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Teacher Professional Development, Competencies, Educational Facilities, and Infrastructure on Teacher Performance and Student Learning Achievement

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Abstract: This study aims to analyze teacher professional development, competence, educational facilities, and infrastructure that affect teacher performance and high school student learning achievement. The population in this study was all teachers from five public high schools and five private high schools, with 183 teachers as samples. The analytical model used in this study is a structural equation model (SEM) using the AMOS program. The results showed that teacher professional development has no significant effect on the performance. Competence, educational facilities, infrastructure, and teacher professional development, have a positive and significant effect on teachers' performance. Competence has no significant impact on the performance of teachers. Educational facilities and infrastructure have a positive and significant effect on student learning achievement. Teacher performance has a positive and significant effect on students' learning achievement. Teacher professional development has a positive and significant effect on the learning achievements of high school students through teacher performance. Competence has a positive and significant effect on the learning achievement of high school students through teacher performance. Educational facilities and infrastructure have a positive and significant effect on the learning achievements of high school students through teacher performance.

Keywords: Teacher Professional Development, Competence, Education Facilities and Infrastructure, Teacher Performance, Student Learning Achievement.

1. INTRODUCTION

The quality of education does not only talk about the results, but also the process of education itself. Education is said to be of high quality if the teaching and learning process runs well and smoothly. Likewise with the results obtained are satisfactory. The quality of education when viewed from the results, refers to the learning achievement obtained by students and schools for a certain period of time. In addition, the school's ability to produce the best graduates also shows the quality of education in the school. Because these graduates will contribute to advancing Indonesia. According to Chang et al. (2022) states that learning achievement is evidence of the success that has been achieved by someone. So learning achievement is the maximum result achieved by someone after carrying out learning efforts. The average value of the National Examination can describe student learning achievement, the following is the data on the average value of the National High School Examination in Makassar City from 2019 to 2021.

Table 1. The Average score of National Examination (UN) in Makassar City in 2019-2021

No.	Status School	Average score of UN IPA			Average score of UN IPS		
		2019	2020	2021	2015	2016	2017
1.	Public High-School	73,02	64,81	47,81	61,72	56,61	44,51
2.	Private High-School	66,95	54,50	43,24	60,75	49,52	41,85

Based on data the average value of the SMA National Examination in Makassar City from 2019 to 2021 has decreased every year, both public high schools and private high schools. The average value of the National Science Examination at public high schools in Makassar City in 2019 was 73.02; in 2020 it decreased by 64.81 and in 2021 it decreased by 47.81. The average value of the National Science Examination at private high schools in Makassar City in 2019 was 66.95; in 2020 it decreased by 54.50 and in 2021 it decreased by 43.24. The average value of the Social Sciences National Examination at State Senior High Schools in Makassar City also decreased, namely in 2019 by 61.72; in 2020 decreased by 56.61 and in 2021 decreased by 44.51. The average value of the Social Sciences National Examination at private high schools in Makassar City in 2019 was 60.75; in 2020 it decreased by 49,502 and in 2021 it decreased by 41.85.

Given the importance of the teacher's role in the learning process, every teacher is required to have academic qualifications and competence as learning agents. Zhao et al. (2020) asserts that the competencies that must be possessed by teachers include 1) pedagogic competencies, namely the ability to manage learning, 2) personality competencies, namely personal abilities that are steady, stable, mature, wise and authoritative to be role models for students, 3) competencies professional competence, namely the ability to master learning materials broadly and deeply, and 4) social competence, namely the ability of teachers as part of the community to communicate and socialize effectively. The achievement of these four competencies can be seen from the performance shown by each teacher. Talking about teacher professionalism, of course, cannot be separated from the teacher professional development activities themselves. To anticipate the challenges of the increasingly severe world of education, the professionalism of teachers must be developed. Broadly speaking, teacher professional development activities can be divided into three types, namely: 1) intensive development, 2) cooperative development, and 3) self-directed development (Tikkanen, 2002). Ideally every teacher can involve themselves in all three types of teacher professional development activities. If a teacher does not try to get involved (involved) in the three types of professional development activities, it is almost certain that he will fall down professionally. The government's efforts in this case the Ministry of National Education and Culture (Kemendikbud) have actually tried to continue to develop the teaching profession including increasing the qualifications and requirements for higher education levels for teaching staff, teacher certification programs, and the establishment of the PKG (Teacher Activity Center), MGMP (Teacher Activity Center). Subject Teacher Conference), and KKG (Teacher Working Group). So theoretically, with the government's efforts to develop the teaching profession, it should be able to improve teacher performance, especially improving the quality of education, but in reality there are still a number of basic problems that need to be solved immediately, for example the low quality of teachers in various types and levels of education.

This research is the development of variables from previous studies with different subjects, objects, and research indicators. The relationship with previous research on the effect of teacher competence on teacher performance (Blömeke et al., 2022; Monsivais & Nunez, 2022; Wu et al., 2022) the results of this study indicate that there is a positive and significant influence of teacher competence on teacher performance. On the other hand, research by (e.g., Muliati et al., 2022; Wahyudi et al., 2022) showed different results, namely teacher competence had no effect on teacher performance. Referring to the results of previous studies indicating that the research results were contradictory, the inconsistency of the results of previous studies prompted researchers to conduct research using the teacher's performance variable as an intervening variable. Further research related to this research is research conducted by Hartiwi et al. (2020) whose research focus is the leadership of the principal, infrastructure, and teacher performance. The results of the research by Hartiwi et al. (2020) stated that infrastructure had an effect on teacher performance. The similarity of Hartiwi's research with the research conducted lies in the observation of infrastructure and teacher performance. While the difference with this study, the researchers did not conduct research on the leadership of school principals. In addition, the data analysis method used is different, namely in previous studies using the classical assumption test, and multiple regression testing, while this study used SEM (Structural Equation Model) data analysis techniques.

2. Literature Review

2.1. The Teacher Professional Development

The word of profession is synonymous with the word expertise. The definition of profession according to the Big Indonesian Dictionary (KBBI) (Kristiawan & Rahmat, 2018) means a field of work based on certain skills education (skills, vocational and so on). Profession is also defined as a certain position or job that requires special knowledge and skills obtained from intensive academic education. So a profession is a job or position that requires certain skills (Maiza & Nurhafizah, 2019). According to Yamin Martinis, the profession has the understanding of someone who pursues work based on expertise, abilities, techniques, and procedures based on intellect (Maiza & Nurhafizah, 2019). Maiza & Nurhafizah (2019) argues that in general, profession is defined as a job that requires further education in science and technology which is used as a basic tool to be implemented in useful activities. Within the scope of staffing, professional development is widely known as Continuous Professional Development (CPD) or by the agency for improving educational resources and improving the quality of education, the ministry of education and culture is termed Continuing Professional Development (PKB). The definition of development according to Tefera & Hunsaker (2020) is an attempt to improve the technical, theoretical, conceptual, and moral abilities of employees in accordance with the needs of the job/position through education and training. According to Maiza & Nurhafizah (2019) Solomou & Asimaki (2022) teaching staff is a profession which means a position that requires special skills as a teacher and cannot be done by just anyone outside the field of education. The teacher as a profession means the teacher as a job that requires competence (skills and authority) in education and learning in order to carry out the work effectively and efficiently and effectively

2.2. Teacher Competences

Competence is a personal ability that reflects a steady, stable, mature, wise and authoritative personality, being a role model for students. Personality sub-competencies can be described as follows: (Solomou & Asimaki, 2022); (Custodio-Espinar et al., 2022)

- a) Personality Competence Personal: A steady and stable personality has essential indicators: acting in accordance with legal norms, acting in accordance with social norms, being proud as a professional teacher and having consistency in acting according to the norms that apply in life. Mature personality with essential indicators: showing independence in acting as an educator and having a high work ethic. A wise personality with essential indicators: showing actions based on the benefit of students, schools and communities and showing openness in thinking and acting. Noble morals and can be role models with essential indicators: acting in accordance with religious norms, faith and piety, being honest, sincere, willing to help, and having appropriate behavior for students to follow. An authoritative personality with essential indicators: having a behavior that has a positive effect on students and has a respected behavior.
- b) Pedagogic Competencies Pedagogic. Competencies that must be mastered by teachers include teacher understanding of students, design and implementation of learning, evaluation of learning outcomes and student development to actualize their potential. Pedagogic sub-competencies can be described as follows: like Understanding students in depth with essential indicators of understanding students by utilizing the principles of cognitive development, understanding students by utilizing personality principles and identifying students' initial teaching provisions. Designing learning, understanding the educational foundation for the benefit of learning. These sub-competencies have essential indicators: understanding the educational foundation, applying learning and learning theory, determining learning strategies based on the characteristics of students, competencies to be achieved, and teaching materials and preparing learning plans based on the chosen strategy. Implement learning with essential indicators: learning background and carry out conducive learning. Designing and implementing learning evaluations, with essential indicators: designing and carrying out evaluations of learning processes and outcomes on an ongoing basis with various methods:

analyzing the results of evaluating processes and learning outcomes to determine the level of mastery learning and utilizing the results of learning assessments in general.

- c) Professional. Competence Professional competence is a broad and deep mastery of learning materials that must be mastered by teachers, including mastery of curriculum subject matter in schools and the scientific substance that overshadows the material, as well as mastery of scientific structures and methodologies. Each of these sub-competencies has the following essential indicators: Craig et al. (2022): Mastering scientific substances related to the field of study with essential indicators: understanding the teaching materials in the school curriculum; understand the structure, concepts and scientific methods that overshadow or coherent with the teaching material; understand the relationship of concepts between related subjects; and apply scientific concepts in the teaching and learning process.
- d) Social. Social competence is the ability that must be possessed by teachers to communicate and socialize effectively with students, fellow educators, education staff, parents/guardians of students and the surrounding community. This competency has sub-competencies with essential indicators as follows: Kotic et al. (2021); Able to communicate and interact effectively with students with essential indicators: communicate effectively with students, teachers can understand the wishes and expectations of students. Able to communicate and get along effectively with fellow educators and education staff, for example being able to discuss problems faced by students and their solutions. Able to communicate and socialize effectively with parents/guardians of students and the surrounding community. For example, teachers can provide information about students' talents, interests, and abilities to parents.

2.3. Educational

Facilities and infrastructure have a broad meaning. Many experts explain the definition of facilities and infrastructure according to their respective opinions. According to the Big Indonesian Dictionary, it is stated that the difference between facilities and infrastructure is that facilities are everything that is used as a tool in achieving goals or objectives, while infrastructure is supporting the implementation of a process (Kotic et al., 2021). According to Bafadal Ibrahim (2003:2) educational facilities and infrastructure are equipment, marine and furniture that are directly used in the education process in schools. While educational infrastructure is all basic equipment that indirectly supports the implementation of the educational process in schools. According to (Kotic et al., 2021) (Ndubuisi & Jacob, 2021) regarding educational facilities and infrastructure, facilities are equipment and supplies that are directly used and support the educational process, especially the teaching and learning process such as buildings, classrooms, tables, chairs, and teaching tools and media. Infrastructure is a facility that indirectly supports the course of the education or teaching process. The definition of educational facilities and infrastructure is also stated by Elpina et al. (2021) educational facilities and infrastructure are all movable and immovable objects, which are needed to support the implementation of the teaching and learning process, either directly or indirectly. Facilities and infrastructure are the entire process of procurement, utilization and supervision of facilities and infrastructure as well as equipment used to support education so that the educational goals that have been set are achieved effectively and efficiently.

2.4. Teacher Performance

Gong et al. (2020) divides the factors that affect performance into two categories, namely internal factors and external factors. Internal factors are factors that come from within a person that can affect a person's performance in carrying out his work, including: motivation, interests, talents, character, nature, age, gender, education and experience. External factors are factors that come from outside a person's self that can affect his performance, among others: the physical environment, facilities and infrastructure, rewards, atmosphere, policies and administrative systems. According to Kahn (1990) explain that there are two variables that affect performance, namely: Individual is variables consist of experience, education, gender, age, motivation, physical condition, personality. Situational is variables Situational variables involve two factors, namely: Social and organizational factors, including: policies, types of training and experience, wage system and social environment.

Physical and occupational factors, including: work methods, settings and conditions, work equipment, work space arrangements, noise, lighting and temperature.

According to Akob et al. (2020), the factors that influence performance include: 1) Attitude and mentality (work motivation, work discipline, and work ethic), 2) Education, 3) Skills, 4) Leadership management, 5) Level income, 6) Salary and health, 7) Social security, 8) Work climate, 9) Facilities and infrastructure, 10) Technology, and 11) Opportunity for achievement. Another explanation regarding the factors that influence performance is explained by Mulyasa. According to Mulyasa (2011: 227) there are at least ten factors that can improve teacher performance, both internal and external factors. The ten factors are: 1) encouragement to work, 2) responsibility for the task, 3) interest in the task, 4) appreciation of the task, 5) opportunities for development, 6) attention from the principal, 7) interpersonal relationships with fellow teachers, 8) MGMP and KKG, 9) guided discussion groups, and 10) library services. Furthermore, another opinion was also expressed by Surya (2004:10) about the fundamental factor that is closely related to the professional performance of teachers is job satisfaction which is closely related to the welfare of teachers. This satisfaction is motivated by the following factors: 1) remuneration for services, 2) a sense of security, 3) interpersonal relationships, 4) working environment conditions, 5) opportunities for self-development and improvement.

2.5. Learning Achievement

is a relatively permanent change in behavior as a result of experience (Chantarasombat & Sombatsakulkit, 2021). In the context of the school, learning is a process of students' efforts to obtain a new behavior change as a whole, as a result of students' own experiences in interacting with their environment. Learning achievement is the result of educators' assessment of the learning process and student learning outcomes in accordance with instructional objectives concerning lesson content and expected behavior from students (Sarnok et al., 2021).

According to Firman (2022) states that learning achievement is evidence of the success that has been achieved by someone. So learning achievement is the maximum result achieved by someone after carrying out learning efforts. Meanwhile, according to Hachmi et al. (2022) suggests that learning achievement is the maximum effort achieved by a person after carrying out learning efforts. Learning achievement in the field of education is the result of the measurement of students which includes cognitive, affective and psychomotor factors after following the learning process which is measured using test instruments or relevant instruments. Lei et al. (2022) defines learning achievement as the results obtained in the form of impressions that result in changes in the individual as a result of activities in learning. Learning achievement can be measured through a test which is often known as a learning achievement test. According to (Lei et al., 2022; Sarnok et al., 2021) suggests about the learning achievement test when viewed from the goal of revealing a person's success in learning. Testing is essentially digging up information that can be used as a basis for decision making. The learning achievement test is a test that is arranged in a planned manner to reveal the maximum performance of the subject in mastering the materials or materials that have been taught. In formal education activities, learning achievement tests can be in the form of daily tests, formative tests, summative tests, even ebtanas and college entrance exams. From the opinions of the experts above, it can be concluded that learning achievement is a change in behavior covering three aspects (cognitive, affective and motoric) such as mastery, use and assessment of various knowledge and skills as a result or result of the learning process with the influencing factors contained in form of value given by the teacher. Based on this explanation, our hypotheses are:

- H1: The development of the teaching profession has a positive and significant effect on the performance of teachers.
- H2: Competence has a positive and significant effect on the performance of high school teachers.
- H3: Educational facilities and infrastructure have a positive and significant effect on the performance of high school teachers.

- H4: The development of the teaching profession has a positive and significant effect on the learning achievement of high school students.
- H5: Competence has a positive and significant effect on learning achievement of high school students.
- H6: Educational facilities and infrastructure have a positive and significant effect on learning achievement of high school students.
- H7: Teacher performance has a positive and significant effect on learning achievement of high school students.
- H8: The development of the teaching profession has a positive and significant effect on the learning achievement of high school students through teacher performance.
- H9: Competence has a positive and significant effect on learning achievement of high school students through teacher performance.
- H10: Educational facilities and infrastructure have a positive and significant effect on learning achievement of high school students through teacher performance.

3. Research Method and Materials

3.1. Participant

This research approach is to answer the problems that have been formulated, the goals to be achieved and at the same time test hypotheses that explain the symptoms caused by an object of research, so this research includes explanatory research, which is a study to confirm and test variable relationships (casual research). Casual research is research designed to identify the causes and effects of each relationship between variables on the research problem. The location of the research was carried out in public high schools and private high schools in Makassar City within the scope of the Makassar City Education and Culture Office. The number of public high schools in Makassar City is 23 schools and the number of private high schools in Makassar City is 91 schools. Determination of the research location using purposive sampling method, namely the technique of determining the location of the study intentionally. The choice of location in this study, the authors assume that the school is quite representative and easier to obtain data and information to support research and is considered representative in this study.

Table 2. Research Locations

No.	Status School	Location Research
1.	SMA Negeri	1. SMA Negeri 19 Makassar 2. SMA Negeri 16 Makassar 3. SMA Negeri 10 Makassar 4. SMA Negeri 17 Makassar 5. SMA Negeri 9 Makassar
2.	SMA Swasta	1. SMA Zion 2. SMA Islam Athirah Makassar 3. SMA Muhammadiyah 7 Makassar 4. SMA YP PGRI 1 Makassar 5. SMA LPP UMI Terakreditasi
Total School		10 School

Furthermore, the data collection techniques in this study were Questionnaires, Interviews, Documentation. Based on the above formula, the distribution of the research sample can be seen in the following table:

Table 3. Distribution of the Sample of Respondents for High School Teachers Scope of Makassar City Education and Culture Office

No	Status School	Location Research	Population	Sample
1.	SMA Negeri	1. SMA Negeri 19 Makassar	25	14
		2. SMA Negeri 16 Makassar	53	29
		3. SMA Negeri 10 Makassar	57	31

No	Status School	Location Research	Population	Sample
		4. SMA Negeri 17 Makassar	47	26
		5. SMA Negeri 9 Makassar	54	29
		6. SMA Zion	25	14
		7. SMA Islam Athirah Makassar	30	16
		8. SMA Muhammadiyah 7 Makassar	15	8
		9. SMA YP PGRI 1 Makassar	12	7
		10. SMA LPP UMI Terakreditasi	18	10
Total			336	183

The sampling technique used in this study is *proportionate random sampling*. Proportionate sampling was carried out by taking subjects from each stratum as for the number of samples for each stratum with the formula (Akdon and Riduan, 2009:254). Furthermore, the analytical method used in this research is descriptive analysis technique and verification analysis.

3.2. Instrument and Measurement

Data analysis techniques used in explaining the phenomena in this study are descriptive statistical analysis techniques and Structural Equation Modeling (SEM) analysis with the criteria of Goodness of Fit Chi-square Index (Expected to be small), Significant Probability (≥ 0.05), RMSEA (≤ 0.08), GFI (≤ 0.90), AGFI (≥ 0.90), CMIN / DF (≤ 2.0), TLI (≥ 0.95), CFI (≥ 0.95) (Mashur et al., 2020); (Indahingwati et al., 2019); (Putra et al., 2019); (Hair et al., 2014).

4. Results and Discussion

4.1. Statistic Description

The respondents in this study were grouped according to: age, gender, education level and years of service of respondents who were sampled

Table 4. Demography of Samples

Gender	Frequency (People)	%
Man	71	38,8
Woman	112	61,2
Age (Years)	Frequency (People)	%
20 – 30	39	21.3
31 – 40	32	17.5
41 – 50	42	23
51 – 60	70	38.3
Education Level	Frequency (People)	%
Bachelor	144	78.7
Magister	38	20.8
Doctoral	1	0.5
Working Period (Years)	Frequency (People)	%
1 – 10	69	37.7
11 – 20	36	19.7
21 – 30	39	21.3
31 – 40	39	21.3

The respondent structure of high school teachers in Makassar City is dominated by women. Female teachers dominate in terms of numbers, which means that the interest of women to become high school teachers in Makassar City is very high. The teaching profession is often seen as a profession that is suitable for women, while the reasons include the teaching profession is closely related to educating and the task of educating is generally carried out by a mother who incidentally is a woman. Women have more affection for students than men, this is related to the fact that women have a basic instinct to love children. The age level that occupies the largest proportion is

the age level of 51-60 years 70 people (38.3%) this shows that most high school teachers in Makassar City in this study are 51-60 years old. At the age of 51-60 years is the age of maturity and maturity in carrying out activities. The older a person is, the more experience they gain. The data obtained shows that the education level that has the highest proportion is S1 as many as 144 people (78.7%). This shows that the education level of S1 dominates, which means that the education of the respondents is quite good and plays an important role in carrying out their duties as teachers. The working period of respondents who occupy the highest proportion are in the working period of 1-10 years as many as 69 people (37.7%). This illustrates that most of the respondents are teachers who are still synergistic and productive.

4.2. Statistical Analytic

Table 5. Validity Test

Variabel	Indicator	Total correlation	Description
Teacher professional development (X1)	Question 1	0,877	Valid
	Question 2	0,834	
	Question 3	0,862	
Competence (X2)	Question 1	0,851	Valid
	Question 2	0,837	
	Question 3	0,829	
	Question 4	0,800	
Educational Facilities and Infrastructure (X3)	Question 1	0,821	Valid
	Question 2	0,841	
	Question 3	0,822	
	Question 4	0,773	
Teacher performance (Y)	Question 1	0,765	Valid
	Question 2	0,795	
	Question 3	0,881	
	Question 4	0,842	
	Question 5	0,842	
Student Learning Achievements (Z)	Question 1	0,852	Valid
	Question 2	0,864	
	Question 3	0,880	
	Question 4	0,869	

Indicators or questionnaires used for each variable of teacher professional development, competence, educational facilities and infrastructure, teacher performance and student learning achievement are declared valid to be used as variable measuring instruments.

Table 6. Reliability Test

Variabel	cronbach's alpha (α)	Standard Reliabilitas	Description
Teacher professional development	0,811	0,60	Reliable
Competence	0,845	0,60	Reliable
Educational Facilities and Infrastructure	0,799	0,60	Reliable
Teacher performance	0,756	0,60	Reliable
Student Learning Achievements	0,892	0,60	Reliable

Modification of the model is prioritized only on correlations between items and or errors and does not modify the influence path. The complete results of the SEM analysis at the final stage are presented in Figure 1 below:

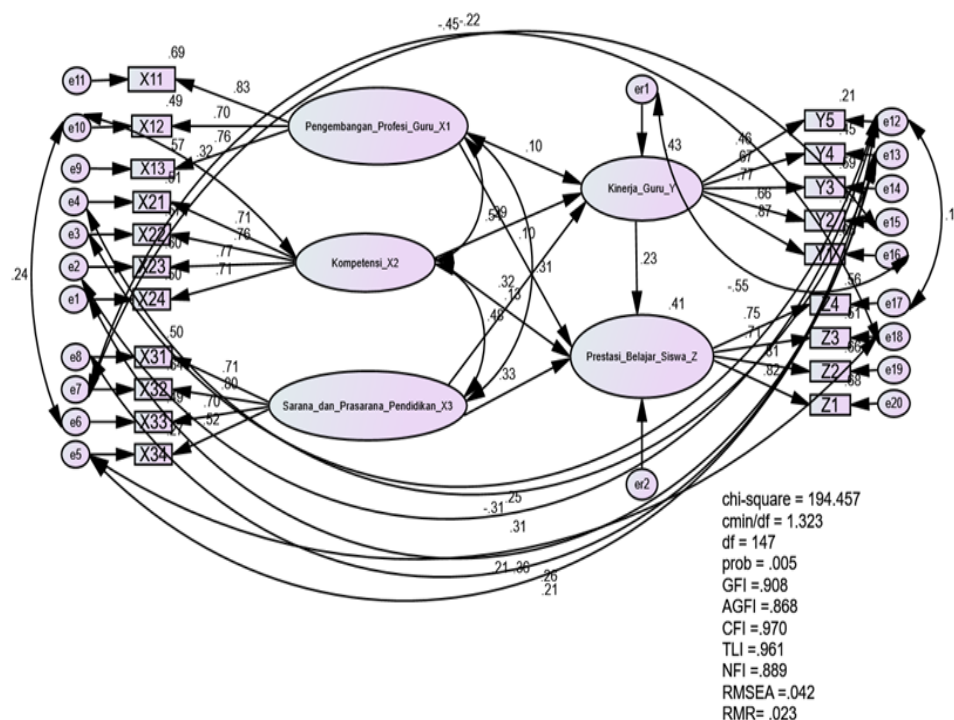


Figure 1. Goodness of Fit Model Test

Table 7. Evaluation of criteria for *Goodness of Fit Indices Overall Final Stage Model*

No	Goodness of fit indices	Nilai Cut-off	Result	Description
1	Probability χ^2 - Chi square	$p > 0,05$	0,005	Deficient
2	CMIN/DF	$\leq 2,00$	1,323	Good
3	GFI	$\geq 0,90$	0,908	Good
4	AGFI	$\geq 0,90$	0,868	Deficient
5	TLI	$\geq 0,90$	0,961	Good
6	CFI	$\geq 0,90$	0,970	Good
7	RMSEA	$\leq 0,08$	0,042	Good
8	NFI	$\geq 0,90$	0,889	Deficient
9	RMR	$\leq 0,05$	0,023	Good

By the nine Goodness of Fit criteria in table 7 there are six that meet the good criteria, so it can be concluded that the overall model can be said to be in accordance with the data and can be analyzed further. To find out how big the inter-variables are, then an analysis of the direct influence and indirect influence as well as the total effect is carried out. The results of direct influence, indirect influence and total influence are as shown in table 8 below;

Table 8. Hypothesis Testing and Path Coefficient Values

Hip	Variabel	P-Value	Direct Effect	Indirect Effect	Total Effect	Description
1	Teacher's Professional Development (X1) \rightarrow Teacher Performance (Y)	0,219	0,097	-	0,096	Not Support
2	Competence (X2) \rightarrow Teacher Performance (Y)	0,000	0,488	-	0,489	Support
3	Education Facilities and Infrastructure (X3) \rightarrow Teacher Performance (Y)	0,000	0,415	-	0,415	Support
4	Teacher Professional Development	0,294	0,100	-	0,122	Not Support

Hip	Variabel	P-Value	Direct Effect	Indirect Effect	Total Effect	Description
	(X1) → Student Learning Achievements (Z)					
5	Competence (X2) → Student Learning Achievements (Z)	0,227	0,135	-	0,223	Not Support
6	Education Facilities and Infrastructure (X3) → Student Learning Achievements (Z)	0,001	0,334	-	0,406	Support
7	Teacher Performance (Y) → Student Learning Achievements (Z)	0,040	0,228	-	0,228	Support
8	Teacher Professional Development (X1) → Teacher Performance (Y) → Student Learning Achievements (Z)	0,000	0,100	0,022	0,122	Support
9	Competence (X2) → Teacher Performance → Student Learning Achievements (Z)	0,000	0,135	0,088	0,223	Support
10	Educational Facilities and Infrastructure (X3) → Teacher Performance (Y) → Student Learning Achievements (Z)	0,000	0,334	0,072	0,406	Support

Based on table 8 hypothesis testing can be explained as follows:

1. Teacher professional development has a positive and insignificant effect on the performance of high school teachers. Testing the first hypothesis that the development of the teaching profession has no significant effect on the performance of high school teachers with a *P-Value* of $0.219 > 0.050$. This value indicates that the professional development of teachers in the form of intensive development, cooperative development and independent development has an influence on teacher performance but does not support improvement. performance of high school teachers.
2. Competence has a positive and significant effect on the performance of high school teachers. Testing the second hypothesis that competence has a positive and significant effect on the performance of high school teachers with a *P-Value* of $0.000 < 0.050$ this value indicates that competence is in the form of pedagogic competence, personality competence, competence social, and professional competence have an influence on teacher performance and support in improving the performance of high school teachers.
3. Educational facilities and infrastructure have a positive and significant effect on the performance of high school teachers. Testing the third hypothesis, namely educational facilities and infrastructure has a positive and significant effect on the performance of high school teachers with a *P-Value value* of $0.000 < 0.050$. and educational infrastructure in the form of space, furniture, educational tools and media, as well as books or teaching materials have an influence on teacher performance and support in improving the performance of high school teachers.
4. The development of the teaching profession has a positive and insignificant effect on the learning achievement of high school students. Testing the fourth hypothesis, namely the development of the teaching profession has a positive and insignificant effect on the learning achievement of high school students. With a *P-Value value* of $0.294 > 0.050$ this value indicates that the development of the teaching profession in the form of intensive development, cooperative development and independent development has an influence on achievement student learning but does not support in improving the learning achievement of high school students.
5. Competence has a positive and insignificant effect on learning achievement of high school students. Testing the fifth hypothesis competence has a significant effect on the performance of high school teachers with a *P-Value* of $0.227 > 0.050$. This value indicates that competence is in the form of pedagogic competence, personality competence, and competence social, and

- professional competence have an influence on the learning achievement of high school students but do not support in increasing the learning achievement of high school students.
6. Educational facilities and infrastructure have a positive and significant effect on learning achievement of high school students. Testing the sixth hypothesis, namely educational facilities and infrastructure has a positive and significant effect on learning achievement of high school students with a *P-Value value* of $0.001 < 0.050$ this value indicates that educational facilities and infrastructure in the form of space, furniture, educational tools and media, as well as books or teaching materials have an influence on student achievement and support in improving the learning achievement of high school students.
 7. Teacher performance has a positive and significant effect on learning achievement of high school students. Testing the seventh hypothesis, namely teacher performance has a positive and significant effect on learning achievement of high school students with a *P-Value value* of $0.040 < 0.050$. This value indicates that teacher performance is in the form of work quality, work speed/accuracy, initiative in work, work ability, and performance. communication has an influence on student achievement and supports in improving the learning achievement of high school students.
 8. The development of the teaching profession has a positive and significant effect on the learning achievement of high school students through the performance of teachers. The results of the evaluation of the influence of teacher professional development on high school student achievement by involving the mediating variable of teacher performance are as follows:

The direct influence of teacher professional development has no significant effect on student learning achievement while teacher performance is significant on student learning achievement. So it can be concluded that high teacher professional development can improve student achievement when supported by high teacher performance. Competence has a positive and significant effect on learning achievement of high school students in Makassar City through teacher performance.

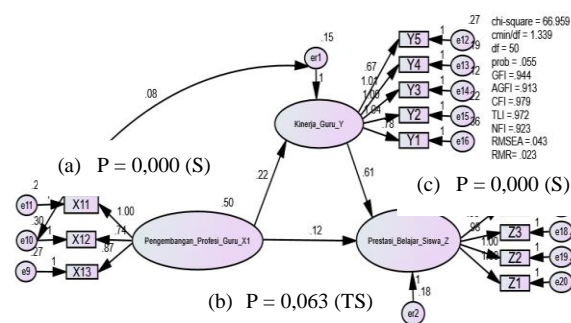


Figure 2. Pathway Diagram of Testing Teacher Performance Mediation Variables Effect of Teacher Professional Development on Student Learning Achievement

The results of the evaluation of the influence of competence on high school student achievement by involving the mediating variable of teacher performance are as follows:

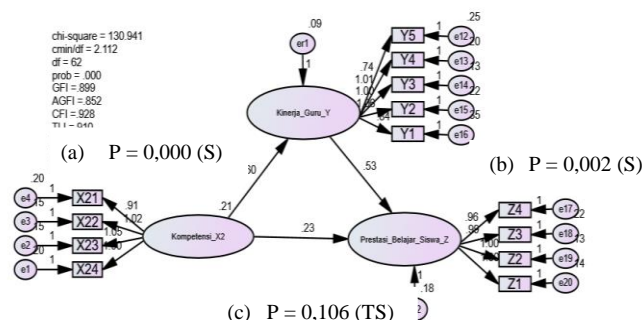


Figure 8. Testing Path Diagram of Teacher Performance Mediation Variables Effect of Competence on Student Learning Achievement

This means that the influence of competence directly has no significant effect on student learning achievement while teacher performance is significant on student learning achievement. So it can be concluded that high competence can improve student achievement when supported by high teacher performance. Educational facilities and infrastructure have a positive and significant effect on learning achievement of high school students in Makassar City through teacher performance. The results of the evaluation of the influence of educational facilities and infrastructure on high school students' learning achievement by involving the mediating variable of teacher performance are as follows;

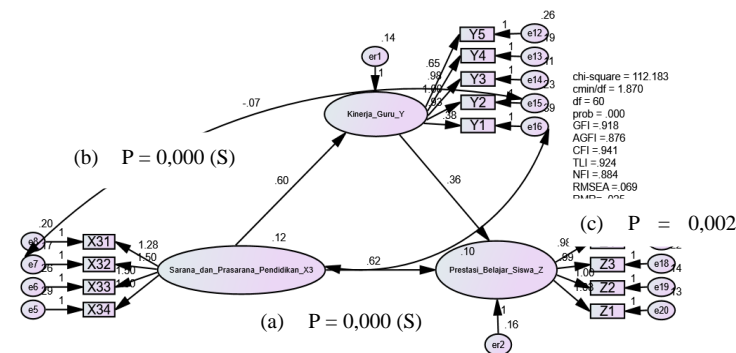


Figure 9. Pathway Diagram for Testing Teacher Performance Mediation Variables Effect of Educational Facilities and Infrastructure on Student Learning Achievement

The influence of educational facilities and infrastructure directly has a significant effect on student learning achievement and so does teacher performance on student learning achievement. So it can be concluded that high educational facilities and infrastructure and high teacher performance directly have a significant effect on increasing high student learning achievement.

Discussion

Effective professional development is ongoing and requires training, practice, and feedback, as well as adequate time and follow-up. Teachers are encouraged to build learning communities and participate in learning activities comparable to those they would do with their students. The idea of transforming schools into learning organizations and creating more systematic ways for instructors to share their expertise and experience is gaining traction. To update individuals' knowledge of a subject in light of recent advances in the field; to update individuals' skills, attitudes, and approaches in light of the development of new teaching techniques and objectives, new circumstances, and new educational research; to enable individuals to apply changes made to curricula or other aspects of teaching practice; to enable schools to develop and apply new strategies concerning the curriculum and other aspects of teaching practice; to exchange information and expertise among teachers and others, e.g. academics, industrialists; and to help weaker teachers become more effective. During the last decade, teacher professional development (PD) has been in high demand, and the development and diffusion of novel PD models has sparked debate among educators all over the world. Previously known as teacher in-service training, scholars and practitioners now refer to it as teacher professional development. In achieving good quality education, it is strongly influenced by the performance of teachers in carrying out their duties so that teacher performance becomes an important demand for achieving educational success. In general, a good quality of education becomes a benchmark for the success of the performance shown by the teacher. However, the reality shows that the quality of teachers in Indonesia is still relatively low. This is partly due to the non-fulfillment of the quality of education. Therefore, teacher performance is very concerned, and strives to be continuously improved. One of the efforts in developing the teaching profession by improving and developing skills can be obtained through the learning process. Professional development of teachers is studied and presented in relevant literature in many different ways. But always at the heart of such efforts is understanding that professional

development is about teachers learning, learning how to learn, and changing their knowledge of practice for the benefit of their students. In principle, it can be said that the main goal of education, in general, is the achievement of optimal preparation of the future professional. Teacher professional development is a process of activities in order to adjust the professional abilities of teachers to the demands of education and teaching. Professional development of teachers in the educational environment is directed at professional quality, objective performance appraisal, transparency and accountability, as well as motivating to improve performance and achievement. Professional development is basically an increase in the quality of teacher competence. Some of the main dimensions in teacher competence are pedagogic competence, personality competence, social competence, and professional competence. Professional development is the activity of teachers in the practice of science and knowledge, technology and skills to improve quality, both for the teaching and learning process and the professionalism of other education personnel. Professional development is a personal improvement made by a person to achieve a professional plan. Profession is an ordinary position or job as with other jobs. The development of the teaching profession is an important thing to pay attention to in order to anticipate changes and the magnitude of the demands on the teaching profession which mainly emphasizes the mastery of science. Professional development can be defined as a long career process in which educators perfect their teaching to meet the needs of students.

Teacher performance is the ability of teachers to show their skills or competencies in the real world of work. The real world of teacher work is student learning in classroom learning activities. Teacher performance is all the results of the teacher's efforts in delivering the learning process to achieve educational goals, which includes all activities related to his duties as a teacher. The professional duties of a teacher include educating, teaching, guiding, directing, training, assessing and evaluating students. So it can be concluded that teacher performance is the result of work achieved by a teacher in carrying out the task of educating, teaching, guiding, directing, training, assessing, and evaluating students. The performance of a teacher can be seen from the achievements obtained by a teacher, how a teacher carries out the learning process and evaluates learning outcomes and provides follow-up on the evaluation of learning, and the work obtained by a teacher. Performance is seen as the implementation of an action or a person's ability. Good performance is also related to the achievement of quality, quantity, cooperation, reliability and creativity, besides that performance means employee productivity and output as a result of employee development. Employee performance will ultimately affect organizational effectiveness.

Learning is said to be successful when the activities that take place at the school are able to facilitate students in the transfer of value process in the context of nation character building as stated in the official curriculum. However, not all teachers are able to develop and implement such learning. In fact, learning activities are a determining factor for the success and quality of graduates. Therefore, in realizing good learning, competent (have competence) teachers are needed. The competencies that must be mastered by a teacher are pedagogic competence, social competence, professional competence, and personality competence. Where in practice teachers are asked not only to master these competencies, but are also asked to improve these competencies in accordance with the development of science and technology. Competent teachers will carry out teaching and learning tasks in class full of enthusiasm and fun, and full of meaning, students always get new things every time they enter class to learn. Students will never be bored to learn in class because the teacher is competent. In the end, competent teachers will produce students who study hard because they love the learning process and understand the importance of learning for the future. The competence of teachers in the learning process greatly determines the academic and non-academic progress of students, and the ability of teachers in the learning process is one of the main pillars of improving the quality of teachers. Indonesian National Teacher Standards, both formal and non-formal teaching institutions must have teachers who meet the basic competencies of teachers, namely pedagogical, personality, social, and professional competencies. The four basic competencies are adapted to the goals and needs of each non-formal teaching institution. Any improvement efforts made to improve the quality of teachers will not make a significant contribution without being supported by professional and qualified teachers who have good pedagogical competence capabilities. Increasing the pedagogic competence of teachers will prevent learning activities that are

monotonous, disliked by students and make students lose interest as well as their absorption and concentration in learning. Pedagogic competence is an ability related to student understanding and educational and dialogical learning managers. This is closely related to the student's decision to study harder and more meaningfully to the teacher concerned because of the memorable learning experience

5. Conclusion

Professional development of teachers through intensive development, cooperative development and independent development has an influence on teacher performance but does not support the improvement of high school teacher performance. Pedagogic competence, personality competence, social competence, and professional competence have an influence on teacher performance and support in improving teacher performance. Educational facilities and infrastructure through space, furniture, educational tools and media, as well as books or teaching materials have an influence on teacher performance. Cooperative development and independent development have an effect on student achievement but do not support improving learning achievement. Teacher performance through work quality, work speed/determination, initiative in work, work ability, and communication have an influence on student achievement and support in improving student achievement.

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