
The Influence of Teachers' Pedagogical Competence on Students' Outcome in School

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Abstract

Teachers' pedagogical competence is an important aspect that will shape students' outcome. Recently there are various issues that plague the teaching profession, such as the issue of teachers' heavy workload and teachers with disciplinary problems. It is feared that this will bring negative impact on students' outcome in the long run. This study aims to see the influence of teachers' pedagogical competence on students' outcome in school. For that purpose, this study tries to identify the level of students' outcome in school as well as assess the relationship between teachers' pedagogical competence and students' outcome in school. This study had involved a total of 364 respondents who had been randomly selected among the secondary school teachers in the Petaling Utama district in Selangor. The instrument used in this study is a set of questionnaires and analyses using the Statistical Package Social Sciences (SPSS) version 22.0 software to find the mean, frequency and percentage of each item. This study found that the students' outcome level was high, with a mean of 3.58 and a standard deviation of 0.470. The effect of teachers' pedagogical competence on students' outcome is also high, with a mean of 4.18 and a standard deviation of 0.388. Students' outcome was found to be influenced by teachers' pedagogical competence with values ($F(1, 459) = 43.694, p < 0.05$). In addition, the value of R^2 equals 0.087, which shows that 8.7% of the variance in students' outcome is explained by teachers' pedagogical competence. Overall, this study shows that teachers' pedagogical competence does affect students' outcome in school. Therefore, teachers need to constantly improve their competence in pedagogical skills to enable students to be educated well.

Keywords: *Teachers' pedagogical competence, students' outcome, Malaysian Education Quality Standard 2nd Wave (SKPMg2)*

1. Introduction

Students' outcome is an important goal that is projected by the national education system. To achieve good students' outcome, students must be taught in an efficient and effective education system. It is very important to be informed that students' outcome is not only judged based on academic achievement. Obtaining many 'A's' is not the only way to reflect a person's ingenuity or intelligence. What needs to be applied is the need to learn why certain knowledge and skills need to be learned as well as how to apply them in everyday life.

Students need to be educated holistically so that they can be able to reach their full potential whether in mastery of knowledge and skills, noble character, responsibility, and the ability to achieve personal well-being (Mohd Zaidi Mohd Zeki, Ahmad Zabidi Abdul Razak, & Rafiza Abd. Razak, 2020). They also need to actively participate in all curriculum and co-curricular activities conducted by their respective schools. The Malaysian Education Development Plan (PPPM) 2013-2025 can be used as a reference in outlining the definition of students' outcome. The essence of PPPM is focused on six national educational aspirations, namely knowledgeable students with thinking skills, leadership skills, bilingual skills, good ethics, and spirituality, as well as a strong national identity.

In relation to that, the entire machinery in the education system must be mobilized to fully achieve that mission. In this regard, the need to have competent teachers in schools is highly desirable, because the role of today's teachers is increasingly complicated and challenging. Teachers not only play the main role of imparting knowledge and skills to the students but are also responsible for nurturing the interests and developing the talents and abilities of the students. They also need to play a role in producing students who have analytical, creative, and innovative thinking, in line with the goals and direction of the national education system.

But the problem is, there are some teachers who take a less caring attitude towards the importance of improving their pedagogical skills and knowledge. A study conducted by Igusti Ayusrijuniantari (2017) has proven that teachers are not diligent in reading and writing. The study also found that teachers are not creative in trying to increase their knowledge, skills, and values. This view is supported by Mitra Tarigan (2019) who found that there are still many teachers who are lazy to read, which ultimately affects the quality of education in the country. If this teacher's competence is not properly curbed, it is feared that students' outcome in the future will also be affected.

This study has several specific goals and objectives, especially to clarify issues related to teachers' pedagogical competence and students' outcome. The objectives and questions of this study will guide the depth and extent to which this study will be carried out.

1.1 Research Objectives

- 1) Identify the student's level of outcome in school.
- 2) Assessing the relationship between teachers' pedagogical competence in pedagogy and student outcome in school.

1.2 Research Questions

- 1) What is the students' level of outcome in school?
- 2) What is the relationship between teachers' pedagogical competence in pedagogy and student outcome in school?

2. Literature Review

There are several research and writings related to teachers' pedagogical competence and students' outcome but studied from different angles and perspectives. Even so, those past studies still help this research to get clearer and deeper understanding and explanation, especially in issues that are closely related to the teachers' pedagogical competence and students' outcome.

2.1 Concept of Teacher Pedagogical Competence

Students' outcome at school rests on the shoulders of teachers. Student success is considered the teacher's success in educating. Similarly, if the opposite is true, the student's failure is considered a teacher's failure in effective teaching and guidance. Teachers are said to have failed to perform their duties properly if there are students who drop out and fail to finish school. Teachers are also blamed if they produce students who excel academically, but at the same time face high discipline problems and low moral values. These things are examples of why teachers are often misunderstood and pointed at by various parties, especially parents and the community.

The national education system is in dire need of highly competent teachers. Trude and Gustafsson (2016) in Ilminza Zakaria et., al. (2021), reported that the issue of teacher quality is something that needs to be given focus and attention, especially to empower teachers' ability to educate students in the classroom. Highly competent teachers will be more committed in carrying out their responsibilities, interested in the work they do, and carry out their duties willingly without any coercion and loyal to their work (KPM, 2016). In addition, they will also always be ready to obtain additional knowledge and skills needed to perform tasks better.

The Malaysian Education Development Plan (PPPM) 2013-2025 which was launched by the Malaysian Ministry of Education in 2013 has clearly expressed the country's desire to produce highly competent teachers and focus on students' outcome. In relation to that, the Continuous Professionalism Development Plan (PPPB) has been created as a guide to all ministry agencies, state education departments, district education offices and schools in shaping and strengthening the level of teacher professionalism. It is hoped that this will indirectly strengthen students' outcome in the future.

According to Zahorcova et.al, (2012) in Yakcop Jantan and Chua Yan Piaw (2017), teachers' competencies need to be diverse, that is from content knowledge to pedagogical skills. This is because the teacher's job is not only limited to teaching, educating, and guiding; now in addition to the essential duties, teachers are also needed to do various side duties as well as clerical work (Abdull Sukor et., al, 2006 in Aliff Nawawi & Gamal Abdul Nasir Zakaria, 2016).

It has been clearly proven that the teaching profession today demands high commitment from teachers, especially in improving the level of professionalism and maintaining good competence. Therefore, teachers need to constantly make self-reflection, and continue to strengthen their competence by following training and continuous professional

development. This aims to improve their ability and consistency in terms of content knowledge, pedagogical skills, emotional control, leadership, skills and abilities.

2.2 Students' Outcome Concept

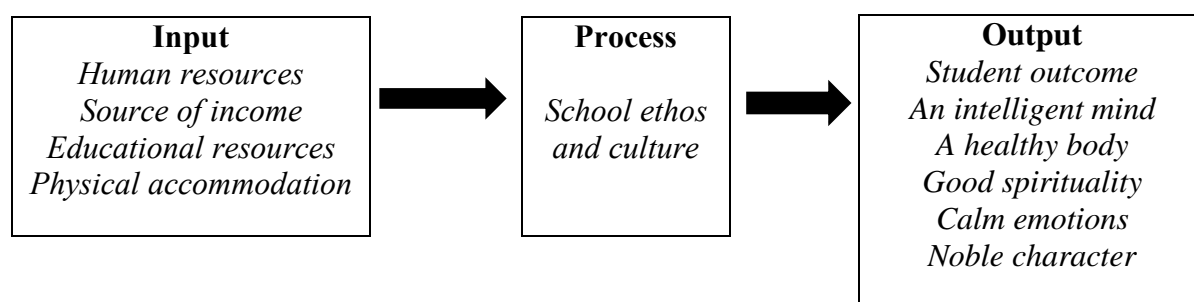
There are many definitions related to the concept of student outcome. Generally, the term student outcome is referred to the change in students' knowledge and behaviour after going through the learning process either formally or informally. Students' outcome also often used as a benchmark for the excellence of a school.

Students' success is associated with the success of a teacher in educating his students; causing the students to master what is taught, not only in terms of educational value but also the moral values that make the students perfect (Ruzlan, 2017). The success or achievement of students is the result of the teaching process that has been implemented by the teacher.

Lee and Shukuri Zain (2016) in Julian @ Juliana George Jette and Mohd Izham Mohd Hamzah (2020), reported that students' success is judged based on achievement and excellence in exams. Even so, the definition conflicts with what the Malaysian Ministry of Education (MOE) intends. Based on the Malaysian Education Quality Standard 2nd Wave (SKPMg2), students need to be nurtured and educated holistically through an efficient school management system and be ready to maximize their potential. This matter includes aspects of skill, noble character, ability to achieve personal well-being and responsibility, apart from their ability to master knowledge and skills (Quality Assurance Inspectorate, 2016).

The following is the model of student assessment presented by the Quality Assurance and Inspection Committee (JNJK).

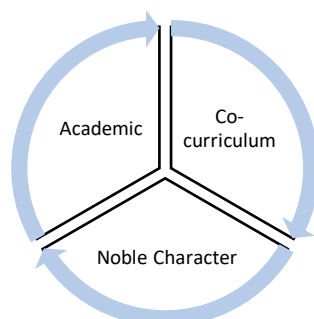
Figure 2.1: Student Outcome Assessment Model by JNJK



Based on this Student Outcome Assessment Model, the student's performance is said to be driven and influenced by the ethos and culture of the school. This model emphasizes that educational institutions do not focus solely on academic excellence, but also focus on the personality and welfare of students, optimize the use of available infrastructure and resources, and involve community participation in educational activities at school. Irwan Fariza, et.al. (2015) in Abdul Rahim Abu, et.al, (2023) reported that the diverse school ethos and culture leads to the development of the student's personality and outcome. A stable environment will encourage the formation of a strong students' identity.

This point is strengthened with Figure 2.2 which explains the Students' Outcome Model through the fifth standard in SKPMg2, as outlined by Ministry of Education, Malaysia.

Figure 2.2: Students' Outcome Model (SKPMg2, 2016)



Irma Mahad, Ugartini Magesvaran and Intan Nur Syuhada Hamzah (2021) described that one of the main challenges for teachers is to provide ways to help students to be always motivated, active and have problem-solving and decision-making skills, especially after going through the tiring post-pandemic Covid-19. Teachers need to educate students to acquire knowledge, master various skills and show self-development skills for the future. In addition, involvement in co-curricular activities and social skills also need to be worked on and encouraged by each student. In relation to that, the existence of highly competent teachers is very necessary to ensure that excellent students' outcome can be produced.

The process of fulfilling and improving the student's potential needs to be done all the time at school. If attention is not given, then the problem of academic dropout and other moral symptoms can occur and indirectly cause social problems in the community. The failure of teachers in guiding and educating students will have an impact on the student's development. A study by Yong Hie Hie and Ku Hasnita Ku Samsu (2019) has proven that there are a few teachers who practice discrimination in carrying out their duties. Among them, the attitude of teachers who only care about excellent students compared to average and low-achieving students. As the result, students who feel neglected will have a low self-concept, are not motivated to learn, and continue to lag in academic achievement.

3. Research Methodology

This research is a survey study using a quantitative approach. This approach is used to describe and study a problem, phenomenon, or new thing with the aim of knowing and analyzing the problem being studied. The design of this study is as in Table 3.1.

Table 3.1: Study Design

Data Type	Collection Method	Sample	Study Design
<i>Descriptive Study</i>	<i>Questionnaire</i>	<i>Teacher</i>	<i>Quantitative</i>

To meet the data collection requirements for this study, the 364 respondents who were selected as a sample were among the teachers who teach in 26 secondary schools in the Petaling Utama district, Selangor. The schools were SMK Lembah Subang, SMK Damansara Utama, SMK Taman SEA, SMK Sri Permata, SMK Seksyen 4 Kota Damansara, SMK Seksyen 8 Kota Damansara, SMK Seksyen 10 Kota Damansara, SMK Damansara Jaya, SMK Taman Dato Harun, SMK Taman Medan, SMK (P) Taman Petaling, SMK (P) Sri Aman, SMK (L) Bukit Bintang, SMK Bandar Utama, SMK Bandar Utama Damansara 2, SMK Bandar Utama Damansara 3, SMK Bandar Utama Damansara 4, SMK Kelana Jaya, SMK Bandar Sri Damansara 1, SMK Bandar Sri Damansara 2, SMK Assunta, SMK La Salle, SMK Sultan Abd Samad, SMK Tropicana, SMK Sri Utama and SMK Katholik, Petaling Jaya. According to Azizi et al. (2007) in Mohd Asnorhisham Adam and Abdul Rahim Hamdan (2017), accurate sample size is important because it symbolizes the strength of the outcome results to be obtained.

The instrument used in this study is a set of questionnaires. According to Melvina Chung Hui Ching (2021), the use of questionnaires as an instrument is appropriate because it is standardized. In addition, it is also easy to administer, and the data is easy to process and analyze, saving time, energy, and costs. This view is supported by the study of Mazikana (2023), who found that questionnaires are an effective and successful way. In fact, if conducted correctly and carefully, it will increase the amount of feedback, facilitating the conclusion and analysis of the collected data.

This questionnaire was developed by the researcher using a five-point Likert scale. The Likert scale used is based on the options in Table 3.2.

Table 3.2: Five-point Likert Scale

5	Strongly agree
4	Agree
3	Uncertain
2	Disagree
1	Strongly disagree

Sub-construct A (*Students' Outcome Level*) contains 10 questions that will measure the extent of students' outcome in school. This section also tries to see more clearly the students' outcome in terms of character and morality, national identity, self-skills, interest in learning, leadership values, and bilingual proficiency.

In the meantime, sub-construct B (*The Effect of Teachers' Pedagogical Competence on Students' Outcome*) contains 7 questions that aim to get feedback related to the effect of teachers' pedagogical competence on students' outcome in school. This sub-construct also tries to evaluate the teachers' response to the importance of improving their own competence.

Once all the questionnaires have been completed by the respondents, the forms will be collected, and data analysis will begin. Data and information analysis will involve activities such as organizing, selecting, combining, and scheduling the data that has been collected (Taherdoost, 2021). The data and information will then be analysed using the Statistical Package Social Sciences (SPSS) version 22.0 software to find out the mean, frequency, percentage of each item.

4. Results and Discussion

The mean score for each item in the construct is as shown in Table 4.1. For the *Student Outcome Level* sub-construct, the item 'My students show good moral characters' recorded the highest mean score of 3.90 while 'My students successfully mastered bilingual skills' recorded the lowest mean score (3.18). While for the sub-construct *The Effect of Teachers' Pedagogical Competence on Students' Outcome*, it was found that the highest mean score was shown by 'Teachers need to improve their level of competence in pedagogy if they want to improve student development' (4.42) while the lowest mean score was recorded by 'My students still depend entirely on the teacher's teaching in the classroom degrees' (3.72).

Overall, *The Effect of Teachers' Pedagogical Competence on Student Outcome* sub-construct has recorded an overall mean of 4.18, which is at a high level. The amount is higher than the overall mean score recorded by the *Student Outcome Level* sub-construct, which is 3.58, which is at a moderate level.

Table 4.1: Descriptive Analysis of Items

Bil.	Item	Min	Standard Deviation	Standard
<i>Sub-construct A: Students' Outcome Level</i>				
1	My students show good moral characters	3.90	0.537	High
2	My students are proud of their national identity	3.81	0.608	High
3	My students have a high sense of self	3.70	0.697	High
4	My students show interest in learning	3.62	0.789	Moderate
5	My student is involved in disciplinary violations at school	3.36	1.002	Moderate
6	My students care about neatness	3.77	0.616	High
7	My students show leadership skills	3.65	0.736	Moderate
8	My students are always absent from extracurricular activities	3.49	1.052	Moderate
9	My students successfully mastered bilingual skills	3.18	0.881	Moderate
10	My students are role models for other students.	3.38	0.767	Moderate
Overall Mean		3.58	0.470	Moderate
<i>Sub-construct B: The Effect of Teacher Pedagogical Competence on Students' Outcome</i>				
1	I believe the success of my students is closely related to the pedagogical competence of the teacher	4.30	0.516	High
2	The way I teach affects my students' understanding in class	4.22	0.526	High
3	My students are still completely dependent on the teacher's teaching in the classroom	3.72	0.791	High

4	Highly pedagogical competent teachers can more easily control the learning atmosphere in the classroom	4.33	0.574	High
5	Highly pedagogical competent teachers will produce high student outcome	4.40	0.556	High
6	Teachers with low levels of pedagogical competence will produce weak students	3.88	0.879	High
7	Teachers need to improve their level of competence in pedagogy if they want to improve student outcome	4.42	0.540	High
	Overall Mean	4.18	0.388	High

4.1 Linear Regression Analysis to Study the Effect of Teachers' Pedagogical Competence on Student Outcome in School

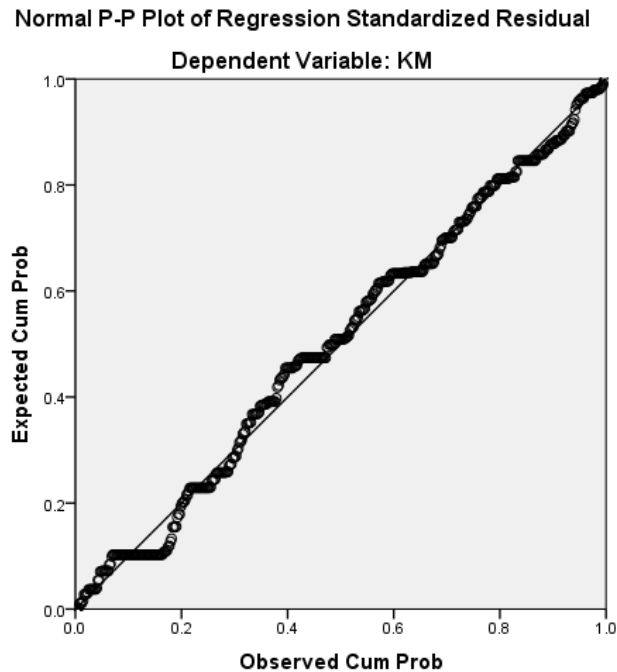
To see if there is a relationship between teachers' pedagogical competence and student outcome, a linear regression analysis was conducted. The data must meet the following assumptions before linear regression analysis is run to provide valid results.

- a) Assumption of normality
- b) Linear relationship between variables
- c) Homoscedasticity

a) Assumption of normality

The assumption of normality of the data affects the model being fitted. The value of the t or F statistic will be affected by non-normal data and then have an impact on the confidence interval and prediction interval. The normal probability plot is one of the simplest methods to test the normality of the data, which is a straight line that passes through the origin will be formed by the normal probability plot if the data is normally distributed.

Figure 4.1: Normal Probability Plot

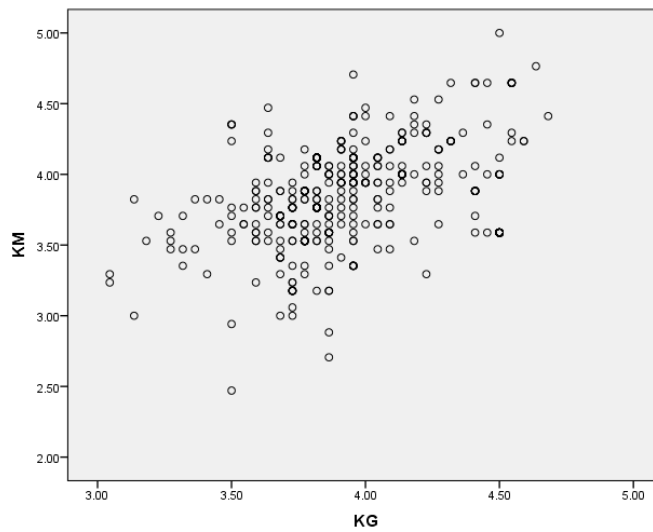


Based on the data in Figure 4.1, it appears that the data form a straight line. All respondent information collected from the instrument is scattered over a straight line to the corner. According to Hair et al. (2019), all respondent information collected from instruments that are above a straight line at an angle of 45 degrees have a normal data distribution. Based on that view, then the assumption of normality of the data for the diagram above has been met.

b) Assumption of linear relationship between variables

Confirmation of the assumption of a linear relationship between two variables, namely the independent variable (teachers' pedagogical competence) and the dependent variable (students' outcome) is necessary before the estimation of a parameter is done. Based on the scatter plot in Figure 4.2, a linear relationship can be determined where the independent variable (teachers' pedagogical competence) in this study has a linear relationship with the dependent variable (students' outcome).

Figure 4.2: Scatter Plot



c) Homoscedasticity

The data should show homoscedasticity, which means the error is the same for the independent variable. The scatterplot in Figure 4.3 shows that the assumption of homoscedasticity is met. This is so because the error findings seem to be scattered randomly and no particular shape is visible.

Figure 4.3: Residual Standardized Regression Scatter Plot Against Regression Standardized Predicted Value

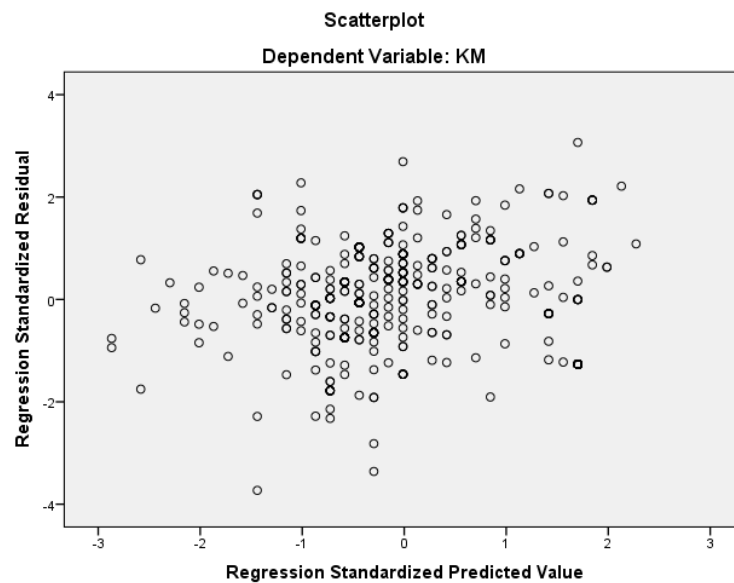


Table 4.2: Regression Analysis Results

R ²	Adjusted R2	Independent variable	Unstandardized Coefficients B	Standardized Coefficients Beta	t	Sig.
0.087	0.085	Teachers' pedagogical competence	0.315	0.295	6.610	< 0.001*

* significant at the 0.05 level

Table 4.2 shows the results of linear regression analysis. Students' outcome was apparently influenced by teachers' pedagogical competence with values ($F(1, 459) = 43.694, p < 0.05$). Based on Table 4.17, the value of R² is equal to 0.087, which shows that 8.7% of the variance in students' outcome is explained by teachers' pedagogical competence. If there is an increase of every 1 unit in the mean level of agreement of the teacher's pedagogical competence, then the mean value of the level of agreement of the students will increase by 0.315 units. The results of this study show that teachers' pedagogical competence is a contributor to students' outcome. This means that the higher the level of teachers' pedagogical competence, the higher the level of students' outcome. This finding shows that the teachers' pedagogical competence has an impact on the students' outcome with a contribution value, $\beta = 0.295$.

5. Conclusion and Recommendations

Overall, this study shows that teachers' pedagogical competence does affect students' outcome in school. In relation to that, all teachers must always strive to improve their knowledge and skills. They should not be satisfied with the knowledge and skills they already have. There are many approaches that can be used to improve the ability and proficiency of teachers, one of which is to follow continuous training and learning programs. Training and continuous learning programs that are followed consistently will improve the quality of teachers and contribute to school excellence.

The administrators and teachers at the school need to ensure that the students' outcome achieved are holistic and well balanced. For that, the aspects contained in SKPMg2 need to be given due attention. Students' outcome must include academic excellence, co-curricular prowess, and noble character, in addition to prudence, tolerance, courtesy and friendliness.

This study is expected to help interested parties such as the Teacher Professionalism Development Division, State Education Departments, District Education Offices, and schools to design training programs and continuous professionalism development to improve the competence of teachers. It is the hope of all parties that with stable and accurate teacher competence, students' outcome will also be able to be improved to a higher level in the future.

In the future, it is suggested that this study be continued by assessing teacher competence in other fields, such as professional competence, social competence, communication competence and others.

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