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THE RELATIONSHIP BETWEEN TEACHER PEDAGOGICAL COMPETENCE, CAREER EXPECTATIONS, AND SCHOOL INFRASTRUCTURE AND LEARNING OUTCOMES OF GRADE VI STUDENTS

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Abstract. This study aims to find out how much the relationship between teacher pedagogic competence, career expectations, and school infrastructure has to the learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency. This research is ex post facto with a population of 282 students. Determination of the sample through random sampling technique in order to obtain a sample of 162 students. Data is collected through questionnaires and document study. Data analysis uses multiple regression and partial correlation. The results of the study show that: 1) there is a significant relationship between teacher pedagogical competence and student learning outcomes; 2) there is a significant relationship between career expectations and student learning outcomes; 3) there is a significant relationship between school infrastructure and student learning outcomes; and 4) taken together, there is a significant relationship between teacher pedagogical competence, career expectations, and school infrastructure with student learning outcomes.

INTRODUCTION

The development of education continues to occur over time. Humans are required to have various skills and new ways of working in order to survive. For this reason, the implementation of education must also undergo adjustments in order to produce superior human resources and be able to face all the challenges that exist. As a world body that regulates education, UNESCO recommends that the development of education in the 21st century must refer to the 4 pillars of education (Priscilla & Yudhyarta, 2021), namely learning to know, students learn knowledge according to their level of education. Learning to do, students train and develop skills by combining the knowledge mastered with practice (law of practice). Learning to be, students learn gradually to become complete individuals who understand the meaning of life and vice versa in order to be able to live a better life. Learning to live together, students can learn to understand the meaning of life with other people. The four pillars of education can be realised through a learning process carried out in schools (Widana, et al., 2022). The learning process itself is an effort to condition students so that they can learn effectively, and students are able to understand all the knowledge, skills and attitudes they must have.

The teacher acts as a learning executor having responsibility for the learning objectives to be achieved optimally. Sundari (2017) states that in learning activities the teacher is expected to be a facilitator who can also motivate students in learning. The learning activities carried out by the teacher should be able to give pleasure to students, so that learning becomes more meaningful and able to achieve the learning objectives that have been set. The achievement of learning objectives indicates the success of the learning process carried out by the teacher, one of which can be seen from the learning outcomes that have been achieved by students (Sumandya et al., 2022). The process of assessing learning outcomes can provide information to teachers about student progress in an effort to achieve their learning goals through learning activities. Furthermore, from this information the teacher can arrange and foster further student activities, both for the whole class and individually (Devi, 2021).

However, student learning outcomes that have not been optimal can be seen in the reality of current learning in class VI SD Gugus III, Kediri District, Tabanan Regency. This is evidenced by the average student learning outcomes of 68.75. In the learning process teachers tend to dominate learning activities and become the main source of learning activities. This makes students less developed in the learning process. Some students also look passive and think that learning is learning that is not fun because the material is only rote. Based on the observations that have been made, there are several factors that are predicted to influence the learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency, namely: teacher pedagogical competence, career expectations, and school infrastructure.

Competence is a combination of knowledge, attitudes and skills that are manifested in the form of actions. Competence is also said to be a combination of abilities, knowledge, skills, attitudes, tools, understanding, appreciation and expectations that underlie a person's characteristics to work to achieve quality standards in work (Sagala, 2008). For a teacher, competence is very important. One of the competencies that must be possessed by a teacher is pedagogical competence. Pedagogic competence is the teacher's ability to manage learning which includes understanding students, designing and implementing learning, evaluating learning outcomes and developing students to actualize their various potentials (Wahyudi, 2012). Pedagogic competence is the teacher's understanding of students, planning, implementing learning, evaluating learning outcomes, and developing students to actualise their potential (Suciana, 2018). Teachers who have good pedagogical competence, of course, will be able to plan, implement and evaluate the learning process well, so that the learning process provided by the teacher to students becomes innovative, creative and fun for students (Widana, 2022).

In addition to the teacher's pedagogical competency factor, another factor that influences student learning outcomes is student career expectations. Expectation means hope (Indriani et al., 2021). Hope is the basic form of belief in something that is desired or obtained in the future. In general, hope is in the form of an abstract, invisible, but it is believed that one day it will come true. This will be a positive suggestion for students' minds. If expectations are related to careers, according to Kusumastuti (2015) career expectations are a job or profession expected by students with the knowledge and skills they possess. Students who have high career expectations, of course, will try to study diligently, so that their hopes or aspirations can be realised in the future. This gives suggestions to students to expend all their abilities in learning, because they believe that achieving goals requires hard work and has good insight and skills (Artawan, 2020).

Furthermore, the third factor that is predicted to influence student learning outcomes is school infrastructure. Infrastructure is a tool to support success in public services (Level, 2020). If these two things are not available then all activities carried out will be disrupted and will not be able to achieve the results as planned. With regard to educational facilities and infrastructure, Susiani et al. (2022) have distinguished between educational facilities and educational infrastructure. Educational facilities are all equipment, materials and furniture that are directly used in the educational process at school. In this regard, educational infrastructure is all basic equipment that indirectly supports the implementation of the educational process in schools (Devi, 2021).

Schools that have complete educational facilities and infrastructure can of course be believed to be able to provide better educational services than schools that have incomplete facilities and infrastructure. This is because schools that have complete facilities and infrastructure can certainly provide a better learning process and make it easier for teachers to transfer knowledge to students. This of course will have a positive impact on student learning outcomes at school. Thus, it is suspected that teacher pedagogic competence, career expectations, and school infrastructure are predicted to contribute to student learning outcomes. This is supported by several previous studies which state that pedagogical competence, student learning motivation and educational infrastructure in schools have a significant influence on social studies learning achievement (Falentina et al., 2019). Research conducted by Milarika et al. (2018) states that there is a direct effect of career expectations on biology learning outcomes. Research conducted by Kawisari, et al. (2019) concluded that there is a significant contribution of career expectations to practicum learning outcomes in class X students of the Culinary Department at SMK Negeri 2 Singaraja. Research conducted by Qomariyah & Wulandari (2021) found that learning facilities and infrastructure had a significant impact on student learning scores.

However, the extent of the relationship between teacher pedagogical competence, career advancement, and school infrastructure and student learning outcomes in grade VI SD in Cluster III Keldiri Subdistrict, Tabanan Regency is not yet known with certainty. This is because there has never been any research on this matter in Cluster III, Keldiri Subdistrict, Tabanan Regency.

METHOD

This research is ex post facto research. The population in this study is Grade VI elementary school students in Cluster III, Kediri District, Tabanan Regency in the academic year 2022/2023, with a total of 282 students. The determination of the research sample is carried out by using random sampling technique. Given the relatively large population, the sample size is determined using the Morgan table so that a sample of 162 students is randomly selected from various schools in Cluster III, Kediri District, Tabanan Regency. In analysing the data, linear regression is used based on the functional or causal relationship of one independent variable with one dependent variable (Sugiyono, 2010). The research data concerns four variables consisting of one dependent variable, namely student learning outcomes (Y), and three independent variables, namely: 1) teacher pedagogic competence (X1), 2) career expectations (X2), and 3) school infrastructure (X3).

The method of collecting data in this study is the survey method and the document study method. Data on teacher pedagogic competence, career expectations, and school infrastructure are collected using a questionnaire. While data on student learning outcomes

are taken from students' midterm test scores at school. The instrument used has met the requirements after testing the validity and reliability. To test the hypotheses that have been formulated, the data that has been collected is first analysed. In conducting data analysis for this study, three stages are carried out, namely: 1) data description stage, 2) analysis requirements testing stage, 3) hypothesis testing stage. The research data are then analysed using Multiple Linear Regression. In calculations, data analysis uses the help of the SPSS 20.0 for Windows program.

RESULTS AND DISCUSSION

The results in this study are the data/information obtained from: an overview of teacher pedagogic competence, career expectations, school infrastructure, and learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency. These data are first analysed descriptively by calculating the mean, median, mode (the most frequently occurring data), standard deviation, and variance. Based on the description of the data, the results are as shown in Table 1 below.

Table 1. Results of Data Description of Teacher Pedagogic Competence, Career Expectations, School Infrastructure, and Student Learning Outcomes

Statistics	X_1	X_2	X_3	Y
Average	121.23	112.37	123.33	85.53
Median	121.00	112.00	124.00	85.00
Mode	117.00	107.00	124.00	90.00
Deviation Standard	11.99	12.64	5.38	5.46
Variety	143.85	159.69	28.91	29.77
Range	45.00	43.00	24.00	20.00
Minimum Score	98.00	90.00	108.00	75.00
Maximum Score	143.00	133.00	132.00	95.00

Teacher pedagogic competency data with the highest score achieved is 143, while the lowest score achieved is 98. From the results of the calculation of central tendency, the average is 121.23, the standard deviation is 11.99, the variance is 143.85, the mode is 117, and a median of 121. Meanwhile, the career expectation score obtained the highest score achieved is 133, while the lowest score achieved is 88. From the results of the calculation of central tendency, the average is 112.37, the standard deviation is 12.64, the variance is 159.69, the mode is 107, and the median is 112. Next, on the school infrastructure score, the highest score achieved is 132, while the lowest score achieved is 108. From the results of the calculation of central tendency, the average is 123.33, the deviation the standard is 5.38, the variance is 28.91, the mode is 124, and the median is 124. Furthermore, the learning outcome variable data obtained from the results of measuring the respondents shows that the highest score achieved is 95, while the lowest score achieved is 75. The results of calculating the central tendency of the learning outcomes variable averages 85.53, standard deviation is 5.46, variance is 29.77, mode is 90, and median is 85.

The data distribution normality test is carried out using the Kolmogorov-Smirnov test. The results of the normality test can be seen in Table 2 below.

Table 2. Data Distribution Normality Test

Variable	Kolmogorov-Smirnov[a]		
	Statistics	df	Sig.
Teacher pedagogical competence	0.076	162	0.053

Variable	Kolmogorov-Smirnov[a]		
	Statistics	df	Sig.
Career expectations	0.109	162	0.070
School infrastructure	0.068	162	0.066
Learning outcomes	0.144	162	0.105

The results of testing the normality of the data distribution show that all variables are normally distributed because the price is sig. on Kolmogorov-Smirnov > 0.05. This means that the scores of the teacher's pedagogic competency variables, career expectations, school infrastructure and learning outcomes are normally distributed.

The linearity test is carried out to determine the relationship between the dependent variable and each independent variable. The results of the linearity test can be seen in Table 3, below.

Table 3. Linearity Test with F Test at Significance Level α = 0.05

Variable Pair		F. Linearity		F. Deviation from Linearity		Note
Independent	Dependent	Calculation	Sig.	Calculation	Sig.	
X_1	Y	162.949	0.000	1.230	0.193	Linear
X_2	Y	172.810	0.000	0.950	0.562	Linear
X_3	Y	101.740	0.000	0.783	0.736	Linear

The results of the linearity test analysis of the regression line show F deviation from linearity with a significance of > 0.05. Thus, it can be concluded that the correlation between teacher pedagogic competency scores, career expectations, and school infrastructure and learning outcomes has a linear relationship.

Multicollinearity testing can be done by using the VIF (variance inflation factor) benchmark value and the correlation coefficient between independent variables. The results of the Multicollinearity test can be seen in Table 4 below.

Table 4. Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Teacher pedagogical competence	0.899	1.347
	Career expectations	0.897	1.366
	School infrastructure	0.924	1.101

Based on the calculations, it turns out that the tolerance value is > 0.800 and the VIF value is close to 1 for all independent variables, so it can be concluded that in the regression between the independent variables the teacher's pedagogic competency variables, career expectations, and school infrastructure with learning outcomes, there is no multicollinearity between the independent variables .

Heteroscedasticity test was carried out using a linear regression model. Based on the analysis that has been done, the following results are obtained.

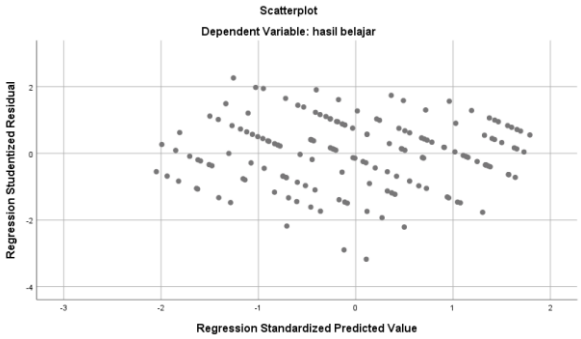

Figure 1. Heteroscedasticity test

From the graphic image, it can be seen that the dots spread randomly, do not form a clear pattern and spread out. This means that there is a constant variance, so that the regression model is suitable for predicting the relationship between teacher pedagogic competence, career expectations, and school infrastructure and learning outcomes.

The results of the autocorrelation test of the teacher's pedagogic competency variables, career expectations, school infrastructure, and learning outcomes, can be seen as follows.

Table 5. Variable Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,776[a]	0,603	0,595	3,57078	1,482

From Table 5 above, it can be seen that the Durbin-Watson value is 1.482 and is in the range of values -2 to 2, so it can be said that there is no autocorrelation in all instrument variables. Thus, it can be concluded that in the regression between the independent variables of teacher pedagogic competence, career expectations, and school infrastructure and learning outcomes there is no autocorrelation.

The results of testing the first hypothesis show that $\hat{y}$ = 46.930 + 0.318X1 with Freg = 153.670 with a relationship of 49% is significant and linear. The effective contribution of the teacher's pedagogic competency variable to student learning outcomes is 16.47%. Based on the correlation analysis between the teacher's pedagogic competence (X1) and learning outcomes (Y) obtained rcount = 0.700. This means that rcount = 0.700 is significant at α = 0.05 (rtable = 0.159). Thus, the null hypothesis (H0), which states that there is no significant relationship between teacher pedagogic competence and learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency, is rejected. This means that the research hypothesis (Ha) proposed, namely that there is a significant relationship between teacher pedagogic competence and learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency, is accepted. The results of testing the second hypothesis obtained that the regression model $\hat{y}$ = 50.464 + 0.312X2 with Freg = 175.042 with a relationship of 52.2% is significant and linear. The effective contribution of the career expectation variable to student learning outcomes is 26.39%. Based on the correlation analysis between career expectations (X2) and learning outcomes (Y) obtained rcount = 0.723. This means that rcount = 0.723 is significant at α = 0.05 (rtable = 0.159). Thus, the null hypothesis (H0), which states that there is no significant relationship between career expectations and learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency, is rejected. This means that

the research hypothesis (Ha) proposed, namely that there is a significant relationship between career expectations and learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency, is accepted. The results of testing the third hypothesis concludes that the regression model $\hat{y}$ = 6.816 + 0.638X3 with Freg = 104.717 with a relationship of 39.6% is significant and linear. The effective contribution of school infrastructure variables to student learning outcomes is 17.42%. That's because Freg > Ftable. Based on the correlation analysis between school infrastructure (X3) and learning outcomes (Y) obtained rcount = 0.629. This means that rcount = 0.629 is significant at α = 0.05 (rtable = 0.159). Thus the null hypothesis (H0), which states that there is no significant relationship between school infrastructure and learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency, is rejected. This means that the research hypothesis (Ha) proposed, namely that there is a significant relationship between school infrastructure and learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency, is accepted.

Testing the fourth hypothesis was carried out using multiple regression techniques and partial correlation. The results of testing the significance of the multiple regression equation concludes that the regression model $\hat{y}$ = 20.179 + 0.107X1 + 0.157X2 + 0.281X3 with Freg = 79.942 ($p < 0.05$). is significant with a relationship (Rsquare x 100) of 60.30%. Thus the null hypothesis (H0) which states that there is no significant relationship between teacher pedagogic competence, career expectations, and school infrastructure with the learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency, is rejected. This means that the research hypothesis (Ha) proposed, namely that there is a significant relationship between teacher pedagogic competence, career expectations, and school infrastructure with the learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency, is accepted. The partial correlation technique used is the second level correlation. The results of the Partial Correlation test of Variable Teacher pedagogical competence, career expectations, and school infrastructure with learning outcomes are presented in the following table.

Table 6. Partial Correlation Test of Variables of Teacher Pedagogic Competence, Career Expectations, and School Infrastructure with Learning Outcomes

Partial correlation	Correlation coefficient	t Calculation	t Table	Note
$r_{1y\text{-}23}$	0.201	2.573	1.980	Significant
$r_{2y\text{-}13}$	0.301	3.964	1.980	Significant
$r_{3y\text{-}12}$	0.328	4.363	1.980	Significant

Table. In the study of the Relationship between Teacher Pedagogic Competence and Learning Outcomes of Grade VI Elementary School Students in Cluster III, Kediri District, Tabanan Regency, it is found that there is a significant relationship between teacher pedagogical competence and learning outcomes of Grade VI SD students in Cluster III, Kediri District, Tabanan Regency. These results indicate that the better the pedagogical competence possessed by a teacher, the better the learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency. Therefore, the competencies possessed by teachers should always be improved as much as possible by following developments that occur in the world of education (Jahidi, 2016).

The results of this study are in line with the results of research conducted by Falentina et al. (2019) with the title The Influence of Teacher Pedagogic Competence, Student Learning

Motivation and Educational Infrastructure in Schools on Social Science Learning Achievement of Grade VI Cluster VI Elementary School Students in Sendang Tulungagung District with an effect of 62%. Likewise with the research by Syaidah et al. (2018) with the title The Effect of Teacher Competence on Economic Learning Outcomes at Rambipuji State High School. In his research, it is stated that the percentage influence of Teacher Pedagogic Competence on economics learning outcomes at Rambipuji State High School was 80.2%, while the remaining 19.8% is influenced by other independent variables not examined in this study.

According to Somantri (2021) pedagogic competence is the ability to manage student learning which includes understanding students, designing and implementing learning, evaluating learning outcomes and developing students to actualise their various potentials. According to him, the teacher's pedagogical competence needs to be accompanied by the teacher's ability to understand the characteristics of students, both based on moral, emotional, and intellectual aspects. This has the implication that a teacher must be able to master learning theory and learning principles, because students have different characters, traits and interests. Teachers must understand that students are unique.

In the research, it is found that there is a significant relationship between career expectations and learning outcomes. These results indicate that the better the career expectations a student has, the better the learning outcomes of class VI elementary school students in Cluster III, Kediri District, Tabanan Regency. Therefore, students' career expectations should always be considered and improved to the maximum so that learning objectives can be achieved optimally. The results of this study are also strengthened by the results of Milarika et al. (2018). In his research, it is stated that there is a direct effect of career expectations on biology learning outcomes. Furthermore, research by Kawisari et al. (2019) concludes that there is a significant contribution of career expectations to practicum learning outcomes in class X students of the Culinary Department at SMK Negeri 2 Singaraja with a correlation coefficient of 0.763, a partial correlation of 0.565 and an effective contribution of 36.42%.

Abdullah et al. (2020) states that career expectations are expectations for success in finding a good career based on abilities, experience, knowledge and expertise possessed, based on what one learns from the surrounding environment. This opinion is reinforced by Antariat et al. (2021) which states that career expectations are a job or profession expected by students with the knowledge and skills acquired by students from school. Students who have high career expectations will certainly study hard to achieve what has been aspired to or hoped for someday. Therefore, often in the learning process the teacher asks students' aspirations. Furthermore, the teacher provides motivations to students so that they can achieve their goals someday. With these motivations, students will try their best to learn to master the material provided by the teacher. This will also indirectly improve student learning outcomes at school. Therefore, it can be concluded that student career expectations have a very strong relationship strong with student learning outcomes at school.

In the study, it is also found that there is a significant relationship between school infrastructure and learning outcomes. These results indicate that the better the school infrastructure, the better the learning outcomes. Therefore, school infrastructure should always be considered and improved to the maximum extent so that the learning process carried out by teachers and students can run optimally. The results of this study are also reinforced by the results of Cintya & Nugraha's (2021) research which state that infrastructure facilities have a significant influence on student learning outcomes in Class XII

Office Management Automation at Ketintang Vocational School, Surabaya. Furthermore, Qomariyah & Wulandari (2021) find out that learning facilities and infrastructure has a significant impact on the value of student learning.

Sopian (2019) states that educational facilities are direct tools to achieve educational goals, for example: rooms, books, libraries, laboratories, and so on. Educational facilities are supporting facilities for the teaching and learning process. This opinion is reinforced by Herawati et al. (2020) who reveal that means are tools that are used directly to achieve goals, for example classrooms, books, blackboards, and others. While infrastructure is an indirect tool used to achieve goals in education, for example locations/places, school buildings, sports fields, and so on. School infrastructure is very basic and must be owned by schools in accordance with the standards set by the government. Schools that have complete infrastructure according to the demands of the times will certainly make the learning process much more effective and enjoyable for students. This is because the learning resources provided to students will be more complete than schools that have inadequate infrastructure. In addition, the existence of complete school infrastructure will be able to provide academic and non-academic services for students as a whole, so that this will make students more enthusiastic about learning, and learning outcomes can be optimally improved. Therefore, if the school wants its students to achieve optimal learning outcomes, then one of the efforts that can be made is to complete the existing infrastructure at school.

A learning is said to be successful if the learning outcomes obtained by students are in accordance with predetermined learning objectives. Nugraha e al. (2020) states that learning outcomes are the abilities possessed by students after students receive learning experiences. At school, the results of this study can be seen from the students' mastery of the subjects they take. Suratman et al. (2019) states that in general student learning outcomes are influenced by internal factors, namely factors that exist within students and external factors, namely factors that are outside the student's self. These factors are teacher pedagogic competence, career expectations, and school infrastructure.

Teacher pedagogical competence is the teacher's ability to manage learning. Teachers must be able to master the material and be able to transfer the material to students. In the process of transferring the material, the teacher must use a variety of learning methods/models that are adapted to the characteristics of students. No matter how much effort the teacher makes in the learning process, if students do not have the motivation to excel, it will not work out. One of the motivations that can encourage students to be passionate about learning is career expectations. With students having career expectations in the future, students will try to realise all their desires and aspirations through learning activities. Therefore students need to have good insight. The next factor that is no less important is school facilities and infrastructure. Facilities and infrastructure in schools are also a key to improving student learning outcomes. Schools that have complete facilities and infrastructure will certainly make learning more varied and able to support students so that it is easier for students to understand the material being studied by the teacher. Based on the explanation above, it can be concluded that teacher pedagogical competence, student career expectations, and school infrastructure together contribute significantly to student learning outcomes.

CONCLUSION

The conclusion that can be drawn based on the research that has been done is that there is a significant relationship between teacher pedagogic competence, career expectations, and school infrastructure and the learning outcomes of class VI elementary school students in

Cluster III, Kediri District, Tabanan Regency in the academic year 2022/2023. This confirms that student learning outcomes are not only influenced by factors that come from within the student but are also influenced by factors that come from outside the student's self, namely the pedagogical competence of teachers, career expectations, and school infrastructure.

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