

**The Effect of Instructional Leadership
School Principles, Teacher Innovation and Supervision in The Quality
of Learning Management at Muhammadiyah Jakarta Senior High
School**

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ABSTRACT

This study aims to determine the effect of instructional leadership, teacher innovation and supervision on the quality of learning management at SMA Muhammadiyah Jakarta. The location of the research was carried out at SMA Muhammadiyah South Jakarta. The research method used in this study was a survey method, with a population of 178 teachers with a sample of 123 teachers. The research instruments consist of learning management quality instruments, instructional leadership instruments, teacher innovation instruments and supervision instruments. The research results obtained (1) there is a positive direct effect of instructional leadership on the quality of learning management, (2) there is a positive direct effect of teacher innovation on the quality of learning management, (3) there is a positive direct effect of supervision on the quality of learning management, (4) there is a positive direct effect of instructional leadership on supervision, (5) there is a positive direct effect of teacher innovation on supervision, and (6)) there is a positive direct effect of instructional leadership on teacher innovation. The implication of this research is that if you want to improve the quality of learning management, you must strengthen instructional leadership, teacher innovation and supervision. Suggestions that the quality of learning management is increased, all parties, namely the education office, school principals and the Muhammadiyah organization provide support for the research results that have been obtained.

Keywords: Instructional Leadership, Supervision, Teacher Innovation, and Quality of Learning Management

1. Introduction

Phenomenon of covid-19 has become a central issue in international world and has an impact on The interaction between teachers and students in teaching and learning activities that take place in the classroom requires special skills possessed by the teacher, which is called the learning process. The learning process will be successful if it is well planned, starting from teaching preparation (Ratna Aliyas, Muh. Ilyas Ismail, 2019).

The development of the 5.0 industrial revolution era certainly has an impact on the world of education, changes are not only in the way of teaching, but the most important thing is the change in the perspective of the concept of education itself. The 5.0 industrial revolution in the world of

education emphasizes character, moral and exemplary education and requires readiness in terms of competency-based education, understanding and use of the Internet. In this digital technology era, the use of internet networks or the use of gadgets will have an impact on students' emotional symptoms, such as students tend to be more individualistic, always want to be in power, if they receive negative information there will be changes in a negative direction as well. However, there are also many positive sides, such as learning that is easy to understand and interesting, (Anggraeni, 2017).

Management of learning is a planned activity in realizing educational goals (Mahmud & Suratman, 2019). Learning management activities ranging from planning, implementation to assessment or evaluation, if carried out systematically with good preparation will produce the expected outcomes, but if the management of learning is not good, it will affect both attitudes, skills and knowledge to have poor results. The table below is one of the direct and indirect effects of poor learning management, so that the learning outcomes are also unsatisfactory. The grade set at Muhammadiyah Jakarta Junior High School has a KKM (Minimum Completeness Criteria) score of 75. If a student's score is equal to or more than 75, then the student has completed studying certain material, and if it is below 75,

Table 1.1. Results of Daily Deuteronomy (UH) Muhammadiyah High School Students

Year	Subjects					
	B. England	B. Arabic	B. Indonesia	Mathematics	IPA	IPS
2019	72.5	74,2	73,8	70,4	71.6	70.5
2020	73,8	71.5	71.7	73,2	73,8	73,4
2021	70,7	72,7	73,2	74,1	72,9	74,2

Note: Data Source processed by the Author, 2020

Competence, expertise, skills and capabilities possessed by teachers, especially professional competence and pedagogical competence will affect the management of learning. With low competence it will be difficult to analyze a mature lesson plan (Kusumaningrum et al., 2020) (Syafaruddin et al., 2020). The success of learning is also influenced by teacher competence which is always tested in stages through the UKG test (Teacher Competency Test). What is tested is professional competence and pedagogical competence. If you look at the UKG results, the results are unsatisfactory and not in accordance with those determined by the government through the Ministry of Education and Culture, as shown in the table below:

Table 1.2. 2019 Jakarta SMA Level UKG Results

No	Region	SENIOR HIGH SCHOOL	Pedagogic	Professional	Average
1	province DKI Jakarta	70.00	56.74	65.09	62.58
2	Central Jakarta City	71.38	57.06	65.68	63.09
3	North Jakarta City	70.80	56.77	64.85	62.43
4	West Jakarta City	70.32	56.49	64.88	62.36
5	South Jakarta City	70.29	57.17	65.57	63.05
6	East Jakarta City	68.65	56.46	64.77	62.27

Source: Ministry of Education and Culture, 2019

The table above shows UKG results in the Jakarta area which have not met the target set by the Government of 80.00; however, efforts continue to be made to improve teacher competency through teacher certification, seminars, workshops or ongoing professional development.

Management of learning is the teacher's skill in managing the class, namely by opening lessons and ending learning in the process the teacher must be able to explore the potential of students so that they can be explored optimally, as well as teachers must be able to provide simple learning facilities such as teaching aids or modified tools so that they function in explaining material that is difficult for students to digest(Desfiyanti et al., 2021; Listiyani, 2012; Sunardi et al., 2019).

Management of learning can be interpreted as the implementation of learning activities that have been designed, planned, implemented and evaluated by the teacher, so that whether or not the learning process takes place in the classroom depends on the management of the learning itself(Sulahudin & Sasongko, 2019).

Learning is a process of interaction between teachers and students in class in carrying out learning activities. Learning focuses more on how to teach students and not on what students learn(Desvianti, 2020; Harahap, 2019; Sulahudin & Sasongko, 2019; Usman, 2014). learning is a process of communication between teachers, students and teaching materials. Communication will not run without the help of means of conveying messages or media. The message to be communicated is the learning content in the curriculum presented by the teacher to students in the learning process at school(Afrina, 2019; Dwiyono et al., 2022; Karim et al., 2020; Sinambela & Cibro, Sri Ganda, 2022).

Based on the description of the background of the problem, the author's interest in further research is entitled: "The Influence of Instructional Leadership, Teacher Innovation and Supervision on the Quality of Learning Management in SMA Muhammadiyah Jakarta"

2. Research Method

The method used in this study is a survey method, which uses a questionnaire or questionnaire distributed to respondents to obtain data. The approach used in this study is a path analysis approach, namely to determine the independent variable to the dependent variable.

Based on the framework of the research hypothesis, a constellation of problems is compiled as shown below:

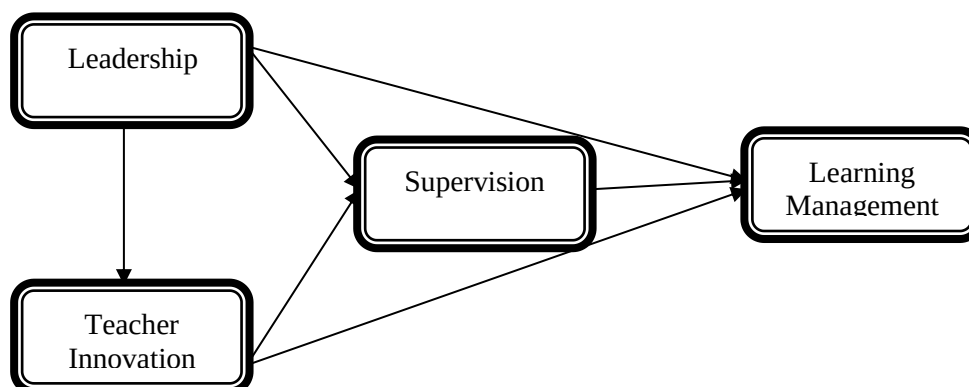


Figure 3.4. Constellation of Research Problems

Information:

X1	=	Instructional Leadership
X2	=	Teacher Innovation
X3	=	Principal Supervision
Y	=	Learning Management Quality

The population in this study were teachers at SMA Muhammadiyah Jakarta.

Table 3.5. Jakarta Muhammadiyah High School

No	School	Address	Σ Teacher
1	Muhammadiyah 3 Jakarta High School	Jl. Limau II BLOK No.3, RT.3/RW.3, Kramat Pela, Kec. Kby. Baru, City of South Jakarta, Special Capital Region of Jakarta 12130	85
2	SMA Muhammadiyah 5 Jakarta	Jl. Tebet Timur Raya No. 565, RT. 10/RW. 5, Tebet Tim., Kec. Tebet, City of South Jakarta, Special Capital Region of Jakarta 12820	32
3	SMA Muhammadiyah 18 Jakarta	Jl. Panjang No.19, RT.8/RW.9, Cipulir, Kec. Kby. Lama, City of South Jakarta, Special Capital Region of Jakarta 12230	27
4	SMA Muhammadiyah 4 Jakarta	Jl Dewi Sartika 316 A, Municipality of East Jakarta, Jakarta	34
			178

Source: Muhammadiyah Elementary School, 2022

Based on the table above, the number of teachers is 178 as the study population.

Determination of the number of samples was carried out using the Proportional Random Sampling technique, with the following steps:

1. Collecting data on Muhammadiyah High Schools in the South Jakarta Region.
2. Determining the number of teachers for instrument trials in accordance with research principles, then set as many as 30 people
3. Determine the number of research samples, referring to the Slovin formula, if the population is 178; then obtained a research sample of 123 teachers at a probability of 5%, with the following calculation:

$$n = \frac{N}{1 + Ne^2}$$

Diketahui:
N = 178 (Populasi)
e = 0,05

$$n = \frac{178}{1 + 178 \times (0,05)^2}$$

$$= 123$$

The distribution of the number of samples in each Muhammadiyah SMA is shown in the following table:

Table 3.6 Determining the Number of Samples

No.	School	Σ Teacher	Σ Research Sample	Σ Trial Sample
1	Muh High School 3	85	$(123/178) \times 85 = 59$	$(30/178) \times 85 = 14$
2	5th Muh High School	32	$(123/178) \times 32 = 22$	$(30/178) \times 32 = 5$
3	18th Muh High School	27	$(123/178) \times 27 = 19$	$(30/178) \times 27 = 5$
4	4th Muh High School	34	$(123/178) \times 34 = 24$	$(30/178) \times 34 = 6$
		178	123	30

Based on the table above, the research sample was 123 people and the instrument trial sample was 30 people. According to Singarimbun and Effendi (2008: 137) it is highly recommended that the number of respondents for the trial be at least 30 people, so that the distribution of scores is closer to the normal curve.

3. Discussion and Analysis

3.1. Data Description Variable Quality of Learning Management

Based on the results of measuring the variable quality of learning management obtained through distributing questionnaires consisting of 29 items with a score of 1 to 5, empirical data was obtained on the variable quality of learning management with the lowest score of 47 and the highest of 142. Also obtained a total score of 11987 with an average score of 97.46 and a middle score of 99.00 and a score that occurs frequently is 97. Meanwhile the standard deviation value is 25.677. A description of the statistical data on the variable quality of learning management is presented in the following table:

Table 4.12 Description of Statistical Data on the Quality of Learning Management (Y)

No	Criteria	Score
1	Average Score (Mean)	97.46
2	Central Score (Median)	99.00
3	Frequently Appearing Scores (Mode)	97a
4	Standard Deviation	25,677
5	Variance (Variance)	659,316
6	Skewness	-.201
7	Sharpness (Kurtosis)	-.873
8	Range	95
9	Lowest Score (Minimum)	47
10	Highest Score (Maximum)	142
11	Total Amount (Sum)	11987

Based on the table above, the data calculation uses Sturges' rules with the number of class intervals as many as 8 classes, the distance between class intervals is 12. The frequency distribution table for the variable quality of learning management can be seen in the following table:

Table 4.13 Frequency Distribution of Learning Management Quality Variables (Y)

No	Class	Frequency	Relative Frequency	Cumulative Percentage
1	47 - 58	10	8,13	8,13
2	59 - 70	12	9.76	7.89
3	71 - 82	13	10.57	28,46
4	83 - 94	16	13.01	41,46
5	95 - 106	25	20,33	61,79
6	107 - 118	18	14.63	76,42
7	119 - 130	15	12,20	88.62
8	131 - 142	14	11.38	100.00
	Amount	123	100.00	

Based on the table above, it is known that there were 14 people or 11.38% of respondents whose scores were at the largest interval, namely between 131 to 142; there were 10 respondents or 8.13%, whose scores were at the lowest interval, namely between 47 to 58. While the majority of respondents were 25 people or 20.33%, obtaining scores between 95 to 106.

The distribution of the scores for the variable quality of learning management as shown in the table above is presented in the histogram as shown below:

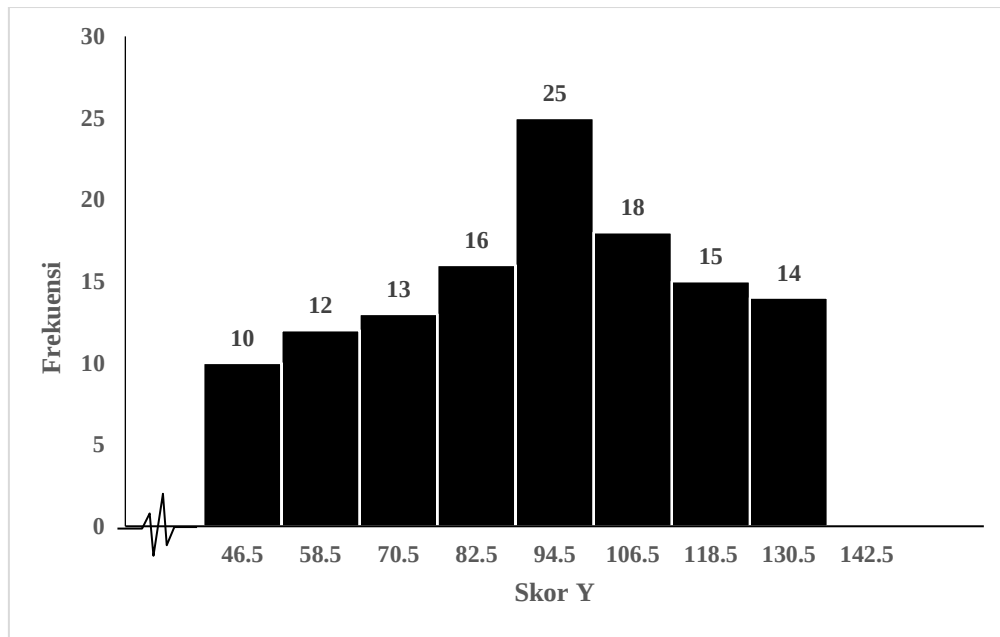


Figure 4.5. Histogram of Learning Management Quality Variables

Based on the histogram above, it can be interpreted that the data on the quality of learning management has a skewness coefficient value of -0.201, which means that it is normally distributed, if the skewness coefficient is $-2.0 < TK < 2$. While the kurtosis value is -0.873 which indicates that the curve formed is a curve with a platykurtic distribution (flat/sloping) the criterion for spiciness is < 3 . (Ananda & Fadhli, 2018: 83).

The variable instrument for the quality of learning management in this study consists of 29 valid statements, which means that theoretically it has the lowest score of 29 and the highest score of 145, while the theoretical middle score is $(29+145)/2 = 87$. Meanwhile, based on empirical data the lowest score is 47 and the highest score is 142 while the empirical median score is $(47+142)/2 = 94.5$; it can be concluded that the empirical median score (94.5) is greater than the theoretical median score (87), this indicates that the score of the variable quality of learning management in this study is high.

4.1. Supervision Variable Data Description

Based on the measurement results of the supervision variable obtained through distributing questionnaires consisting of 28 instruments with a score of 1 to 5, empirical data of the supervision variable was obtained with the lowest score of 45 and the highest of 138. Also obtained a total score of 11557 with an average a score of 93.96 and a middle score of 95.00 and a score that occurs frequently is 92. Meanwhile the standard deviation value is 24.546. The description of the supervision variable statistical data is presented in the following table:

Table 4.14 Description of Supervision Statistical Data (X3)

No	Criteria	Score
1	Average Score (Mean)	93.96
2	Central Score (Median)	95.00
3	Frequently Appearing Scores (Mode)	92a
4	Standard Deviation	24,546
5	Variance (Variance)	602,498

No	Criteria	Score
6	Skewness	-.200
7	Sharpness (Kurtosis)	-.839
8	Range	93
9	Lowest Score (Minimum)	45
10	Highest Score (Maximum)	138
11	Total Amount (Sum)	11557

Based on the table above, the data calculation uses Sturges' rule with the number of class intervals as many as 8 classes, the class interval distance is 12. The frequency distribution table for the supervision variable can be seen in the following table:

Table 4.15 Frequency Distribution of Supervision Variables (X3)

No	Class	Frequency	Relative Frequency	Cumulative Percentage (%)
1	44–55	9	7,32	7,32
2	56–67	11	8.94	16,26
3	68 – 79	15	12,20	28,46
4	80–91	18	14.63	43.09
5	92–103	27	21.95	65.04
6	104 – 115	17	13.82	78,86
7	116–127	14	11.38	90,24
8	128 - 139	12	9.76	100.00
	Amount	123	100.00	

Based on the table above, it is known that there are 12 people or 9.76% of respondents whose scores are at the largest interval, namely between 128 to 139; there were 9 respondents or 7.32%, whose scores were at the lowest interval, namely between 44 to 55. While the majority of respondents were 27 people or 21.95%, obtaining scores between 92 to 103.

The spread of the supervision variable scores as shown in the table above is presented in the histogram as shown below:

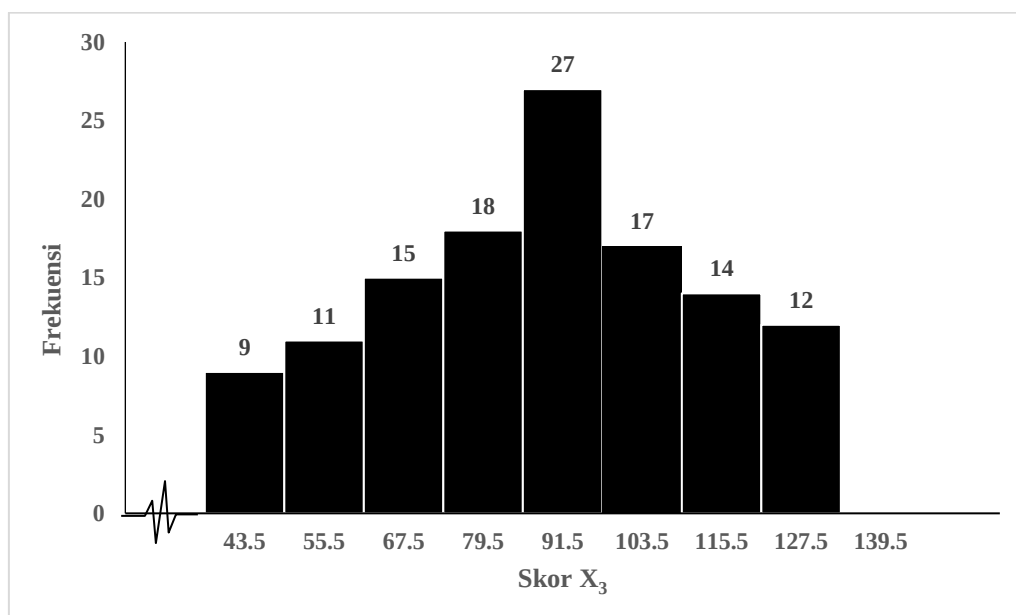


Figure 4.6. Supervised Variable Histogram

Based on the histogram above, it can be interpreted that the supervision data has a skewness coefficient value of -0.200, which means that it is normally distributed, if the skewness coefficient is $-2.0 < TK < 2$. While the kurtosis value is -0.839 which indicates that the curve formed is a curve with a platykurtic distribution (flat/sloping) with a criterion of spiciness < 3 . (Ananda & Fadhli, 2018: 83).

The supervision variable instrument in this study consisted of 28 valid statements, which means that theoretically it has the lowest score of 28 and the highest score of 140, while the theoretical middle score is $(28+140)/2 = 84$. Meanwhile, based on empirical data the lowest score is 45 and the highest score is 138 while the empirical median score is $(45+138)/2 = 91.5$; it can be concluded that the empirical median score (91.5) is greater than the theoretical median score (84), this indicates that the score of the supervision variable in this study is high.

4.2.Description of Teacher Innovation Variable Data

Based on the measurement results of the teacher innovation variable obtained through distributing questionnaires consisting of 28 instruments with a score of 1 to 5, empirical data was obtained on the teacher innovation variable with the lowest score of 45 and the highest of 140. Also obtained a total score of 11293 with an average -the average score is 91.81 and the middle score is 94.00 and the score that occurs frequently is 96. Meanwhile the standard deviation value is 25.437. A description of the statistical data of teacher innovation variables is presented in the following table:

Table 4.16 Description of Teacher Innovation Statistical Data (X2)

No	Criteria	Score
1	Average Score (Mean)	91.81
2	Central Score (Median)	94.00
3	Frequently Appearing Scores (Mode)	96a
4	Standard Deviation	25,437
5	Variance (Variance)	647,055
6	Skewness	-.046
7	Sharpness (Kurtosis)	-.879
8	Range	95
9	Lowest Score (Minimum)	45
10	Highest Score (Maximum)	140
11	Total Amount (Sum)	11293

Based on the table above, the data calculation uses Sturges' rules with a total of 8 class interval classes, the class interval distance is 12. The frequency distribution table for teacher innovation variables can be seen in the following table:

Table 4.17 Frequency Distribution of Teacher Innovation Variables (X2)

No	Class	Frequency	Relative Frequency	Cumulative Percentage
1	45 - 56	12	9.76	9.76
2	57 - 68	14	11.38	21,14
3	69 - 80	15	12,20	33,33

4	81 - 92	17	13.82	47,15
5	93 - 104	26	21,14	68,29
6	105 - 116	16	13.01	81.30
7	117 - 128	13	10.57	91.87
8	129 - 140	10	8,13	100.00
	Amount	123	100.00	

Based on the table above, it is known that there are 10 people or 8.13% of respondents whose scores are at the largest interval, namely between 129 to 140; there were 12 respondents or 9.76%, whose scores were at the lowest interval, namely between 45 to 56. While the majority of respondents were 26 people or 21.14%, obtaining scores between 93 to 104.

The distribution of teacher innovation variable scores as shown in the table above is presented in the histogram as shown below:

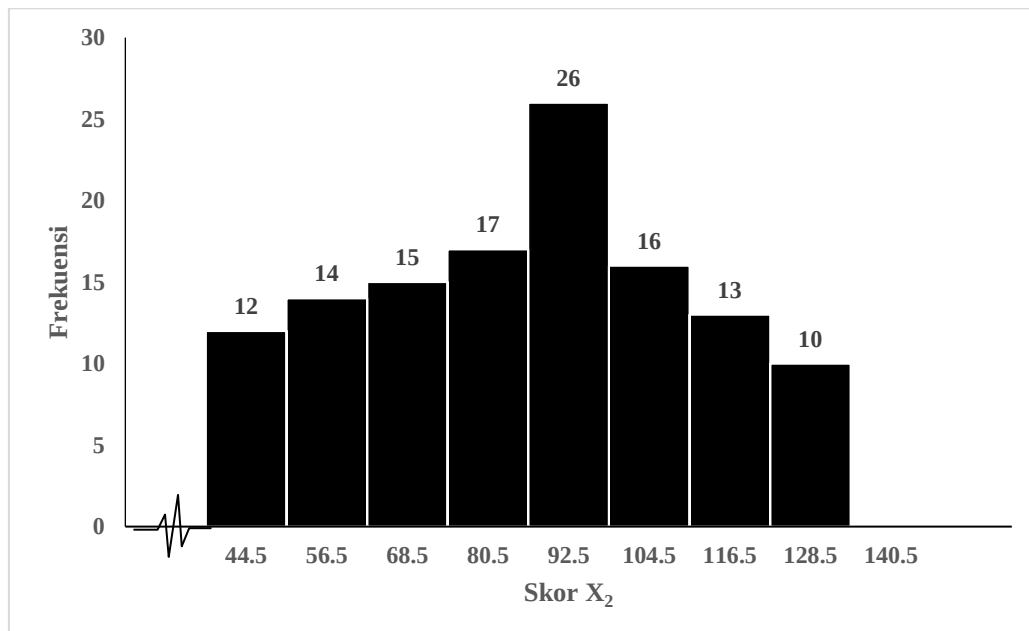


Figure. Histogram of Teacher Innovation Variables

Based on the histogram above, it can be interpreted that the teacher's innovation data has a skewness coefficient value of -0.046, which means that it is normally distributed, if the skewness coefficient is $-2.0 < TK < 2$. While the kurtosis value is -0.879 which indicates that the curve formed is a curve with a platykurtic distribution (flat/sloping) with a criterion of spiciness < 3 . (Ananda & Fadhli, 2018: 83).

The teacher innovation variable instrument in this study consisted of 28 valid statements, which means that theoretically it has the lowest score of 28 and the highest score of 140, the theoretical middle score is $(28+140)/2 = 84$. Meanwhile, based on empirical data the lowest score is 45 and the highest score is 140 while the empirical median score is $(45+140)/2 = 92.5$; it can be concluded that the empirical median score (92.5) is greater than the theoretical median score (84), this indicates that the teacher innovation variable score in this study is high.

4.3.Description of Instructional Leadership Variable Data

Based on the measurement results of the instructional leadership variable obtained through distributing questionnaires consisting of 27 items with a score of 1 to 5, empirical data obtained on the instructional leadership variable with the lowest score of 38 and the highest of 133. Also obtained a total score of 10345 with an average -the average score is 84.11 and the middle score is 85.00 and the score that occurs frequently is 38. Meanwhile the standard deviation value is 24.532. A description of the statistical data on instructional leadership variables is presented in the following table:

Table 4.18 Description of Instructional Leadership Statistical Data (X1)

No	Criteria	Score
1	Average Score (Mean)	84.11
2	Central Score (Median)	85.00
3	Frequently Appearing Scores (Mode)	38a
4	Standard Deviation	24,532
5	Variance (Variance)	601,800
6	Skewness	-.021
7	Sharpness (Kurtosis)	-.811
8	Range	95
9	Lowest Score (Minimum)	38
10	Highest Score (Maximum)	133
11	Total Amount (Sum)	10345

Based on the table above, the data calculation uses Sturges' rules with a total of 8 class interval classes, the class interval distance is 12. The frequency distribution table for instructional leadership variables can be seen in the following table:

Table 4.19 Frequency Distribution of Instructional Leadership Variables (X1)

No	Class	Frequency	Relative Frequency	Cumulative Percentage
1	38 - 49	11	8.94	8.94
2	50 - 61	14	11.38	20,33
3	62 - 73	17	13.82	34,15
4	74 - 85	20	16,26	50,41
5	86 - 97	25	20,33	70,73
6	98 - 109	15	12,20	75,61
7	110 - 121	12	9.76	92.68
8	122 - 133	9	7,32	100.00
	Amount	123	100.00	

Based on the table above, it is known that there were 9 people or 7.32% of respondents whose scores were at the largest interval, namely between 122 to 133; there were 11 respondents or 8.94%, whose scores were at the lowest interval, namely between 38 to 49. While the majority of respondents were 25 people or 20.33%, obtaining scores between 86 to 97.

The distribution of instructional leadership variable scores as shown in the table above is presented in the histogram as shown below:

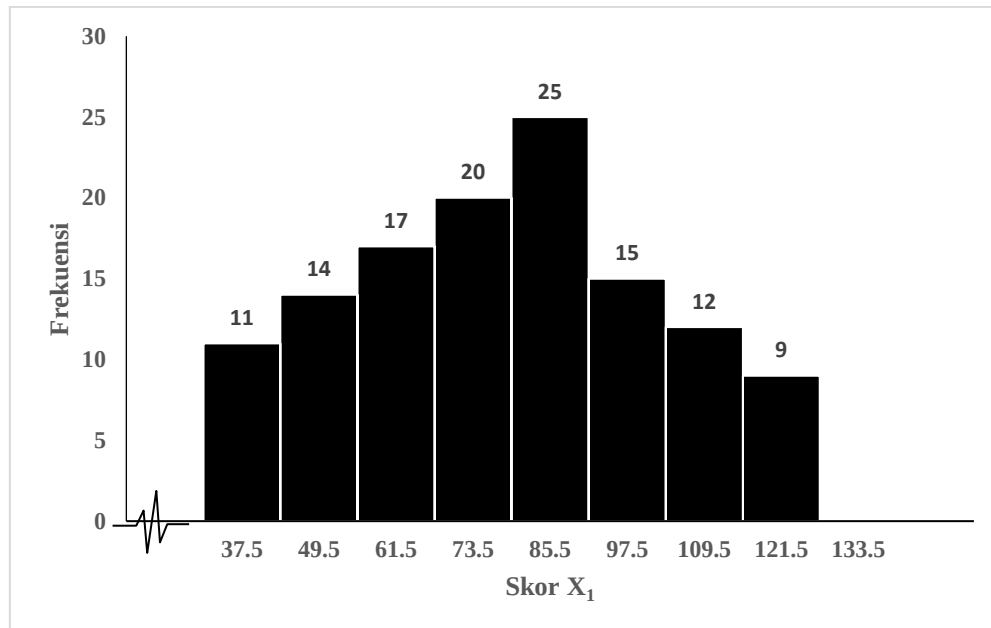


Figure 4.8. Histogram of Instructional Leadership Variables

Based on the histogram above, it can be interpreted that the instructional leadership data has a skewness coefficient value of -0.021, which means that it is normally distributed, if the skewness coefficient is $-2.0 < TK < 2$. The kurtosis value is -0.811 which indicates that the curve formed is a curve with a platykurtic distribution (flat/sloping) with a criterion of taper value < 3 . (Ananda & Fadhli, 2018: 83).

The instructional leadership variable instrument in this study consisted of 27 valid statements, which means that theoretically it has the lowest score of 27 and the highest score of 135, while the theoretical middle score is $(27+135)/2 = 81$. Meanwhile, based on empirical data the lowest score is 38 and the highest score is 133 while the empirical median score is $(38+133)/2 = 85.5$; it can be concluded that the empirical median score (85.5) is greater than the theoretical median score (81), this indicates that the score of the instructional leadership variable in this study is high.

4.4. Discussion of Research Results

4.4.1. The Positive Direct Effect of Instructional Leadership on the Quality of Learning Management

The results of the study show that there is a positive direct effect of instructional leadership on the quality of learning management. Based on the results of research by testing the hypothesis it is known that the correlation value between instructional leadership on the quality of learning management is 0.878 with a probability value ($\text{sig } 0.000 < 0.05$), H_0 is rejected, it can be concluded that instructional leadership has a direct positive effect on the quality of learning management. The results of this study get a regression equation $\hat{Y} = 20.19 + 0.919X_1$; which means that this equation can predict that every 1 increase in instructional leadership scores will increase the quality of learning management by 0.919 times. This study also shows a coefficient of determination of 0.7708 or 77,

The results of research conducted by Syarafudin (2019: 128) show that there is a positive and significant influence on leadership patterns on learning management, with a correlation coefficient of 0.455 with a contribution of 20.70%. This means that leadership as an independent variable can influence the dependent variable, namely learning management.

Based on the description above, it can be concluded that improving the quality of learning management can be done by strengthening instructional leadership.

4.4.2. The Positive Direct Effect of Teacher Innovation on the Quality of Learning Management

The results of the study show that there is a positive direct effect of teacher innovation on the quality of learning management. Based on the results of the research by testing the hypothesis it is known that the correlation value between teacher innovation on the quality of learning management is 0.898 with a probability value ($\text{sig } 0.000 < 0.05$) H_0 is rejected, it can be concluded that teacher innovation has a direct positive effect on the quality of learning management. The results of this study get the regression equation $\hat{Y} = 14.25 + 0.906X_2$; which means that this equation can predict that every 1 increase in the teacher's innovation score will increase the quality of learning management by 0.906 times. This study also shows a coefficient of determination of 0.8064 or 80,

Based on the description above, it can be concluded that improving the quality of learning management can be done by strengthening teacher innovation.

4.4.3. The Positive Direct Effect of Supervision on the Quality of Learning Management

The results showed that there was a positive direct effect of supervision on the quality of learning management. Based on the research results by testing the hypothesis, it is known that the correlation value between supervision on the quality of learning management is 0.896 with a probability value ($\text{sig } 0.000 < 0.05$) H_0 is rejected. It can be concluded that supervision has a direct positive effect on the quality of learning management. The results of this study obtained a regression equation $\hat{Y} = 9.38 + 0.937X_3$; which means that this equation can predict that every 1 increase in the supervision score will increase the quality of learning management by 0.937 times. This study also shows a coefficient of determination of 0.8028 or 80.28%, the quality of learning management can be explained by the variables in the study, while 19,

Based on the results of Sumarni's research (2015: 8) states that the supervision variable (X_1) has a significant effect on the Y variable (learning management) with tcount of the principal supervision variable $> t_{\text{table}}$. This means that H_0 is rejected, so it can be concluded that partially supervision has a significant effect on improving learning management.

Based on the description above, it can be concluded that improving the quality of learning management can be done by strengthening supervision.

4.4.4. Positive Direct Effect of Instructional Leadership on Supervision

The results of the study show that there is a positive direct effect of instructional leadership on supervision. Based on the results of the research by testing the hypothesis it is known that the correlation value between instructional leadership on supervision is 0.871 with a probability value ($\text{sig } 0.000 < 0.05$) then H_0 is rejected, it can be concluded that instructional leadership has a direct

positive effect on supervision. The results of this study get the regression equation = $20.68 + 0.871X_1$; meaning that this equation can predict that every 1 increase in instructional leadership scores will increase supervision by 0.871 times. This study also shows a coefficient of determination of 0.7586 or 75.86% supervision can be explained by the variables in the study while 24,

Based on the description above, it can be concluded that to improve supervision can be done by strengthening instructional leadership.

4.4.5. The Positive Direct Effect of Teacher Innovation on Supervision

The results of the study show that there is a positive direct effect of teacher innovation on supervision. Based on the research results by testing the hypothesis it is known that the correlation value between teacher innovation on supervision is 0.875 with a probability value (sig 0.000 < 0.05) then H_0 is rejected so it can be concluded that teacher innovation has a direct positive effect on supervision. The results of this study get the regression equation = $16.42 + 0.845X_2$; which means that this equation can predict that every 1 increase in the teacher's innovation score will increase supervision by 0.845 times. This study also shows a coefficient of determination of 0.7656 or 76.56% supervision can be explained by the variables in the study while the remaining 23.43% is influenced by other factors outside the research variables.

Bellibaş et al (2020:5) state that “Effective leadership is indispensable if organizations are to produce desired outcomes. In educational organizations, leadership is a vital ingredient for improving teachers' professional learning and student achievement”. (Effective leadership is essential if organizations are to produce the desired results. In educational organizations, leadership is an important ingredient for enhancing teacher professional learning and student achievement). This can be interpreted that the role of a leader in educational institutions can influence the development of educational institutions and ultimately have an impact on the quality of learning.

Research findings conducted by Oke and Fatima (2020:16) show opportunities for the education sector to take advantage of innovations related to 4IR (4th Industrial Revolution) through research and teaching to enhance students' experiences; however, this may require significant improvements in educational curricula, as well as investment.

Based on the description above, it can be concluded that improving supervision can be done by strengthening teacher innovation.

4.4.6. The Positive Direct Effect of Instructional Leadership on Teacher Innovation

The results of the study show that there is a positive direct effect of instructional leadership on teacher innovation. Based on the research results by testing the hypothesis, it is known that the correlation value between instructional leadership on teacher innovation is 0.895 with a probability value (sig 0.000 < 0.05), H_0 is rejected, so it can be concluded that instructional leadership has a direct positive effect on teacher innovation. The results of this study obtained a regression equation $\hat{Y} = 13.75 + 0.928X_1$; which means that this equation can predict that every 1 increase in instructional leadership scores will increase teacher innovation by 0.928 times. This study also shows a coefficient of determination of 0.8010 or 80.10% teacher innovation can be explained by the variables in the study while 19,

According to Marzano et al (2010: 8) in a research report stated that "In many ways the principal is the most important and influential person in any school. He is the person in charge of all activities that occur in and around the school building. It is the principal's leadership that determines the atmosphere of the school, the climate of teaching, the level of professionalism and morale of the teacher, and the level of concern for what students may or may not become. The principal is the main link between the community and the school, and the way in which he exercises this capacity largely determines the attitudes of parents and students about the school. If a school is a vibrant, innovative, child-centered place, if it has a reputation for excellence in teaching, if students perform to the best of their ability,

Based on the description above, it can be concluded that increasing teacher innovation can be done by strengthening instructional leadership

5. Conclusion and Recommendation

The quality of learning management is the level of success of a teacher in managing learning in the classroom. Learning management is an activity carried out by the teacher starting from the preparation stage, namely by preparing learning tools, teaching aids that must be brought to class, etc.; the implementation stage, namely implementing what is stated in the learning device; the assessment stage is to assess the level of success of the teacher in learning through students' cognitive mastery abilities, a change in attitude arises after learning.

Based on the results of the study that the quality of learning management can be improved through instructional leadership, teacher innovation and supervision. In this regard, the first is that there is a positive direct effect of instructional leadership on the quality of learning management, there is a positive direct effect of teacher innovation on the quality of learning management, there is a positive direct effect of supervision on the quality of learning management, there is a positive direct effect of instructional leadership on supervision, there is an influence positive direct effect of teacher innovation on supervision, and there is a positive direct effect of instructional leadership on teacher innovation.

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