

# **Influence School Head Leadership, Teacher Competency, And Education Infrastructure Toward Education Quality In School**

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**Abstract:** *The purpose of this study is to describe the principal's leadership, teacher competencies, educational infrastructure and quality of education, to analyze the influence of school leadership, teacher competencies and educational infrastructure on the quality of education. The population in this study were all teachers in "SMP Negeri 12 Malang", amounting to 64 teachers. While the data collection technique is to use a questionnaire. The data analysis technique used is multiple linear regression analysis. The results showed that the principal's leadership on the quality of education, teacher competence on the quality of education and educational infrastructure facilities on the quality of education. The results showed that there was a significant positive influence between school principals' leadership, teacher competencies, educational infrastructure, and the quality of education in schools simultaneously and partially. The independent variable has an influence on the quality of education in schools by 31.30%, the remaining 68.70% is influenced by other factors outside the model. The most dominant factor influencing the quality of education in schools is teacher competency.*

**Keywords:***principal leadership, teacher competence, educational infrastructure, quality of education*

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## **I. Introduction**

Every human being is inseparable from education which is something that is needed by every human being to form character and make a good person and develop all the potentials that he has and can be beneficial to society and the country. According to (RI Law No. 20 of 2003) relating to the national education system that education is an effort made to achieve the situation of teaching and learning processes for students who dynamically and grow abilities in themselves so that they have firmness with trust/belief, supervision, individuality, ability, moral, and creative that are needed by students, parents, nation and country. This research was conducted to succeed in strengthening human resources, especially in the field of education in accordance with the objectives of Sustainability Development Goals (Natsir and Triatmanto, 2009).

Contributions to schools in education carried out in the country of Indonesia are not only to carry out education itself but must pay attention to improving quality education, both input, process, output, and impact. Inputs to improve the quality of quality education are qualified educators or teachers, qualified students, curriculum, adequate infrastructure, and various components of quality management of education. The process to improve the quality of quality education is a quality teaching and learning process. The output in the process of improving the quality of quality education is the process of superior learning outcomes by having determining competence. The impact to improve the quality of quality education is the result of quality outputs that can continue their studies to a superior level of education by developing their ability to compete and be able to apply it.

In general, the low quality of education can be caused by a variety of factors, both internal factors of the school and external factors of the school. The internal factors of schools that can influence the improvement of the quality of education include the low leadership of school principals, teacher competencies and applicable curriculum so that the effectiveness of teaching and learning processes is inadequate, infrastructure facilities are inadequate, the distribution of teachers is uneven, and so on. While external factors that influence the quality of education in schools include the participation of parents, the community in general, and the government has not been optimal in working together to support the development of quality education.

Thus in the context of the quality of education, it refers to the educational process and educational outcomes including the results of inputs, outputs, processes, and outcomes. A quality education process can be seen from a variety of inputs, while educational outcomes refer to the achievements achieved by schools at any given period time. Quality educational processes and outcomes are interconnected, but good processes are not misdirected. Schools must formulate well targets to be achieved within the specified timeframe (Sumarno, 2012 & Sudadio, 2012).

## **II. Theoretical Review**

### **2.1 Principal Leadership**

Priansa, (2014) revealed that: "Leadership means one part of the skills to influence the organization to achieve goals and demands". This behavior appears from the willingness of the principal to accept differences in ideas or ideas, procedures taken based on mutual agreement, and the participation of teachers, someone who has the skills to influence and inspire and control the attitudes/movements of a person or community to achieve the desired goals.

In general, the same thing expressed by Wahjosumidjo(2008:100) there are 3 types of abilities possessed by principals are: ideal ability is the ability to study various problems, as well as the ability to interpret or capture various desires (conceptual skills), the human ability is a skill in reading someone's behavior and the process of cooperation (human skills), and technical ability is a skill in understanding education about strategies, processes, procedures, and techniques in carrying out special activities (technical skills).

Sulistiya (2013) also stressed that the principal's leadership as a superior can influence and determine the progress of the school must have administrative management, have responsibilities, and be free in carrying out their duties. Productive leaders must be able to strive to improve the ability of teachers in carrying out activities such as training of teaching staff.

Based on the opinion of the experts above, it can be concluded that good leadership is someone who behaves well, is honest, and has a high enthusiasm for working and can direct and assess subordinates to lead a change towards the future towards a better direction.

### **2.2 Teacher Competence**

Competence is a learning tool, objective, creative and behavioral, internalized, which must be mastered by the teacher or lecturer in carrying out their professionalism. Competence has several important aspects, which are intelligence/skills, and attitudes that teachers have in carrying out their duties as educators, instructors, mentors, directors, training, assessment, and evaluating students in teaching and learning in class. Law - R.I. No. 14 of 2005 concerning Teachers and Lecturers (2006). Competence is one part of positive or efficient behavior in realizing something that has been determined. UU.R.I No. 14 of 2005 article 8 regarding Teachers and Lecturers competence there are four components: 1) Pedagogic competence, 2) personality competence, 3) Social competence, 4) professional competence. Employee behavior is the behavior done by the employee to reach the organizational purpose (Respati and Amin, 2014). The intended behavior is the teacher's behavior.

According to Mulyasa (2009) revealed that teacher competence is a combination of skills, knowledge, technology, community and religious with the preacher will form competence that measures the job/career of the teacher, which includes: mastering the subject matter, understanding the characteristics of each student assessment in providing guiding lessons, professional self-development.

Teacher professionalism is often interpreted by teacher competence. Professional teachers are proven by the potentials that will support to realize the processes and performance products that can support to improve quality education (Kartini, 2011: 8).

### **2.3 Educational Infrastructure Facilities**

Rosivia (2014) revealed that education must have adequate and pleasant facilities for students and teachers for the sake of fluency in the teaching and learning process by supporting all complete facilities and improving the quality of education. Educational facilities and infrastructure are used to support all facilities related to school facilities for the smooth running of learning and learning. With the existence of educational infrastructure, facilities are very necessary for carrying out so that the teaching and learning process runs effectively and efficiently. Kurniawati and Sayuti (2013) stated that school facilities or equipment are all school facilities that can be fulfilled and that is absolute in the learning process to improve quality education.

According to Risnawati (2014), Educational facilities are all equipment, tools, and all other facilities used in implementing learning processes. While educational infrastructure is all basic equipment that will indirectly support in carrying out teaching and learning processes. Educational facilities are divided into 3 categories: (a) whether or not they are used (b) moving or not when used (c) their relationship in the learning process.

Based on the above findings, the researcher concludes that educational facilities and infrastructure, which are parts of school equipment/furnishings such as chairs, tables, buildings, and other equipment, are part of special needs in educational institutions that can support the smoothness of teaching and learning activities in schools or the classroom so that they can achieve the goals set.

## **2.4 Quality Of Education**

Usman (2011: 513) states that the kinetics or condition of education, defined from the quality of education, is divided into several items including inputs, processes, outputs, and the superior impact of education. Inputs to education are said to be of quality if they are ready to be processed. The educational quality process is able to win the atmosphere of learning that is an activity, creativity, effectiveness, and fun. The educational output is said to be of quality if academic and non-academic learning achievements achieved by students can be satisfying. A superior impact for students is said to be of high quality if the results of graduates are quickly absorbed in the business world, sufficient wages, all components contribute to the graduates' excellence so they are satisfied with the compensation held by graduates (Susanto, 2016: 45). It is important to note that the quality is not reviewed by the company standpoint, it is seen from the perspective of the customer or public (Respati, 2010). Therefore, the quality of education needs attention to be examined.

## **III. Method**

### **3.1 Operational Definitions of Variables Principal's Leadership**

#### **1) Principal's leadership**

is a pattern of the principal's behavior in organizing and directing the teacher so that the behavior illustrates the interaction between the school and its subordinates the measurement with 6 indicators of educator, manager, supervisor, leader, innovator, and motivator.

#### **2) Teacher competence**

Teacher competence is a combination of mastery, knowledge, skills, values, and attitudes that are reflected in the habits of thinking and acting in carrying out the task/work. Teacher competence in the implementation of learning with indicators of pedagogical, personality, social, and professional competence.

#### **3) Infrastructure Facilities**

Infrastructure is defined as a supporting process that facilitates the completeness of schools in supporting the teaching and learning process and the effective and efficient utilization of all educational facilities and infrastructure. Infrastructure is measured by 4 indicators as follows: books and other sources, educational media, educational equipment, and school furniture.

#### **4) Quality of education**

The quality of education is the ability of schools to manage operationally and efficiently with components related to schools so that they produce added value according to the norms/standards that apply. The quality of education covers aspects of the curriculum, competence, and professionalism, completeness of facilities and infrastructure, and school management. The quality of education can be measured by 4 indicators namely input, process, output, and outcome.

### **3.2 Population and sampling techniques**

The population in this study were all teachers in "SMP Negeri 12 Malang", totaling 64 teachers. The sample is a portion of the population. The sample in this study was 64 teachers. The sampling technique in this study is a census in which all members of the population are sampled (Sugiyono, 2017).

### **3.3 Multiple Regression analysis techniques**

The data analysis technique in this study is to use multiple linear regression analysis techniques to measure the effect of the independent variable on the dependent variable with the following equation model:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

#### **Information:**

Y = predicted value

X = predictor variable value

a = constant number

b = predictor coefficient number

e = Residual error

## **IV. Results**

### **4.1 Description of educational quality variables**

Variable quality of school education research instrument items as many as 8 items statement items with 5 choices, so that the item score can be determined as follows. The detailed description of the distribution of Education Quality "SMP Negeri 12 Malang" based on predetermined criteria can be seen in Table 1 as follows:

**Table 1: Description of educational quality variables**

Statement item	Score Answer										total	Average
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree			
	F	%	F	%	F	%	F	%	F	%		
Y.1	6	4,7%	44	34,1%	12	9,3%	2	1,6%	0	0,0%	246	3,84
Y.2	24	18,6%	34	26,4%	3	2,3%	3	2,3%	0	0,0%	271	4,23
Y.3	16	12,4%	31	24,0%	13	10,1%	4	3,1%	0	0,0%	251	3,92
Y.4	14	10,9%	37	28,7%	13	10,1%	0	0,0%	0	0,0%	257	4,02
Y.5	29	22,5%	29	22,5%	6	4,7%	2	1,6%	0	0,0%	283	4,42
Y.6	23	17,8%	31	24,0%	8	6,2%	2	1,6%	0	0,0%	267	4,17
Y.7	18	14,0%	24	18,6%	20	15,5%	2	1,6%	0	0,0%	250	3,91
Y.8	13	10,1%	27	20,9%	20	15,5%	4	3,1%	0	0,0%	241	3,77
Average education quality score												4,04

Source: data processing with SPSS version 16.2020

On the SPSS calculation in table 1, above it can be seen that from the distribution of respondents' answers about the quality of education (Y) for item Y.1, they strongly agree as much as 6 respondents (4.7%), followed by 44 respondents (34.1%) who stated agree and 12 respondents (9.3%) who stated neutral and 2 respondents (1.6%) who stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 3.84 this shows that the respondent tends to be neutral with item Y.1

Of answers from the item, Y.2 were 24 respondents (12.4%) who strongly agreed, followed by 34 respondents (26.4%) who agreed, 13 respondents (2.3%) stated neutral, 3 respondents (2, 3%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.23. This shows that respondents tend to agree with item Y2.

Of answers from the item, Y.3 were 16 respondents (18.6%) who strongly agreed, followed by 31 respondents (24.0%) who agreed, 13 respondents (10.1%) stated neutral, 4 respondents (3, 1%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 3.92. This shows that respondents tend to be neutral towards item Y3.

Of answers from the item, Y.4 were 14 respondents (10.9%) who strongly agreed, followed by 37 respondents (28.7%) who agreed, 13 respondents (10.1%) stated neutral, 4 respondents (3, 1%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.02. This shows that respondents tend to agree with item Y4.

Of answers from the item, Y.5 were 29 respondents (22.5%) who strongly agreed, followed by 29 respondents (22.5%) who agreed, 6 respondents (4.7%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.42. This shows that respondents tend to agree with item Y5.

Of answers from the item, Y.6 were 23 respondents (17.8%) who strongly agreed, followed by 31 respondents (24.0%) who agreed, 8 respondents (6.2%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.17. This shows that respondents tend to agree with item Y6.

Of answers from the item, Y.7 were 18 respondents (14.0%) who strongly agreed, followed by 27 respondents (20.9%) who agreed, 20 respondents (15.5%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 3.91. This shows that respondents tend to be neutral towards item Y7.

Of answers from the item, Y.8 were 13 respondents (10.1%) who strongly agreed, followed by 27 respondents (20.9%) who agreed, 20 respondents (15.5%) stated neutral, 4 respondents (3, 1%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 3.77. This shows that respondents tend to be neutral towards item Y8.

It can be concluded that from the above respondent answers with 8 statement items, the highest average of each item is on item Y5 with an average of 4.42. The average total score of education quality indicators (Y) is 4.04. This shows that respondents tend to agree that they can contribute to the quality of education.

#### **4.2 Description of the principal's leadership variables**

School leadership variable, the research instrument items are 12 statement items with 5 choices, so the item scores can be determined as follows. The detailed description of the principal's leadership "SMP Negeri 12 Malang" based on predetermined criteria can be seen in Table 2 as follows:

**Table 2: Description of the principal's leadership variables**

Statement item	Answer Score										total	Average
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree			
	F	%	F	%	F	%	F	%	F	%		
X1.1	33	25,6%	26	20,2%	4	3,1%	1	0,8%	0	0,0%	283	4,42
X1.2	25	19,4%	28	21,7%	6	4,7%	5	3,9%	0	0,0%	265	4,14
X1.3	25	19,4%	30	23,3%	6	4,7%	3	2,3%	0	0,0%	269	4,20
X1.4	37	28,7%	22	17,1%	4	3,1%	1	0,8%	0	0,0%	287	4,48
X1.5	28	21,7%	23	17,8%	12	9,3%	1	0,8%	0	0,0%	270	4,22
X1.6	35	27,1%	19	14,7%	8	6,2%	2	1,6%	0	0,0%	279	4,36
X1.7	33	25,6%	20	15,5%	11	8,5%	0	0,0%	0	0,0%	278	4,34
X1.8	32	24,8%	26	20,2%	5	3,9%	1	0,8%	0	0,0%	281	4,39
X1.9	40	31,0%	17	13,2%	5	3,9%	2	1,6%	0	0,0%	287	4,48
X1.10	29	22,5%	22	17,1%	11	8,5%	0	0,0%	0	0,0%	266	4,16
X1.11	34	26,4%	23	17,8%	5	3,9%	2	1,6%	0	0,0%	281	4,39
X1.12	32	24,8%	23	17,8%	9	7,0%	0	0,0%	0	0,0%	279	4,36
<b>Average Principal Leadership Score</b>												4,33

Source: data processing with SPSS version 16.2020

On the SPSS calculation in table 2, above it can be seen that from the distribution of respondents' respects about the leadership of the principal (X1) for item X1.1, they strongly agree with 33 respondents (25.6%), followed by 26 respondents (20.2%) ) which stated agree and 4 respondents (3.1%) stated neutral and 1 respondent (0.8%) stated disagreed and 0 respondents (0.0%) stated strongly disagreed with an average score of 4, 42 this shows that respondents tend to agree with item X1.1

Of answers from the item were 25 respondents (19.4%) who strongly agreed, followed by 28 respondents (21.7%) who agreed, 6 respondents (4.7%) stated neutral, 5 respondents (3.9%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.14. This shows that respondents tend to agree with item X1.2

Of answers from the item, X1.3 were 25 respondents (19.4%) who strongly agreed, followed by 30 respondents (23.3%) who agreed, 6 respondents (4.7%) stated neutral, 1 respondent (0, 8%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.20. This shows that respondents tend to agree with item X1.3.

Of answers from the item, X1.4 were 37 respondents (28.7%) who strongly agreed, followed by 22 respondents (17.1%) who agreed, 4 respondents (3.1%) stated neutral, 1 respondent (0, 8%) stated disagree and 0 respondents (0.0%) who stated strongly disagree with an average score of 4.48. This shows that respondents tend to agree with item X1.4.

Of answers from the item, X1.5 were 28 respondents (21.7%) who strongly agreed, followed by 23 respondents (17.8%) who agreed, 12 respondents (9.3%) stated neutral, 1 respondent (0, 8%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.22. This shows that respondents tend to agree with item X1.5.

Of answers from the item, X1.6 were 35 respondents (27.1%) who strongly agreed, followed by 19 respondents (14.7%) who agreed, 8 respondents (6.2%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.36. This shows that respondents tend to agree with item X1.6.

Of answers from the item, X1.7 were 33 respondents (25.6%) who strongly agreed, followed by 20 respondents (15.5%) who agreed, 11 respondents (8.5%) stated neutral, 0 respondents (0, 0%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.34. This shows that respondents tend to agree with item X1.7.

Of answers from the item, X1.8 were 32 respondents (24.8%) who strongly agreed, followed by 26 respondents (20.2%) who agreed, 5 respondents (3.9%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.39. This shows that respondents tend to agree with item X1.8.

Of answers from the item, X1.9 were 40 respondents (31.0%) who strongly agreed, followed by 17 respondents (13.2%) who agreed, 5 respondents (3.9%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.48. This shows that respondents tend to agree with item X1.9.

Of answers from the item, X1.10 were 29 respondents (22.5%) who strongly agreed, followed by 22 respondents (17.1%) who agreed, 11 respondents (8.5%) stated neutral, 0 respondents (0, 0%) stated disagree

and 0 respondents (0.0%) who strongly disagreed with an average score of 4.16. This shows that respondents tend to agree with item X1.10.

Of answers from the item, X1.11 were 34 respondents (26.4%) who strongly agreed, followed by 23 respondents (17.8%) who agreed, 5 respondents (3.9%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.39. This shows that respondents tend to agree with item X1.11.

Of answers from the item, X1.12 were 32 respondents (24.8%) who strongly agreed, followed by 23 respondents (17.8%) who agreed, 9 respondents (7.0%) stated neutral, 0 respondents (0, 0%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.36. This shows that respondents tend to agree with item X1.12.

It can be concluded that from the above respondent answers with 12 statement items, the highest average of each item is in items X1.4 and X1.9 with an average of 4.48. The average total score of head leadership indicators.

### 4.3 Description of teacher competency variables

The teacher competency variable items of research instruments are 8 items statement items with 5 choices so that the item score can be determined as follows. The detailed description of teacher competence “SMP Negeri 12 Malang” based on predetermined criteria can be seen in Table 3 as follows:

**Table 3: Description of teacher competency variables**

Statement item	Answer Score										total	Average
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree			
	F	%	F	%	F	%	F	%	F	%		
X2.1	12	9,3%	41	31,8%	6	4,7%	5	3,9%	0	0,0%	252	3,94
X2.2	31	24,0%	27	20,9%	3	2,3%	3	2,3%	0	0,0%	278	4,34
X2.3	25	19,4%	24	18,6%	12	9,3%	3	2,3%	0	0,0%	263	4,11
X2.4	26	20,2%	31	24,0%	6	4,7%	1	0,8%	0	0,0%	274	4,28
X2.5	47	36,4%	14	10,9%	3	2,3%	0	0,0%	0	0,0%	300	4,69
X2.6	30	23,3%	24	18,6%	9	7,0%	1	0,8%	0	0,0%	275	4,30
X2.7	32	24,8%	16	12,4%	13	10,1%	3	2,3%	0	0,0%	269	4,20
X2.8	32	24,0%	16	12,4%	15	11,6%	2	1,6%	0	0,0%	273	4,27
<b>Average Teacher Competency Score</b>												4,27

Source: data processing with SPSS version 16.2020

On the SPSS calculations in table 3, above it can be seen that from the distribution of the respondents' respondents about teacher competence (X2) for item X2.1, they strongly agree with 12 respondents (9.3%), followed by 41 respondents (31.8%) who stated agree and 6 respondents (4.7%) who stated neutral and 5 respondents (3.9%) who stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 3.94 this shows that the respondent tends to be neutral towards item X2.1

Of answers from the item, X2.2 were 31 respondents (24.0%) who strongly agreed, followed by 27 respondents (20.9%) who agreed, 3 respondents (2.3%) stated neutral, 3 respondents (2, 3%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.34. This shows that respondents tend to agree with item X2.2

Of answers from the item, X2.3 were 25 respondents (19.4%) who strongly agreed, followed by 24 respondents (18.6%) who agreed, 12 respondents (9.3%) stated neutral, 3 respondents (2, 3%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.11. This shows that respondents tend to agree with item X2.3.

Of answers from the item, X2.4 were 26 respondents (20.2%) who strongly agreed, followed by 31 respondents (24.0%) who agreed, 6 respondents (4.7%) stated neutral, 1 respondent (0, 8%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.28. This shows that respondents tend to agree with item X2.4.

Of answers from the item, X2.5 were 47 respondents (36.4%) who strongly agreed, followed by 14 respondents (10.9%) who agreed, 3 respondents (2.3%) stated neutral, 0 respondents (0, 0%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.69. This shows that respondents tend to agree with item X2.5.

Of answers from the item, X2.6 were 30 respondents (23.3%) who strongly agreed, followed by 24 respondents (18.6%) who agreed, 9 respondents (7.0%) stated neutral, 1 respondent (0, 8%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.30. This shows that respondents tend to agree with item X2.6.

Of answers from the item, X2.7 were 32 respondents (24.8%) who strongly agreed, followed by 16 respondents (12.4%) who agreed, 13 respondents (10.1%) stated neutral, 3 respondents (2, 3%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.20. This shows that respondents tend to agree with item X2.7.

Of answers from the item, X2.8 were 32 respondents (24.0%) who strongly agreed, followed by 16 respondents (21.4%) who agreed, 15 respondents (11.6%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.27. This shows that respondents tend to agree with item X2.8.

It can be concluded that from the above respondent answers with 8 statement items, the highest average of each item is in the item, X2.5, and with an average of 4.69. The average score of total principals' leadership indicators (X1) was 4.27. This shows that respondents tend to agree that they can contribute to the quality of education.

**4.4 Description of variable educational infrastructure**

Variable educational infrastructure variable items of research instruments are 8 items statement items with 5 choices so that the item score can be determined as follows. The detailed description of educational infrastructure “SMP Negeri 12 Malang” based on predetermined criteria can be seen in Table 4 as follows:

**Table 4: Description of variable educational infrastructure**

Statement itemn	Answer Score										total	Average
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree			
	F	%	F	%	F	%	F	%	F	%		
X3.1	30	23,3%	22	17,1%	11	8,5%	1	0,8%	0	0,0%	273	4,27
X3.2	39	30,2%	21	16,3%	2	1,6%	2	1,6%	0	0,0%	289	4,52
X3.3	40	31,0%	16	12,4%	8	6,2%	0	0,0%	0	0,0%	288	4,50
X3.4	33	25,6%	20	15,5%	11	8,5%	0	0,0%	0	0,0%	278	4,34
X3.5	41	31,8%	20	15,5%	2	1,6%	1	0,8%	0	0,0%	293	4,58
X3.6	37	28,7%	19	14,7%	6	4,7%	2	1,6%	0	0,0%	283	4,42
X3.7	33	25,6%	21	16,3%	9	7,0%	1	0,8%	0	0,0%	278	4,34
X3.8	33	25,6%	18	14,0%	7	5,4%	6	4,7%	0	0,0%	270	4,22
<b>Average score of educational infrastructure</b>												4,40

Source: data processing with SPSS version 16.2020

Onthe SPSS calculation in table 4, above it can be seen that from the distribution of respondents' respondents about educational infrastructure (X3) for item X3.1, they strongly agree with 30 respondents (23.3%), followed by 22 respondents (17.1%) ) which stated agree and 11 respondents (8.5%) stated neutral and 1 respondent (0.8%) stated disagreed and 0 respondents (0.0%) stated strongly disagreed with an average score of 4, 27 this shows that respondents tend to agree with item X3.1.

Of answers from the item, X3.2 were 39 respondents (30.2%) who strongly agreed, followed by 21 respondents (16.3%) who agreed, 2 respondents (1.6%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.52. This shows that respondents tend to agree with item X3.2.

Of answers from the item, X3.3 were 40 respondents (31.0%) who strongly agreed, followed by 16 respondents (12.4%) who agreed, 8 respondents (6.2%) stated neutral, 0 respondents (0, 0%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.50. This shows that respondents tend to agree with item X3.3.

Of answers from the item, X3.4 were 33 respondents (25.6%) who strongly agreed, followed by 20 respondents (15.5%) who agreed, 11 respondents (8.5%) stated neutral, 0 respondents (0, 0%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.34. This shows that respondents tend to agree with item X3.4.

Of answers from the item, X3.5 were 41 respondents (31.8%) who strongly agreed, followed by 20 respondents (15.5%) who agreed, 2 respondents (1.6%) stated neutral, 1 respondent (0, 8%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.58. This shows that respondents tend to agree with item X3.5.

Of answers from the item, X3.6 were 37 respondents (28.7%) who strongly agreed, followed by 19 respondents (14.7%) who agreed, 6 respondents (4.7%) stated neutral, 2 respondents (1, 6%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.42. This shows that respondents tend to agree with item X3.6.

Of answers from the item, X3.7 were 33 respondents (25.6%) who strongly agreed, followed by 21 respondents (16.3%) who agreed, 9 respondents (7.0%) stated neutral, 1 respondent (0, 8%) stated disagree and 0 respondents (0.0%) who stated strongly disagree with an average score of 4.34. This shows that respondents tend to agree with item X3.7.

Of answers from the item, X3.8 were 33 respondents (25.6%) who strongly agreed, followed by 18 respondents (14.0%) who agreed, 7 respondents (5.4%) stated neutral, 6 respondents (4, 7%) stated disagree and 0 respondents (0.0%) who strongly disagreed with an average score of 4.22. This shows that respondents tend to agree with item X3.8.

It can be concluded that from the above respondent answers with 8 statement items, the highest average of each item is in the item, X3.5, and with an average of 4.58. The average total score of school principals' leadership indicators (X1) was 4.40. This shows that respondents tend to agree that they can contribute to the quality of education.

#### 4.5 The results of multiple linear regression analysis

**Table5. Regression Test Results with Education Quality Variable as Dependent Variable**

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.826	4.764		1.643	.106
	Principal Leadership X1	.164	.069	.290	2.369	.021
	Teacher Competence X2	.275	.115	.295	2.402	.019
	Education Quality X3	.184	.077	.257	2.392	.020

Source: Data processing with SPSS version 16. 2020

From the results of the calculation of table 5 we get the Multiple Linear Regression equation with the following formula:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

$$Y = 7.826 + 0.164 X_1 + 0.275 X_2 + 0.184 X_3$$

The equation above shows that the constant is 7,826. Thus if the independent variable Principal's Leadership, Teacher Competence, and educational infrastructure is of constant value, a quality education value of 7.826 is obtained

Based on the multiple linear regression equation above, the regression coefficients for each of each variable can be explained as follows:

- 1) The regression coefficient of the principal's leadership variable on the quality of education in Malang 12 Public Middle School is obtained  $\beta_1 = 0.164$  and has a positive sign, meaning that if the higher the principal's leadership in Malang 12 State Junior High School, it will certainly be followed by improving the quality of education.
- 2) The regression coefficient of teacher competency variables on the quality of education in Malang 12 Public Middle School is obtained  $\beta_2 = 0.275$  and has a positive meaning, this shows that if the higher the competency of teachers in Malang 12 State Junior High School, surely it will be followed by improving the quality of education.
- 3) The regression coefficient of the variable educational infrastructure for the quality of education in Malang 12 Public Middle School is obtained  $\beta_3 = 0.184$  and is positive, this indicates that the higher the educational infrastructure in Malang 12 Junior High School, it will certainly be followed by improving the quality of education.

#### 4.6 Hypothesis Testing Results

##### 1) Testing the first hypothesis (F test)

Based on the results of the F test for multiple linear analyzes can be seen in the following table 6:

**Table 6: Testing the first hypothesis (F test)**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	282.325	3	94.108	9.098	.000 <sup>a</sup>
	Residual	620.613	60	10.344		
	Total	902.938	63			
a. Predictors: (Constant), Educational infrastructure X3, Principal leadership X2, Teacher Competency X2						
b. Dependent Variable: Quality of Education Y						

Source: Data processing with SPSS version 16. 2020

Based on the SPSS calculation in table 6, the F test value (9.098) is greater than the alpha F table 0.05 (df1 = k-1 = 2, df2 = n - k = 64 - 4 = 60) of 2.36 . From the analysis carried out obtained in the table above, it is found that the calculated F value is 9.098,> F table 2.36 or a significance value of 0.000 <0.05, then Ha is accepted, meaning that the principal's leadership variables, teacher competence, and educational infrastructure simultaneously influence a significant impact on the quality of education. Thus the hypothesis is tested or statistically proven.

**2) Second hypothesis testing (t-test)**

Based on the results of the t-test of multiple linear analysis can be seen in the following table 7:

**Table 7: Second hypothesis testing (t-test)**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardize d Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.826	4.764		1.643	.106
	Principal Leadership X1	.164	.069	.290	2.369	.021
	Teacher Competence X2	.275	.115	.295	2.402	.019
	Education Quality X3	.184	.077	.257	2.392	.020

Source: Data processing with SPSS version 16. 2020

Based on the SPSS calculation in table 7, the T table value (1.999) is greater than the alpha T table 0.05 (df1 = k-1 = 2, df2 = n - k = 64 - 2 = 62) of 1.999.

Based on the analysis carried out above with partial acceptance and rejection of hypothesis testing, then based on the Sig t value in table 2. Results of Regression Coefficient Analysis the following results are obtained:

- 1) Determined the value of t count 2.369> t table 1.999 and a significance value of 0.021 <0.05 then Ha is accepted, meaning that the principal's leadership variable partially has a significant effect on the quality of education.
- 2) Determined the value of t count 2.402> t table 1.999 and a significance value of 0.019 <0.05 then Ha is accepted, meaning that the teacher competency variable partially has a significant effect on the quality of education
- 3) Determined the value of t arithmetic 2.339> t table 1.999 and a significance value of 0.020 <0.05 then Ha is accepted, meaning that the teacher competency variable partially has a significant effect on the quality of education.

Thus the second hypothesis is tested / statistically proven. Then it can be concluded that the principal's leadership variables, teacher competency, and educational infrastructure partially have a significant effect on the quality of education.

### 3) **Hypothesis testing 3 (dominant influence)**

Based on table 2 above that to test the third hypothesis which states that teacher competence has a dominant influence on the quality of education by looking at the significance and value of the regression coefficient the influence of the principal's leadership variables, teacher competence, and educational infrastructure, and determine the greatest coefficient value of the variable - the variable. From the results of calculations in table 2 above that have been revealed previously shows that the coefficient of each variable is the leadership of school principals and educational infrastructure significantly influence the quality of education, while the teacher competency variable has the greatest influence on the quality of education so that the dominant variable influences on the quality of education is the competence of teachers. Thus, the hypothesis is proven and statistically tested

## **V. Discussion**

### **5.1 Effect of Principal Leadership on the quality of education**

The results showed that of the 64 respondents more respondents who expressed responses about the principal's leadership strongly agreed that as many as 40 people were manifested with 62.5%, who stated that the agreed responses were 30 people manifested 46.9% and those who stated a neutral response were 12 people manifested by 18.8% while those stating disagreement responses 5 people manifested 7.8%.

From the results of data analysis, it is known that for the principal's leadership variable, the value of count is  $2.369 > t$  table 1.998 with a significance level of 0.021. Because the accompanying significance is less than 0.05 ( $0.021 < 0.05$ ), the research hypothesis was not rejected. From the calculation of effective contributions, it is also known that the contribution to the variable quality of education is 16.40%. So it can be concluded that the principal's leadership simultaneously has a significant effect on the quality of education.

This supports the research of Budi Susanto & Mattalata (2018) entitled *The Effect of Principal Leadership, School Climate, and Teacher Competence on the Quality of Education in MTS in Jeneponto Regency*. Based on the results of hypothesis testing with the calculation of the F test and the T-test using the SPSS computational program for windows release 20.0 obtained an F-count of 21,849 with a significant price of 0,000 and an F-table value of 3.15 is obtained so that the F-calculated value is greater than F-table ( $21.849 > 3.15$ ), and positive value, and significant value less than 0.05. Based on these results, hypothesis 4 can be stated that the principal's leadership, school climate, and teacher competence have a significant effect together on the quality of education. The results of the t-test analysis with calculations using the SPSS program then the calculated value of t is 1690. Because t count ( $1690 > t$  table (1669)) then  $H_0$  is rejected means that the principal's leadership has a positive and significant effect partially on the quality of education in Madrasah Tsanawiyah schools ( Mts) in the Tarowang District, Jeneponto Regency.

### **5.2 Effect of Teacher Competence in Education Quality**

The results showed that of the 64 respondents more respondents who expressed responses about teacher competence strongly agree that as many as 47 people were manifested with 73.4%, stated that agreed responses were 41 people manifested 64.1% and those who stated neutral responses were 15 people in manifested by 23.4% while those who expressed disagreement responses 5 people manifested 7.8%.

From the results of data analysis, it is known that the variable of teacher competence obtained t value of  $2.402 >$  from t table 1.998 with a significance level of 0.019 Because the accompanying significance is less than 0.05 ( $0.019 < 0.05$ ), the research hypothesis is not rejected. From the calculation of effective contributions, it is also known that the contribution, to the educational quality variable, is 27.50%. So it can be concluded that teacher competence jointly has a significant effect on the quality of education in Malang 12th Middle School.

This supports research from Hasmah, (2017) entitled *The Effect of the Competence of Educators on Improving the Quality of Education in "SMP Negeri 5 Duampanua"*, Pinrang Regency. Based on the results of the inferential statistical analysis shows that there is an influence of the competence of educators on the quality of education in "SMP Negeri 5 Duampanua", Pinrang Regency.

### **5.3 Effect of Educational Infrastructure on Quality of Education**

The results showed that of the 64 respondents more respondents who expressed responses about teacher competence strongly agreed that as many as 41 people were manifested with 64.1%, who stated that the agreed responses were 21 people manifested 32.8% and those who stated neutral responses were 11 people in manifested by 17.2% while those who expressed disagreement responded 6 people manifested 9.4%

From the results of data analysis, it is known that for educational infrastructure variables the value of t arithmetic is  $2.392 >$  from t table 1,998 with a significance level of 0.020 Because the accompanying significance is less than 0.05 ( $0.020 < 0.05$ ), the research hypothesis is not rejected. From the calculation of effective contributions, it is also known that the contribution, to the variable quality of education (Y), is 18.40%.

So it can be concluded that the competency of teachers together has a significant effect on the quality of education in Malang 12th Middle School.

This supports research from Eko Djatmiko (2006) entitled *The Effect of Principal Leadership and Infrastructure on the Performance of Semarang City Public Middle School Teachers*. The results of this study indicate that the leadership of school principals affect the performance of Semarang City Junior High School teachers by 58.4%, Infrastructure facilities affect teacher performance by 36.9%. While the results of the principal's leadership variables and infrastructure influence teacher performance by 65.1%. The results of the t-test analysis on the leadership factor showed that the absolute value of t arithmetic (9,376) was greater than the table (2.0395) then H<sub>0</sub> was rejected and H<sub>1</sub> was accepted. This means that the leadership variable has a partial effect on teacher performance. The results of the t-test analysis on the infrastructure factors show the absolute value of t arithmetic (10,357) is greater than the t table (2.0395) then H<sub>0</sub> is rejected and H<sub>1</sub> is accepted. This means that the variable infrastructure has a partial effect on teacher performance. The results of the analysis of the F test on leadership factors and infrastructure → show the results of the calculation of F count of 73,871 while the F table of 3,9113. Because F-arithmetic is greater than the F table, then H<sub>0</sub> is rejected and H<sub>1</sub> is accepted. This shows that the leadership and infrastructure variables influence simultaneously teacher performance.

## **VI. Conclusion**

The principal's leadership partially has a significant effect on the quality of education in Malang 12th Middle School. Thus it can be concluded that the increasing quality of education and the role of the principal, will improve teacher performance which will have an impact on improving the quality of education in schools.

- 1) Teacher competency partially has a significant effect on the quality of education in Malang 12th Middle School. Thus it can be concluded that the more competent the teacher is, the better the results will be obtained and will have a positive impact on the quality of education in schools and the learning process in the classroom.
- 2) Educational infrastructure partially has a significant effect on the quality of education in Malang 12th Middle School. Thus it can be concluded that the means of targeting is very important in the teaching and learning process that will take place in the classroom and outside the classroom with complete and adequate facilities to improve the quality of education in schools.
- 3) Principal Leadership, Teacher Competence, and Educational Infrastructure Facilities simultaneously have a significant effect on the quality of education in "SMP Negeri 12 Malang". This indicates that if a school wants to improve the quality of its education, it should be an improvement in the Principal's Leadership factors, Teacher Competence, and educational facilities which are carried out jointly. This indicates that the quality of education is strongly influenced by the Principal's Leadership, teacher competence, and educational infrastructure, so these three important components must be paid close attention to get better results.

## **VII.Suggestion**

- 1) The influence of the principal's leadership on the quality of education in the school is advised by the principal to cooperate between teachers to achieve optimal quality education. If the principal's leadership increases, the quality of education can also improve.
- 2) Teacher competence influences the quality of education in "SMP Negeri 12 Malang". Principals should try to pay attention to the teaching and learning process of students and pay attention and develop educators' competencies, especially pedagogic competencies, personality competencies, social competencies, and professional competencies because they are getting better the competence of educators will improve the quality of education in terms of student achievement.
- 3) To pay attention and maintain facilities and infrastructure at school, the principal conducts supervision of the maintenance of facilities and infrastructure must take care of properly and more intensively to give awareness to all school members to maintain the facilities and infrastructure in the school.
- 4) For further researchers, researchers suggest continuing similar research by looking at other factors that can influence to improve the quality of education in schools.

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