



Analysis of teacher ability effect on student learning achievement

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ARTICLE INFO

Article history:

Received Jun 05, 2023

Revised Jun 05, 2023

Accepted Jul 05, 2023

Keywords:

Knowledge;
Tobasa Hope House;
Skill;
Student achievement;
Teacher Ability.

ABSTRACT

This study aims to determine the effect of the teacher's ability on student achievement. The population and sample in this study is at SMP Rumah Harapan Tobasa Private Middle School amounted to 420 students. The data collection method in this study was a questionnaire or questionnaire. The data analysis technique used was simple linear regression analysis, t-test and determination test. Based on the results of data processing, it is concluded that the teacher's ability had a positive and significant effect on student achievement at Rumah Harapan Tobasa Middle School. After that the coefficient of determination of the teacher's ability on student achievement is 0.434 which means that 43.4% of the variability of student achievement can be explained by the teacher's ability variable, while the remaining 56.6% is explained by other variables not examined in this study.

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INTRODUCTION

One _ component important in education is teacher. The role of the teacher is very important Because function as communicator that is convey message (material) to adopted students _ as stock student after finish his studies . Therefore the role of the teacher in teach Not yet can replaced by machines teachers , tape recorders and computers created by humans , because tool it ca n't replace the role of the teacher with regard to the elements human like attitudes , systems , values and habits . Based on regulation government No.19 of 2005 concerning National Education Standards a teacher must have qualification academic evidence as evidenced by a certificate acquired expertise _ through certification as mastery ability (competence) (Nursyam, 2018).

Especially the ability of teachers in increase quality child students , teachers need to be sensitive and responsive to changes renewal as well as knowledge knowledge and technology (Zhu et al., 2023), for that when the activity process learning going on a teacher can create interesting learning and have _ soul high spirits _ so that his students well motivated and more think creative and innovative To use support his life in Century come and in face challenges in the era of globalization (Tomaszewski et al., 2022).

In the learning process a teacher should own standard competency for the learning process teach well done. The ability of the teacher is a must own qualification academic according to the field expertise in the field science relevant to the eye subjects taught at school. Master ability will more capable create environment conducive learning , fun and more _ capable in manage class so that good impact on results Study student (Abou Naaj et al., 2023). This is what teachers are required to have ability in operate task as a educator . The ability possessed by a teacher becomes factor important in achievement performance Study student (Utomo, Puri, Suwachid, 2012).

Based on observations made _ found problem Still lack of teacher abilities include : competence pedagogic where the teacher is during the learning process Still not enough variative in use method learning , competency professional where the teacher does not relate material learning in life daily students , competence personality where the teacher often late enter class after shift time lesson sounds , and competence social where is the teacher still not enough in interact with people who can help in the learning process . With it problem the will influential to performance Study students in private junior high schools Rumah Harapan Tobasa, indicated by the lack enthusiasm student in follow learning, this is evidenced by students rowdy moment learning economy took place and there were also students who went to the cafeteria during class hours going on . Problems that arise that is low performance Study students with indicated by grades exam the middle of the economics semester year teaching 2022 still there is more from half amount whole students who got lesson economy Still get mark not enough from KKM 70. Private Middle School Tobasa Hope House is is one _ school level First private sector in the District Porsea Toba Samosir Regency, where school medium level first it has source financing that is not only originate from the foundation that houses the Harapan Tobasa Junior High School, though so, if associated with achievement Study students , improvement ability the rated not enough means . Ideally with high teacher abilities, then performance students are also better off. Teachers who have good ability _ increase performance his students.

This study analyzes whether there is influence enhancement the ability of teachers in private junior high schools Tobasa Hope House to performance Study student. Enhancement performance student is factor important as reject measuring success institution education in operate its activities. So that action to identify factor important influential _ to achievement is appropriate course of action to evaluate achievement success. As for goals from this research is to know and analyze influence teacher's ability to performance Study students in private junior high schools Tobasa Hope House.

Understanding Ability (competence) teacher

According to (Febriana, 2019) say that ability (competence) is results learning in perspective education, which includes three aspect that is knowledge, skills, and work attitudes. As characteristics inherent individual competence is part and personality relatively stable individual, can be seen, as well be measured from behavior the individual concerned at work or in various situation.

(Nuridin, D., dan Bakar, n.d.) state ability (competence) as something behavior rational to achieve the required goals in accordance with the required conditions. In other words, ability (competence) can be understood as skill or ability. Teacher competence is ability an inside teacher carry out obligations in a manner responsible answer and deserve _ Development the ability (competence) of useful teachers for all parties involved. For development teachers ability (competence) is needed to support career. For school evaluation skills (competencies) required as tool selection employee. For students, teachers who are capable in their fields more help them in go through the learning process teach.

(Astuty, 2015) explain four possible factor used to measure level ability (competence) teacher. First , the pedagogic competence (competence) which includes teacher 's ability make systems and materials learning . Second , the ability (competence) personality form attitudes and

actions of teachers during do the learning process teach . Third , social skills (competencies) that include teacher 's ability interact and communicate with students , superiors , friends , and the community . Fourth , the ability (competence) of professionals who see the extent to which the teacher understands and masters material learning (Mariska et al., 2023).

For necessities analysis teacher's duties as teacher , then many teacher abilities or teacher competencies relationship with business improve processes and results Study can grouped inside _ four abilities , namely : plan study programs teach , carry out or manage the learning process teach , assess progress of the learning process teach and master material lesson (Li & Xue, 2023). The teacher's ability or teacher's competence is a lot relationship with business improve processes and results Study (Syaidah, Umu, Suyadi, Bambang dan Ani, 2018).

Performance Study

Performance is results from something activities that have done , created , either in a way individual nor groups and attitudes somebody in finish something matter (Hamdani, 2011). Whereas performance Study is results learning achieved by students _ (Sriyanti, 2011). Hence the achievements _ Study is results achieved by a person after do change study well in school nor outside _ school .

Performance Study students need to be evaluated Because is gauge measuring success student the in follow activity Study teach (Sary, 2015). Whereas according to (Suyanto, dan Jihad, 2013) except for students , evaluation performance also useful for instructors and institutions school . In essence, this evaluation is gauge measuring achievement results as well as as tool identification to do repair next.

According to (Rahim, 2022), Achievement Study is value obtained _ student after do activity Study in period time certain . Performance Study someone according to mastery success to material stated lesson _ in form value or number after experience the learning process teach.

(Syaidah, Umu, Suyadi, Bambang dan Ani, 2018) explain exists factor external and internal factors that influence performance student. Factor external covers condition environment natural and social culture, curriculum , programs, facilities and facilities , as well as teachers. Whereas internal factors include condition physical ability _ five senses, interests, intelligence , talents , motivations , and abilities cognitive . View similar put forward by (Hadis, A., dan Nurhayati, 2012)which explains influence internal factors and factors external to performance student .

There is various approach to measure performance student. A number of researchers use the average value and some are using value per semester or per level. This research uses tool measure assessing _ attitude student related to the learning process (Syah, 2012).

Influence ability (competence) to Performance Study

This section discusses study from study previously analyzed _ connection between ability (competence) teacher and achievement learn . The teacher is responsible answer to push independence student in learn, grow attitudes and perceptions positive to Study so that capable increase performance from results Study student .

Furthermore , (Muzenda, n.d.) did research in South Africa found that knowledge subject , skills teaching , presence lecturer , and attitude lecturer own influence significant positive _ to performance academic student .

Study (Akiri, 2013)in Nigeria, with 300 teachers as respondent show that effective teacher produce performing students _ better . Similar results obtained by Wamala and Seruwagi (2013) who did research in Uganda. High teacher competence influence performance academic high students _ in reading and counting. Study Astuty (2015) in Indonesia shows same thing _ that competence lecturers (teachers) have an impact significant to performance academic student.

Although part big study earlier state exists connection significant and positive between ability (competence) teacher and achievement student , will but (Bonney et al., 2015)who did research in Ghana shows opposite result . _ Height teacher quality in matter qualification academic and

professional it didn't affect performance Study student. Similar results also (Kosgei, Anita, 2013). This Kenyan study shows none significant relationship _ between teacher qualifications and achievements academic student. Contradiction this result makes measuring research _ connection between teacher competence and achievement student interesting to study. Like seen in the literature earlier that results from South Africa, Nigeria, Uganda, and Indonesia prove that influential teacher competence positive significant to performance Study student . Whereas results from Ghana and Kenya show the opposite . _ This means study related ability (competence) teacher and achievement students need to be researched return using different countries , different respondents , different methods , or with tools _ _ _ different measure

RESEARCH METHODOLOGY

In choose method research , type researcher use approach quantitative . Quantitative , that is presenting research _ the data form numbers and use analysis statistics aim to show _ influence between variable , test theory and search generalizations that have mark prediction (Sugiyono, 2017). This research seeks influence variable free teacher ability (X), and variables bound performance Study student (Y).

Population from this research is whole students enrolled in SMP Rumah Harapan Tobasa namely 420 students . Sample is part from the number and characteristics possessed by the population the . one _ method used to determine _ amount sample is to use formula Slovin (Suprianto, wahyu dan Iwandiri, n.d.) as following .:

$$n = \frac{N}{1 + \frac{N \cdot e^2}{k^2}}$$

Description :

n = Amount Sample

N = amount Population

e = tolerance limit error 0.10

So that can concluded amount sample is as many as 80 students with the method *incidental sampling* that is taking sample by the way random .

To obtain research data using Primary data and Secondary data . Data collection obtained from the description of the respondents by means give questionnaire , where a list of questions was created statements according to the variables studied .

Deep data collection techniques this research is Observations , Questionnaires or questionnaires and Documentation . instrument used _ is questionnaire with a Likert scale . Because deep this research is quantitative data , then technique data analysis using statistics. The data analysis in this research are :

Pre study

- a. Validity Test is degrees accuracy between the data that occurs in the object research with power that can reported by researchers . Thus valid data is data that is not different between data reported by researchers with actual data happens to objects study (Sugiyono, 2017)

To get results accurate calculation _ so processing and analysis of this data using help SPSS program computer version 24 for windows. Criteria from validity each question item is if coefficient correlation rcount positive and more large or equal to rtable then those items said to be valid and vice versa if rcount negative or more small from rtable then those items said to be invalid (drop). Furthermore if there are question items that do not meet criteria validity (not valid), then the item will issued from questionnaire . The rtable value used for subjects (N) is 30 using level significant 5% then obtained rtable = 0.349.

Table 1.

Validity test

ability (X)	Performance Study student (Y)	Information
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No. grain Instrument	Calculated r value	Value r table	Calculated r value	Value r table	
1	0.519	0.349	0.505	0.349	Valid
2	0.891	0.349	0.888	0.349	Valid
3	0.498	0.349	0.489	0.349	Valid
4	0.939	0.349	0.948	0.349	Valid
5	0.717	0.349	0.699	0.349	Valid
6	0.939	0.349	0.948	0.349	Valid
7	0.717	0.349	0.699	0.349	Valid
8	0.846	0.349	0.752	0.349	Valid
9	0.717	0.349	0.797	0.349	Valid
10	0.841	0.349	0.841	0.349	Valid

Source: Research Results , 2023 (data processed)

Based on the table above shows that out of twenty question items contained in the teacher's ability and achievement variables Study student indicates that all of these questions are stated to be valid as evidenced by the value of the correlation coefficient which is greater than 0.349 and a significant level less than 0.05 .

- b. Reliability pointing at something understanding that something sufficient instrument can trusted to use as tool data collection because the instrument is already good. Instruments that have been obtained trusted, reliable will produce data that can trusted too.

As for analyzing reliability instrument use Alpha Cronbach technique with the help of SPSS version 24 for windows. Reliability not enough of 0.6 is not good, while 0.7 can received, and more of 0.8 is good. If value mark cronbach's alpha > 0.6 , then instrument study reliable. If value cronbach's alpha < 0.6 , then instrument unreliable research . Reliability test intended to acquire reliability , so instrument the can trusted or reliable .

Table 2.
Reliability test

No.	Instruments / variables	Rails.(alpha)	Information
1	ability (X)	0.941	reliable
2	Performance Study student (Y)	0.938	reliable

Source: Research Results , 2023 (data processed)

From description table on can is known that variable the ability the teacher has mark cronbach alpha more from 0.6. Thus _ variable the ability of the teacher is said to be reliable. As for the calculations cronbach alpha can be known.

Then problem in this research is use analysis simple linear regression, t test and determination test were operated through the SPSS version 24 program. Equation model Simple linear regression and t test basically used to see influence variable free to variable bound. After carried out a determination test and it turned out fulfilled, stage furthermore done data modeling using analysis simple linear regression.

RESULTS AND DISCUSSIONS

Analysis Simple Linear Regression

Analysis simple linear regression used to see influence variable free to variable bound. After assumption test is carried out data normality and it turns out fulfilled, stage furthermore done data modeling using analysis simple linear regression . The results of the analysis with the help of the SPSS program are shown in the table as following:

Table 3.

Analysis test results regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	std. Error	Betas		
1	(Constant)	6,218	4,262		1,459	.149
	X	.870	.112	.659	7,738	.000

a. Dependent Variable: Y

Based on results analysis above, the simple linear regression model is as following .

$\hat{Y} = 6.218 + 0.870X$ Based on the equation model regression such, then can interpreted things as following :

- a. Constant value of 6,218 shows If there is influence from Master's ability then the average value from variable performance Study student is of 6,218 units.
- b. Coefficient Value Regression Variable X (Teacher Ability) of 0.870 shows every change variable Teacher ability of 1 unit will influence performance Study student of 0.870 units .

1. Partial Test (T Test)

After testing analysis regression done furthermore will held testing influence in a manner Partial from variable free (Teacher Ability) against variable bound ie performance Study student . The test results using SPSS 24 are as following :

Table 4
Partial test results (T Test)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	std. Error	Betas		
1	(Constant)	6,218	4,262		1,459	.149
	X	.870	.112	.659	7,738	.000

a. Dependent Variable: Y

Based on table on can seen t - table value obtained to get conclusion whether to accept or reject H_0 , especially formerly must determine the t- table to be used . The t- table value depends on the magnitude df (degrees of freedom) as well level significant used _ by 5% and value df of $n - k - 1 = 80 - 1 - 1 = 79$ is obtained t- table value of 7,738. Results of analysis using SPSS 24 program assistance was obtained results that is t- count value 7,738 > t- table 1,662 and value significance 0.000 < 0.05 then can concluded that hypothesis in this research is accepted that is variable Teacher's ability (X) is influential positive and significant to performance Study students at SMP Rumah Harapan Tobasa (Y).

Testing Coefficient Determination

Coefficient value determination is something great value _ range between 0%-100%. To know magnitude coefficient determination (R2) can seen in the table following :

Table 5.
Coefficient determination

Summary models				
Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	.659 ^a	.434	.427	4.31486

a. Predictors: (Constant), X

Based on results analysis coefficient determination on the table on show magnitude coefficient adjusted determination or R Square figure is of 0.434. Or by 43.4%. This value shows that of 43.4% achievement Study student (Y) can explained by variables Teacher Ability (X), meanwhile the rest 56.6 % is explained by other variables not examined in this research.

Discussion

Based on results research on sub- chapters previously found that influential teacher abilities positive significant to performance Study students at SMP Rumah Harapan Tobasa . This result is evidenced by the t- count value of 7,738 more big from t- table 1.662 and value significance of 0.000 or more small from 0.05. These results show that by implementing it teacher's ability to students so can increase performance Study students at SMP Rumah Harapan Tobasa . One strategy that can be used in increase performance Study student is to apply teacher ability . Teacher interaction with students naturally own influence big positive _ because a learning process can goes well when communication between students with teachers can went well. This method basically is method where can the teacher how to interact with students Can achieve a good learning process . A learning process can said to be good if the process can awaken activity effective learning , so _ can obtain performance optimal learning .

The results of this study support study from Diasty Widar Hapsar , Arif (Hapsari. Diasty Widar dan Prasetio, 2017), (Titu, Maria Anita, Masi, Reinaldis dan Keban, 2023)and (Rahim, 2022) state that the ability (competence) of influential teachers positive significant to performance Study student.

CONCLUSION

Based on results research and discussion so put forward conclusion study that is The Ability of Influential Teachers Positive and significant To performance Study students at SMP Rumah Harapan Tobasa . After that coefficient determination from Teacher Ability Against performance Study Student is of 0.434 which means that of 43.4% variability performance Study student can explained by the teacher's ability variable, meanwhile the rest 56.6 % is explained by other variables not examined in this research. For future researchers who wish to conduct similar or even the same research, the researcher hopes that this thesis can be used as learning materials and considerations in developing research that will be carried out related to other variables in a clearer scope.

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