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Influence of Teachers' Computing Skills on the Utilization of PMM at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency

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ABSTRACT

This research concludes a strong correlation between computer proficiency and the utilization of PMM (Pedagogical Media Package) among teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province, with a correlation coefficient of 0.98. The findings suggest that the higher the computer proficiency possessed by teachers, the greater the utilization of PMM in their teaching processes. The regression equation, Y=0.901X-0.107, provides a mathematical representation of this relationship, indicating that for every one-unit increase in computer proficiency, the utilization of PMM is expected to increase by 0.901 units, with an initial utilization of PMM of -0.107 when computer proficiency is zero. This conclusion underscores the importance of enhancing computer proficiency among teachers to optimize the utilization of PMM in teaching practices. By considering this regression equation, a more focused and sustainable approach to developing teachers' computer skills can be implemented, thus enabling more effective and efficient utilization of PMM to support learning objectives. Therefore, efforts to improve digital literacy and technology skills among educators are crucial for maximizing the potential of technology-enhanced learning in the future.

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1. INTRODUCTION

The era of Society 5.0 is a time in which digital technology has and will continue to evolve, significantly influencing human life. Digital literacy has become a critical key in strengthening character education in this era. Digital literacy refers to individuals' ability to use, evaluate, and actively participate in the digital environment [1]. As technology advances, digital literacy for teachers becomes increasingly important. Through digital literacy, teachers can utilize various digital tools and platforms to create dynamic, interactive teaching materials that meet students' learning needs in the digital age. It also enables them to access and share a wider and more diverse range of educational resources, and to continuously update their knowledge with the latest developments in the field of education.

eachers' abilities are crucial factors determining the success of implementing any curriculum. This is because teachers play a pivotal role in executing every program designed by the Ministry of Education and Culture. Without teachers' abilities, everything loses its meaning and becomes difficult to achieve [2]. Therefore, in order to apply various instructional approaches, tactics, methods, and enjoyable learning processes effectively and imaginatively, teachers' competencies must be continually enhanced [3].

Currently, teacher qualifications in Indonesia are still insufficient to produce high-quality workforce. This situation leads to issues in the learning process, impacting the quality of education. In response, the government is developing policies by introducing the Merdeka Curriculum [4]. The Merdeka Curriculum offers a variety of intracurricular learning experiences, where the curriculum content is optimized to allow students sufficient time to grasp concepts and strengthen competencies. Teachers are given the flexibility to choose various teaching aids, thereby tailoring learning to students' needs and interests. Projects aimed at enhancing students' understanding of Pancasila values are developed based on specific themes set by the government. These projects do not aim to achieve specific learning targets and are not bound by subject content [5].

Merdeka Mengajar Platform is a technological platform designed to support teachers and school principals in the teaching, learning, and creative creation processes. It is tailored to support the implementation of the Merdeka Curriculum by providing teachers with references, inspiration, and understanding in applying it. The platform offers several creative facilities for teachers, including Student Evaluation, Learning Materials, Evidence of Work, Self-Training, Inspirational Videos, and Communities. To access the products available on the Merdeka Mengajar platform, users need a Learning Account (belajar.id) [6].

From the above explanations, it can be concluded that using the Merdeka Mengajar platform requires teachers' abilities to keep up with current technological advancements. This research will explore the impact of teachers' abilities in using technological products on the utilization of applications provided by the government through the Ministry of Education and Culture, namely the Merdeka Mengajar platform (PMM).

2. METHOD

This research aims to examine the influence of computer proficiency on the utilization of the Merdeka Mengajar platform (PMM) at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province. To achieve this objective, the study will employ an experimental method to gather data from a predetermined population or sample. Currently, there are 13 teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province, all of whom will participate as respondents in this study. The research instrument is a questionnaire designed to measure computer proficiency and the utilization of the Merdeka Mengajar platform (PMM). This study is quantitative in nature, aiming for the data obtained to serve as an evaluation tool for the school in efforts to enhance the quality and competence of teachers.

3. RESULTS AND DISCUSSION

Sugiono notes that population refers to the generalization domain encompassing objects and subjects with specific qualities and characteristics used by researchers for their study and conclusions drawn from the study results [7]. The population in this study consists of all teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province, totaling 13 individuals. With this number of teachers, the research employs a population research method (census). According to Kerlinger, variables are ideas, such as male in the concept of gender and consciousness in the concept of awareness. Furthermore, he explains that variables are constructs or attributes to be investigated, such as income, education level, social status, gender, work productivity, and so on [8]. In this study, the first variable is defined as the computer proficiency of teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province, and the second variable is the utilization of the Merdeka Mengajar platform (PMM) by teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province.

a. Teacher's Computer Proficiency

Teacher's computer proficiency refers to the skills and knowledge possessed by educators in operating computer devices and using various applications and software relevant to instructional activities. This includes basic understanding of operating systems, word processing, spreadsheets, presentation software, as well as digital communication tools such as email and video conferencing platforms. It also encompasses skills in using educational technology, such as Learning Management Systems (LMS) and specialized software for creating interactive learning materials.

Additionally, teacher's computer proficiency involves understanding digital security, data management, and using technology for assessing and tracking student progress. Teachers with strong computer skills can effectively integrate technology into the curriculum, creating dynamic and

interactive learning environments, and enhancing student engagement and learning outcomes. This proficiency is increasingly important in the current digital era, where technology continues to evolve and plays a vital role in education.

b. Utilization of the Merdeka Mengajar Platform (PMM)

The Merdeka Mengajar Platform is a technological platform designed to support teachers and school principals in the processes of teaching, learning, and creative creation. It is tailored to support the implementation of the Merdeka Curriculum by providing teachers with references, inspiration, and understanding in applying the Merdeka Curriculum.

From the instruments provided to teachers, data will be obtained and validated for its reliability. Validity testing is used to determine whether a questionnaire is valid or not. A questionnaire is considered valid if its questions can accurately reveal what the questionnaire aims to measure [9]. In this case, several questions are used to accurately measure the intended variables. To measure validity, correlations are made between the scores of each question item and the total score of the construct or variable.

Reliability is the instrument used to assess whether a questionnaire serves as an indicator of a variable or construct. A questionnaire is considered reliable if respondents' answers to statements within it are consistent or stable over time. Reliability measurement is conducted once using SPSS for statistical testing with Cronbach's Alpha (α). A construct or variable is considered reliable if it yields a Cronbach's Alpha value > 0.60 [9]. After distributing questionnaires to 13 teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province, the validity test analysis yielded the following results:

Table 3.1. Results of Validity Testing

Variabel Indikator

No	Kemampuan Komputer	r hitung	r tabel	Keterangan
1	X_1	0,9312	0,553	Valid
2	X_2	0,9312	0,553	Valid
3	X_3	0,9221	0,553	Valid
4	X_4	0,8299	0,553	Valid
5	X_5	0,9423	0,553	Valid
6	X_6	0,9312	0,553	Valid
7	X_7	0,6749	0,553	Valid
8	X_8	0,6738	0,553	Valid
9	X_9	0,9312	0,553	Valid
10	X_{10}	0,9221	0,553	Valid
	Pemanfaatan PMM			
1	Y_1	0,9236	0,553	Valid
2	Y_2	0,9338	0,553	Valid
3	Y_3	0,9034	0,553	Valid
4	Y_4	0,8208	0,553	Valid
5	Y_5	0,9306	0,553	Valid
6	Y_6	0,9338	0,553	Valid
7	Y_7	0,6958	0,553	Valid
8	Y_8	0,6941	0,553	Valid
9	Y_9	0,9236	0,553	Valid

The results from Table 3.1 indicate that the relationship between each indicator and the overall score of the construct for each variable is valid, as the calculated r-value exceeds the critical r-value. Therefore, it can be concluded that all statements within those items are considered valid.

Table 3.2. Results of Reliability Testing

No	Variabel	Alpha Hitung	Standar Alpha	Keterangan
1	Kemampuan Komputer (X)	0,954	0,600	Reliabel
2	Pemanfaatan PMM (Y)	0,957	0,600	Reliabel

All variables are considered reliable based on the results of the reliability testing, as each variable has a Cronbach's Alpha value exceeding 0.60.

The use of the Merdeka Belajar platform as a learning tool has become increasingly common in the context of modern education. In an era where technology has become a cornerstone of the teaching and learning process, it is important to understand how specific factors, such as computer proficiency, can influence the effective utilization of such platforms. Research on the relationship between computer proficiency and the use of the Merdeka Belajar platform is relevant as it can provide valuable insights for curriculum development, enhancing educational accessibility, and gaining a deeper understanding of the dynamics between technology and education.

Computer proficiency has become a crucial skill in various aspects of life, including education. In the context of using the Merdeka Belajar platform, computer proficiency not only affects how students can access and utilize the platform but also influences the effectiveness, understanding, and achievement of learning objectives. Therefore, research examining the relationship between computer proficiency and the utilization of the Merdeka Belajar platform can offer valuable insights for educators, curriculum developers, and education practitioners to enhance the effectiveness and positive impact of technology use in the educational process.

The next step is to analyze the relationship between Computer Proficiency (X) and Utilization of PMM (Y) among teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province. From the analysis using IBM SPSS, the coefficient of determination (R^2) was obtained. The coefficient of determination, typically symbolized as R^2, is a statistical measure used to evaluate how well a linear regression model fits the observed data. R^2 values range from 0 to 1, where values closer to 1 indicate a better fit of the model to the data. Intuitively, R^2 indicates the percentage of variation in the response variable that can be explained by the model. While R^2 is often used to assess model quality, it should be noted that its limitations include an inability to distinguish between simple and complex models and it does not provide information on whether the model fits significantly.

In this study, the coefficient of determination is 0.99, meaning that Teacher's Computer Proficiency has a very high influence on the utilization of the Merdeka Mengajar Platform (PMM) among teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province. From this determination value, it is derived that 99% of the utilization of the Merdeka Mengajar Platform (PMM) is determined by teachers' computer proficiency, with only 1% influenced by other factors.

Correlation coefficient is a statistical metric used to measure the relationship between two variables numerically. The correlation coefficient value ranges from -1 to 1. A positive correlation indicates that both variables move in the same direction, while a negative correlation indicates they move in opposite directions. A correlation value close to 1 or -1 indicates a strong relationship between variables, while a value close to 0 indicates a lack of linear relationship. However, it's important to note that correlation does not imply causation, meaning that changes in one variable do not necessarily cause changes in another.

Additionally, the correlation coefficient provides information about the direction and strength of the relationship between two variables. While a high correlation value indicates a strong relationship, it does not guarantee that the relationship is relevant in a practical context or that it is linear. Therefore, interpreting correlation coefficients should be done carefully, and in some cases, additional analysis may be required to further understand the relationship between variables. Below is a table for interpreting correlation coefficients:

Table 3.3. Interpretation of Correlation Coefficients

No	Interval Koefisien	Tingkat Hubungan
1	0 – 0,199	Sangat Rendah
2	0,2 – 0,399	Rendah
3	0,4 – 0,599	Sedang
4	0,6 – 0,799	Kuat
5	0,8 – 1	Sangat Kuat

In this study, the correlation coefficient value is 0.98, indicating a very strong relationship between Computer Proficiency (X) and Utilization of PMM (Y) among teachers at SDN 014 Ujung Tanjung, Benai

District, Kuantan Singingi Regency, Riau Province. Next, we will examine the regression equation for both variables. A regression equation is a mathematical formula used to model the relationship between one or more independent variables (Computer Proficiency) and a dependent variable (Utilization of PMM). The regression equation derived from the relationship between Computer Proficiency (X) and Utilization of PMM (Y) among teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province is Y= 0.901X - 0.107.

4. CONCLUSION

From the results of this study, it can be concluded that there is a very strong relationship between computer proficiency and the utilization of PMM among teachers at SDN 014 Ujung Tanjung, Benai District, Kuantan Singingi Regency, Riau Province, with a correlation coefficient of 0.98. This indicates that the higher the computer proficiency possessed by teachers, the greater the utilization of PMM in their teaching processes. The regression equation formed, Y=0.901X-0.107, provides a mathematical representation of this relationship, where each one-unit increase in computer proficiency is expected to increase the utilization of PMM by 0.901 units.

This conclusion underscores the importance of enhancing computer proficiency among teachers to optimize the utilization of PMM in the teaching process. By considering this regression equation, a more focused and sustainable approach to developing teachers' computer skills can be implemented, thereby enabling more effective and efficient utilization of PMM to support learning objectives. Therefore, efforts to improve digital literacy and information technology skills among educators are crucial for maximizing the potential of technology-enhanced learning in the future.

For future research, there are several additional areas that can be explored, such as other factors that may influence the utilization of PMM by teachers. For example, aspects such as technological infrastructure, managerial support, and school institutional readiness could also be important considerations in determining the extent to which PMM is used in education.

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