

Path Analysis Factors Effect Teacher Competence: Case Studies in Indonesia during Covid-19

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Abstract Teacher competence is influenced by internal and external factors. Indicators of the low quality of education above, cannot be separated from the lack of professionalism of teachers, because teachers are an important component in the administration of education; in other words, the teacher is at the forefront in the implementation of education. It is the teacher who deals directly with students to transfer knowledge and technology while educating with positive values through guidance and example. The subjects in this study were elementary school teachers in the city of Bima Indonesia, who were both civil servants and honorary teachers. The instrument to be used in the study was divided into two namely questionnaires in the form of questionnaires and tests. Based on the results of hypothesis testing shows that internal factors have a significant positive effect on the competence of elementary school / elementary school teachers in Bima City, testing the hypothesis shows that external factors have a significant positive effect on the competence of elementary school / elementary school teachers in the City of Bima and the results of the F-test showed that simultaneously internal and external factors significantly influence the competence of elementary school / elementary school teachers in the City of Bima.

Keywords Factors, Effect, Performance, Teacher, Competence

1. Introduction

Indicators of the low quality of education above, can not be separated from the lack of professionalism of teachers, because teachers are an important component in the administration of education; in other words, the teacher is at the forefront in the implementation of education. It is the teacher who deals directly with students to transfer knowledge and technology while educating with positive values through guidance and example. By [33], it writes that teacher competence is influenced by internal and external factors. Indicators of the low quality of education above, can not be separated from the lack of professionalism of teachers, because teachers are an important component in the administration of education; in other words, the teacher is at the forefront in the implementation of education. It is the teacher who deals directly with students to transfer knowledge and technology while educating with positive values through guidance and example. According to [17] that success in the world of education is determined by the quality of the teacher, because the teacher is the leader of learning, the facilitator, as well as the center of learning initiatives, and the presence of the teacher greatly influences the quality of teaching through providing more time for students, interaction with more incentive students, high sense of responsibility of teaching from the teacher. [26] teacher competence is a factor that influences the achievement of

learning and education goals in schools. Teacher competence is very important as a selection tool in recruiting prospective teachers, and as a guideline in the framework of teacher development. This implies that all subject teachers including teachers must possess and master these competencies, especially pedagogical and professional competencies. The low mastery of pedagogical and professional competence of teachers is not a problem, but there are factors that influence it.

1.1. Teacher Competency

1. Understanding Teacher Competency

Broke and Stone in [17] argued that teacher competence is a qualitative description of the meaningful nature of teacher behavior; suggested that competence is a rational behavior to achieve the required goals in accordance with the conditions expected. [18] defines teacher competency is a collection of knowledge, behavior and skills possessed by teachers to achieve learning objectives. Specification of teacher competencies is a most crucial aspect of designing a competency-based teacher education program. The purpose of this article is to examine several issues related to specifying teacher competencies, specifically, the bases from which competencies might be specified, the kinds of competencies which might be specified, the persons who might be involved in specifying competencies, and the processes which might be used in specifying competencies[9].

2. The Importance of Teacher Competency

According to [26], teacher competency is one of the factors that influences the achievement of learning and education goals in schools. Teacher competence is considered important as a selection tool in the acceptance of prospective teachers, guidelines in the framework of teacher development and development. According to [25] said teacher competence is very important so that a teacher is able to analyze, organize, diagnose, and propose the educational situation. The findings of the study showed that TVET teachers' motivational competence, methodological competence and evaluation competence had a high influence on the implementation of inclusive education curriculum [1]

1.2. Four Teacher Competencies

In the perspective of national policy, the government has formulated all four types of teacher competencies as listed in the explanation of government regulation No. 19 of 2005 concerning National Education Standards (SNP), namely: pedagogical, personal, social and professional competencies. The following explained matters related to teacher competence.

1. Pedagogical Competence

According to the National Education Standards, pedagogical competence is the ability of teachers in the

management of students which includes: (a) understanding insight or educational foundation; (b) understanding of students; (c) curriculum development; (d) learning design; (e) the implementation of educative and dialogical learning; (f) evaluation of learning outcomes; and (g) the development of students to actualize the various potentials they have.

2. Personality competence

According to the National Education Standards Agency personality competencies, namely personality abilities that are: (a) noble character; (b) steady, stable and emotional; (c) wise and wise; (d) be an example; (e) evaluating one's own performance; (f) developing oneself; and (g) religious.

3. Social Competence

According to the National Education Standards Agency, social competence is the ability of teachers as part of the community to: (a) communicate both verbally and in writing; (b) use communication and information technology functionally; (c) associate effectively with students, fellow educators, education personnel, parents / guardians of students; and (d) socialize politely with the surrounding community.

4. Professional Competence

According to the National Education Standards Agency stated that professional competence is the ability to master the material of learning broadly and deeply covering: (a) concepts, structures and methods of science / technology / art that overshadow / coherent with teaching material; (b) teaching materials that are in the school curriculum; (c) conceptual relationships between related subjects; (d) the application of scientific concepts in daily life; and (e) professional competence in a global context while preserving national values and culture.

1.3. Critical thinking

[22] defines critical thinking as a way of reflecting productive thinking and evaluating as a concrete form. Santrock mentioned that there were several indicators of critical thinking, namely: (a) asking not only what was done, but also asking how and why it was done; (b) prioritizing ratios rather than emotions; (c) can link answers with questions and being able to judge answers more precisely; (d) can find good answers and how to explain them; and (e) evaluating and analyzing the questions of some who ask rather than agreeing directly. Institutional enthusiasm for critical thinking is also reflected in the professional literature. Articles about the nature and role of critical thinking techniques continue to flood the educational and philosophical journals [31]. Critical thinking in relation to scientific claims found in secondary source material can be successfully taught and quantitatively assessed [8]. Studies of the development of teachers' critical thinking related beliefs are needed, with the goal of establishing teacher-education practices

emphasizing appropriate use of high critical thinking activities for low-advantage learners [32]. [23]Critical thinking is active rather than passive and is of a higher-order and abstract nature.

1.4. Attitude Pattern

[10] defines attitude as a mental or emotional readiness in situations that are right-meaning more emphasis on one's emotional towards an object, or attitude is a mental and nervous readiness arranged through experience and gives a direct influence on individual responses to all objects or situation related to that object. [20], defines attitude is a strong belief and feeling that will lead to a behavior, defines attitude as an organization of cognitive, emotional and moments of will that is specifically influenced by past experiences, so that they are dynamic and give direction to each employee's behavior. [21], attitude consists of three elements namely what you think (cognitive component); how you feel (affective component); and how you act to control your thought patterns and feelings. [6] Predict that some attitudes may be experienced as moral because they are heritable, promoting group survival and firmly rooting people in these attitudes. Reliable individual differences in people's perceived attitude stability predict the actual stability of their attitudes over time [36].

1.5. Discipline

[4] writes that the idea of discipline is a mind that involves the substance of psychology and does not prioritize lies in every action. Discipline is a mindset and behavior that shows someone's obedience or compliance with applicable laws and regulations. Teacher discipline according to [13], is an orderly and regular condition that is owned by the teacher in working at school, without any violations that are harmful either directly or indirectly to himself, his colleagues and to the school as a whole. Diverse teacher workforce in terms of student discipline, gaining the full range of expected benefits from a more diverse workforce would depend on the classroom-management skills of newly recruited teachers being similar to those observed [16]. [35] Gestures can play relatively central or minor roles in communicating disciplinary concepts. It concludes with implications for disciplinary literacy instruction that more rigorously accounts for the role that gestures play in disciplinary learning.

1.6. Economic well-being

[11] writes that economic welfare is a condition that is associated with real assets that have economic values. [11] that the level of economic welfare of teachers can be seen through the following indicators: (a) monthly income is able to meet the basic needs of daily families permanently

and with quality; (b) family education needs can be met properly and optimally; (c) have the ability to develop continuing education and develop themselves professionally; and (d) have additional income. In this context, it is also possible for teachers to have additional work outside their duties as teachers in a school. Associated restrictions and emphases on more "masculine" values create an environment where women's welfare takes a back seat to the ostensible priority of defending the homeland [30].

1.7. Learning Resources

Based on Government Regulation No. 19/2005 concerning National Education Standards Article 42 paragraph 1 states that, every education must have facilities that include furniture, educational equipment, learning media, books and other learning resources, consumables, and other equipment needed for regular and sustainable riding. In paragraph 2 it is stated, each educational unit must have infrastructure that includes land, classrooms, leadership room of education units, teaching space, administrative space, library room, laboratory room, workshop space, production unit room, canteen room, service power installation, a place to exercise, a place of worship, a place to play, a place of recreation, space / other places needed to support an orderly and sustainable learning process. Educational facilities and infrastructure are sources of learning for the school community. [17] writes that learning resources or learning resources can be formulated as anything that can facilitate learning, so that a number of information, knowledge, experience, and skills are needed. Then [17] suggested the learning resources available in schools among other things: libraries, mass media, experts in the field of study and community resources. Natural critical learning environment and how excellent teachers create and cultivate such environments for outstanding teaching and learning [12]. The purpose and role of teaching and learning resources don't only consist of making the educational process more attractive and interesting, but also of encouraging active learning, the development of different skills and the adoption of desirable values and attitudes of students [7].

1.8. Training

According to [18] training is every effort to improve worker performance on a particular job that is his responsibility. [18], defines training as a recognized institutional approach and is intended to increase the ability of staff to fill their particular roles, especially in relation to teaching. Training gives teachers the opportunity to gain new knowledge, skills and attitudes that change their behavior, which in turn will increase their competence. Regarding some of the effects of training for educational institutions. [18] there is a case study conducted. as a lesson

for every school that wants to develop and progress - Mustang, is a company that has high employee behavioral value, and of course is able to get high employees around 47 percent. Feedback on the effectiveness of the training program resulted in 14 practical guidelines, which informed the revised 4-Step Virtual Worlds Teacher Training model that can be used both in general and special education with minor adjustments depending on the teacher and student population [19]. [5] In this time of dramatic change and increasing scrutiny of higher education, graduate teacher training is arguably more important than ever before. Thus, we seek to provide a new baseline of teacher training in the discipline.

1.9. Development of Information Technology

Information technology is the study or electronic equipment, especially computers, to store, analyze, and distribute any information, including words, numbers, and images (Oxford dictionary). Information Technology is a set of tools that help you work with information and carry out tasks related to information processing [13]. Information Technology not only limited to computer technology (software and hardware) is used to process or store information, but also includes communication technology for sending information [19]. Information Technology's all forms of technology applied to process and transmit information in electronic. Information Technology is a technology that combines computing (computers) with high-speed communication lines that

carry data, voice and video .

1.10. Achievement motivation

According to [10] achievement motivation is the drive to do a task properly based on excellence standards. Achievement motivation is not just an impulse to do, but refers to a measure of success based on an assessment of one's work tasks. Achievement motivation correlation with one's expectations in doing something; in other words, people who believe in describing the results of their actions will be motivated to do so. Now in 2020, what we know about underachievement in gifted populations (particularly in relation to achievement motivation) has improved. But this increased understanding has also helped us become aware of what we still do not know [24].

2. Materials and Methods

2.1. Research design

Based on the research objectives indicated nine research variables consisting of (a) critical thinking (X1) attitude patterns (X2), discipline (X3), economic welfare (X4), learning resources (X5), training (X6) and information technology development (X7) as an independent variable, (b) teacher competency (Y) as the dependent variable and (c) achievement motivation as a moderator variable (Z).

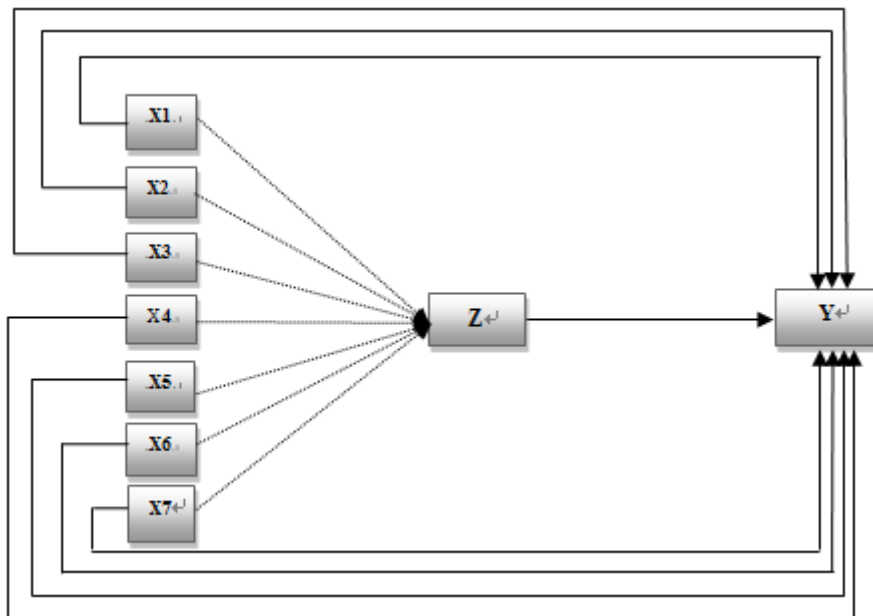


Figure 1. Conceptual Frame work

2.2. Validity and Reliability Instruments

The instrument that will be used in the study is divided into two, namely a questionnaire in the form of a questionnaire and a test. Questionnaires are written questions that are used to obtain information from respondents in the sense of reports about their personalities, or things they know. Questionnaires are used to reveal the internal and external factors of teachers with a Likert scale always, often, rarely, and never. The questionnaire before use must first be tested for validity and reliability. A valid instrument if it is able to measure what is desired in order to accurately reveal the data from the variables to be studied. [3] writes, the instrument has the validity of what construct if it can measure symptoms in accordance with the research definition, both conceptual and operational. Through measuring the construct validity of the instrument in the form of a questionnaire, it will be known the contribution of each item (item) question to the construct or indicator that is the reference. Therefore, the questionnaire in this study will declare valid if it has a correlation of each item to the total score with the criteria ≥ 0.3 . To analyze the validity of the instrument, researchers used the SPSS 25.0 for windows program. Overall, this instrument has been validated by 6 experts in their respective fields

2.3. Research responden

The respondents in this study were elementary school teachers in the city of Bima Indonesia, who were both civil servants and honorary teachers. The researcher uses all members of the population to become research respondents because the researcher wants to analyze more deeply about the research variables with a wider range. Besides that, according to [29] what if the population is less than one hundred, it is recommended that all of them be used as respondents.

Table 1. Number of respondents in Bima City Elementary school Teacher in 2020

School	Status School	Amount School	amount Teacher	Total
Primary School	Country	5	24	48
	Private	4	10	
Elementary school	Country	3	9	
	Private	2	5	

2.4. Research Instruments

The instrument to be used in the study was divided into two namely questionnaires in the form of questionnaires and tests. Questionnaire is a written question that is used to obtain information from the respondent in the sense of a report about his personality, or things he knows. Questionnaires are used to uncover the internal and external factors of teachers with a Likert scale always, often, rarely, and never. The questionnaire before being

used must first be tested for its validity and reliability repetition with 2.2.

3. Research Result

3.1. Critical Thinking

The results of the questionnaire about critical thinking of Elementary Teachers in the City of Bima in 2020 are described in the following table.

Table 2. Critical thinking of elementary school / elementary school teachers in the City of Bima in 2020

Classification	Interval Class	Frequency	Percent
Not good	6-9	0	0
Not good	10-13	5	10
Pretty good	14-17	15	31
Good	18-21	23	47
Very good	22-24	5	10
amount		48	100

The table above can be seen that the critical thinking of elementary school / elementary school teachers in the City of Bima in 2020 is not good as many as 0 respondents. Not good classification of 5 respondents with a percentage of 10%, classification is quite good as many as 15 respondents with a percentage of 31%, good classification of 23 respondents with a percentage of 47% and very good classification of 5 people with a percentage of 10%.

3.2. Attitude Pattern

The results of the questionnaire about the attitudes of elementary school / elementary school teachers in Bima City in 2020 are described in the following frequency table.

Table 3. Attitudes of elementary school / elementary school teachers in Bima City in 2020

Classification	Interval Class	Frequency	Percent
Not good	6-9	1	2
Not good	10-13	7	14
Pretty good	14-17	15	31
Good	18-21	21	43
Very good	22-24	4	8
amount		48	100

The table above shows the pattern of attitudes of elementary school / elementary school teachers in Bima City in 2020 having a bad qualification of 1 respondent with a percentage of 2%. Not good classification of 7 respondents with a percentage of 14%, classification is quite good as many as 15 respondents with a percentage of 31%, good classification of 21 respondents with a

percentage of 43% and very good classification of 4 people with a percentage of 8%.

3.3. Discipline

The results of the questionnaire on Discipline for elementary school / elementary school economics teachers in the City of Bima in 2020 are described in the following table.

Table 4. Discipline for elementary school / elementary school teachers in the City of Bima in 2020

Classification	Interval Class	Frequency	Percent
Not good	6-9	3	6
Not good	10-13	13	27
Pretty good	14-17	23	47
Good	18-21	8	16
Very good	22-24	1	2
amount		48	100

Based on the table above, it shows that the discipline of elementary school teachers in Bima City in 2020 is bad for 3 respondents with a percentage of 6%. Poor classification was 13 respondents with a percentage of 27%, good classification was 23 respondents with a percentage of 47%, good classification was 8 respondents with a percentage of 16%, and very good classification amounted to 1 person with a percentage of 2%. Thus, based on the results of a questionnaire on the discipline of elementary school teachers in Bima City in 2020, they are in fairly good interval classes with a percentage of 47%.

3.4. Economic Well Being

The results of the questionnaire on economic welfare for elementary school / elementary school teachers in the City of Bima in 2020 are described in the following table.

Table 5. Economic welfare for elementary school / elementary school economics teachers in the City of Bima in 2020

Classification	Interval Class	Frequency	Percent
Not good	6-9	1	2
Not good	10-13	9	18
Pretty good	14-17	14	29
Good	18-21	14	29
Very good	22-24	10	20
amount		48	100

The table above shows the economic well-being of elementary school / elementary school teachers in Bima City in 2020 had a bad qualification of 1 respondent with a percentage of 2%. Not good classification of 9 respondents with a percentage of 18%, classification is quite good as many as 14 respondents with a percentage of 29%, good classification of 14 respondents with a percentage of 29%, and very good classification of 10 respondents with a percentage of 20%.

and very good classification of 10 people with a percentage of 20%.

3.5. Learning Resources

Based on the results of a questionnaire about the learning resources of elementary school / elementary school teachers in the City of Bima in 2020 are described in the following table.

Table 6. Learning resources of elementary school / elementary school teachers in the City of Bima in 2020

Classification	Interval Class	Frequency	Percent
Not good	6-9	0	0
Not good	10-13	8	16
Pretty good	14-17	19	39
Good	18-21	15	31
Very good	22-24	6	12
amount		48	100

The table above shows the learning resources of elementary school / elementary school teachers in the city of Bima in 2020 had a bad qualification of 0 respondents with a percentage of 0%. Not good classification of 8 respondents with a percentage of 16%, classification is quite good as many as 19 respondents with a percentage of 39%, good classification of 15 respondents with a percentage of 31%, and very good classification of 6 respondents with a percentage of 12%.

3.6. Training Activities

The results of the questionnaire about the training activities of elementary school / elementary school teachers in Bima City in 2020 are described in the following table.

Table 7. Training activities of elementary school / elementary school teachers in Bima City in 2020

Classification	Interval Class	Frequency	Percent
Not good	6-9	2	4
Not good	10-13	6	12
Pretty good	14-17	22	45
Good	18-21	10	20
Very good	22-24	12	25
amount		48	100

The table above shows the training activities of elementary school / elementary school teachers in the city of Bima in 2020 had bad qualifications of 2 respondents with a percentage of 4%. Not good classification of 6 respondents with a percentage of 12%, classification is quite good as many as 22 respondents with a percentage of 45%, good classification of 10 respondents with a percentage of 20%, and very good classification of 12 people with a percentage of 25%.

3.7. Development of Information Technology

The results of a questionnaire about the development of information technology for elementary school / elementary school teachers in the City of Bima in 2020 are described in the following table.

Table 8. Development of information technology for elementary school / elementary school teachers in the City of Bima in 2020

Classification	Interval Class	Frequency	Percent
Not good	6-9	3	6
Not good	10-13	13	27
Pretty good	14-17	19	39
Good	18-21	9	18
Very good	22-24	4	8
amount		48	100

The table above shows the development of information technology for elementary school / elementary school teachers in the city of Bima in 2020 had bad qualifications of 3 respondents with a percentage of 6%. Not good classification of 13 respondents with a percentage of 27%, classification is quite good as many as 19 respondents with a percentage of 39%, good classification of 9 respondents with a percentage of 18%, and very good classification of 4 people with a percentage of 8%.

3.8. Achivment Motivation

The results of the questionnaire about the achievement motivation of Bima City Primary School / Elementary School Teachers in 2020 are described in the following table.

Table 9. Achievement motivation of Bima City Primary School / Elementary School Teachers in 2020

Classification	Interval Class	Frequency	Percent
Not good	6-9	1	2
Not good	10-13	8	16
Pretty good	14-17	24	50
Good	18-21	9	18
Very good	22-24	6	12
amount		48	100

The table above shows it can be seen that the achievement motivation of Bima / Elementary School Teachers in the City of Bima in 2020 had a bad classification of 1 respondent with a percentage of 2%. Not good classification of 8 respondents with a percentage of 16%, classification is quite good as many as 24 respondents with a percentage of 50%, good classification as many as 9 respondents with a percentage of 18%, and very good classification of 6 people with a percentage of 12%.

3.9. Teacher Competency

The results of the elementary school / elementary school teacher competencies in Bima City in 2020 are described in the following table.

Table 10. The results of the elementary school / elementary school teacher competencies in Bima City in 2020

Classification	Interval Class	Frequency	Percent
Not good	0-16	0	0
Not good	20-40	6	12
Pretty good	44-56	16	33
Good	60-76	18	37
Very good	80-96	8	16
amount		48	100

The table above shows the competence of elementary school / elementary school teachers in Bima City in 2020 had no good qualifications of 0 respondents with a percentage of 0%. Not good classification of 6 respondents with a percentage of 12%, classification is quite good as many as 16 respondents with a percentage of 33%, good classification of 18 respondents with a percentage of 37% and very good classification of 8 people with a percentage of 16%. Based on the results of the analysis using the SPSS 16 program for windows, each research variable by observing plots graph form can be judged to be normally distributed research variables because data spread near the normal curve. Whereas based *tests of normality*, each variable is said to be said to have normal distribution because each variable has a probability value (sig) > 0.05. The following table *tests of normality*.

Table 11. Tests of normality

Tests of Normality							
	Kolmogorov-Smirnova			Shapiro-Wilk			Information
	Statistics	df	Sig.	Statistics	df	Sig.	Normal
CRITICAL THINKING	.111	48	.180	.970	48	.257	Normal
ATTITUDE PATTERN	.122	48	.070	.964	48	.145	Normal
DISCIPLINE	.082	48	.200 *	.978	48	.489	Normal
WELFARE EKO.	.101	48	.200 *	.960	48	.999	Normal
LEARNING RESOURCES	.123	48	.065	.960	48	.999	Normal
TRAINING	.143	48	.016	.944	48	.051	Normal
ICT DEVELOPMENT	.156	48	.005	.962	48	.119	Normal
ACHIEVEMENT MOTIVATION	.126	48	.053	.957	48	.077	Normal
TEACHER COMPETENCE	.117	48	.100	.951	48	.056	Normal

4. Path Analysis

4.1. The Direct Effect of Attitude Patterns on Teacher Competence

The results of the analysis of the direct effect of attitude patterns on teacher competency can be seen in the form of the following coefficient table.

Table 12. Direct effect of attitude patterns on teacher competency

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22,482	9,242		2,433	.019
	Attitude Pattern	2,253	526	.534	4,280	.000

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta in the table above, states if the attitude pattern (X2) increases by 1 unit, it will increase teacher competency (Y) by 0.534. The magnitude of the direct effect of attitude patterns on teacher competence can be calculated (534) 2 equals to 28.5% while the remaining 71.5% is influenced by models or other factors.

4.2. The Direct Effect of Discipline on Teacher Competence

The results of the analysis of the direct effect of discipline on teacher competency can be seen in the following coefficient table.

Table 13. Analysis of the direct effect of discipline on teacher competency

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22,707	8,281		2,742	.009
	Discipline	2,577	.541	.575	4,765	.000

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta in the table above, states if discipline (X3) changes to 1 unit, it will change or shift teacher competency (Y) by 0.575. The direct effect of discipline on teacher competency can be calculated with $(.575)^2$ equals to 33.8% while the remaining 67% is influenced by models or other factors.

4.3. Direct Effect of Economic Welfare on Teacher Competence.

The results of the analysis of the direct effect of economic welfare on teacher competency can be seen in the form of the following coefficient table.

Table 14. Direct effect of economic welfare on teacher competency

Model		Coefficients ^a			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	30,799	9,093		3,387	.001
	Economic well-being.	1,730	.505	.451	3,428	.001

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta in the table above, states if economic welfare (X4) changes by 1 unit, it will change or shift teacher competency (Y) by 0.451. The direct effect of discipline on teacher competence can be calculated by squaring *Standardized Coefficients/ Beta* (.451)² equals 20% while the remaining 80% is influenced by the model or other factors.

4.4. Effect of Learning resources on teacher competence

The results of the analysis of the direct influence of learning resources on teacher competence can be seen in the form of the following coefficient table

Table 15. Direct influence of learning resources on teacher competence

Model		Coefficients ^a			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	24,901	8,314		2,995	.004
	Learning Resources	2,143	.478	.551	4,480	.000

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta in the table above, states if the learning source (X5) changes to 1 unit, it will change or shift teacher competency (Y) by 0.551. The direct effect of discipline on teacher competence can be calculated by squaring *Standardized Coefficients/ Beta* (.551)² equals 30% while the remaining 70% is influenced by models or other factors.

4.5. The Direct Effect of Training on Teacher Competence

The results of the analysis of the direct effect of training activities on teacher competency can be seen in the form of the following coefficient table.

Table 16. Direct effect of training activities on teacher competency

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant)	30,049	7,770		3,867	.000
	Training	1,910	.462	.5221	4,135	.000

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta in the table above, states if the training activity (X6) changes to 1 unit, it will change or shift teacher competency (Y) by 0.521. The direct effect of discipline on teacher competence can be calculated by squaring *Standardized Coefficients/* Beta (521) ² equals 27% while the remaining 70.3% is influenced by the model or other factors.

4.6. The Direct Effect Of ICT Development On Teacher Competence

The results of the analysis of the direct influence of the development of information technology (ICT) on teacher competency can be seen in the form of the following coefficient table.

Table 17. Direct influence of the development of information technology (ICT) on teacher competency

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	42,116	8,180		5,148	.000
	The development of ICT	1,263	.523	.336	2,416	.020

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta in the table above, states if the training activity (X6) changes to 1 unit, it will change or shift teacher competency (Y) by 0.336. The direct effect of discipline on teacher competence can be calculated by squaring *Standardized Coefficients/* Beta (336) ² equals 11% while the remaining 89% is influenced by models or other factors.

4.7. The Indirect Effect of Critical Thinking on Teacher Competence Through Achievement Motivation

Based on the analysis of the indirect effect of critical thinking on teacher competence through achievement motivation can be seen in the following table

Table 18. Indirect effect of critical thinking on teacher competence

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	9,836	9,832		1,000	322
	Critical thinking	1,926	689	.422	2,794	.008
	Achievement motivation	1,047	.598	.264	1,751	.087

a. Dependent Variable: TEACHER COMPETENCY

Standardized Coefficients/ Beta table above, reflects the pattern of indirect influence. The amount of indirect effect is $0.422 \times 0.264 = 0.111$. The multiplication results state that if critical thinking (X1) increases by 1 unit, it will increase teacher competence by 0.111 through achievement motivation (Z). So the percentage of indirect effect is 1.2% while the remaining 98.8% is influenced by models or other factors.

4.8. The Effect of Attitude Patterns on Teacher Competence Through Achievement Motivation.

The results of the analysis of the indirect effect of discipline on teacher competency through achievement motivation can be seen in the following table:

Table 19. Indirect effect of discipline on teacher competency

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18,525	8690		2,132	.039
	Discipline	1,787	.767	.399	2,329	.024
	Achievement motivation	.975	679	.246	1,436	.158

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta table above, reflects the pattern of indirect influence. The amount of indirect effect is $0.399 \times 0.246 = 0.098$. The multiplication results state that if discipline (X3) increases by 1 unit, it will increase teacher competence by 0.098 through achievement motivation (Z). The percentage of indirect effect is 0.9% while the remaining 99.1% is influenced by models or other factors.

4.9. The indirect effect of economic well-being on teacher competence through achievement motivation.

The results of the analysis of the indirect effect of economic welfare on teacher competence through achievement motivation can be seen in the following table:

Table 20. Indirect effect of economic welfare on teacher competence

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17,433	9,561		1,823	.75
	Economic well-being.	.975	.533	.254	1,830	.74
	Achievement motivation	1,624	.551	.409	2,948	.005

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta table above, reflects the pattern of indirect influence. The magnitude of the indirect effect is $0.245 \times 0.409 = 0.100$. The multiplication results state that if the economic welfare (X4) increases by 1 unit, it will increase teacher competence by 0.100 through achievement motivation (Z). The percentage of indirect effect is 1% while the remaining 99% is influenced by models or other factors.

4.10. The Effect of Learning Resources On Teacher Competence Through Achievement Motivation.

The results of the analysis of the indirect effect of learning resources on teacher competency through achievement motivation can be seen in the following table:

Table 21. Indirect effect of learning resources on teacher competency

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13,071	9662		1,353	.183
	Learning Resources	1,311	.535	.321	2,449	.018
	Achievement motivation	1,565	.520	.395	3,010	.004

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta table above, reflects the pattern of indirect influence. The amount of indirect effect is $0.321 \times 0.395 = 0.126$. The multiplication results state that if the source of learning (X5) increases by 1 unit, it will increase teacher competence by 0.126 through achievement motivation (Z). The percentage of indirect effect is 1.5% while the remaining 98.5% is influenced by models or other factors.

4.11. The Effect of Training on Teacher Competence Through Achievement Motivation.

The results of the analysis of the indirect effect of learning resources on teacher competency through achievement motivation can be seen in the following table.

Table 22. Indirect effect of learning resources on teacher competency

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13,182	9,653		1,366	.179
	Training	1,154	.473	.302	2,438	.019
	Achievement motivation	1,762	.491	.444	3,586	.001

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta table above, reflects the pattern of indirect influence. The amount of indirect effect is $0.302 \times 0.444 = 0.134$. The multiplication results state that if training (X6) increases by 1 unit, it will increase teacher competence by 0.134 through achievement motivation (Z). The percentage of indirect effect is 1.7% while the remaining 98.3% is influenced by models or other factors.

4.12. The Effect of ICT on Teacher Competence through Achievement Motivation.

The results of the analysis of the indirect effect of the development of information technology on teacher competence through achievement motivation can be seen in the following table:

Table 23. Indirect effect of the development of information technology on teacher competence

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Error	Beta		
1	(Constant)	18,842	10,169		185	.070
	The development of ICT	.639	.485	.166	1,31	.194
	Achievement motivation	1986	.500	.501	3,973	.000

a. Dependent Variable: Teacher Competence

Standardized Coefficients/ Beta table above, reflects the pattern of indirect influence. The amount of indirect influence is $0.166 \times 0.501 = 0.083$. The multiplication results state that if the development of information technology (X7) increases by 1 unit, it will increase teacher competence by 0.083 through achievement motivation (Z). The percentage of indirect effect is 0.1% while the remaining 99.9% is influenced by models or other factors.

Based on the results of the analysis above, the next step is to summarize the direct and indirect effects and examine the validity of the research paradigm model.

4.13. Summary of the effect independent variabls on independent variabel

Table 24. Summary of the effect independent variabls on independent variabls

No	Variable	Influence		Information
		Direct	Indirect	
1	X1 → Y	0.589	-	Significant
2	X2 → Y	0.534	-	Significant
3	X3 → Y	0.575	-	Significant
4	X4 → Y	0.451	-	Significant
5	X5 → Y	0.551	-	Significant
6	X6 → Y	0.521	-	Significant
7	X7 → Y	0.336	-	Significant
8	X1 → Z → Y	-	0.111 *	Not significant
9	X2 → Z → Y	-	0.104	Significant
10	X3 → Z → Y	-	0.083 *	Not significant
11	X4 → Z → Y	-	0.103 *	Not significant
12	X5 → Z → Y	-	0.127	Significant
13	X6 → Z → Y	-	0.134	Significant
14	X7 → Z → Y	-	0.081 *	Not significant

4.14. Model validity check

Determinethe validity of the model, an indicator of model validity is used, namely Trimming theory. Based on this theory, the paths between insignificant variables are removed (elimination), so that a model that is supported by empirical data is obtained.

5. Finding and discussion

Based on the findings of researchers that mastery of teacher competence is in good classification. This means that the higher or better the critical thinking skills of the teacher, the better the mastery of teacher competence. The results of hypothesis testing that have been statistically accepted support the opinion of [17], that the teaching competence of teachers depends on the ability to read and express thoughts clearly based on critical thinking. Related

to the attitude pattern of elementary school teachers in Bima City is classified as good. In accordance with the research flow described above about how the relationship between attitude patterns and teacher competence is based on the results of empirical research that attitude patterns have a positive and significant effect on teacher competency mastery. The results of testing this hypothesis support the research results of [28] that teacher attitudes at work have a positive and significant effect on their professional competence. Discipline (self-control) is a life choice that is imperative for individuals who desire to improve self-competence. It must be admitted that in any field, self-discipline will be reflected in work competence through priority choices and work completion times based on self-control so that it has a positive impact on work competence. That the main idea of discipline is a thought that concerns the substance of psychology and does not promote lies in every action. So discipline is a pattern of thought and behavior that shows a person's obedience or compliance with applicable laws and regulations. The economic welfare of elementary school teachers in Bima City in 2020 based on research data is classified as quite good with. This reflects the level of teacher welfare, which is measured by indicators of the amount of salary, allowances and other incentives received by teachers to meet learning needs, and the family household. Economic welfare for teachers is very important because according to [27] the economic welfare of teachers is referred to as complementary compensation / benefits meaning that complementary remuneration is given based on policies aimed at maintaining and improving the mental physical condition of teachers so that productivity his work increases. The benefits of learning resources depend on the teacher to communicate and interact with the messages contained in learning resources. According to [2] learning resources function: (a) provides direct and creative learning experiences; (b) allows something that cannot be held, visited, seen in person; (c) adds and expands the range of offerings; and (d) provides accurate and integrated information. Training activities reflect the activities of elementary school teachers in participating in education and training activities, discussion seminars with peers and other educational staff classified as poor. According to [18] training is an attempt to improve worker performance in a particular job which is their responsibility. Thus it can be concluded that training provides opportunities for teachers to gain new knowledge, skills, and attitudes that change their behavior, which in turn will affect their competence. The development of Information Technology reflects the ability and willingness of teachers in utilizing informational coordinated services for the benefit of economic teacher learning. Informatic technology is very important to master and be used by teachers, for example (a) WIFI is able to increase learning motivation so that the education system can run as expected. This facility is considered important because it can greatly facilitate

learning activities, especially in finding educational materials or assignments in learning activities; (b) the internet has penetrated into the main media for fostering new knowledge and stimulating the development of science. The internet provides unlimited information. Through the internet, learning in education becomes a source of information that can be used to support the learning process. With the internet, it can make it easier to do assignments and to find various information and knowledge that is on the internet. advances in information technology provide benefits to humans, including teachers (a) helping teachers to complete various jobs better and more efficiently; (b) motivating teachers to keep thinking about creating changes and improving job competencies; and (c) helping teachers recognize history and predict current and future phenomena.

6. Conclusions

Based on the discussion of the results of the study, it came to the conclusion that is:

1. Based on the results of hypothesis testing shows that internal factors have a significant positive effect on the competence of elementary school / elementary school teachers in Bima City.
2. Based on testing the hypothesis shows that external factors have a significant positive effect on the competence of elementary school / elementary school teachers in the City of Bima.
3. Based on the results of the F-test showed that simultaneously internal and external factors significantly influence the competence of elementary school / elementary school teachers in the City of Bima.

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