

Influence Pedagogical and Professional Competence Towards Improving the Quality of Education at SMA Negeri 1 Payaraman

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Abstract: This study aims to determine the influence of pedagogical and professional competencies on improving the quality of education at SMA Negeri 1 Payaraman. The research employed a quantitative approach with a correlational design. Data were collected through questionnaires distributed to teachers and analyzed using statistical methods to test the relationship between the variables. The findings indicate that both pedagogical and professional competencies have a significant and positive influence on the quality of education. Pedagogical competence, which encompasses the ability to design, implement, and evaluate learning processes, contributes to more effective teaching strategies. Meanwhile, professional competence, including mastery of subject matter and continuous professional development, supports academic excellence and student achievement. The results suggest that enhancing teachers' competencies in these areas is essential for improving educational quality. Therefore, educational stakeholders are encouraged to invest in continuous training and development programs for teachers.

Keywords: Education quality, Pedagogical competence, Professional competence, SMA Negeri 1 Payaraman, Teacher performance.

1. Introduction

The development and progress of science and technology related to the world of education encourages education providers to be able to provide better services and quality of education. UNESCO Education For All Global Monitoring Report 2012 ranked "Indonesia's education system 64th best in the world out of 127 countries. Worse still, out of fourteen developing countries evaluated, Indonesia's education system was ranked tenth in UNESCO's 2016 Global Education Monitoring Report (GEM). Meanwhile, out of 14 developing countries, Indonesia's teacher quality was ranked fourteenth (Elvrida N. Sinaga 2023)

Based on the education development index (EDI) in 2023, Indonesia is ranked 67th out of 203 countries. The results show an urgent need to improve Indonesia's education system in terms of services, funding, infrastructure, and teaching staff and education. When viewed from the budget side provided by the central government through the 2017 State Budget (APBN), which is 20% which is used specifically for education funding, but the budget is still lacking, this is because it is used to fund various activities including the provision of teacher certification allowances, the provision of additional income allowances, the purchase of textbooks, funding for School Operational Assistance (BOS, including activities to improve teacher quality through technical guidance, workshops, IHT, dissemination and so on. If we relate it to services, especially in the field of education, it is still very lacking, if we refer to the minimum service operational standards. With the existence of minimum services, it will directly affect the improvement of the quality of education in schools at various levels.

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Law Number 20 of 2003 concerning the National Education System states that "learning is a process of interaction between students and educators and learning resources in the learning environment", among others, guarantees the basic rights of educators and protects the interests of students and the community in the field of education. According to Law Number 14 of 2005 concerning Teachers and Lecturers, "pedagogical competence is the ability in terms of student learning, while professional competence is the ability to master subject matter broadly and deeply that must be possessed by an educator". Thus, this remains in accordance with the provisions of the law.

Competence is a skill and knowledge derived from the social and work environment that is absorbed, mastered and used as an instrument to create value by carrying out tasks and work as well as possible. Teacher competence is assessed as a picture of whether or not the educator (teacher) is professional. Teacher competence consists of pedagogical competence, personality competence, professional competence, and social competence (Sudrajat, 2020) in (Mita Anggraini, Syarwani Ahmad 2023).

2. Theoretical Framework

Teacher Competence

According to the Ministry of National Education, competence is knowledge, skills, basic values in reflecting, getting used to thinking and acting. Competence is the ability, skill, state of authority based on legal provisions in carrying out one's obligations responsibly (Sohim , , Syah, and Hanafiah3 2021)

Teacher competence must be owned by an educator. This competence will be the final result of the success of learning activities. teaching . This activity must create a fun activity, teachers must learn different perspectives and strategies contained in each competency they have so that the four competencies that teachers should have become better. These competencies are social, personality, pedagogical and professional competencies. In essence, teachers hold the key to the success of student learning outcomes (Nurdianti 2017). The quality of teaching competence plays an important role in maintaining and determining the knowledge to be learned and demonstrating teacher professionalism.

Pedagogical Competence

Pedagogical competence is the ability of a teacher to manage learning (Handican, Jannah, and Zakky 2020) in (Akbar 2021). Core competencies in pedagogical competence that must be possessed by a teacher are attached to the Minister of National Education Regulation Number 16 of 2007 concerning Academic Qualification Standards and Pedagogical Competence (Sutarmizi and Syarnubi 2022)

Pedagogy is the science and art of teaching children. This term comes from the Greek paidos (son) and agogos (to lead). Pedagogy focuses more on formal education at elementary to secondary levels. Meanwhile, andragogy is the science and art of teaching adults. This word comes from andra (adult) and agogos (to lead). Andragogics focuses on more independent and experience-oriented adult learning.

Professional Competence

Professional competence is one of the requirements in learning activities. In this competency, educators (teachers) must have good knowledge, skills and attitudes personally, socially and academically. According to Government Regulation No. 19 of 2005, a competent professional is someone who is able to guide students in learning activities by meeting the specified criteria. Educators (teachers) need to have a deep and comprehensive understanding of the content of the lesson in order to master this competency.

Professional competence, according to (Endang Supardi, Sri Mulyati 2019), also means that instructors have a strong understanding of the subject matter and are able to fulfill various roles from elementary school to university, including the roles of learning designer, facilitator, director, trainer, and evaluator of student work results.

Quality of Education

Meeting or exceeding customer expectations is a common definition of quality (Isma Hasyim Fanani and Farikhul Anwar 2023). Quality is defined as an indicator of how good or bad something is in Indonesian according to the Big Indonesian Dictionary (KBBI). Quality includes things like intelligence, talent, and condition. The English word for quality is quality, which is synonymous with kualitas.

In the context of education, quality is defined as something that includes input, process, output and outcome of education (Rosad 2019). There are two sides to the quality of education, namely normative and descriptive. Normative means based on intrinsic and extrinsic considerations, while descriptive is seen from the excellence of organizing education efficiently to form the seeds of quality graduate students (Suti 2011).

Quality is the ability possessed by a product or service that can meet the needs or expectations, satisfaction, customers which in education are grouped into two, namely internal customers and external customers. Internal customers are students as learners and external customers are society and the industrial world. In other words, quality is not the ultimate goal; on the contrary, there are several components needed to achieve and maintain it (Marwan 2022).

3. Research Methods

The type of research used in this study is quantitative research. Quantitative research is a process that uses more numbers, starting from data collection, data interpretation and performance (Suharsimi Arikunto 2014). This research is a correlational type which functions to find out whether there is a relationship between variables. The research takes into account determining how much influence the dependent variable (pedagogical and professional competence) has on the independent variable (quality of education).

4. Results and Discussion

Research result

SMA Negeri 1 Payaraman is located on Jalan Lanang Kuaso, Payaraman Barat Village, Payaraman District, Ogan Ilir Regency. This high school was established in 2005, which was originally SMA Negeri 2 Tanjung Batu. In 2006, in accordance with the results of the expansion of Payaraman District and the large support from the community, this school was replaced with SMA Negeri 1 Payaraman

Pedagogical Competence Variables

The results of the study showed that the maximum score for pedagogical skills was 150, while the minimum score was 120. Based on these scores, the scores can be categorized into high, medium, and low as follows:

$$\begin{aligned} \text{Interval} &= \frac{\text{Highest value} - \text{Lowest value}}{3} \\ &= (150 - 120) / 3 \\ &= 30 / 3 \\ &= 10 \end{aligned}$$

Thus, the research data scores can be grouped, namely:

High = score 142 to $142 + 10 = 152$

Medium = score 131 to $131 + 10 = 141$

Low = score 120 to $120 + 10 = 130$

Based on these benchmarks, each research data score can be categorized as in table 1 below:

Table1 Frequency Category of Pedagogical Competence

Score	Category	Frequency	%
142-152	Tall	29	76
131-141	Currently	4	11
120-130	Low	5	13
Amount		38	100

Source: processed using Microsoft Excel

The data in the table shows that of the 38 instructors at SMA Negeri 1 Payaraman, 29 (or 76% of the total) have high pedagogical competence, 4 (11% of the total) have moderate competence, and 5 (13% of the total) have low competence. From these findings it is known that the level of pedagogical competence of teachers at SMA Negeri 1 Payaraman is categorized as good.

Professional Competence Variables

The maximum score of 150 and the minimum score of 120 are determined from the research assessment for professional competence. Using these scores, we can categorize the scores as high, medium, or low in the following way :

$$\text{Interval} = \frac{\text{Highest value} - \text{Lowest value}}{3}$$

$$= (150 - 120) / 3$$

$$= 30 / 3$$

$$= 10$$

Thus, the research data scores can be grouped, namely:

High = score 142 to $142 + 10 = 152$

Medium = score 131 to $131 + 10 = 141$

Low = score 120 to $120 + 10 = 130$

The table below shows the classification of study data scores according to the standards mentioned above:

Tabel 2. Professional Competence Frequency Category

Score	Category	Frequency	%
142-152	Tall	27	71
131-141	Currently	6	16
120-130	Low	5	13
Amount		38	100

Source: processed using Microsoft Excel

From the data in the table, it can be concluded that out of 38 teachers at SMA Negeri 1 Payaraman, 27 people (or 71% of the total) have high professional competence, 6 people (16%) have moderate professional competence, and 5 people (13% of the total) have poor professional competence. From these findings, it is known that the level of professional competence of teachers at SMA Negeri 1 Payaraman is categorized as good.

Education Quality Variables

According to the report, scores ranging from 123 to 150 indicate varying levels of educational excellence. Scores can be classified as high, medium, or low using this metric in the following ways :

$$\text{Interval} = \frac{\text{Highest value} - \text{Lowest value}}{3}$$

$$= (150 - 123) / 3$$

$$= 27 / 3$$

$$= 9$$

Thus, the research data scores can be grouped, namely:

High = score 143 to $143 + 9 = 152$

Medium = score 133 to $133 + 9 = 142$

Low = score 123 to $123 + 9 = 132$

The table below shows the classification for each study data score according to the description:

Table 3 Category Frequency Quality of Education

Score	Category	Frequency	%
143-152	Tall	16	42
133-142	Currently	14	37
123-132	Low	8	21
Amount		38	100

Source: processed using Microsoft Excel

Of the 38 teachers at SMA Negeri 1 Payaraman, 16 (or 42% of the total) rated the quality of education at their school as good, 14 (or 37% of the total) as moderate, and 8 (21% of the total) as poor, according to the data shown in the table above. From these findings, it is known that the quality of education at SMA Negeri 1 Payaraman is categorized as good.

Discussion

In SMA Negeri 1 Payaraman, it is known that there is a correlation between pedagogical competence and improving the quality of education because the Sig value obtained is 0.001 which is smaller than 0.05. This means that H_0 is rejected, which means there is a relationship. Likewise, in SMA Negeri 1 Payaraman, pedagogical competence has increased based on the results of simple linear regression analysis. Furthermore, a t-test was conducted and the results showed a statistical significance of $0.001 < 0.05$ so that H_0 was rejected. This means that pedagogical competence has a major influence on improving the quality of education in SMA Negeri 1 Payaraman.

Pedagogical competence contributes 59.4 % to improving the quality of education, while the remaining 40.1% is influenced by other factors, based on the statistical test, the R^2 (R Square) value obtained was 0.594 or 59.4%.

There is a relationship between professional competence and the improvement of education quality in SMA Negeri 1 Payaraman, as confirmed by simple linear correlation analysis, which produces a Sig value of 0.001, less than 0.05 and leads to the rejection of H_0 . Similarly, a positive increase in professional competence is proven to be related to the quality of education in SMA Negeri 1 Payaraman in a simple linear regression test. Furthermore, a t-test was also conducted, and the findings were found to be statistically significant at $0.001 < 0.05$, leading to the rejection of H_0 . This indicates that there is a real correlation between professional competence and the improvement of education quality in SMA Negeri 1 Payaraman.

Statistical analysis shows an R^2 (R Square) value of 0.631 or 63.1 % , which indicates that pedagogical competence contributes 63.9% of the impact on improving the quality of education, while other variables not taken into account in this study contribute the remaining 36.9%.

Based on the test results that have been carried out by researchers using multiple linear correlation tests, multiple linear regression tests, t-tests (partial), F-tests (simultaneous), and coefficient of determination tests, the results show that there is a joint influence between pedagogical and professional competence on improving the quality of education at SMA Negeri 1 Payaraman.

The statistical test of the R^2 (R Square) value produced a value of 0.641 or 64.1%, which shows that pedagogical and professional competence have an influence of 64.1% on improving the quality of education, while the remaining 35.9% is influenced by factors not discussed in this study.

According to research (Ministry of National Education, 2002), there are three main reasons why school education is of poor quality. The main cause is the bureaucratic and centralistic national education system, which gives disproportionate power to the central government when formulating policies. Second, there is no uniformity in the use of input-output analysis methods in education policy. This input-based strategy is based on the premise that better education outcomes will be achieved through investment in teacher professional development, textbook procurement, and improvements in school infrastructure and facilities. Third, there is still a lack of community involvement in education policy-making, especially among parents of children. Second, and related to this research, is the need for high-quality teacher training. By tailoring teacher education for each profession, we can raise the bar for student achievement in the classroom. (Supriadi, 2017).

Thus, it can be concluded that pedagogical and professional competence have a major influence on the quality of education. Therefore, efforts to improve these two competencies must be the focus of every school quality improvement program. At the same time, it is necessary to realize that improving the quality of education is not solely the responsibility of teachers, but also requires active collaboration between the government, school principals, parents, and the wider community.

5. CONCLUSIONS

Based on the results of data analysis through hypothesis proof using the SPSS Application and the discussion raised from the problem of the influence of pedagogical and professional competence on improving the quality of education at SMA Negeri 1 Payaraman, the following conclusions are drawn : There is an influence between pedagogical competence and improving the quality of education at SMA Negeri 1 Payaraman. There is an influence between professional competence and improving the quality of education at SMA Negeri 1 Payaraman. There is an influence between pedagogical and professional competence simultaneously on improving the quality of education at SMA Negeri 1 Payaraman..

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