Teacher Performance and Learning Achievement on Educational Facilities of High School Students

Yusran
Science Education Department, Faculty of Science Education, University of Tomakaka Mamuju
Corresponding Author. Email: yusranbone@gmail.com

Abstract: The purpose of this study was to examine the Professional Development of Teachers, Competencies, Educational Facilities and Infrastructure on Teacher Performance and Learning Achievement of High School Students. The population in this study were all teachers from 5 public high schools and 5 private high schools in the education unit of the Makassar City Education and Culture Office, sample of 183 teachers. The analytical model used in this research is descriptive quantitative and Structural Equation Model (SEM) using the AMOS program. The results showed that teacher professional development had a positive and insignificant effect on teacher performance. Competence has a positive and significant effect on teacher performance. Educational facilities and infrastructure have a positive and significant effect on performance. Teacher professional development has a positive and insignificant effect on student achievement. Competence has a positive but not significant effect on teacher performance. Educational facilities and infrastructure have a positive and significant effect on student learning achievement. Teacher performance has a positive and significant effect on student achievement. Teacher professional development has a positive and significant effect on student learning achievement through teacher performance. Competence has a positive and significant effect on student achievement through 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.

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 Winkel (Darmadi, 2017) 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 2015-2020.
Table 1. The Average Value of the High School National Examination in Makassar City in 2015-2020

<table>
<thead>
<tr>
<th>No.</th>
<th>Status School</th>
<th>Mean Value UN IPA</th>
<th>MValue UN IPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>SMA Negeri</td>
<td>73.02</td>
<td>64.81</td>
</tr>
<tr>
<td>2.</td>
<td>SMA Swasta</td>
<td>66.95</td>
<td>54.50</td>
</tr>
</tbody>
</table>

Source: [https://puspendik.kemdikbud.go.id/hasil-un/](https://puspendik.kemdikbud.go.id/hasil-un/)

Based on data, the average UN high school scores in Makassar City from 2019 to 2020 experienced a significant decline, both public high schools and private high schools. The average score for the UN IPA SMA Negeri in Makassar City in 2015 was 73.02; in 2016 it decreased by 64.81 and in 2017 it decreased by 47.81. The average value of the National Science Examination for Private High Schools in Makassar City in 2015 was 66.95; in 2016 it decreased by 54.50 and in 2017 it decreased by 43.24. The average UN IPS score for SMA Negeri in Makassar City also decreased, namely in 2015 by 61.72; in 2016 it decreased by 56.61 and in 2017 it decreased by 44.51. Comprehensively, the average score of the Social Sciences National Examination for Private Senior High Schools in Makassar City in 2015 was 60.75; in 2016 it decreased by 49.502 and in 2017 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. Rusman (2012) asserts that the competencies that teachers must have (eg) pedagogic competencies, namely the ability to manage learning, personality competencies, namely personal abilities that are steady, stable, mature, wise and authoritative to be role models, for students, professional competence, namely the ability to master learning materials broadly and deeply, and 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's own professional development activities. To anticipate the challenges of the increasingly severe world of education, teacher professionalism must be developed. (Sudrajat, Ahmad 2014) Broadly speaking, teacher professional development activities can be divided into three types, (ie) intensive, cooperative development, and independent development. Ideally every teacher can involve themselves in the three types of teacher professional development activities. If a teacher does not try to be involved (involved) in these three types of professional development activities, it is almost certain that he will fall professionally. The government's efforts in this case the Ministry of National Education and Culture (Kemdikbud) 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 formation of 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 some basic problems that need to be resolved, 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, namely Jannah Anita, et al (2012), Fitriana Nina and Sopian (2013), Rahmatullah Mamat (2015), Sudriyah and Lie Liana
Udiyono (2011), Zaenal Tatan Mutakin (2013), 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 Raharjo Sri (2014), and Untara Sutrisno Budi (2014) 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 Djatmiko Eko (2006) whose research focus is the leadership of the principal, infrastructure, and teacher performance. The results of the research by Djatmiko Eko (2006) stated that infrastructure had an effect on teacher performance. The similarity of Djatmiko Eko'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.

**H1:** The development of the teaching profession has a positive and significant effect on the performance of high school teachers in South Sulawesi.

**H2:** Competence has a positive and significant effect on the performance of high school teachers in South Sulawesi.

**H3:** Educational facilities and infrastructure have a positive and significant effect on the performance of high school teachers in South Sulawesi.

**H4:** Educational facilities and infrastructure have a positive and significant effect on learning achievement of high school students in South Sulawesi.

**H5:** Teacher performance has a positive and significant effect on learning achievement of high school students in South Sulawesi.

**H6:** The development of the teaching profession has a positive and significant effect on the learning achievement of high school students in South Sulawesi through teacher performance.

### Research Method

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>
<thead>
<tr>
<th>No.</th>
<th>Status School</th>
<th>Lokation Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Public High School</td>
<td>1. Public High School 19 Makassar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Public High School 16 Makassar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Public High School 10 Makassar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Public High School 17 Makassar</td>
</tr>
</tbody>
</table>
Results and Discussion

Hypothesis Testing

H1: Teacher professional development has a positive and insignificant effect on the performance of high school teachers in South Sulawesi.

Testing the first hypothesis that the development of the teaching profession has no significant effect on the performance of high school teachers in Makassar City 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 in Makassar City.

H2: Competence has a positive and significant effect on the performance of high school teachers in South Sulawesi

Testing the second hypothesis that competence has a positive and significant effect on the performance of high school teachers in Makassar City with a $P$-Value of 0.000 < 0.050 this value indicates that competencies in the form of pedagogic competence, personality competence, social competence, and professional competence have an influence on teacher performance. 

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

<table>
<thead>
<tr>
<th>No.</th>
<th>Status School</th>
<th>Location Research</th>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public High School 16 Makassar</td>
<td>53</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public High School 10 Makassar</td>
<td>57</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public High School 17 Makassar</td>
<td>47</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public High School 9 Makassar</td>
<td>54</td>
<td>29</td>
</tr>
<tr>
<td>2.</td>
<td>Private High School</td>
<td>Private High School Zion</td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private High School Islam Athirah Makassar</td>
<td>30</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private High School Muhammadiyah 7 Makassar</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private High School YP PGRI 1 Makassar</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private High School LPP UMI Terakreditasi</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>10 School</strong></td>
<td><strong>336</strong></td>
<td><strong>183</strong></td>
</tr>
</tbody>
</table>

Source: Research Sample 2022 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). Furthermore, the analytical method used in this research is descriptive analysis technique and verification analysis.
performance and support in improve the performance of high school teachers in Makassar City.

**H3: Educational facilities and infrastructure have a positive and significant effect on the performance of high school teachers in South Sulawesi**

Testing the third hypothesis, namely educational facilities and infrastructure has a positive and significant effect on the performance of high school teachers in Makassar City 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 in Makassar City.

**H4: Educational facilities and infrastructure have a positive and significant effect on learning achievement of high school students in South Sulawesi**

Testing the sixth hypothesis, namely educational facilities and infrastructure has a positive and significant effect on learning achievement of high school students in Makassar City 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 in Makassar City.

**H5: Teacher performance has a positive and significant effect on learning achievement of high school students in Makassar City.**

Testing the seventh hypothesis, namely teacher performance has a positive and significant effect on learning achievement of high school students in Makassar City 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 in Makassar City.

**H6: The development of the teaching profession has a positive and significant effect on the learning achievement of high school students in Makassar City 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:

![Figure 1. Pathway Diagram of Testing Teacher Performance Mediation Variables The Effect of Teacher Professional Development on Student Learning Achievement](image-url)
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 South Sulawesi through teacher performance.**

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:

![Diagram](image)

**Figure 2. Diagram of Teacher Performance Mediation Variables The 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 South Sulawesi 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:

![Diagram](image)

**Figure 3. The 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

The Effect of Teacher Professional Development on Teacher Performance

Independent development provides broad autonomy to teachers. The teacher tries to plan activities, carry out activities, and analyze feedback for self-development. The technique used can be through self-evaluation (self-evaluation/self-supervision). The teacher can carry out several activities for self-development in addition to the activities that have been determined, there are several alternative activities, namely: (Mulyana, 2010) making writings/scientific works (KTI) in the field of education, finding appropriate technology, making teaching aids, participating in curriculum development activities. The findings of this study are in line with the results of research conducted by Devi Esisna, et al. (2017) found that the teacher development program carried out or not carried out did not have a significant effect on the performance of the Gugus V Kindergarten teachers, Harau District, Lima Puluh Kota Regency. In contrast to research conducted by Udiyono (2011) found that there is a positive and significant relationship between teacher professional development work and teacher performance in a case study at Widya Dharma University, Klaten. Both studies have something in common, they both focus on performance. While the difference is the object and subject of the research. One looks at the performance of Kindergarten teachers, while the other looks at the performance of Lecturers.

Influence of Competence on Teacher Performance

Competence possessed by a teacher has an influence on the success of teacher performance in carrying out their duties as teachers and educators. The competence possessed by a teacher explains that the professionalism of a teacher is not only shown when the teacher is in the learning process or during the teaching and learning process, but the professionalism of the teacher is shown more than that, in the sense of being able and always carrying out his teacher duties in accordance with his field. Prihadi (2004) suggests that competence produces effective performance, this means that competence has a close relationship with performance. It can be said that if the teacher has competence in his field, the teacher will improve effective performance. The findings of this study are in line with the results of research conducted by Udiyono (2011) found that there is a positive and significant relationship between professional competence and teacher performance (Case Study at Widya Dharma University Klaten). Research conducted by Jannah Anita, et al (2012) found that teacher competence had a significant effect on teacher performance at SMP Negeri 7 Bandung. Research conducted by Fitriana Nina and Sopian (2013) results of the study indicate that competence has an effect on teacher performance at SMA Negeri 16 Palembang. However, several studies differ from this study. Among other things, what was done by Raharjo Sri (2014) found that competence had no effect on the performance of elementary school teachers in Surakarta City, Central Java. Research conducted by Untara Sutrisno Budi (2014) found that teacher competence had no effect on teacher performance in elementary school teachers at the UPT Education Office, Gunem District, Rembang Regency.
The Effect of Educational Facilities and Infrastructure on Teacher Performance

Only one school had a science laboratory and library room which was badly damaged. Management such as needs analysis, procurement, inventory, and optimal maintenance are needed so that later the facilities and infrastructure owned can contribute according to the purpose of holding them and are always in a condition ready for use. With good and optimal management of facilities and infrastructure, every educational process in schools will run according to what is expected because it is supported by the availability of complete and appropriate facilities according to needs, so that it will have an impact on the quality of every educational process in schools. The findings of this study are in line with the results of research conducted by Jannah Anita, et al. (2012) found that infrastructure facilities have a significant effect on teacher performance at SMP Negeri 7 Bandung. Research conducted by Djatmiko Eko (2006) found that facilities and infrastructure had an effect on the performance of Semarang State Junior High School teachers.

The influence of educational facilities and infrastructure on student learning achievement

The availability of learning facilities as a means of supporting the ongoing learning activities is very influential on learning motivation and student achievement, because the availability of learning facilities affects the smooth running of the student learning process. This is in accordance with the opinion of Dalyono (2001), which states that the completeness of learning facilities will help students in learning, the lack of learning aids or facilities will hinder their learning progress. The findings of this study are in line with the results of research conducted by finding that Wina Dwi Puspitasari (2016) found that the effect of learning facilities on student achievement in social studies subjects in the VSDNTarikolot class, Majalengka Regency, was acceptable and has been proven true. Research conducted by Nanik Legiwati (2016) found that there was a significant effect of the use of learning facilities and infrastructure on the learning outcomes of social studies subjects for class VII students of SMPN 3 Grati Satap Pasuruan City.

The influence of teacher performance on student learning achievement

Whatever knowledge a person has if it is useful for himself and others, knowledge is classified as one of the three heirlooms that will not become extinct even though the owner has died. The three heirlooms are charity, useful knowledge and pious children who pray for their parents. The findings of this study are in line with the results of research conducted by Ujang Permana (2016) which found that there was a positive and significant influence between teacher performance on student achievement in Pharmacy Vocational School in Majalengka Regency. Research conducted by Syafrial Herry (2017) found that there was a positive and significant influence on the teaching performance of lecturers on student achievement at the LP3I Jakarta Polytechnic, Blok M Campus. Research conducted by La Siteni (2016) found that the teaching performance of teachers had a significant effect on achievement. studying class VII students of SMP Negeri in the district of Nusaniwe, Ambon City.

The effect of teacher professional development on student learning achievement through teacher performance

Performance The variable teacher performance in the research model is said to be a perfect mediation variable (complete mediation). student achievement. So it can be concluded that high teacher professional development can improve student achievement when supported by high teacher performance.
Conclusion

Professional development of teachers (e.g.) intensive development, cooperative development and independent development has an influence on teacher performance but does not support the improvement of high school teacher performance in South Sulawesi. 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.

Recommendation

The results of this study become a reference for further research in examining more deeply about the development of human resources related to the development of the teaching profession, competence, educational facilities and infrastructure, teacher performance and student achievement in other research objects. To the school, to be able to assist teachers in carrying out their duties properly, and it is recommended to involve teachers in training and seminars. Educators (teachers) in the development of the teaching profession, especially independent development, are expected to be more active in carrying out scientific work or writing activities in the field education and making teaching. The ability to write scientific papers is important for teachers because activities when writing scientific papers will be a means for teachers to reflect on their experiences. To the Makassar City Education Office to pay attention to the availability of educational facilities and infrastructure in Makassar City that support the learning process.

References


