



ISSN : 2722-7944 (Online)

Point of View Research Economic Development

<https://journal.accountingpointofview.id/index.php/povred>



**ANALYSIS OF TEACHER PEDAGOGICAL COMPETENCE ON EDUCATION
QUALITY THROUGH LEARNING QUALITY AND LEARNING INNOVATION AT
TWIKRAMA VOCATIONAL SCHOOL UPTD
MAMUJU MAMUJU DISTRICT**

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Abstract

This research aims to determine and analyze the influence of teacher pedagogical competence on the quality of education through learning innovation and learning quality at UPTD SMK Twikrama Mamuju, Mamuju Regency. This research was carried out at UPTD Twikrama Mamuju Vocational School, Mamuju Regency, lasting approximately two months (June to July 2020). The population of this research was all 146 students. Sampling used the total sampling method, so the sample in this study was 146 students. Data collection was carried out through observation, interviews, questionnaires and documentation. This research uses path analysis. The results of the research show that improving the quality of education can be further optimized by learning innovations carried out in schools where students' mastery of teaching materials requires their teachers to be more innovative in providing lessons and providing objective approaches, methods and assessments. The quality of education is reflected in changes in learning patterns that are carried out and are not limited to teacher competence and also the quality of learning, but the most important thing is innovation in learning. Learning quality and learning innovation as intervening variables are quite good in moderating the relationship between teacher pedagogical competence and education quality.

Keyword :

Pedagogical competence, learning quality,
learning innovation, education quality

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INTRODUCTION

Education is an absolute means used to create a civil society that is able to master, develop, control and utilize science and technology. The goals of national education according to Republic of Indonesia Law no. 20 of 2003 concerning the National Education System states that "national education functions to develop abilities and shape the character and civilization of a dignified nation in order to make the nation's life more intelligent.

In order to achieve quality education, the role of teacher competence is very important. Teachers as educators and instructors are the determining factor for success in education. Therefore, discussions about curriculum, provision of teaching equipment and existing human resource needs tend to be oriented towards an educator or teacher. This emphasizes that in education teachers have a very large role (Hunt, 1999).

Apart from that, the quality of learning also plays a role in creating quality of education. As a teacher or educator, you have a very essential role in learning activities in order to direct and determine various learning activities. Teaching and learning activities are pursued and directed towards achieving goals in the education system as planned in advance, not only limited to formalities but also emphasizing aspects of a person's abilities

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with the various activities and tasks assigned to him. Doyle in (Danim, 2004) believes that there are two roles of education in learning activities, namely determining the level of order (establishing order) and also providing facilities for learning activities (facilitating learning).

As a teacher is directly involved in learning activities, the teacher plays a very important role and determines the quality of learning and increasing learning achievement for students. One of the levels of ability that a teacher should have and master in this regard is how to provide good teaching so that the learning objectives can be achieved as fully as possible. In this regard, it is the level of mastery of the material and the approach used or appropriate teaching techniques to determine the achievement of the learning objectives. Likewise, in the learning process, in order to achieve the goals of these learning activities, it is necessary to develop a concept and strategy so that these goals can be achieved optimally. Without the right strategy used, it will be difficult to achieve the desired goals (Sanjaya, 2010).

Another thing that supports the quality of education is the existence of innovation that continues to develop in the learning process. This innovation is something new in certain social situations and is used to answer or solve a problem. Meanwhile, learning innovation can be interpreted as a new effort in the learning process, using various methods, approaches, facilities and an atmosphere that supports the achievement of learning goals. According to (Hasbullah, 2001), "new" in innovation is anything that has not been understood, accepted or implemented by the recipient of the innovation. Learning innovation is something that must and is important for an educator to do. Through innovation in learning activities, an educator can learn to create learning conditions that are dynamic, exciting, fun, enthusiastic and face challenges.

Twikrama Mamuju Vocational School is a B accredited vocational school which aims to strengthen skills development. The low achievement of learning objectives is because the implementation of the teaching and learning system still maintains the concept of one-way learning. Apart from that, there is a current paradigm or perspective where learning activities are the same as writing and the availability of books, and this has indirectly killed creativity for an educator or teacher.

This research answers the question of educational innovation at Twikrama Mamuju Vocational School, namely that in general pedagogical competence is still less than optimal in supporting the expected quality of education. Learning quality and learning innovation are variables that are considered important in supporting the achievement of educational innovation. Based on this, researchers tried to test the quality of learning and learning innovation as mediator variables between pedagogical competence and educational quality.

a. Teacher Pedagogical Competence and Learning Quality

Teacher competence is not only related to academic competence but also personal abilities that reflect a personality that is steady, stable, mature, wise and authoritative, being a role model for students, and having good morals. Competency includes expertise or expertise in the field, namely mastery of the material that must be taught. The more the teacher understands what he is teaching, it will directly influence the quality of learning, students will more quickly understand and capture what is being conveyed so that positive interactions occur and enliven the learning atmosphere. This is supported by the opinion (Hamalik, 2009) that teachers are teachers who touch students' personal lives. Research (Fransiska, 2016; Kosim, 2016; Sobandi, 2010; Werdayanti, 2008) shows the positive and significant influence of teacher competence on the quality of learning.

b. Teacher Pedagogical Competence and Learning Innovation

A teacher in the learning concept must really understand the character of his students, so that they can design and carry out learning evaluations which include designing and carrying out evaluations (assessments) of learning processes and outcomes continuously using various methods, analyzing the results of process evaluations and learning outcomes to determine the level learning completeness (mastery level), and utilizing the results of learning assessments to improve the quality of learning programs in general (Alma, 2008). In relation to learning innovation, teacher competence as a provider of appropriate solutions to every problem and innovation is a way that plays a role in the problem solving process, as stated by (Sanjaya, 2010) that innovative learning programs are learning programs that directly solve the problems being faced. In turn, this learning program will contribute to efforts to improve the overall quality of the school. Research (Khursdi & Ansari, 2012; Lee,

2018; Naz, 2017; Retnowati, 2014; Sitthisomjin & etal, 2018) shows the positive influence of teacher competence on learning innovation.

c. Teacher Pedagogical Competence and Education Quality

Basically, the most important task for a person is to provide teaching and also provide education. As a teacher, the teacher is an active intermediary or medium between students with the knowledge provided, while teachers as educators mean they are active intermediaries between students and also philosophy in the country and understand the meaning of social life in its various dimensions, and in developing students' personalities and bring it closer to influences that come from outside and keep it away from conflicting or bad influences. Teacher competency is the teacher's ability or ability to carry out his duties, carry out the teaching and learning process, the ability or ability to truly have the knowledge and skills as best as possible (Wahyudi, 2012). Good competence in a teacher will have an impact on improving the quality of learning in particular and the quality of education in general. Achieving the quality of education is the final target of a curriculum-based learning system, this is in line with the opinion (Suryadi, 2009) that the quality of education shows the achievement of curriculum objectives (objective of curriculum) designed for managing student learning. Research (Amalia, 2018; Devi & et al, 2018; Hasmah, 2017; Sari, 2015). Shows the positive influence of teacher competence on improving the quality of education.

d. Quality of Learning and Quality of Education

The quality of learning can be shown through how the learning conditions experienced support interest in learning activities, provide challenges, provide meaning and fun in forming professionalism in education. Operationally learning quality can be interpreted as the intensity of the relationship between teachers, students, curriculum and learning materials, media, facilities and learning systems in producing optimal learning processes and outcomes (Hamalik, 2009). Quality learning involves many parties such as teachers, students, infrastructure and the environment, all of these elements are interrelated and support a quality learning process. The quality of education is the final achievement of the input and output in the learning system. This is supported by the opinion (Sallis, 1993) that education is a service in the form of a cultural process, which has implications for input and output. Research (Bassi & etal, 2019; Fitriana, 2018; Mukhid, 2007; Witasoka, 2013). Shows the positive influence of the quality of learning on the quality of education.

e. Learning Innovation and Education Quality

Innovative learning is a learning process that is designed in such a way that it is different from students

RESULTS AND DISCUSSION

This research uses path analysis. This research shows 3 different pathway models. The results of the validity test on each variable show that all indicators have valid values for each variable. This is proven by the corrected item-total correlation value > 0.30 (Sugiyono, 2017), so that the items are considered to meet as shown in table 1

Validity and Reliability Test

Valid Questionnaire Test Results

Variable	Indicator	r count	r table	Information
(X)	X1.1	0.505	0.3	Valid
	X1.2	0.457	0.3	Valid
	X1.3	0.555	0.3	Valid
	X1.4	0.420	0.3	Valid
(Y1)	X2.1	0.591	0.3	Valid

	X2.2	0.732	0.3	Valid
	X2.3	0.644	0.3	Valid
	X2.4	0.413	0.3	Valid
(Y2)	Y1.1	0.817	0.3	Valid
	Y1.2	0.802	0.3	Valid
	Y1.3	0.718	0.3	Valid
	Y1.4	0.743	0.3	Valid
(Z)	Y2.1	0.862	0.3	Valid
	Y2.2	0.790	0.3	Valid
	Y2.3	0.785	0.3	Valid
	Y2.4	0.648	0.3	Valid

Data sources processed in August 2023

Based on the validity test table above, it is known that all question items in this study are valid, which is indicated by the value of each question item having a positive *Corrected Item Total Correlation* value and greater than the r table value of 0.3 (two-way test).

Based on the results of the questionnaire validity test, the 4 research variables, namely Teacher Pedagogical Competency (X), Learning Quality (Y1), Learning Innovation (Y2), and Education Quality (Z), are all valid so they are suitable to be continued in the reliability test.

Next, the reliability test aims to find out how far a measuring instrument can be relied upon or trusted (Sugiyono, 2017). The results of reliability testing for all question items from each variable are reliable if the Cronbach Alpha value is > 0.6 (Ghozali, 2018). The results of variable reliability testing in this study are declared reliable as shown in the following table

Reliability Test

Questionnaire Reliability Test Results

Variable	Cronbach's Alpha	Cut of Point (0.6)	Information
(X)	0.738 _	0.6	Reliable
(Y1)	0.780 _	0.6	Reliable
(Y2)	0.823 _	0.6	Reliable
(Z)	0.824 _	0.6	Reliable

Data sources are processed August 2023

From the table above, the reliability values for each variable are obtained, namely; Work Environment variable (x1) is 0.738, Facilities Work (x2) is 0.780, Motivation (y1) is 0.823, and Performance (y2) is 0.824. This figure shows that the research instrument used is reliable, because the *Cronbach's Alpha* value of each variable is greater than >0.6 , which means that all the statements tested have a good level of reliability.

Model I Path Coefficients

As for results calculation multiple linear regression on model 1 on part table ' coefficients " as following : Uji reliabilitas

Variabel	Cronbach Alpha	Kesimpulan
(X)	.879	Reliabel
(Y1)	.783	Reliabel
(Y2)	.712	Reliabel

(Z)	.752	Reliabel
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coefficients" table as the following : Analysis of research data refers to the pattern of relationships between variables from independent variables to dependent or intervening variables in accordance with the conceptual framework shown in the previous chapter. The results of data analysis in this research are divided into 3 paths, which can be completely described as follows:

X to Y1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.714	1.421		9.648	.000
	Kompetensi Pedagogik Guru (X)	.713	.086	.570	8.327	.000

a. Dependent Variable: Kualitas Pembelajaran (Y1)

Source: Hasil olahan data, 2022

In line 1, the following equation can be created:

$$Y1 = 0.570X + e1$$

Based on path analysis, the path coefficient (α_1) = 0.570 and a significance level of 0.000 means a significant effect (Sig < 0.05). Thus, Teacher Pedagogical Competency (X) has a significant positive effect on Learning Quality (Y1). This research is supported by (Fransiska, 2016) who concluded in his research that teacher competence has a positive and significant effect on the quality of learning. Likewise (Sobandi, 2010). However, different findings were shown by (Werdayanti, 2008) in his research that teacher competency did not have a significant effect on the quality of learning. Developing learning technology capabilities in achieving the quality of learning itself. This research on pedagogical competence has provided in-depth understanding in encouraging teachers' abilities to prioritize mastery of teaching material that can be accepted by students, maintain good learning management skills, understand students' character so that it has an impact on the quality of learning that is able to prioritize systematic and contextual learning. The quality of learning is always related to teachers and pedagogical competence guarantees the implementation of systematic and contextual learning, teachers with technological capabilities in learning, understanding student character and managing learning.

a) Teacher Pedagogical Competency (X) on Education Quality (Z)

As in the table above, the coefficient value (β_1) = 0.211 and the significance level is 0.008, which means significant (Sig < 0.05). Thus, the Teacher Pedagogical Competency variable (X) has a significant positive effect on Education Quality (Z). This research is supported by (Amalia, 2018; Devi & et al, 2018; Hasmah, 2017; Sari, 2015) where teacher competency has a significant positive effect on the quality of education. Teachers as the main actor in fostering, directing and mediating learning achievement are very important in achieving sustainable quality education. Research on the quality of education has provided an understanding of the importance of the role of teachers with their pedagogical competence so that they are able to provide approaches that address student needs and produce outcomes as expected by educational institutions, schools, students and society at large.

b) Learning Quality (Y1) on Education Quality (Z)

As in the table, the coefficient value (β_2) = 0.217 and the significance level is 0.011, which means significant (Sig < 0.05). Thus, the Learning Quality variable (Y1) has a significant positive effect on Education Quality (Z). This research is supported by (Bassi & et al, 2019; Fitriana, 2018; Mukhid, 2007; Witasoka, 2013) that the quality of learning has a positive and significant effect on the quality of education. The quality of education through the quality of learning can be influenced by the implementation of quality learning that is oriented

towards school/educational needs, and this can be seen from the teacher's role in presenting the concept of providing appropriate learning material in a systematic and contextual pattern so that the impact is good mastery of the material on students.

c) Learning Innovation (Y2) on Education Quality (Z)

As in the table, the coefficient value (β_3) = 0.360 and the significance level is 0.000, which means significant (Sig < 0.05). Therefore, the Learning Innovation variable (Y2) has a positive and significant effect on Education Quality (Z). This research is supported by (Bunyamin, 2013; Dewi, 2018; Nafisah, 2018; Suprudi, 2017) concluding that learning innovation has a positive and significant effect on the quality of education. The quality of education and learning innovation has a strong relationship in that learning innovation guarantees changes that occur in the teaching and learning process with the main aim of producing a sustainable impact from the strategies developed.

In this research, to see the contribution of indirect influence, it was carried out using the Sobel test, the aim of which is to see the extent of the significance level of the intervening variables that mediate the relationship between the independent variable and the dependent. Sobel test calculations in research utilize the Sobel Calculator test facility which is available online on the website <https://www.danielsoper.com/statcalc/calculator.aspx?id=31>. For the calculated t, analysis is obtained, while the t table value is obtained through the t distribution table, where with a sample size of 146, the t table value is 1,976.

1. The Influence of Teacher Pedagogical Competency (X) on Education Quality (Z) Through Learning Quality (Y1)

Effect of Facilities on Motivation

Input:		Test statistic:	Std. Error:	p-value:
a	0.570	Sobel test: 3.25812216	0.03796359	0.00112152
b	0.217	Aroian test: 3.23035849	0.03828987	0.00123635
s _a	0.086	Goodman test: 3.28661421	0.03763447	0.001014
s _b	0.058	Reset all	Calculate	

Based on the results of the Sobel test, it was found that the calculated t value was 3,258 which was greater than the t table value, namely 1,976, as well as the p-value of 0.001 < 0.05, so it could be concluded that this indirect effect had a significant mediation effect. Pedagogical competence is able to change the quality of learning for the better and also improve the quality of education. Learning quality as the level of achievement of learning objectives. Teachers as educators produce quality learning as expected because it is ingrained in them as educators who instill behavioral changes in students for the better.

2. The Influence of Teacher Pedagogical Competency (X) on Education Quality (Z) Through Learning Innovation (Y2)

Input:		Test statistic:	Std. Error:	p-value:
a	0.494	Sobel test: 4.21827935	0.04215937	0.00002462
b	0.360	Aroian test: 4.18918948	0.04245213	0.000028
s _a	0.079	Goodman test: 4.24798376	0.04186457	0.00002157
s _b	0.063	Reset all	Calculate	

Based on the results of the Sobel test, it was found that the calculated t value was 4,218 which was greater than the t table value, namely 1,976, as well as the p-value of 0.000 < 0.05, so it could be concluded that this indirect effect had a significant effect. Learning innovation has a better role than learning quality in supporting the

quality of education at UPTD Twikrama Vocational School, Mamuju, Mamuju Regency, so that learning innovation is given priority in improving the quality of education. Although the concept of learning is also demonstrated in innovation, innovation places more emphasis on changes in learning activities. Quality education is not something that happens by itself, but is the result of an educational process that is carried out effectively and efficiently.

CONCLUSIONS AND RECOMMENDATIONS

Based on the research results, it can be concluded that improving the quality of education can be better optimized by learning innovations carried out in schools where students' mastery of teaching materials requires their teachers to be more innovative in providing lessons and providing objective approaches, methods and assessments. The quality of education is reflected in changes in learning patterns that are carried out and are not limited to teacher competence and also the quality of learning, but the most important thing is innovation in learning. Indirectly, the quality of learning and learning innovation as intervening variables are quite good in moderating the relationship between teacher pedagogical competence and the quality of education. However, the contribution of learning innovation in mediating pedagogical competence on the quality of education is still higher if there is a continuous process of learning impact with the integration of teachers' mastery of technology and the materials/materials taught, the range of teaching materials becomes more innovative and supports the technology used by teachers/ educator.

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