THE INFLUENCE OF PRINCIPAL'S ACADEMIC SUPERVISION IMPLEMENTATION, TEACHER PEDAGOGIC COMPETENCE AND TEACHER PROFESSIONAL COMPETENCY AGAINST STUDENT ACHIEVEMENT: SURVEY ON SMA NEGERI IN KUNINGAN REGENCY

By
Dr. Pupu Saeful Rahmat[1]
Dr. Entin Jumantini[2]
Universitas Kuningan

1. pupu.saeful.rahmat@uniku.ac.id
2. entin.jumantini@uniku.ac.id

The problem in this study is our quriosity as researchers of how the effect of the implementation of Principal's academic supervision, economic teacher pedagogical competence and economic teacher professional competence on student achievement. The method used in this research is a survey method. Data obtained through a questionnaire distributed to all respondents, namely 30 economics teachers. Other data were obtained through the average value of students' daily tests obtained from 30 teachers of economics subjects at SMA Negeri in Kuningan Regency as the research sample. Test the quality of data validity and reliability test, while the analysis technique in this study uses path analysis. The results of this study indicate that (1) There is an effect of the implementation of the principal's academic supervision on teacher pedagogical competence. This shows that the principal's academic supervision has a positive and significant effect on teacher pedagogical competence. (2) The implementation of the Principal's academic supervision has a positive and significant effect on the professional competence of teachers. (3) teacher pedagogical competence has a positive and significant effect on learning achievement. (4) Teacher professional competence has a positive and significant effect on student achievement.

Keywords: Principal's academic supervision implementation, teacher pedagogic competence, teacher professional competency, students' achievement.

I. Introduction

Education is a transformation that converts input into output. In improving the quality / achievement of education at an educational level, it is necessary to carry out supervision. Educational supervision is a discipline of assessing the improvement of teaching and learning situations, empowering teachers and improving the quality of teaching. In order to improve the quality of education at an education level, Prinsipal's supervision is needed which aims to find or identify the capabilities and inability of teachers to provide assistance / services to these personnel in order to improve their abilities/expertise.

If we look at the objectives of the supervision, then how heavy the task is assigned to a supervisor where at this time the principal has an important role as the person in charge of the implementation of education at the school level. The principal must be able to develop a better teaching and learning situation through coaching and increasing the potential of educators. Achieving to improve teaching and learning are aimed at achieving the ultimate goal of education, namely the maximum personal formation of children. Improving the quality of learning in the classroom is done through improving the quality of teachers. Teacher pedagogical competence is one of the competencies that must also be improved because only teachers with pedagogical abilities can improve the quality of learning properly.

The program is essentially an improvement in teaching and learning. In more detail, Rifai in Zayadi (2001:6) supervision includes: researching (collecting data objectively), assessing (cooperatively determining what is good and what is lacking based on data), so that academically supervised teachers really have competence.

Competence according to Law No. 14 of 2005 concerning teachers and lecturers, professional competence is "the ability to master broadly and deeply". The final goal of an educational activity is directed at the success achieved by students after they participate in learning activities. Based on the description above, the formulation of this research problem are: (1) Is there positive influence between the implementation of the principal's academic supervision against the pedagogical competence of economic teachers? (2) Is there positive influence between the implementation of the principal's academic supervision against the professional competence of economic teachers? (3) Is there positive influence between teacher pedagogical competence against student achievement in economic subject? and (4) Is there positive influence between professional competence against student achievement in economic subject?

2. Theoretical Basis

Student's Achievement

Student achievement is the measurement of the amount of academic content a student learns in a given time frame. Each instruction level has specific standards or goals that educators must teach to their students. Achievement is usually assessed through frequent progress and comprehension checks and examinations, however, there is no consensus on how it is best evaluated or which elements of it are most important. refers to the extent to which a learner has attained their short or long-term educational goals. Individual differences in academic performance are strongly correlated with differences in personality and intelligence.

The definition of learning achievement according to the KBBI (Big Indonesian Dictionary, 2005: 895) means: (a) mastery of knowledge or skills developed by subjects, usually indicated by test scores or scores given by the teacher; (b) abilities that actually exist or can be observed (actual abilities) and which can be directly measured by certain tests. So According to Sumadi Suryabrata (Revise: 2016: 297), achievement can also be defined as follows: "the value is the last formulation that can be given by the teacher regarding the progress / student achievement during a certain period". So, achievement is the result of a student's efforts during a certain period of time to carry out activities. According to Rahmat (2014) that Learning outcomes are divided into four groups, namely: (a) Knowledge, namely in the form of information materials, facts, ideas, beliefs, procedures, laws, rules, standards, and other concepts; (b) Ability, namely in the form of the ability to analyze, reproduce, create, organize, summarize, make generalizations, think rationally and adapt; (c) Habits and skills, namely in the form of behavioral habits and skills in using all abilities; (d) Attitude, namely in the form of appreciation, interest, consideration and taste. From the above opinion it can be concluded that learning achievement is the result of student efforts that can be achieved in the form of mastery of knowledge, habitual abilities and skills as well as attitudes after participating in the learning process which can be proven by test results. Learning achievement is something that students need to know the abilities they get from an activity called learning.

Teacher's Pedagogical Competence

Pedagogical competence of a teacher is very important in the teaching-learning process because in modern education pupil is the centre of the learning system. Pedagogical competence is the ability of teachers in managing learning that includes the ability to plan a learning program, the ability to interact or manage the learning process and the ability to perform an assessment. Pedagogic competence is defined as the ability to manage student learning, which includes: understanding of students, designing and implementing learning, evaluating learning outcomes, developing students to actualize their potential (explanation of Government Regulation Number 19 of 2005 concerning National Education Standards). Pedagogic Competence is the ability to understand students, design and implement learning, evaluate learning outcomes, and develop students to actualize their various potentials. According to the law of the Republic of Indonesia No. 14 Year 2005 about Teachers and Lecturers, Sub competencies in Pedagogic competencies are:

1) Understanding students in depth which includes understanding students by utilizing the principles of cognitive development, personality principles, and identifying students' initial teaching provisions.
2) Designing learning, including understanding the foundation of education for the benefit of learning which includes understanding the foundation of education, applying learning and learning theory, determining

learning strategies based on student characteristics, competencies to be achieved, and teaching materials, and compiling learning designs based on the chosen strategy.

3) Carry out learning which includes arranging learning settings and implementing conducive learning.

4) Designing and implementing learning evaluations which include designing and implementing evaluation (assessment) of learning processes and outcomes on an ongoing basis with various methods, analyzing the results of process evaluation and learning outcomes to determine the mastery level, and utilizing the results of learning assessments for improvement. the quality of the learning program in general.

5) Developing students to actualize their various potentials, including facilitating students to develop various academic potentials, and facilitating students to develop various non-academic potentials

Teachers' Professional Competencies

Professional competencies are skills, knowledge and attributes that are specifically valued by the professional associations, organizations and bodies connected to in the future career. Professional competence can be defined as the ability of teachers to master their subjects in depth and the way to be precise convey it to students (Syahrudin, Ernawati, Abdul Rahman, & Sihes, 2013), competencies that must be mastered by the teacher in relation to the implementation of their main duties teaching. The teacher task that is meant is everything that must be prepared by a teacher, especially as a teacher. (Yustiawan & Nurhikmahyanti, (2014), professional employability according to the standards set for action individual professionals. The formation of professional competences is necessary for planning success, implementation, and evaluation of their own educational actions is the main task of a teacher as an educator (Ciechanowska, 2010).

Professional competency indicators consist of four indicators including mastering the educational foundation, mastering teaching materials, compiling teaching programs, implementing teaching programs, and assessing the results and teaching and learning processes that have been implemented. (Usman, 2011). The characteristics of professionally competent teachers were conveyed by Gary and Margaret, namely having the ability to create a conducive learning climate, being able to develop learning strategies and management, being able to provide feedback and reinforcement, and being able to improve themselves. (Mulyasa, 2007) Based on the views of Gary and Margaret, indicators of teacher professional competence are broader in scope, ranging from the ability to master all aspects of classroom learning to the ability to improve themselves to become professionally competent teachers. Because of their broader scope, Gary and Margaret's views on the indicators or characteristics of professional competence are used as a measure in this study. Principal's Academic Supervision. Teachers' professional competence their professional knowledge, skills, beliefs and motivation—is a critical predictor of teachers' professional wellbeing and success.

Based on the description above, the following hypothesis can be formulated:
1. There is a positive influence between the implementation of the principal's academic supervision on the pedagogical competence of economic teachers.
2. There is a positive influence between the implementation of the principal's academic supervision on the professional competence of economic teachers.
3. There is a positive influence between teacher pedagogical competence on student achievement in economic subjects.
4. There is a positive influence between professional competence on student achievement in economic subjects.

3. Research Method

The research is intended to examine hypotheses about the causal relationship or influence between variables, namely the principal's academic supervision (X1) as the first independent variable (independent), teacher pedagogical competence (X2) as the second independent variable (independent) and Teacher professional competence (X3) as the third independent variable (independent), student achievement (Y) as the dependent variable (dependent). In this study the authors used descriptive research methods

the descriptive method is: an investigation that tells, analyzes, classifies, investigations using survey techniques, questionnaire techniques, observation or by testing, comparative studies, time and motion studies, operational quantitative analysis." (Winarno Surakhmad, 994: 139).

The characteristics of the Descriptive Method, namely:

a. Focusing on solving problems that exist in the present

b. The data collected is first compiled, described and then analyzed.

The analysis technique in this study uses the path analysis method. The path analysis method is a calculation technique based on the path diagram which helps to describe the casual relationship between variables. With path analysis, it can be calculated that the direct or indirect effect of the independent variables on the dependent variable.

The population in this study were all economics teachers in public high schools in Kuningan regency, either civil servants or permanent teachers (GT) or honorarium or non-permanent teachers (GTT) with a sample of 30 people. Calculations to test hypotheses using the SPSS version.24 for windows.

4. Result and Disscussion

The research instrument was tested on 30 economics teacher respondents in public high schools throughout Kuningan regency. The collected questionnaire data is then statistically calculated for its validity and reliability. The questionnaire that was tried out consisted of a questionnaire to measure the academic supervision variables of the school principal as many as 20 questionnaire items, 25 questionnaire items of economic teacher pedagogical competence, 13 questionnaire items of economic teacher professional competence. Total items of the questionnaire that were tested were 58 items. According to Suharsimi Arikunto (2002) that "an instrument is declared valid if it can reveal data from the variables under study accurately and validly. The level of instrument validity indicates the extent to which the data collected does not deviate from the description of the intended variables.

The data collected was then processed using the SPSS version 24 for Windows. The validity of each item number can be seen by looking at the correlation between item scores and item total scores compared to r table values. If the calculated r value is greater than r table or r count> r count, then the item is valid. By using the distribution r table $\square\square = 0.05$ with conditions degrees of freedom = 30 - 2 = 28 (df = n - 2) in order to get r table = 0.361. To test the relevance in this study, Cronbach's Alpha formula was used. In determining the reliability of the instrument, the writer refers to the opinion of Nugroho (2005) who states that "The reliability of a variable construct is said to be good if it has a Cronbach's Alpha value> 0.60. Reliability results can be seen in the table below:

Table 1
Results of Testing the Reliability of the Variables X1, X2 and X3

Variabel	Alpha Cronbach's	Keputusan
X_1	0,917	Reliabel
X_2	0,943	Reliabel
X_3	0,904	Reliabel

From the table above, the calculation results of the variable instrument reliability can be concluded that all variables are reliable.

Calculations to test the hypothesis using the SPSS version 24 for Windows. In this study, the model to be tested is as follows:

Table 2
Summary of coefficient results of substructure path analysis 1

Influence Between Variables	Path coefficient	T	P_{value}	R^2	F	Test Result
X_1 against X_2	0,781	6,623	0,000	0,610	43,858	H_1 received
X_1 against X_3	0,665	4,713	0,000	0,442	22,209	H_1 received

Source: Path Analysis Appendix

Significant requirements based on Nugroho (2005) alternative hypothesis (H1) will be accepted if Pvalue < 0.05. Based on the table above, it is obtained that Pvalue = 0.000, this value is less than 0.05. Based on the table above, the amount of R2X2X1 = 0.610 is obtained so that the amount of R remainder ($⟦ρ⟧\_ε1$) = 1 - R2X2X1 = 1 - 0.610 = 0.390 and the value $⟦ρ⟧\_(x\_2 x\_1)$ = 0.781. The amount of R2X3X1 = 0.442 so that the amount of residual R ($⟦ρ⟧\_ε2$) = 1 - R2X3X1 = 1 - 0.442 = 0.558 and the value of $⟦ρ⟧\_(x\_3 x\_1)$ = 0.665 if substituted for the path diagram of the sub-structure model 1, it can be described as shown below:
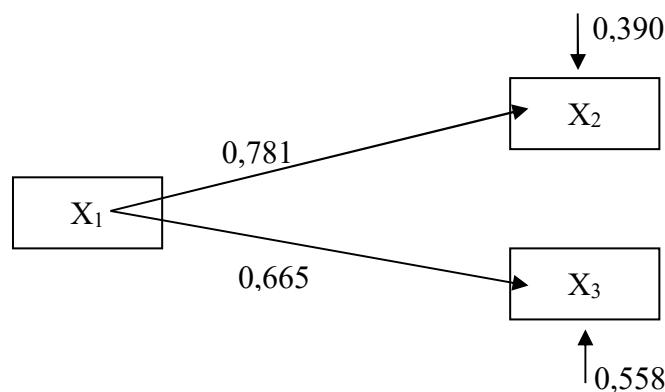
Picture. 1

The empirical causal path diagram of X1 against X2 and

X1 against X3

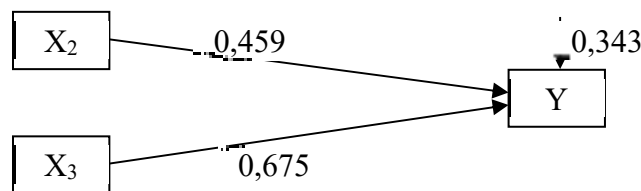Based on the results of the calculation of the structural path analysis, then:
a. The magnitude of the influence of the principal's academic supervision (X1) which directly affects the pedagogical competence of teachers (X2) is 0.781 or 78.1% and the rest is influenced by other variables of 39%.
b. The magnitude of the influence of the principal's academic supervision (X1) directly affects the professional competence of teachers (X3) 0.665 or 66.5% and the rest is influenced by other variables of 55.8%.

Table. 3
Summary of coefficient results of substructure path analysis 2

Influence Between Variables	Path coefficient	T	P_{Value}	R^2	F	Test Result
X_2 against Y	0,459	4,051	0,000	0,653	25,420	H_1 received
X_3 against Y	0,675	5,953	0,000	0,653	25,420	0,653

Source: Path Analysis Appendix

Significant requirements based on Nugroho.(2005) alternative hypothesis (H1) will be accepted if Pvalue <0.05. Based on the table above, it is obtained that Pvalue = 0.000, this value is less than 0.05, which means that it is significant.Based on the table above, the amount of R2 = 0.653 is obtained so that the amount of remaining R ($[\![\rho]\!]\_\varepsilon3$) = 1 - R2 = 1 - 0.653 = 0.347 and the value $[\![\rho]\!]\_(yx\_2)$ = 0.459 and the value $[\![\rho]\!]\_(yx\_3)$ = 0.675 if it is substituted for the path diagram for the sub-structure model 2, it can be described as shown below:
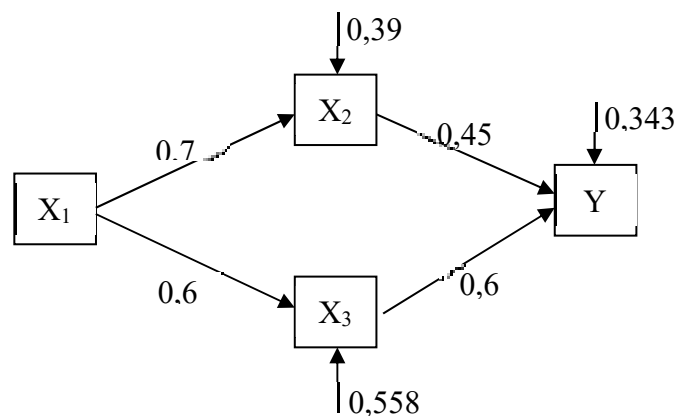

Picture. 2
The empirical causal path diagram X2, X3 with respect to Y

Based on the results of the calculation of the structural path analysis, then:
a. The magnitude of the influence of teacher pedagogic competence (X2) directly affects student achievement (Y) is 0.4592 = 0.211 or 21.1%.
b. The magnitude of the influence of teacher professional competence (X3) which directly affects student achievement (Y) is 0.675 = 0.455 or 45.5%.
c. The magnitude of the influence of teacher pedagogical competence (X2) and teacher professional competence (X3) simultaneously which affects student achievement (Y) is R2 = 0.653 or 65.3% while the rest is determined by other unobserved factors $[\![\rho]\!]\_\varepsilon3$ of 0.343 or 34%.
Based on the data above, the complete path diagram is as follows:

Picture 3.
Complete path diagram

Based on the path diagram above we can conclude that some of the effects are direct. The magnitude of this influence is described as follows:

1. The variable X1
   a. The direct effect of variable X1 on X2 = 0.781
   b. The direct effect of variable X1 on X3 = 0.665
   2. The variable X2
   The direct effect of the variable X2 on Y = 0.459
3. Variable X3
   The direct effect of the variable X3 on Y = 0.675
4. Variable X1
   a. The indirect effect of variable X1 on Y through X2 = 0.781 × 0.459
   = 0.358
   b. The indirect effect of variable X1 on Y through X3 = 0.665 × 0.675
   = 0.448

Table. 4
Decomposition of Influence Between Variables in Path Analysis Model

The Effect	Direct	Indirect		Total
		X_2	X_3	
X_1 against X_2	0,781	-	-	0,781
X_1 against X_3	0,665	-	-	0,665
X_2 against Y	0,459	-	-	0,459
X_3 against Y	0,675	-	-	0,675
X_1 against Y	-	0,358	-	0,806
X_1 against Y	-	-	0,448	

Based on the above data processing, the following research hypothesis can be formulated:

1. The effect of the implementation of the principal's academic supervision on the pedagogic competence of teachers is directly affected by 61%, this shows that the academic supervision of the principal has a positive and significant effect on the pedagogic competence of teachers.
2. The implementation of principal academic supervision has a positive and significant effect on teacher professional competence by 0.665 or 44%.
3. Teacher pedagogical competence has a positive and significant effect on student achievement by 0.459 or 21%.
4. Teacher professional competence has a positive and significant effect on student achievement by 0.675 or 45.5%.

5. Conclussion

The implementation of principal academic supervision has a positive effect on the pedagogic competence of teachers at public high schools Kuningan regency. It's meant that the more efficient and good and intense the principal's academic supervision is, the more teacher pedagogical competence is increasing. The implementation of principal academic supervision has a positive effect on the professional competence of teachers at public high schools in Kuningan regency. It's meant that the more efficient and good and the intense academic supervision of principals, the higher the professional competence of teachers. Teacher pedagogical competence has a positive effect on student achievement at public high schools in Kuningan regency. It's meant that the better and the increase in teacher pedagogical competence, the student's learning achievement will also increase. Teacher professional competence has

a positive effect on student achievement at public high schools in Kuningan regency. It's meant that the better and the increase in teacher professional competence, the student's learning achievement will also increase.

There is an indirect relationship effect of the principal's academic supervision variable on learning achievement. The relationship that occurs is the effect of X1 on Y through X2 and the effect of X1 on Y through X3. In addition to the three variables that affect student achievement, this variable is called epsilon. The epsilon variable also affects student achievement.

The results of this study prove that the epsilon variable also has a positive and significant effect on student achievement. This means that in addition to the implementation of school principal supervision, teacher pedagogical competence and teacher professional competence there are other factors that are quite significant in influencing student achievement. Variables that are predicted to increase student achievement include teacher education qualifications, educational facilities and infrastructure, training and learning technology.

6. Suggestion

Principals and teachers must be able to provide reinforcement and support for efforts to change for the better, especially in the context of increasing teacher pedagogical and professional competence. The principal has the ability to motivate teachers to work more actively, creatively, and innovatively in the framework of creating professionals and has implications for quality learning processes and student learning outcomes who excel. Teacher competency enhancement can be carried out independently or following activities programmed by the Ministry of National Education. Improve teacher pedagogical and professional competence by increasing commitment to design, implement, evaluate learning, and improve student learning achievement. This commitment must be built on the basis of teacher awareness as a form of service to the nation and the State. The commitment of the teacher in implementing this learning is then followed up by conducting Classroom Action Research (CAR) which is one part of teacher professional development.

7. Reference

.Becoming a Professional Teacher Creating Creative Learning. Bandung: Rosda Karya (Mulyasa 2007)

Becoming a Professional Teacher. PT. Rosdakarya (Usman.2011))

Educational administration, Jakarta: Ministry of Education and Culture Yogyakarta (Surachmad, 1994)

Glickman, C.D., Gordon, S.P., and Ross-Gordon, J.M. (2007). Supervision and Instructional Leadership A Development Approach. Seventh Edition. Boston: Person.

Ministry of National Education. Laws of the Republic Indonesia. No. 14 of 2005 Regarding Teachers and Lecturers.

Ministry of National Education. Laws of the republic Indonesia. No. 19 of 2005. Regarding National Education Standards

Neagley, R.L. and N.D. Evans (1980) Handbook for Effective Supervision for Instruction. Third Edition. Englewood Cliffs, New Jersey: Presentice-Hall, Inc.

Rahmat, Pupu Saeful (2014). Education Foundation. Kuningan: FKIP Press. .

Statistics for Research. Bandung: CV Permadi. (Nugroho 2005.)

Suharsimi Arikunto (2007). Research Procedure. Jakarta. Rineka Cipta

Suryabrata, Sumadi (Revise: 2016). Research methodology. Jakarta: King Grafindo.

The Big Indonesian Dictionary (2018) Online Based on the Fifth Edition.

http://www.suarapembaharuan.com/News/1999/01/220199/OpEd,