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Teacher Performance, Facilities and Student Achievement: Does Principal's Leadership Matter?

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Abstract

This study aims to investigate the role of principal's leadership toward teacher performance, as well as to examine the role of school facilities and student achievement. Using structural equation modeling, the findings indicate that the principal's leadership plays a pivotal role in explaining teacher performance and school facilities. However, this study noted that both teacher performance and school facilities cannot be act as a mediator variable.

Keywords: principal leadership, teacher performance, school facilities, student achievement

Introduction

Education is a planned, directional, systematic, structured, measurable process to encourage, direct, and manage people's human enhancement (Hallinger, 2018). Education is essentially a formally organized education process based on hierarchical and tier structures (Oloolube, 2017). The school as a place to acquire knowledge is a system that has a component intertwined with each other, and all related components should provide benefits and influences for the achievement of the objectives of an organization. These main components include school committees, principals, educators or teachers, curriculum, school environment, adequate facilities, infrastructures, other education professionals who strongly support school objectives and students' accomplishment (Burkhauser, 2017). Hence, we argue that appropriate those supporting components will lead to educational success.

In addition to the facilities, human resources also play a pivotal role in organizational success. In educational circumstances, human resources involve two main actors: the school principal and teachers. A school principal has an essential role in engaging student learning achievements and educational success because their position is central. Therefore, school principal should have the ability and readiness to influence, encourage, engage, direct as attempts to achieve a predetermined goal (Gentiluici & Muto, 2007). Bodnarchuk (2016) added that school principal has a major role in ensuring the quality of learning (Darling-Hammond et al., 2019).

A teacher is also instrumental in determining the quality of school graduates. To promote quality graduates, the teachers are required with high quality and achievement, according to the competence owned by a teacher. Teachers' competency includes pedagogic competence, personality competence, social competence, and professional competence obtained through professional education (Hakim, 2015; Sudarwanto & Sulistyowati, 2019). Therefore, it may be

stated that each teacher must own the mastery of four competencies to become a professional educator. Teachers' competency can be interpreted as the knowledge, skills, and attitudes displayed in the form of intelligent and responsible behavior that a teacher owns by a teacher in carrying out his profession (Murkatik et al., 2020). A teacher must have the competence to master a subject and interact socially with fellow students, fellow teachers, and principals. Darling-Hammond (2000) remarked that a qualified teacher can teach students effectively according to existing constraints, resources, and the environment. In accordance with the teacher's competence, it will impact the teacher's performance.

The environment is closely related to the facilities and infrastructure available in the school for ongoing learning. Facilities and infrastructure support the success of the efforts undertaken in public services, especially the school. If both are not met, all activities performed will not obtain the expected results according to the plan. It also affects students' ability to learn and supports the quality of student learning. The school can facilitate buildings, classrooms, desks, chairs, and media teaching tools (Montrieux et al., 2015).

This study provides three main contributions. First, it highlights the literature on what factors affecting students' achievement from the management sides that are missing in the prior studies. The existing studies on students' achievement are focusing on the method or model used in the classroom. The unique study in Indonesia due to the biggest unemployment donors are vocational school graduates (BPS, 2018). East Java province produces the highest number of graduates in Indonesia for vocational school, especially in Surabaya. Second, the Indonesian government has provided a high amount of budget for the certification program, so that it needs to gain an understanding of the impact of teachers' certification and students' achievement. Third, this study offers the government how to improve students' accomplishments, particularly from the vocational schools' perspectives.

Literature Review

Leadership occurs when a person influences their followers to accept the request without the use of coercion. Through the ability to influence, a leader forms and uses their subordinates' power and authority. In acquaintance with leadership behavior, Farahnak et al. (2020) suggested that leaders' behavior tends towards the interests of subordinates. Therefore, the characteristics of the leader's behavior in relation to subordinates are related to hospitality, supporting and defending subordinates, willing to hear subordinates, accepting subordinate proposals, thinking about subordinates' welfare at his or her level (Xu et al., 2017).

Meanwhile, achievement refers to which period is set with several possibilities, such as standard targets, goals, or criteria. The teacher results from work that is far away by becoming an organization for standardization or size, time, and equal to existing norms and ethics (Hargreaves, 2019). The team of an organization is always many factors. While there are several dimensions for teachers of the race mistreated in a teacher model, strategy plan until the availability means a good teacher formulate indicators, strategies, steps to link between the basics and make a right and proper plan. According to Roos Breines et al. (2019), educational infrastructure is all moving and immobile objects needed to support the teaching and learning process's implementation, either directly or indirectly.

In addition, facilities and infrastructure are closely linked with students' accomplishments. According to Asyrofahnti et al. (2018), the school principals' management of facilities includes the availability and utilization of learning resources for teachers, the availability of learning for students, the utilization of learning resources by students to arrangement of the rooms owned. From the previous explanation, the research hypothesis as follows: H₁: there is an influence of school principal leadership on teacher performance H₂: there is the influence of principal's leadership on H₃ facilities and infrastructure: there is an influence of teacher performance on student achievement H₄: there is an influence of

infrastructure on student achievement H5: there is an influence of principal's leadership on student achievement through teacher performance H6: there is an influence of principal's leadership on student achievement through facilities and infrastructure.

Methods

Study Design

This research involved a quantitative method with the explanatory approach to obtain a deeper understanding of the relationship between variables. The research was conducted in the vocational school in Surabaya. This study engaged about 304 students and 98 teachers at Vocational High School in Surabaya of East Java. The data were gathered from questionnaires given to respondents. The variable was divided into two: principal's leadership as an exogenous variable, while teacher performance, facilities and infrastructure, student achievement act as an endogenous variable. The leadership in this study refers to the headmaster's ability to manage the school based on the skills possessed. Besides, teacher performance refers to the result of work that has been achieved by the teacher is based on standardization or size and time that is adjusted to the type of work and in accordance with established norms and ethics. The facilities and infrastructure in the educational process are directly used for the teaching and learning process, such as the library, skills practice room, and laboratory. Student achievement in this study refers to a person's real ability to learn as a result of doing an effort from certain activities and measurable results. To measure the learning achievement, the value is taken from the student's daily replay of the value of the subject matter.

Measurements

Instruments in this study adopted the Likert scale with various indicators about the principal's leadership, teacher performance, and infrastructure. In more detail, the principal's leadership was measured by several indicators such as the principal as an educator, the principal as a manager, the principal as administrator, the principal as supervisor, principal as a leader, the principal as a motivator and innovator. Meanwhile, school facilities were proxied by educational equipment, learning and teaching media, classrooms, library and laboratory. In addition, teacher performance was explained by the ability to develop learning plans, carry out learning, perform interpersonal relationships, assess learning outcomes and implement enrichment programs. Lastly, students' achievement was proxied by student's daily scores and evaluations of the subject matter of automation and office governance.

Data Analysis

This study elaborated a test for research instruments—a trial of the instrument's items performed on the study. Therefore, the results of the trial are sought for validity and reliability. The validity and reliability test were conducted at Vocational High School teacher in Surabaya. Furthermore, the data were analyzed using Warp-PLS Software. For hypothesis, it was conducted by bootstrap resampling method developed by Geisser (1974); Stone (1964). The test statistics used are the statistical t-test, with statistical hypotheses as follows: statistical hypotheses for outer models: $H_0: \lambda_i = 0$ versus $H_1: \lambda_i \neq 0$. Statistical hypothesis for inner models: the influence of latent exogenous variables on endogenous is: $H_0: \beta_i = 0$ versus $H_1: \beta_i \neq 0$. Statistical hypothesis for inner models: the influence of latent endogenous variables on endogenous are: $H_0: \beta_i = 0$ versus $H_1: \beta_i \neq 0$. The application of the resampling method allows the validity of free distributed data, does not require normal distribution assumptions, and does not require large samples.

Results and Discussion

The results of the goodness of fit test can be seen in Table 1. The goodness of fit calculation indicated that the relationship model between variables built in this study had been fitted. Furthermore, each indicator's test calculation used in each variable in this study shows the loading factor (See Table 2).

Table 1
The Goodness of Fit

No.	Model Fit and Quality Indices	Model Fit Criteria	Analysis Results	Description
1	Average path coefficient (APC)	$P < 0.05$	0.323 ($P < 0.001$)	Qualify for a Fit model
2	Average R-squared (ARS)	$P < 0.05$	0.204 ($P = 0.009$)	Qualify for a Fit model
3	Average adjusted R-squared (AARS)	$P < 0.05$	0.192 ($P = 0.012$)	Qualify for a Fit model
4	Average block VIF (AVIF)	acceptable if ≤ 5 , ideally ≤ 3.3	1.013	Ideal
5	Average full collinearity VIF (AFVIF)	acceptable if ≤ 5 , ideally ≤ 3.3	1.407	Ideal
6	Tenenhaus GoF (GoF)	small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36	0.335	Medium
7	Sympson's paradox ratio (SPR)	acceptable if ≥ 0.7 , ideally = 1	1.000	Ideal
8	R-squared contribution ratio (RSCR)	acceptable if ≥ 0.9 , ideally = 1	1.000	Ideal
9	Statistical suppression ratio (SSR)	acceptable if ≥ 0.7	1.000	Accepted
10	Nonlinear bivariate causality direction ratio (NLBCDR)	acceptable if ≥ 0.7	0.750	Accepted

Table 2
The Variable Profile

No.	Indicator	Loading Factor	Average Score	Advice
1	X1.1	0.793	4.5	Maintained
2	X1.2	0.776	4.2	Maintained
3	X1.3	0.818	4.2	Maintained
4	X1.4	0.782	4.3	Maintained
5	X1.5	0.813	4	Maintained
6	X1.6	0.794	4.1	Maintained
7	X1.7	0.581	3.8	Maintained
8	Y1.1	0.792	4.5	Maintained
9	Y1.2	0.839	4.4	Maintained
10	Y1.3	0.742	4	Maintained
11	Y1.4	0.816	4.2	Maintained
12	Y1.5	0.659	4.2	Maintained
13	Y2.1	0.913	3.9	Immediately Upgraded / Repaired
14	Y2.2	0.938	4	Maintained
15	Y2.3	0.919	4.2	Maintained

16	Y2.4	0.879	3.7	Immediately Upgraded / Repaired
17	Y2.5	0.835	3.6	Immediately Upgraded / Repaired

When the loading factor is getting larger, this indicates that the indicator is turning stronger, reflecting or becoming an important indicator in the variable. From the several variables, the principal's leadership is the most considerable variable (X_1), with an important indicator is the principal as administrator ($X_{1.3}$) with a factor of 0818 in good condition so that it should be maintained. The principal's leadership variable (Y_1) with an important indicator is the ability to implement learning ($Y_{1.2}$) with a payload factor of 0.839 with good conditions to be guarded. Variable infrastructure means (Y_2) with the highest contribution indicator is the education media ($Y_{2.2}$) with a load factor of 0.938 with good condition so it should be maintained (see Figure 1).

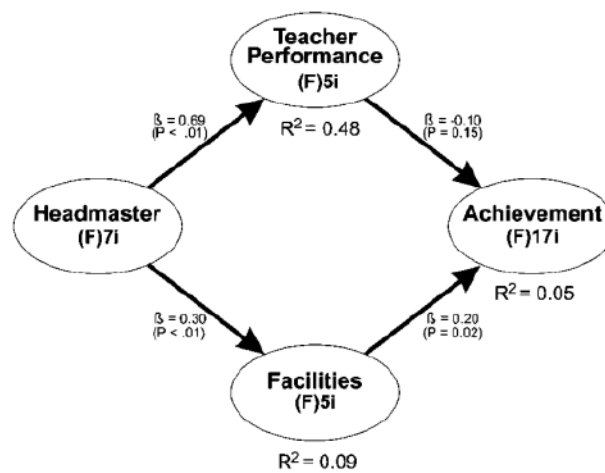


Figure 1
Direct Influence Between Variables

Table 3
Relationships Between Variables

No.	Relationship Between Variables		Path coefficient	P-value	Description
1	School principals	Teacher performance (Y1)	0.689	0.001	Significant
2	School principals (X1)	Facilities and Infrastructure (Y2)	0.301	0.001	Significant
3	Teacher performance (Y1)	Student Achievement (Y3)	0.100	0.155	Not Significant
4	Facilities and Infrastructure (Y2)	Student Achievement (Y3)	0.200	0.019	Significant

Based on Table 3, it is known that the influence of principal leadership (X_1) on teacher performance (Y_1) has a track coefficient of 0.689 and $p < 0.001$. Given p-value smaller than

0.01, it is highly significant, so the hypothesis is accepted. The positively marked path coefficient (0.689) indicates that the better the principals' leadership, the improved teacher performance. Additionally, principal leadership affects facilities and infrastructure (Y₂) with a line coefficient of 0.301 and p-value < 0.001. Based on the calculation, it can be seen that the relationship between teacher performance and student achievement has a p-value of 0.155, meaning that there is no correlation between variables. Lastly, the influence of facilities and structure on students' achievement has been proxied with a p-value of 0.019, implying connectivity between variables. On the other hand, the indirect influence of the variables is illustrated in Table 4.

Table 4
Mediation Two Segments

No.	Explanatory variable	Mediation variables	Response variables	Indirect influence path coefficient	P-value	Description
1	School principals (X ₁)	teacher performance (Y ₁)	Student Achievement (Y ₃)	-0.053	0.165	Not Mediation
2	School principals (X ₁)	Facilities and Infrastructure (Y ₂)	Student Achievement (Y ₃)	0.057	0.149	Not Mediation

Table 4 provides information about the direct influence between variables. From the table, it can be known that the relationship between school principals and students' achievement through teacher performance has a coefficient of -0.053 with a p-value of 0.165. This implies that teacher performance cannot be taken as a mediator variable. Indeed, from the table, facilities and infrastructure cannot explain the relationship between school principals and students' achievement due to the p-value is 0.149.

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Principal's Leadership and Teacher Performance

The hypothesis testing results showed that the principal's leadership had a significant positive influence with the coefficient 0.689 (p-value of < 0.001) on teacher performance. This suggests that the more appropriate the principal's leadership, it leads to the teacher performance. This finding corresponds to the theory propounded by Moriano et al. (2014); Razak et al. (2018) stating that leadership influences without compulsion to motivate individuals in achieving goals. Through the ability to influence, a leader establishes and uses his followers' power and authority. Concerning the conduct of leadership, Van Dierendonck et al. (2014) argued that leaders' behavior tends to subordinate interests. The characteristics of the leader's behavior in relation to subordinates are friendliness, sustaining and defending subordinates, willing to listen to subordinates, accepting subordinate proposals, thinking about subordinate welfare, and treating subordinates on the same level as themselves (Li et al., 2019; Girma, 2016). Thus, respect should be given to teachers, provide them with training to exceed their performance level, and salaries should be designed according to their capabilities, experience and skills regarding job (Inayatullah & Jehangir, 2012).

Indeed, this result agrees with Solomon and Steyn (2017) which showed that leadership has a high relationship with our fellow human beings either directly or indirectly. There are also diagonal or outbound interactions. All of these things have the same meaning of maintaining and developing the organization so that the achievement of organizational objectives is most optimal. The highest indicator influences this research, which is the principal as Administrator with load factor 0.818. This is consistent with Sopiah et al. (2020), which suggested that leadership affects significantly both partially and simultaneously on employee

performance. The task of teaching is the principal task of the principal. The headmaster is more devoted to thinking of a smooth teaching and administration function.

The school principal's leadership has a decisive position in the school to influence others so that others want to follow the purpose of the school or organization. According to Burkhauser (2017), the principal has policies in improving the quality of the school. Therefore, the leadership of the headmaster has a major role in school progress. Similarly, Rahman et al. (2020) states that the principal's leadership has a positive effect on the teacher's performance and is efficient in improving the quality of learning. The findings of this research are also relevant to the research results of Fitria et al. (2017), which showed that school leadership influences junior high school teachers' performance. In line with the research results, Sebastian and Allensworth (2012) stated that from the hypothesis test found there was a positive influence on the principal's leadership skills towards teacher performance.

Regarding the principal's leadership according to Wahyuddin (2017), a new paradigm saw the duties and functions of the headmaster as educators, managers, administrators, supervisors, leaders, innovators and motivators. Even in the future the headmaster should become a figure and mediator for the development of society and environment. It can be said the function of the principal as a manager in managing school activities in cooperation with the stakeholders in the school, has innovation and creativity and is responsible and responsible for the school programs that run, critical thinking and solving problems at school. The surrounding environment, capable of becoming politicians and diplomats in taking.

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Principal's Leadership and School Facilities

The results of the hypothesis testing showed that the principal's leadership (X_1) had a significant positive influence with the coefficient of 0.301 (the p-value of < 0.001) on facilities and infrastructure (Y_2). It implies that the better the principal's leadership will promote better school facilities. The findings are in accordance with Renata et al. (2018) which mentioned that the headmaster creates a quality enhancement model for learning by identifying the needs, strengths, weaknesses of the school's opportunities, and devising plans with school members that empower resources to vision, mission, school values, and continue to conduct studies for every performance that has been produced to continuously improve quality. In this case, the role of school principal's is necessary to improve the quality of the school by maintaining and resolving the shortage of facilities and learning infrastructure. With the advancement of science and technology, supporting school facilities should be equipped for learning to run smoothly and in accordance with the curriculum in force.

Similarly, Yasin et al. (2010) remarked that education infrastructure is a place or building space to implement a teaching program, including workshops, practice halls, laboratories, and libraries. In addition, Barret et al. (2019), the planning of educational facilities and infrastructure is the process of thinking about and building a program of procurement of schools in the form of education infrastructure in the future to achieve certain objectives. Meanwhile, Mohammed (2016) stated that procurement is a series of activities providing various types of education facilities and infrastructure in accordance with the need to achieve educational objectives. Burhanudin (2017) stating that the role of the headmaster should be able to create a good teaching and learning situation and able to manage the school services factories of school services and educational facilities so that teachers and students have the satisfaction of enjoying working conditions, manage faculty and students, build a curriculum that meets the needs of children, and manage educational records.

Teacher Performance and Its Impact on Student Achievement

The hypothesis testing estimation shows that the teacher performance had a negative and insignificant influence with a coefficient of 0.100 (p-value > 0.001) on student

achievement. This suggests that higher or lower teacher performance will not affect student achievement. The findings in accordance with the theory expressed by Ramli et al. (2018); Mahmoudi and Mahmoudi (2015); Papanastasiou (2000) stated that the factors influencing the achievement of learning are divided into two groups, namely: (1) internal factors include physiology and psychology. Physiological factors are physical and sensory conditions while psychological factors of talent, interest, intelligence, motivation, and cognitive ability; (2) external factors include the environment and instrumental. Environmental factors in the form of natural and social environment, while the instrumental factor in the form of curriculum/teaching materials, teachers, facilities and administration or management. Alghazo and Alghazo (2015) found that the family's social-economic condition, parental education level, and parental work significantly affect learning achievement.

Meanwhile, Sirait (2016) stated that junior high school teachers' performance has no significant effect. The teacher's commitment to teaching must demonstrate the policy. It is also according to Kimani et al. (2013), which stated that professional qualifications and teaching experience have no significant effect on students' achievement in middle school. Therefore, the increasing performance of teachers will not affect the academic achievement of students. The vocational school's learning process ideally is demanded to apply a learning approach that can provide learning experience to the students in the mastery of competency or working ability under business and industry demands. The learning approach consists of competency-based training, production-based training, and industry-based training. Applying this learning approach is expected to provide a learning experience to the students in the mastery of all competencies that must be mastered according to national competency standards to take test level at the end of the semester. Unfortunately, this condition is not appropriate for the situation in Surabaya.

The students of the administrative office in Surabaya are mostly 75 percent of private schools in Surabaya. This shows that the characteristics in the seriousness of learning and their skills are not following the skills expected. Besides, teachers who teach at the administrative office in Surabaya are mostly not graduates under office administration competence but rather graduates from majors that do not make linear with the administration office. Such conditions cause learning to the competency of office administration skills not running with maximum. This finding suggests that educational institutions need to have certified teachers following the expertise in office administration as its role in improving the quality of education for the better. Teachers in creating learning tools will be more motivated by creating collaborative learning strategies by combining various learning models and methods of learning in carrying out teacher functions and tasks during teaching that will have an impact on students' activities, skills, and learning achievements. This is in accordance with the results of the study (Suratman et al. 2020) which explained that the certification of teachers can improve the competence of professionals in teaching, ranging from mastery of teaching materials, implementation of learning plans and the utilisation of educational media.

The Influence of School Facilities on Student Achievement

Hypothesized testing results show that facilities and infrastructure have a positive and significant influence with a coefficient of 0.200 (p-value of < 0.05) on student learning achievement. This finding shows that the better the facilities and infrastructure, student achievement will increase. The findings are in consistent with the theory of facilities according to Stadler-Altmann (2015), saying that all equipment, furniture, and materials are directly used in the education process in the school. Furthermore, educational facilities are tools and equipment that are directly used in the process of learning teaching at school (Ghavifekr & Rosdy, 2015). Therefore, educational facilities and infrastructure are two of the supporting components and important for the implementation of the learning process and the

absence of education facility in the educational process will lead to failure in the education process.

Learning achievement is the mastery of knowledge or skills developed by subjects that are usually indicated by the value of the exam or the value given by the teacher (Paolini, 2015). Meanwhile, Wijaya and Bukhori (2017) mentioned that there are several factors that affect students' success in achieving good learning outcomes, including intelligence factors, talent factor, interest and attention factors, motive factors, learning factors, factors of the family environment, schools factors, the achievement of learning is the result of the ability of a person in a particular field in achieving the level of maturity that can be measured directly with the test form of numbers or description. Similarly, Nepal (2016) which shows that there is a significant influence on the facilities and infrastructure of student learning outcomes. The same results according to Riawan (2017) student learning facilities and motivations together contribute significantly to students' learning outcomes.

This finding also in agreement with a prior study by Sirait (2016), which remarked that the performance of junior high school teachers has no significant effect. The teacher's commitment to teaching should demonstrate the policy. It is also consistent with the research by Kimani et al. (2013), pointing out that professional qualifications and teaching experience do not significantly affect student achievement. Therefore, performance enhancement teachers will not affect students' academic achievements.

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The Influence of Principal's Leadership on Student Achievement Through Teacher Performance

The results of the hypothesis testing show that the principal leadership (10) had a negative and insignificant influence with a coefficient of 0.053 with $P = 0.165$ on student achievement (Y3) through teacher performance (Y1). This indicates that teacher performance cannot play as a mediation variable. The findings are in consistent with the theory expressed by Marks and Printy (2003), the performance is not separated from the principal's leadership influence. Leadership is an activity that affects people, so they like trying to reach the group's goals. According to Sopiah et al. (2020), performance results from a person's work seen from quality, quantity, uptime, and cooperation to achieve the organization's objectives. The operational aspect shows that social competence is crucial in enhancing teacher performance. Social competence is the ability for teachers to communicate and interact effectively with students, fellow educators, education staff, parents or guardians, and the surrounding community.

With social competence, teachers can balance themselves with the surrounding environment because a teacher needs self-adjustment and acceptance in the environment to act effectively in saying that in controlling his or her environment. If the teacher's social competence level is higher, the teacher can work together and have a joyful soul that can support the learning atmosphere. A teacher must also have the ability to communicate socially, both with students, fellow teachers, all school citizens, and the community. Indeed, Ross (2006) stating that there is no direct influence of leadership towards accomplishment through performance. Substantive contributions suggest that teachers' beliefs over their abilities and commitments will impact student achievement. At the moment, there needs to be a firm commitment to provide the best learning for his or her students. A teacher must also have the competence that is suitable for teaching skills that will contribute skills in the appropriate learning. Teachers must develop their competence through training following their teaching field and then transfer knowledge to students and obtain good learning outcomes. A teacher's strong commitment is needed to provide the best learning for his students. Teachers must develop their competencies through training by their teaching fields and then transfer knowledge to students and obtain good learning outcomes.

The Influence of Principal's Leadership on Student Achievement Through School Facilities

The estimation of the hypothesis testing showed that the principal's leadership (X_1) was not significant with a coefficient of 0.057 with $p\text{-value} = 0.149$ on Student achievement (Y_3) through facilities and infrastructure (Y_2). This indicates that the school facilities and infrastructures (Y_2) cannot act as intermediate variables. However, the findings are consistent with the preliminary study by Uline and Tschannen-Moran (2008) which mentioned that the quality of the school facilities is not related to the leadership of the headmaster and also the leadership style of the principal is not related to student achievement. The school principal's leadership style has an indirect role in enhancing student achievement. Meanwhile, the opinion Komariah (2004) remarked that the management of facilities by the principal includes the availability and use of learning resources for teachers, availability of learning for students, utilization of learning resources by students, and arrangements their room. A well-appointed facility will showcase the comfort, beauty and ease of use. This does not match the findings in this study. It means that not only facilities and infrastructure that should be available but it should adjust with the needs of students and its development.

Facilities and infrastructures provide an excellent contribution to the progress of learning the vocational school students. In fact, the condition of facilities and infrastructure in schools for vocational office administration does not support students in practicing office administration expertise. This condition happens mostly in private vocational schools in Surabaya of East Java. The weak laboratory that fits the expertise dramatically affects students' readiness in dealing with the workplace.

Conclusion

This study concluded that the principal's leadership directly drives teacher performance as well as promoting the development of school facilities. However, this study's surprising finding is that teacher performance failed in stimulating vocational student achievement in Indonesia. Meanwhile, school facilities play a pivotal role in influencing students' accomplishments. This implies that better facilities and infrastructure provided by the school will also raise the students' achievements. The principal's leadership on student achievement through teacher performance has no significant influence, so teacher performance is not a mediation variable. The school's leadership on student achievement through facilities and infrastructure has no significant influence, so facilities and infrastructure are not intermediate variables. This study suggests the need for commitment from teachers to provide the best learning by elaborating various learning models so that vocational school students plunge into the world of work have the skills needed. Although the data were collected in numerous vocational schools in Surabaya of East Java, these findings cannot be generalized to represent the real conditions in all vocational schools in the region. Therefore, future scholars may involve several cities in Indonesia by elaborating a mixed method to understand educational phenomena better.

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Article Summary

This study has two primary purposes of this study. First, this research aims to investigate the role of principal's leadership toward teacher performance, school facilities and student achievement. Second, it is intended to ascertain the impact of school facilities and teacher performance on student achievement. This study applied a quantitative method using structural equation modeling. The data in this study were gathered from questionnaires given to respondents. Furthermore, the data were analyzed using Warp-PLS Software. The findings indicate that the principal's leadership positively influences teacher performance and school facilities. In addition, teacher performance has no relationship with student achievement, while school facilities have an impact to student achievement. Lastly, the principal leadership through teacher performance and school facilities does not correlation with student performance, hence both teacher performance and school facilities cannot be act as a mediator variable.

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