

THE INFLUENCE OF TEACHER QUALITY, TEACHERS' PERCEPTIONS OF INFRASTRUCTURE FACILITIES, AND PARTNER INDUSTRIES ON THE ACHIEVEMENT OF THE GOALS OF SMK CENTER OF EXCELLENCE IN YOGYAKARTA CITY

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ABSTRACT

One of the causes of many unemployed is that graduates do not have competencies that match the competencies needed by the world of work. The applied SMK curriculum is not in line with the competence of the business world or the industrial world (link and match), so it has not been able to meet the demands of the world of work, the business world, and the industrial world. Smk revitalization is needed to achieve a center of excellence school. The study aims to analyze the influence of (1) the quality of teachers in achieving the goals of Center of Excellence Vocational School, (2) the teachers' perception of infrastructure in achieving the goals of Center of Excellence Vocational School, (3) the teachers' perceptions of partner industries in achieving the goals of Center of Excellent Vocational School, and (4) the quality of human resources, teachers' perception of infrastructure and the partner industries support together in achieving the goals of Center of Excellence Vocational School. This study was conducted in five Vocational Schools of the Center of Excellence in Yogyakarta. The sampling technique in this research used a proportional sampling technique. The research sample consisted of 45 teachers. The method of this research was a descriptive correlation. Questionnaires collected the data, and their validity and reliability were tested. The data were analyzed by correlation analysis, multiple regression analysis, and variant analysis using the SPSS version 25.0 program. The research shows that: (1) teachers' quality significantly influences achieving the goals of the Center of Excellence Vocational School. It is shown by the p-value chi-square 0,000 ($p < 0.05$), (2) the teachers' perception of infrastructure has a significant effect on the achievement of the goals of the Center of Excellence Vocational School. It is shown by the p-value chi-square 0,000 ($p < 0.05$), (3) the teachers' perception of the partner industries does not significantly influence the achievement of the goals of the Center of Excellent Vocational School, which is shown by the p-value chi-square 0.192 ($p < 0.05$), and (4) variables of human resources and infrastructures simultaneously have an effect in the variable of achieving the goals of the Center of Excellence Vocational School by 33.2%.

Keywords: Teachers, infrastructure, partner industry, Center of Excellence Vocational School

1.0 INTRODUCTION

The number of unemployed people in Indonesia reached 8.75 million people or 6.26% of the total working age population of Indonesia amounting to 205.36 million. Based on data from

the Central Statistics Agency as of February 2022, the unemployment rate is the most from vocational graduates compared to graduates from other education levels. One of the causes of many unemployed is that graduates do not have competencies that match the competencies needed by the world of work. The SMK curriculum applied is not in line with the competence of the business world or the industrial world (link and match) so that it has not been able to meet the demands of the world of work, the business world, and the industrial world (Afrita et al., 2018).

The revitalization of SMK is an effort to improve school performance in order to achieve the highest level or excellence, so it deserves to be called a center of excellence school with criteria 1) Input, consisting of students, teachers, curriculum, infrastructure, finance, management organizations, and partner industries; (2) process, consisting of the implementation of learning, curriculum adjustment, implementation Teaching Factory, school teacher development, school capacity development, DUDI partnership empowerment, work culture implementation, student certification and support raising; (3) Output, consisting of the quality of graduates according to graduate competency standards and the needs of DUDI, and graduate certificates according to the level of the Indonesian National Qualifications Framework; (4) Outcome, consisting of the absorption and independence of graduates, the increasing ability of graduates to develop themselves, the development of production unit capacity, Teaching Factory, teachers, schools, and support gains; and (5) impact, consisting of increasing public trust, and the realization of independent schools (Kemendikbudristek, 2021).

To be able to achieve the target criteria and objectives of SMK center of excellence, teachers who have the ability and expertise are needed. The competence of teachers must be in line with the direction of the organization's vision and mission (Sudarmanto, 2009). Leonard stated that teachers have an influence on performance improvement, having a clause relationship between teacher competence and increased performance accountability realized in teacher capacity building programs (Adawiyah & Rifqi, 2022). Furthermore, Nurbaeti in her research explained that the quality of teachers has a significant influence on improving the quality of schools and teachers are very important in achieving organizational goals. All the potentials possessed by teachers are very influential on efforts to achieve the goals of SMK center of excellence (Nurbaeti, 2019).

Vocational High Schools as educational institutions that aim to create skilled and work-ready teachers certainly require facilities and infrastructure as well as cooperation with parties outside the school in order to harmonize school programs through cooperation with partner industries (Mahmudah & Santosa, 2021). Suyetno explained that the supporting factors for the occurrence link and match namely the cooperative relationship between the school and the business world and the industrial world (Suyetno & Nurmalasari, 2021). Program link and match It must start from planning and implementation in the form of teaching and learning processes, and evaluation.

Previous research has revealed many teachers' influence on performance and productivity, but has not found the influence of teachers in achieving the goals of center of excellence schools (Mahmudah, 2021). Similarly, research on infrastructure facilities has revealed a lot of research on infrastructure management with learning effectiveness, but no one has revealed research that can realize a center of excellence school. The same with research on the role of partner

industries to realize the School of Excellence has yet to be discovered. Based on this description, researchers want to conduct research with the aim of determining the influence of teacher quality, teacher perceptions of infrastructure facilities and partner industries on achieving the goals of SMK Center of Excellence.

2.0 RESEARCH METHODS

This type of research is descriptive correlational with a cross sectional design. The study population was all teachers of SMK PK in Yogyakarta City. The sample in this study amounted to 45 respondents taken by propotional sampling technique. Data analysis uses descriptive analysis, person correlation, and multiple regression. In addition, the independent variables of this study are teacher quality, teacher perceptions of infrastructure facilities and partner industries, while the dependent variable is the achievement of the goals of SMK center of excellence. The instruments used to measure all variables are teacher quality questionnaires, infrastructure, partner industries and vocational centers of excellence with validity (r count >0.294) and reliability (r critical >0.60). The number of questions for the teacher questionnaire was 24 question items, the infrastructure questionnaire as many as 10 question items, the partner industry questionnaire as many as 21 items and the SMK center of excellence questionnaire as many as 5 questions. All questionnaires were measured on a Likert scale with alternative answers lowest 1 and highest 4.

3.0 RESULTS AND DISCUSSION

Descriptive analysis was conducted in this study to see the assumptions of normality, linearity, multicollinearity and autocorrelation. The results of the normality test using the shapiro wilk test showed that the teacher quality variable ($p = 0.234$) and the partner industry quality variable ($p = 0.638$) had a normal data distribution, because the p value > 0.05 . Meanwhile, the variable quality of infrastructure facilities ($p = 0.032$) and the variable of SMK center of excellence ($p = 0.003$) have abnormal data distribution. The linearity analysis shows that the variables of teacher quality ($p = 0.314$), the quality of infrastructure facilities ($p = 0.991$) and the quality variables of partner industries ($p = 0.414$) have a linear relationship with the variables of SMK PK. The multicollinearity test showed that all variables used as predictors of regression models showed VIF values were quite small, where all were below 10 and the tolerance values of all variables were above 0.10. This means that the independent variables used in the study did not show any symptoms of multicollinearity and in the autocorrelation test using Durbin Watson showed that the Durbin-Watson value (d) was 1.773, it shows that the value of d is between the value of D_u and $4-D_u$, so it can be concluded that there is no autocorrelation.

Pearson correlation analysis was conducted to determine the relationship between teacher quality variables, teacher perceptions of infrastructure facilities and teacher perception variables about partner industries on achieving the goals of SMK PK in Yogyakarta City. These results are presented in table 1 below:

Table 1. Pearson Correlation Results Table

No	Variable	SMK Center of Excellence	
		<i>Pearson Correlation</i>	<i>P value</i>

1	Teacher	0,505	0,000
2	Infrastructure	0,514	0,000
3	Partner industries	0,195	0,192

The pearson correlation test shows that there is a relationship between teacher quality ($p = 0.000$) and teacher perception of infrastructure facilities ($p = 0.000$) on the achievement of the goals of SMK PK in the city of Yogyakarta which is shown by the p value of < 0.05 . Meanwhile, the variable of teacher perception of partner industries showed no significant relationship ($p = 0.192$) to the achievement of the goals of SMK PK in the city of Yogyakarta which was shown by the value of p value > 0.05 , namely $0.192 > 0.05$. The results also showed a positive correlation direction with the level of closeness of the strong relationship on the r value of the pearson correlation test.

Multiple Linear Regression Test

Multivariate analysis was conducted to determine the most influential variables partially (T-test) and simultaneously (F-test) on the variables of achieving the goals of SMK PK in the city of Yogyakarta. In this analysis, multiple regression statistical tests (linear) are used. Multiple regression tests are used because the results of the normality test assumption using the Shapiro Wilk test show some normally distributed data ($p > 0.05$) and all variables have a linear relationship ($p > 0.05$), and there are no symptoms of multicollinearity and autocorrelation. In bivariate analysis using the pearson correlation test also shows that all independent variables have a p value of < 0.25 , so that all independent variables can be continued in multivariate tests (linear multiple regression).

T Test

The T Test was conducted to examine the influence of teacher variables, infrastructure facilities and partner industries on the variables of achieving the goals of SMK PK partially. The hypothesis in the study was tested using multiple linear regression analysis models. The test results can be seen in table 2 below:

Table 2. Test Results T Tets

Type	Variable	Regression Coefficient	t-count	P value
1	Teacher	0,077	1,975	0,055
	Infrastructure	0,192	2,137	0,039
	Partner industries	0,002	0,072	0,943
2	Teacher	0,077	2,067	0,045
	Infrastructure	0,193	2,180	0,035

The factor that is most related and has a significant influence on the variable of achieving the goals of SMK Pusat Keunggulan in the city of Yogyakarta is the variable of infrastructure facilities shown by the test results in multiple linear regression Obtained value p -value is 0.035 in the second model and has a partial influence on the direction of positive correlation in table 1. Infrastructure facilities that are standardized with the needs of the industrial world are

supporting factors for the implementation of an effective and efficient learning process, as well as the skills of students are more competent (Pudyastuti et al., 2022; Rahmawati, 2022). The results also show that the facilities or the existence of supporting facilities and infrastructure can improve the achievement of effective learning implementation, school capacity development, and the quality of graduates in accordance with competence (Hanim, 2022; I Made Indra et al., 2022). The result research is in line with research conducted by Alwi (2022) which shows that the condition of facilities and infrastructure at SMK Bina Sejahtera 4 Bogor has met applicable standards and can support existing vocational learning, and Output From the students themselves have been able to compete with graduates from other schools (Alwi et al., 2022; Hanim et al., 2022). The availability of infrastructure facilities is one of the important components that must be met to support the education system, it is always updated, there needs to be planning, procurement, distribution, maintenance, inventory and elimination (Hartoni, Amirudin, 2018; Irwanto & Saputra, 2021; Palah et al., 2022; Yoto et al., 2022).

The teacher variable also has a partial effect on the variable of achieving the objectives of SMK PK as shown by the p value of 0.045 ($p < 0.05$) in table 1. The results also show that there is a positive correlation between the quality of teachers and the achievement of the goals of SMK PK where the better the quality of teachers owned by SMK including teachers who have the ability to manage classroom management and are reliable, will increase the chances of achieving SMK PK in the city of Yogyakarta (Subaidi et al., 2021). This is in accordance with the results of research conducted by Firman and Bahdin Nur Tanjung which explained that the development of teachers who have quality in their fields is needed in the center of vocational excellence with efforts to assist in the latest facilities and infrastructure (Firman, 2021; Tanjung, 2020). Mardi's research also explained that SMK PK requires diverse stakeholders, both from student input, parents, and teachers' ability to prepare the learning process which includes preparing, implementing, and assessing the learning system in SMK PK schools (Mardi, 2021). Resources are one of the determinants of the success or failure of PK PK school achievement (Waruwu et al., 2022). To be able to achieve these goals and objectives, competent, reliable, and visionary teachers are needed (Casmudi et al., 2022; Hartati, 2020; Wulaningrum & Hadi, 2019).

F Test

The F Test is performed to determine whether all independent variables included in the model have a simultaneous influence on the dependent variable. The hypothesis in the study was tested using multiple linear regression analysis models. The test results can be seen in Table 3 below:

Table 3. F Tets Test Results

Type		<i>Sum of Squares</i>	<i>Mean Square</i>	F	Sig.
1	<i>Regression</i>	53,484	17,828	6,792	0,001
	<i>Residuals</i>	107,627	2,625		
	Total	161,111			
2	<i>Regression</i>	53,471	26,735	10,432	0,000

<i>Residuals</i>	107,640	2,563
Total	161,111	

R Test

The coefficient of determination test (R²) is performed to determine how much the variance of the dependent variable can be explained by the independent variable. The test results can be seen in table 4:

Table 4. R Tets Test Results

Type	Variable	R Square	Std. Error of the Estimate
1	Teacher Infrastructure Partner industries	0,332	1,620
2	Teacher Infrastructure	0,332	1,600

The results showed that the variables of teachers, infrastructure, and partner industries had a simultaneous effect on the variables of achieving the goals of SMK PK shown by the results of the F test with a p-value value 0.001 ($p < 0.05$) in table 3. The Ministry of Education and Culture explained that two of the seven objectives of the SMK PK program are to strengthen the quality of vocational teachers, including school supervisors, principals, and teachers to achieve management and teaching and learning processes based on the world of work and improve the infrastructure of student learning practices that meet the world of work standards. Educational infrastructure facilities are managed starting from planning needs, conducting inventories, storing, maintaining, using and removing, and arranging land, equipment buildings, and furniture is very important to support the smooth running of education in addition to being supported by qualified and competent educators (Anjaswati, R., Sumardjoko, B., & Maryadi, 2013). The second model of multiple regression also shows that the variables of teachers and infrastructure facilities together affect the variable of achieving the goals of SMK PK with an R Value Square amounted to 0.332 in table 4. The model also explains that simultaneously the variables of teachers and infrastructure can affect the achievement of the goals of SMK PK by 33.3%. The research that has been done is supported by research conducted by I Made Indra which explains that The SMK PK program realizes Merdeka Belajar which focuses on strengthening teachers and juxtaposing the world of education with the industrial world, preparation of strategy plans, implementation of vision and mission implementation and evaluation of effective activities efficiently achieving SMK PK. SMK PK is one of the activities to achieve and meet the target of a SMK to become SMK PK (Made Indra & Novika, 2022). Vocational High Schools that participate in the SMK PK program by paying attention to the quality of teachers and infrastructure will have an impact on school development, namely to accelerate the achievement of graduates who have a work culture character, in accordance with the criteria of the business / industry / work world that have been determined, principals and teachers in leading the change of SMK to increase their competence

and have the opportunity to become driving or affecting schools for other SMK (Kemendikbudristek, 2021).

4.0 CONCLUSION

The variables that affect the achievement of the goals of SMK PK in the city of Yogyakarta are the variables of teacher quality and the variables of facilities and infrastructure, while the variables of teacher perception of partner industries do not significantly affect the achievement of the goals of SMK PK in the city of Yogyakarta. Research illustrates that partner industries that still have suboptimal values are the number of teachers who do internships in the industry is still low below 5 teachers in one year, the number of guest teachers from industry who attend school is still low below 3 people in one year, the number of learning hours from guest teachers has not reached 50 hours per semester, The absorption of graduates in partner industries is still low below 75%, and partner industries have not provided donations, grants, or scholarships to teachers for competency improvement. Simultaneously, teacher variables, teacher perceptions of infrastructure facilities and partner industries affect the variables of achieving the goals of SMK PK in the city of Yogyakarta

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