

The Effect of Digital Competence on Improving Teacher Performance: A Case of Harapan Christian Vocational School in Rantepao

Agustinus Palimbong¹, Mesta Limbong², Witarsa Tambunan^{3*}

^{1,2,3}Magister Administrasi Pendidikan, Universitas Kristen Indonesia, Jakarta Timur Indonesia
aguspalimbong@gmail.com, mesta.limbong@uki.ac.id, witarsa.oke@gmail.com

Abstract

The problem at SMK Kristen Harapan Rantepao is the low performance of teachers in learning. To improve teacher performance, it is necessary to analyze and prove the factors causing the low performance of the teacher. Many factors can affect teacher performance, but this study only focuses on examining "The Influence of Digital Competence on Teacher Performance at SMK Kristen Harapan Rantepao, North Toraja Regency". The purpose of this study was to analyze the effect of digital supervision and competence on teacher performance. The sample of this research is all teachers at the Christian Vocational School of Harapan Rantepao which were determined purposively involving 40 people. The method used in this research is multiple regression analysis. A simple linear regression analysis will analyze whether supervision affects teacher performance, whether digital competence affects teacher performance, and whether digital supervision and digital competence together affect teacher performance? The results of this study are expected to be a reference for schools to improve teacher performance through the implementation of supervision and improvement of digital competence.

Keywords

Digital Competence;;
Performance; Teachers



I. Introduction

The process carried out in education is directly related to several human elements such as students and educators. Educators in the world of education are human figures who are expected to become figures who have an important role in the implementation of education. Many factors can affect the quality of education such as principal leadership, teacher competence and performance, school climate and culture, infrastructure, curriculum, financing, and so on. Of the various factors described above, the greatest influence on the quality of education is the teacher. As the results of research by Abubakar, (2016) prove that professionalism and teacher work discipline have a very strong influence on improving the quality of education, this is indicated by the R-value of 0.894 and the R square value of 0.799 or 79.9%.

Teachers have a direct role to improve the quality of education, because in the implementation of learning a teacher directly interacts with students as the target of education. As explained by Sulastri, Fitria, & Martha, (2020) that teachers are the most important means to increase the attractiveness and effectiveness of the learning process, therefore teachers are not only required to be able to liven up the classroom atmosphere but are also able to make learning a process to improve student personality. The teacher is a source of learning for students to gain knowledge and skills as well as being an example in

terms of character building for students. A teacher should be able to meet the learning needs of his students and be able to achieve learning objectives.

The task of a teacher is not only in delivering learning material but more emphasis on learning activities that make students more active. Learning that activates students, requires teachers to innovate and be creative in managing learning so that students are interested and motivated to take part in learning. As explained by Sulastri, & Djumali, (2019) that the learning process carried out by teachers in the classroom must be more active, innovative, creative, and fun, to create good interactions between students and teachers. Therefore, to be able to carry out enjoyable learning, teachers must carry out careful preparation before teaching by considering the condition of students, the availability of media and learning resources, as well as learning models that are in accordance with the characteristics of the basic competencies to be taught. The teacher's ability to plan and implement fun learning and make students more activities that can improve the competence of students is evidence that the teacher has the competence and performs well.

Being a teacher is a profession where the profession requires professionalization. In the management of education, professionalization is very important because it indirectly requires all educators to continue to improve their competence to be able to provide maximum service to students. The teacher is the main spirit in education and must have all good and noble personalities. Teachers cannot be separated from mistakes and are nothing more than ordinary people who cannot be separated from bad personalities, but a noble and noble personality should be more dominantly shown by a teacher Setiawan, & Sitorus, (2017).

The quality and professionalism of a teacher can be seen in his performance. As explained by Asf, & Mustofa (2013) that the performance of a teacher is the achievement of the work of a teacher in carrying out his duties and responsibilities to achieve the expected educational goals. A teacher is said to be professional if the teacher has met four teacher competencies, namely: professional competence, pedagogic competence, personality competence, and social competence. In addition to the four basic abilities that must be possessed by professional teachers as described above, Giantara, (2019) describes that in entering the 21st-century teachers in Indonesia are required to have competencies that are in accordance with the demands of the 21st century. not left behind with graduates from other countries. The competencies needed to face the 21st century are competencies or abilities that are integrated with information technology which is commonly called digital competence.

The performance of a teacher can be influenced by several factors, namely the competence of the teacher, compensation, motivation, job satisfaction, school leadership, school culture and climate, supervision, and so on. One of the factors that can affect teacher performance is the ability of the teacher itself which is commonly called teacher competence. Teacher competencies as contained in the Regulation of the Minister of National Education Number 16 of 2007 concerning academic qualifications and teacher competencies, in this regulation teachers are required to have nationally valid academic competencies and qualifications.

Learning in the 21st century is an attempt to initiate learning that integrates information and communication technology with learner-centered learning management. In the implementation of 21st-century learning, educators are required to change conventional learning patterns, namely the implementation of teacher-centered learning (Teacher Centered) into student-centered learning patterns (student-centered), therefore teachers are no longer the only source of learning for students. but the teacher acts as a facilitator,

mediator, motivator, and at the same time a leader in learning. Conventional learning patterns can be understood as learning carried out where the teacher is more dominant in lecturing and students only being listeners, taking notes, and memorizing. Pedagogic competence with conventional patterns is no longer relevant in the current era.

Pedagogic competence is the ability of teachers to understand the characteristics of their students, the ability to carry out learning, assess learning outcomes, and the ability to develop various potentials possessed by students. The requirements for teachers in the 21st century are not only able to teach but teachers are required to be able to keep up with changes to the development of science, information, and communication technology and must be able to utilize technology in managing to learn, meaning that teachers must continue to improve their digital literacy. Somāntri, D. (2021) explains that pedagogic competence in the world of education is very important to strive for, especially in all materials that are directly related to learning in the 21st century. It can be concluded that in the 21st-century era one of the competencies required to be mastered by teachers is digital competence. Krumsvik, (2014) argues that digital competence in the educational profession is more complex than in other professions and the general public because there are two types of digital competence. The first is about the ability to use technology seamlessly to encourage students to think about using technology. The second is pedagogical, while at the same time continuing to conduct pedagogical assessments that focus on how ICT can improve learning opportunities for student subjects.

The ability that must be possessed by teachers in the digital era is that teachers must be the ability to design and develop learning and be able to evaluate learning authentically in the learning experience by using the latest evaluation tools and optimizing the learning environment to improve student competence. A teacher is expected to demonstrate competence and representative performance as a professional and innovative person in the life of a global and digital society, by utilizing technology to transfer knowledge in various circumstances. In addition, to support the success of students in learning, teachers must be able to collaborate with their students, colleagues, and the community with the help of digital tools and other equipment. An educator needs to plan innovative and creative learning techniques using technology-based learning or Computer Assisted Instruction (Kristiawan, 2014) Based on the explanation above we can conclude that teachers in the 21st century are required to master the use and utilization of digital in planning, implementing and evaluating learning.

The low digital competence of teachers in planning, implementing, and evaluating learning, it is proven that most teachers do not use digital tools in the implementation of the learning process which makes learning look conventional and results in low student interest in learning, it is also found that teachers are very slow in working on and inserting learning tools at the beginning of the semester due to lack of competence to utilize information technology in carrying out his work as a teacher. This is different from the explanation Hapudin, (2021) describes that: "According to the (International Society for technology in education) 21st-century teacher skills include 1) Being able to facilitate and inspire learning and creativity of students, 2) Designing and developing learning experiences and assessment-based digital, 3) Become a model for digital-based learning and work, 4) Encourage and become a model of responsibility and digital society, 5) Participate in professional development and leadership".

Based on the description of the background of the problem above, the researcher will scientifically examine the problem by conducting a study entitled "The Effect of Teacher Digital Supervision and Competence on Improving Teacher Performance at SMK Kristen Harapan Rantepao, North Toraja Regency".

II. Research Method

This study uses a quantitative approach, with a multiple regression analysis survey method. The research intends to prove the effect of teacher digital competence on teacher performance at SMK Kristen Harapan Rantepao. The approach used in this research is quantitative. Anshori, & Iswati, (2019) explained that the quantitative research approach is structured research and quantifies data to be generalized. The data analysis technique used in this research is a correlation between variables, simple regression, and multiple regression.

2.1 Place and time of research

This research was conducted at the Christian Vocational School of Harapan Rantepao which is located on Jl. Limbong, Lorong 1, Tallunglipu District, North Toraja Regency. The time of research was carried out from November 2021 to March 2022.

2.2 Population and Research Sample

The population is all the objects studied as described by Sumatmaadja in Rukajat, (2018). that the population is all the individual phenomena, problems, and cases under study. The population in this study were all teachers who were still active in the Christian Vocational School of Harapan Rantepao, amounting to 60 people.

The sample is part of the number and characteristics possessed by the Sugiono population in Rukajat, (2018). The sampling method for this study was a purposive technique, from the total population 40 people were sampled because the researchers considered the 40 teachers to understand and could give perceptions about the three variables studied in this study.

2.3 Research variable

The research variable according to Ulfa, (2021) is the object that is attached to it. Object the research in question is events, objects, people, or transactions obtained from the subject research that can provide insight into an event or value of each topic being researched. The name of the variable comes from the fact that certain characteristics can be very different between objects in a population set. The variables in this study are teacher digital competence (X) and teacher performance (Y).

Teacher digital competence is closely related to the ability of teachers to use information and communication technology in accordance with educational principles by recognizing their impact on teaching. According to Blyznyuk, T. Digital competence is divided into several forms, namely: "information, communication, educational content creation, security, educational problem solving" (Blyznyuk, 2018: 42). It can be concluded that digital teacher competence is the skills and knowledge of a teacher using digital tools to search, find, evaluate, use and create and utilize information from a very wide variety of sources.

Teacher performance according to Pianda, & Didi (2018) is the result obtained by a teacher in doing his job for a certain period according to the standards that apply to the work being done and can also be seen when the teacher carries out his activities. Teacher performance is the ability and achievement of a teacher's work in carrying out learning Rulitiawati, Ritonga, & Hasibuan, (2020). Another opinion explains that teacher performance is the result obtained from the learning process that is manifested in teaching, directing, educating, training, assessing, and evaluating students at an educational

institution to achieve maximum educational goals. Hafidulloh, Iradawaty, & Mochklas (2021).

Based on several descriptions of the opinions above about teacher performance, the researcher concludes that teacher performance is the process and achievement of work displayed and obtained by teachers in carrying out tasks at school, namely planning, implementing, and evaluating learning within a certain period.

III. Results and Discussion

3.1 Correlation Between Variables

Correlation between variables aims to measure the linear relationship between variables y, and variable x. The strength criteria between variables are shown in the following table:

Table 1. Correlation Strength Criteria (Fraenkel and Wallen, 2012 p. 254)

Nilai Korelasi	Penjelasan
0	Tidak ada hubungan
0,01 – 0,20	Sangat Lemah
0,21 – 0,40	Lemah
0,41 – 0,60	(Sedang/moderate)
0,61 – 0,80	(Kuat)
0,81 – 1	(Amat kuat)

The correlation between digital competence variables (x) and teacher performance (y) is shown in table 2 below:

Table 2. Correlation matrix between variables

		X	Y
X	Pearson Correlation	1	.441**
	Sig. (2-tailed)		.004
	N	40	40
Y	Pearson Correlation	.441**	1
	Sig. (2-tailed)	.004	
	N	40	40

Based on the table above, shows that the digital competence variable (x) with teacher performance (y) has a positive correlation in the medium category with a Pearson correlation value of 0.441. This indicates that there is a linear relationship between teacher digital competence and teacher performance, meaning that the better a teacher's digital competence, the better the teacher's performance in carrying out their duties as teachers and educators. This result is the same as the result of research

- **Regression Test**

The effect of the digital competence variable (x) on teacher performance (y) was tested using a regression test. Simple regression is a (linear) regression between a dependent variable and an independent variable. Multiple regression is a regression between a dependent variable with more than one independent variable. Simple regression is used to measure how much influence the variable x has on y. The variable x is said to

not affect y if the magnitude of the effect of x on y is equal to zero. The variable x is said to affect y if the magnitude of the effect of x on y is not equal to zero.

The regression test of x against y was conducted to test the effect of the teacher's digital competence variable (x) on the teacher's performance variable (y). The test results of the influence of the teacher's digital competence variable (x) on the teacher's performance variable (y) are shown in Table 3 below:

Table 3. T-test results the effect of digital competence (x) on teacher performance (y)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	73.894	11.048		6.689	.000
	Kompetensi Digital	.480	.159	.441	3.026	.004

a. Dependent Variable: Kinerja Guru

Based on the results of the t-test in table 3 above, which shows that the t-count value is 3.026 with a significance level of 0.004 less than 0.05, it proves that the teacher's digital competence variable (x) affects the teacher's performance variable (y). These results can prove that a teacher's digital competence influences increasing a teacher's performance in carrying out their duties. This is in line with the research by Hibana, & Surahman, (2021) under the title "Teachers' Digital Competence in Efforts to Improve Early Childhood Education Achievements" from the study, which obtained the results that teacher digital competence significantly affected the improvement of Early Childhood Education achievement with a linear regression value of 1,033. and the correlation coefficient (R) is 0.984. The coefficient of determination of 96.7% indicates the magnitude of the influence of the teacher's digital competence on increasing the achievement of early childhood learning outcomes. It is also reinforced by the results of Iqbal, M. (2020) research entitled "The Influence of Digital Literacy Ability on Professional Competence of Islamic Education Teachers in State Vocational Schools throughout the City of Parepare", the results obtained that h1 were accepted because $r_{xy} = 0.996 > r_{table} = 0.707$ so h0 was rejected. That means that digital literacy skills affect the professional competence of PAI teachers in State Vocational High Schools throughout the city of Parepare.

- **R Square Analysis**

Analysis of R squared x to y was carried out to find out how strong the influence of the teacher's digital competence variable (x) was on the teacher's performance variable (y). The results of the analysis of R squared x to y can be displayed the table in 4 below:

Table 4 . R Square of digital competence on teacher performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.441 ^a	.194	.173	9.629

a. Predictors: (Constant), Kompetensi Digital

Based on the results of the R quadratic analysis in table 4 above, can explain the magnitude of the correlation or relationship (R) value of 0.441. From the output, the coefficient of determination (R Square) is 0.194, which means that the influence of the teacher's digital competence variable (x) on the teacher's performance variable (y) is 19.4%. From this analysis, it can be concluded that digital competence is very important for a teacher to have to support their performance.

V. Conclusion

Based on the results and discussion of the research, some conclusions can be drawn as follows

It is proven that the digital competence of teachers (X) at SMK Kristen Harapan Rantepao affects teacher performance (Y). In accordance with the results of the regression analysis, it shows that the t-count value is 3.026 with a significance level of 0.004 less than 0.05, proving that the teacher's digital competence variable (x) affects the teacher's performance variable (y). The large influence of teacher digital competence (X) on teacher performance (Y) in accordance with the results of the R squared analysis obtained a coefficient of determination (R Square) of 0.194 which means that the influence of the teacher's digital competence variable (x) on the teacher performance variable (y) is 19, 4%.

References

- Anshori, M., & Iswati, S. (2019). *Quantitative research methodology*: 1st edition. Airlangga University Press.
- Asf, Jasmani and Syaiful Mustofa. (2013). *Education Supervision* . Yogyakarta: Ar-Ruzz Media .
- Blyznyuk, Tetyana. Formation of Teachers Digital Competence: Domestic Challenges and Foreign Experience, *Journal of Vasyl Stefanyk Precarpathian National University, Vol.5 , No.1* (2018), p. 42.
- Fraenkel, Jack. R., and Norman E. Wallen. (2012). *How to Design and Evaluate Research in Education 8th Edition* . Boston: McGraw-Hill Higher Education.
- Giantara, F. (2019). 21st Century Teacher Competency Development Model. Al-Mutharahah: *Journal of Religious Research and Social Studies* , 16 (1), 59-83.
- Hafidulloh, Iradawaty, SN, Mochklas, M. (2021) *Teacher Management Improves Discipline & Teacher Performance* . Yogyakarta : CV. Madani Sun Star.
- Hapudin, MS (2021). *Learning and Learning Theory: Creating Creative and Effective Learning* . np : Prenada Media.
- Hibana, H., & Surahman, S. (2021). Digital Competence of Teachers in Efforts to Improve Early Childhood Education Outcomes. *Journal of Teacher Studies and Learning*, 4 (3), 607-615
- Iqbal, M. (2020). *The Influence of Digital Literacy Ability on Professional Competence of Islamic Education Teachers in State Vocational Schools throughout the City of Parepare* (Doctoral dissertation, IAIN Parepare).
- Kristiawan, M. (2014). A Model for Upgrading Teachers Competence on Operating Computer as Assistant of Instruction. *Global Journal of Human-Social Science Research*.
- Krumsvik, RJ (2014). Teacher Educators' Digital Competence. *Scandinavian Journal of Educational Research*, 58 (3), 269-280.

- Pianda, Didi. *Teacher performance: teacher competence, work motivation and principal leadership* . CV Jejak (Jejak Publisher), 2018 .
- Rukajat, A. (2018). *Quantitative research approach: quantitative research approach* . Depublish.
- Rulitawati, Ritonga, H., Hasibuan, L. (2020) *Teacher Performance Management Model* . (np): Tunas Gemilang Press.
- Setiawan, D., & Sitorus, J. (2017). The urgency of the demands for professionalism and the hope of becoming a character teacher (Case study: Elementary and junior high schools in Batubara Regency). *Educational Horizons* , (1), 122-129.
- Somantri, D. (2021). 21st century the importance of teacher pedagogic competence. *Equilibrium: Journal of Educational Research and Economics* , 18 (02), 188-195.
- Sulastri, M., & Djumali, MP (2019). *The Role of Teachers and Parents in Enabling Student Learning at SMK Negeri 6 Surakarta* (Doctoral dissertation, University of Muhammadiyah Surakarta)
- Sulastri, S., Fitria, H., & Martha, A. (2020). Professional Competence of Teachers in Improving the Quality of Education. *Journal of Education Research* , 1 (3), 258-264.
- Abubakar, A. (2016). The impact of teacher certification on the quality of education at Madrasah Aliyah in Kendari City. *Al-Qalam*, 21 (1), 117-128
- Ulfa, R. (2021). Research Variables in Educational Research. *AL-Fathonah*, 1 (1), 342-351.