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The Influence of Digital Competency and Self Leadership on Teacher Performance in Yayasan Indonesia Juara

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Abstract

Purpose: This study aims to examine teacher competence in facing 21st century education through digital competency, aneadership towards oneself through self-leadership, and its influence on teacher performance.

Research Methodology: The method used in this study is quantitative. This study was descriptive and causal research. Based on their involvement, the researchers did not intervene in the data. This means that the data collected and processed were sourced directly from the respondents. Based on this unit, what is analyzed in this study is the individual. Based on the time of the study, this study belongs to the cross-section type; elements were measured only once during the research process in accordance with the applicable time and finished when this study was completed.

Results: Digital competency and self-leadership have been proven to influence teacher performance. However, there was a difference in the influence of digital competency and self-leadership. The results showed that the magnitude of the influence of teachers' digital competency on teacher performance was not very high. Self-leadership has a significant influence on teachers' performance. This indicates that self-leadership has a greater influence on the quality or performance of a teacher in fulfilling his/her role.

Conclusions: This study found that teacher performance at Yayasan Indonesia Juara School is in the good category, supported by strong digital competency (80%) and self-leadership (82%). Both digital competence and self-leadership have a significant positive impact on teacher performance. Teachers who effectively utilize digital tools and demonstrate self-leadership tend to perform better in planning, implementing, and evaluating learning.

Limitations: This study was limited to teachers at Yayasan Indonesia Juara School, which may affect the generalizability of the findings to other educational institutions. Additionally, the study relied on self-reported data, which may be subject to bias.

Contributions: The findings of this thesis are useful for educational institutions to determine the factors that influence teacher performance and to design effective professional development programs to improve teachers' skills and abilities. In addition, this research can be used by educators as a resource to study the impact of digital leadership and self-leadership on teacher performance.

Keywords: *Digital competency, Self-leadership, Teacher performance*

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1. Introduction

The development of the digital world in the 21st century has made us live in an uncertain era with complex and unpredictably changing conditions. The digital explosion that began almost 20 years ago demonstrated the potential of disruptive technology in a speculative bubble (Millar et al., 2018). This condition is called Volatile, Uncertain, Complex, Ambiguous, or commonly abbreviated as VUCA (Canzittu, 2022). VUCA refers to a fluctuating, complex, and uncertain environment caused by a new normal (Kennedy 2020). Uncertainty refers to the lack of information that characterizes a particular situation or event in terms of both the cause and effect arising from taking a decision variant from several possibilities (Minciu et al., 2020).

According to Salakhova et al. (2021),, this VUCA condition can result in changes in the social, economi,c, and geopolitical fields related to digitalization and changes in technological structures that are starting to have a wider impact in many fiel,ds, including the education system. In line with Yehezkel's statement (2020), the turmoil that occurs affects all sectors, including education, because all VUCA components interact with each other chaotically and contradictorily.

According to UNESCO's Global Education Monitoring (GEM) report in 2016, the quality of teachers in Indonesia ranked 14th out of 14 developing countries. In line with Veirissa (2021) that "in Indonesia there are still many teachers whose competence is inadequate." The lack of qualified teachers has an impact on students' learning abilities in schools. This can be proven from the results of a survey conducted by Revina (2020), the Program for International Student Assessment (PISA) 2018, that Indonesia was ranked 7th out of 77 countries with the worst student abilities. In addition, according to World Bank researchers on the quality of teachers in Indonesia through a survey in 2020, the quality of Indonesian teachers remains low (Wicaksono, 2021). This is further strengthened by Indonesia losing 12 months of learning time, which causes student learning effectiveness to reach 40%.

One of the causes of teacher quality in Indonesia that is not up to the standard is teachers' human resource management (Firdausi, 2021). The implementation of human resource management by teachers is reflected in performance assessments. Based on the Regulation of the Minister of National Education 35 of 2010, which regulates teacher performance, it is stated that an ideal teacher is one who is able to produce scientific publications and behave innovatively so that this ability will build a teacher's knowledge and academic abilities. However, in practice, teacher performance assessments that should describe the knowledge and abilities of teachers are merely administrative fulfillment (Solihin et al., 2021). Meanwhile, according to Nugroho et al. (2022), the role of a teacher is not only limited to teaching theories, but teachers must also have good knowledge, attitude, professional, and social competence. In VUCA conditions, teachers are required to make adjustments to achieve learning targets. An example of a VUCA condition in the 21st century is the Covid-19 pandemic (Kautish et al., 2022).

Several researchers have proven that digital skills influence the quality of teacher performance. According to Howard et al. (2021), the OECD (2020) concluded that strong digital competence in teachers is a key component for students in developing skills to maximize the use of new technologies. Sary et al. (2023) in their research conclude that digital competence has a positive and significant influence on employee performance. Digital competence is one solution for facing learning challenges in the digital era (Sitompul, 2022). However, in this case, teachers must consider five criteria before conducting digital-based learning: ease of access, learning environment, application user experience, interaction between teachers and students, and use of a Learning Management System (LMS) (Rahman et al., 2020).

The data above show that the number of human resources coming on time has decreased by 2023. This could be due to the large number of human resources that are negligent in inputting attendance. This problem shows that many human resources have not been able to apply discipline in time management. The discipline of employees or human resources can lead to dishonest attitudes, loyalty, and a lack of seriousness in working (Indriasari et al., 2019). These results cannot determine the increase in the skills of each school human resource brought about by the Indonesian Juara Foundation. In fact, according to

data obtained from the Indonesian Juara Foundation during 2022–2023, the average number of uploaded learning videos was only 2-3 videos. This is because few teachers have modern technology skills. According to Sitompul et al. (2022), users in the digital era must be able to develop and utilize various types of learning media that can attract attention, such as learning videos and various learning applications.

Based on the explanation and problems that have been described above, this study aims to examine how teacher competence in facing 21st century education through digital competency, and a teacher's leadership towards himself through self-leadership and its influence on teacher performance. The innovation to be achieved in this study is the addition of digital competency theory to teachers, the relationship between digital competency and self-leadership, and its influence on teacher performance. Based on the phenomena that have been explained in the background, this is the basis for this study with the title "The Influence of Digital Competency and Self-Leadership on Teacher Performance at Yayasan Indonesia Juara School". Based on the research questions above, the objectives of this study are as follows.

1. To determine Teacher Performance is at Yayasan Indonesia Juara School.
2. To determine how good the Digital Competency of teachers is at Yayasan Indonesia Juara School.
3. To determine how teachers'self-leadership is at Yayasan Indonesia Juara School.
4. To determine the influence of Digital Competency on Teacher Performance at Yayasan Indonesia Juara School.
5. To determine the influence of Self-Leadership on Teacher Performance at Yayasan Indonesia Juara School.

2. Literature Review

2.1 Digital Competency

Digital competence and digital competence were defined separately. Competence is an inherent ability and has regularity to produce competitive work or ideas based on knowledge channeled by rules and patterns (Munstashir & Tricahyono, 2021). Competence is divided into two categories: individual and organizational competence. Individual competence is the ability of an individual to take action and make decisions within an organization. Organizational competence refers to the collective actions of everyone in an organization (Posselt, 2018). The term digital refers to the representation of data in binary form, consisting of zeros and ones. However, in the book Digital Revolution: An Immersive Guide in Kumparan (2023), the term digital not only refers to technology, but also to a fundamental transformation in the way we interact, work, and live. Falloon (2020) defines digital competency as the skills to access the Internet, find, manage, and edit digital information, join in communication, and engage with online information/communication networks. Meanwhile, according to Karsenti et al. (2020), digital competence is the ability of every human being to use digital technology confidently, critically, and creatively to achieve goals in the fields of work, entertainment, inclusion, and participation in society and education.

2.2 Framework for the Digital Competence of Educators

The presence of digital technology is now widespread and has changed almost all aspects of our lives, such as the way we communicate, work, enjoy our free time, organize our lives, and acquire knowledge and information (Redecker, 2017). National and European policies recognize the need to equip all citizens with everything they need and the competence to use digital technology critically and creatively. This applies to all sectors, including education. Digital competence in the scope of education is related to the ability of teachers to catalyze information and communication technology, adapt to cognitive abilities, and adjust based on class, school culture, and society (Habibah, 2022). Meanwhile, according to Prayogi et al. (2019), digital competence in education is related to educators'skills in using information and communication technology (ICT) based on scientific principles (pedagogical).

According to Uswah (2020), in the digital era, teachers will have their own framework, which can be called DigCompEdu. The European Framework for the Digital Competence of Educators document written by Redecker (2017) explains that there are six areas of the digital competency framework, where

each area has the achievement of teacher goals as teachers who must be effective, inclusive, have innovative learning strategies, and use digital tools. The image below is an area of digital competency framework for educators.

2.3 Self Leadership

In self-leadership, a person intentionally influences his/her thoughts, feelings, and actions in an effort to achieve certain goals (Warren, 2021). According to Satria et al. (2020), self-leadership is a process in which a person can become a leader through continuous activities so that they can influence those they lead (followers) to achieve organizational goals. Another definition of self-leadership in the literature is automatic leadership, which is conceptualized as a process of influencing, motivating, and directing oneself (Özdemir, 2020).

Mustaffa and Ghani (2020) explained that self-leadership can be interpreted as the ability to influence oneself to achieve goals desired by oneself. Decisions made by oneself describe the level of self-leadership, good or bad, or open to improvement. Based on the experts' understanding, it can be concluded that self-leadership is a process that exists within a person to achieve desired goals. Self-leadership is part of the development of self-management related to completing work and how a person responds to it (Sary et al. 2023b).

2.4 Human Resource Management

According to Kamaruddin et al. (2022), the definition of human resources, in macro terms, is humans as residents of a country or region who have entered the workforce. In micro terms, humans who work or become members of an organization, institution, or agency are considered personnel, employees, workers, laborers, and others. Human resources (HR) are the most important part of helping realize the goals of an organization, institution, or agency (Pata, 2017). In addition, to achieve a goal, it will not be possible if there is no human resource management.

According to Werdiningsih (2021) in its implementation, HR management has a series of stages that must be carried out, namely HR planning, recruitment, selection, placement, performance and performance assessment, training, work safety compensation, career development, and guarantees. This series of activities aims to ensure maximum employee performance and welfare. When referring to educational institutions, the employees in question were education personnel and educators (teachers).

2.5 Teacher Performance

Performance is a work result that is measured in terms of quality and quantity that must be met by employees in carrying out their work and responsibilities (Mangkunegara, 2013). According to Priansa (2017), performance is the level of employee success in completing work originating from the company, and is a manifestation of the talent or abilities possessed by the employee. According to Prasetio et al. (2021), performance measures the extent to which an individual employee has contributed to achieving the company's goals. Performance is measured in terms of quality and quantity that employees must meet in carrying out their work and responsibilities (Sary et al., 2023).

According to Rorimpandey (2020), Joen et al. (2022) explain that performance is the highest peak of three interrelated elements: skills, efforts, and attitudes of external conditions. Skills are the raw materials that a person brings to the workplace and consist of knowledge, skills, and technical skills. Effort can be described as a person's motivation to complete their work and develop their abilities. External conditions are the extent to which they support employee productivity.

Based on the above definition, it can be concluded that performance is the result of employee work measured in a certain period based on provisions where the results show employee contributions to organizational achievements. Meanwhile, teacher performance is a personal, scientific, technological, social, and spiritual ability that forms the standard competency of the teaching profession, which includes mastery of materials, understanding of students, educational learning, personal development, and professionalism (Veirissa, 2021).

2.6 Research Framework

According to Salakhova et al. (2021), this VUCA condition can result in changes in the social, economic, and geopolitical fields related to digitalization and changes in technological structures that are starting to have a wider impact in many fields, including the education system. In line with Yehezkel's statement (2020), the turmoil that occurs affects all sectors, including education, because all VUCA components interact with each other chaotically and conflictingly. In response to this condition, the education sector must emphasize the role of teachers in achieving quality that meets standards. In VUCA conditions, teachers are required to make adjustments to achieve learning targets. Therefore, to adapt to these changes, teachers must have the ability to continue to follow the times, one of which is digital competence (Sary et al., 2023a).

Several researchers have proven that digital skills influence the quality of teacher performance. According to Howard et al. (2021), the OECD (2020) concluded that strong digital competence in teachers is a key component for students in developing skills to maximize the use of new technologies. Sary et al. (2023) in their research conclude that digital competence has a positive and significant influence on employee performance. Digital competence is one solution for facing learning challenges in the digital era (Sitompul, 2022). However, not all educators and teachers are able to adapt to digital-based information technology. Another phenomenon is the large number of teachers who come from Gen Z circles "with quite high interaction with gadgets, good in the process of delivering learning but still needing improvement in terms of personality. This is because a teacher does not only carry out the process of transferring knowledge but also the most important thing is to shape the character of students. Before forming the character of the students, the teacher must have strong self-leadership skills.

Based on the explanation above, it can be interpreted that in this 21st era, technological developments are quite rapid, so that teachers are overwhelmed in dealing with this problem. In addition, the effects of the pandemic in this era can have an impact on society. The sense of leadership among teachers has also decreased. The framework of thought in this study is described as follows:

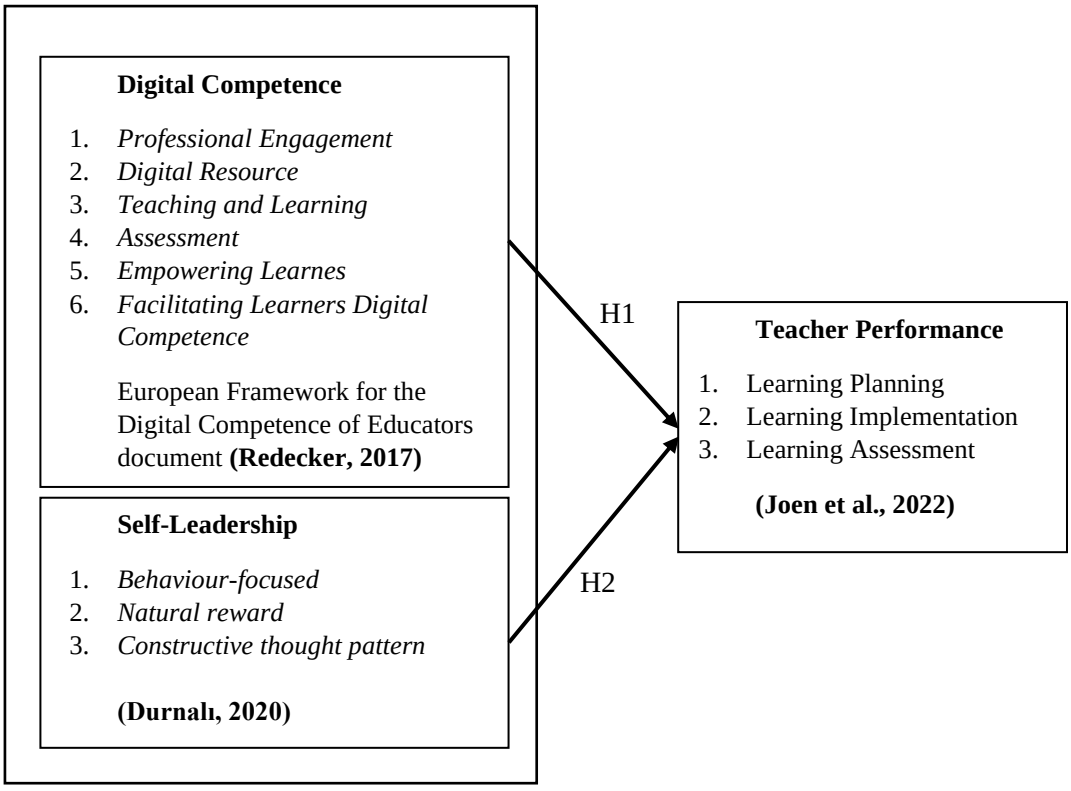

Figure 1. Framework of thought
Source: Researcher design results (2023)

2.7 Research Hypothesis

Based on the framework of thought described above, the following research hypothesis was formulated:
Hypothesis 1: Digital competence has a significantly positive effect on teacher performance.
Hypothesis 2: Self-leadership has a significantly positive effect on teacher performance.

3. Research Methods

3.1 Types of Research

The types of research in this study were descriptive and causal. Descriptive research describes a situation or event with a measure intended to describe existing variables. Causal research is designed to explain whether a factor causes another factor to occur (Hair et al., 2020).

3.2 Operational Variables

Operational variables are defined as research variables that have been identified and classified operationally based on observable or observable properties (Syahza, 2021:68). Operational explanation of variables.

Table 1. Operational Variables

Variable	Dimension	Indicator	Item	Scale
Digital Competency	*Professional Engagement*	Use of digital technology for communication	1	Likert
		Using digital technology to collaborate	2	
		Developing skills in using digital technology in learning	3	
		Participating in digital training opportunities	4	
	Digital Resource	Using the web to search for and select digital resources	5	Likert
		Modifying or adapting selected digital resources	6	
		Sharing resources and safeguarding personal information digitally	7	
	Teaching and Learning	Planning the use of technology in teaching and learning	8 – 9	Likert
		Leading the use of technology in teaching and learning	10 – 11	
		Using digital technologies to facilitate connections between learning venues	12	
		Using digital technologies to foster connections between theory and practice, abstract and concrete, general and specific	13	
	Assessment	Using digital assessment tools to monitor student progress	14	Likert
		Analyzing assessment results to identify student strengths and weaknesses	15	
		Providing more effective feedback using digital technology	16	
	Empowering Learnes	Using digital technologies to enhance inclusion	17	Likert

		Using digital technologies to enhance learner personalization	18	
		Using digital technologies to enhance learner active engagement	19	
		Teaching students to assess information obtained online	20	
		Allowing students to use digital technology responsibly	21	
		Encourage students to use digital technology creatively to solve real-world problems	22	
	Facilitating Learners Digital Competence	Use digital technology in the creation of digital content for students	23	Likert
		Use technology to support students in developing learning and documenting student performance	24	
		Use of technology for students to communicate and collaborate with teachers, peers and others	25	
Self-Leadership	*Behaviour-focused*	Personal rules	26 – 28	Likert
		Self-assessment	29 – 32	
		Self-discipline	33 – 35	
	Natural reward	Giving yourself credit	36 – 37	
		Giving yourself punishment	38 – 39	
	Constructive thought pattern	Creating a pleasant atmosphere	40 – 42	
		Creating a mindset	43 – 45	
		Creating a work pattern	46 – 47	
Teacher Performance	Planning	Describe learning objectives	48	Likert
		Determine learning methods and organize materials according to sequence and group	49	
		Organize and allocate time effectively and efficiently	50	
		Design learning according to predetermined procedures	51	
		Determine and use learning media and resources	52	
		Determine appropriate assessment techniques	53	
	Implementation	Applying learning methods and procedures in presenting lesson materials	54	Likert
		Organizing activities in the classroom so that they run orderly and regularly	55	
		Motivating students in a positive way	56	

	Summarize, provide questions and feedback to find out and strengthen student acceptance.	57	
	Develop assessment tools according to the specified performance indicators or criteria	58	
	Check, score and process student learning outcome test answers	59	
Evaluation	Conclude assessment results clearly and logically	60	Likert
	Prepare assessment result reports and improve assessment tools	61	
	Identify, evaluate and analyze follow-up assessment result results	62	

Source: (Antonietti et al., 2022; Solimun, 2015; Kusumawati, 2008)

3.3 Measurement Scale

This study used a five-point (5) Likert scale. Scale (1) for measuring "strongly disagree," scale 2 for measuring "disagree," scale (3) for measuring "quite agree," scale (4) for measuring "agree," and scale (5) for measuring "strongly agree."

3.4 Population and Sample

The population in this study was teachers under the auspices of Yayasan Indonesia Juara. The sample selection in this study used the non-probability sampling technique or saturated sampling, which means that the sample was the entire population. Thus, the sample in this study included all teachers under the auspices of Yayasan Indonesia Juara.

3.5 Data Collection

Data collection was conducted using survey techniques with questionnaires, which provided a set of test tools in the form of questions to respondents (Sugiyono, 2017). The questionnaire was distributed to respondents and then filled out directly by the respondents. The questionnaire survey consisted of a series of questions to obtain information from previously determined data sources that can be managed or asked by researchers based on the basic and important assumption that respondents are willing to provide real answers (Thomas, 2021).

3.6 Validity and Reliability Test

The validity and reliability of the research instrument (online questionnaire) were tested before use. Validity testing was carried out to determine whether the research instrument could measure what it should measure. Reliability testing was carried out to determine whether the research instrument was consistent in measuring what it should measure.

3.7 Data Analysis Techniques

In this study, data analysis involves two approaches: descriptive data analysis and hypothesis analysis using structural equation modeling (SEM) and partial least squares (PLS). Several important steps must be considered when conducting quantitative data analysis, including a review of the research framework, preparation of data to be analyzed, selection of analysis methods (either descriptive analysis or hypothesis analysis), and implementation of analysis and evaluation of data analysis results (Thomas, 2021).

3.7 1 Descriptive Analysis

The data collected from the respondents were then processed and arranged into a continuous line that was used to combine respondents' answers with the research variables. According to Dwi et al. (2023), the method for calculating the score in this study is as follows:

1. Recapitulate the results of the questionnaire answers
   This study had 103 teachers as respondents using 5 Likert scales. The highest and lowest scale values were 5 and 1, respectively.
2. Calculate the ideal score and the lowest score
   Ideal score = 103 x 5 = 515
   Lowest score = 103 x 1 = 103
3. Calculate the largest and smallest percentages
   Largest percent = (515/515) x 100% = 100%
   Smallest percent = (103/515) x 100% = 20%

3.8 Structural Equation Modeling-Partial Least Square

This study uses the partial least squares (PLS) data analysis technique. Partial least squares has the power to interpret the relationship between variables and carry out data analysis in a test. The equation model in partial least squares is a structural equation modeling (SEM) equation with an approach based on variance or component-based structural equation modeling. Three analyses were conducted using SEM-PLS: the measurement model (outer model), structural model (inner model), and hypothesis testing.

3.8.1 Outer Model Testing

SEM SEM-PLS model evaluation (outer measurement) is a reflective measurement assessed using validity and reliability. Validity measurement is divided into 2 (two) criteria, namely, construct validity, which is carried out by calculating convergent and discriminant validity. Convergent validity is a set of indicators (items) that represents one latent variable (unobserved). The convergent validity value is determined through the loading factor of each item (Lasaiba et al., 2023). The criteria for the results of the outer model are as follows:

Table 2. Outer Model Criteria

Model	Output	Criteria
Outer Model	*Convergent Validity*	**Outer Loading** The recommended outer filling factor value is >0.7, but can be tolerated up to more than 0.5 (Haryono, 2016)
	Discriminant Validity	**Cross Loading** Analysis that produces a loading value for the intended construct and a larger loading value for another construct (Haryono, 2016) **Fornell-larcker** AVE root value > correlation between constructs with other constructs (Haryono, 2016)
	Internal Consistency Reliability	**Cronbach Alpha (CA)** A minimum value of 0.7 is expected, but it is acceptable if it is more than 0.6. (Haryono, 2016) **Composite Reliability (CR)** The expected value is at least 0.7; if the value is more than 0.8, then the current data is considered very reliable. (Haryono, 2016)

Source: (Hair et al., 2021; Haryono, 2016)

3.8.2 Inner Model Testing

The structural model was evaluated by estimating and testing hypotheses regarding the causal relationships between the exogenous and endogenous variables specified in the path diagram. Standard errors and test statistics for relevant parameters were estimated using SmartPLS with the Bootstrapping option (Lasaiba et al., 2023). Bootstrapping testing was performed using the computer software program Smart PLS 3.0. The inner model consists of collinearity issues, coefficient of determination (R2 and predictive relevance-Q2. The following are the criteria for the results of the inner model.

Table 3. Inner Model Criteria

Model	Output	Kriteria
Inner Model	*Collinearity Issues*	There is no evidence of collinearity if the VIF value is less than 5 (Hair et al., 2021)
	Coefficient of Determination – R^2	The R^2 value should be more than 0.67 for strong, less than 0.33 for moderate, and less than 0.19 for weak. (Hair et al., 2021)

Source: (Hair et al., 2021)

3.9 Hypothesis Testing

Hypothesis testing uses sample data to test hypotheses or claims regarding the population parameters. Hypothesis testing involved the use of a random sample from the population. The characteristics of the samples were then observed and compared with the proposed hypothesis. A random sample is acceptable if it shows indications that support the hypothesis; however, if it shows indications that oppose the hypothesis, the hypothesis is rejected. The hypotheses of this study are as follows:

H01: Digital Competency has no significant positive effect on teacher performance.

Ha1: Digital competence has a significantly positive effect on teacher performance.

H02: Self-leadership has no significant positive effect on teacher performance.

Ha2: Self-leadership has a significant positive effect on teacher performance.

4. Result and Discussion

4.1 Research Results

4.1.1 Respondent Characteristics

The characteristics of respondents in this study included position, gender, age, and length of service. A total of 103 respondents from several schools under the auspices of Yayasan Indonesia Juara completed the questionnaire. The results of the analysis of the research respondent data are shown in table below.

Table 4. Respondent characteristics

Profil	F	%
Position		
Homeroom teacher	55	53,4
Field of study	48	46,6
Gender		
Male	41	39,8
Female	62	60,2
Age		
< 25	18	17,5
25 – 30	29	28,2
31 – 36	20	19,4
37 – 42	19	18,4
> 42	17	16,5
Years of service		
< 1 year	17	16,5

1 - 2 years	18	17,5
2 - 3 years	19	18,4
3 - 4 years	9	8,7
> 4 years	40	38,8

Source: Researcher processing results, 2024

4.2 Structural Equation Modeling Partial Least Square Analysis

The SEM-PLS analysis in this study involved two stages of measurement evaluation: assessment of the outer and inner models.

4.2.1 Outer Model Testing

Evaluation or testing of the outer model aims to test the validity and reliability of the instrument. This test has four criteria that must be considered, namely, convergent validity, discriminant validity, cronbach alpha and composite reliability.

1. Convergent Validity Test

A convergent validity test using the SmartPLS program can be observed from the loading factor value for each construct indicator. The rule of thumb for assessing convergent validity is that the loading factor value must be more than 0.7 (Ghozali Latan, 2015). However, according to Haryono (2016), if the loading factor value is greater than 0.5, it can be tolerated. The results of the convergent validity test are presented in table below.

Table 5. Outer loading results

Latent Variable	Manifest Variable	Outer Loadings	Description
Digital Competency	D1	0.678	Valid
	D2	0.706	Valid
	D3	0.694	Valid
	D4	0.725	Valid
	D5	0.710	Valid
	D6	0.701	Valid
	D7	0.657	Valid
	D8	0.610	Valid
	D9	0.794	Valid
	D10	0.771	Valid
	D11	0.735	Valid
	D12	0.628	Valid
	D13	0.700	Valid
	D14	0.771	Valid
	D15	0.805	Valid
	D16	0.747	Valid
	D17	0.795	Valid
	D18	0.689	Valid
	D19	0.804	Valid
	D20	0.723	Valid
	D21	0.800	Valid
	D22	0.770	Valid
	D23	0.759	Valid
	D24	0.798	Valid
	D25	0.646	Valid

Self-leadership	S1	0.722	Valid
	S2	0.769	Valid
	S3	0.621	Valid
	S4	0.635	Valid
	S5	0.821	Valid
	S6	0.848	Valid
	S7	0.870	Valid
	S8	0.731	Valid
	S9	0.694	Valid
	S10	0.705	Valid
	S11	0.603	Valid
	S12	0.702	Valid
	S13	0.731	Valid
	S14	0.594	Valid
	S15	0.784	Valid
	S16	0.878	Valid
	S17	0.841	Valid
	S18	0.851	Valid
	S19	0.691	Valid
	S20	0.765	Valid
	S21	0.795	Valid
	S22	0.706	Valid
Teacher Performance	T1	0.895	Valid
	T2	0.667	Valid
	T3	0.780	Valid
	T4	0.794	Valid
	T5	0.871	Valid
	T6	0.907	Valid
	T7	0.807	Valid
	T8	0.855	Valid
	T9	0.867	Valid
	T10	0.856	Valid
	T11	0.877	Valid
	T12	0.866	Valid
	T13	0.888	Valid
	T14	0.847	Valid
	T15	0.846	Valid

Source: Research processing results, 2024

2. Discriminant Validity Test

The discriminant validity test with the SmartPLS program can be seen from the heterotrait-monotrait (HTMT) and cross-loading values. However, according to Hair et al. (2021), a better alternative to see the results of the discriminant validity test is through the heterotrait-monotrait (HTMT) ratio correlation. The Rule of Thumb for assessing discriminant validity was that the HTMT value must be below 0.90.

Table 6. Results of the HTMT discriminant validity test

	DC	SL	TP
DC			
SL	0.913		
TP	0.859	0.907	

Source: Research processing results, 2024

The table above shows that the HTMT value between the digital competency and self-leadership variables was 0.913. In addition, the HTMT value between the self-leadership and teacher performance variables was 0.907. This value was greater than 0.90. Therefore, it can be interpreted that the discriminant validation of this variable was unacceptable. Therefore, recovery was required. According to Hair et al. (2021), the solution to restoring high HTMT values is to delete items that are highly correlated between the digital competency and self-leadership variables, and then between the self-leadership and teacher performance variables. After deleting several items that had a high correlation, the HTMT value-testing process was repeated. The following are the results of retesting the HTMT values on the recovered data:

Table 7. Results of HTMT stage 2 discriminant validity test

	DC	SL	TP
DC			
SL	0.843		
TP	0.849	0.893	

Source: research processing results, 2024

The table above shows that all constructs have HTMT values below 0.9, so it can be concluded that the HTMT test is fulfilled, and the discriminant validity test is acceptable. Discriminant validity can also be observed through its cross-loading value. In this test, the correlation between the indicator and its construct must be greater than that of the other variable constructs (Haryono, 2016).

Table 8. Cross loading results

	DC	SL	TP
D1	**0.680**	0.468	0.536
D10	**0.770**	0.639	0.615
D11	**0.734**	0.519	0.550
D12	**0.628**	0.479	0.510
D13	**0.700**	0.562	0.559
D14	**0.771**	0.586	0.646
D15	**0.805**	0.697	0.700
D16	**0.747**	0.554	0.590
D17	**0.795**	0.685	0.710
D18	**0.689**	0.527	0.525
D19	**0.804**	0.662	0.651
D2	**0.706**	0.568	0.549
D20	**0.724**	0.564	0.589
D21	**0.800**	0.692	0.685
D22	**0.770**	0.701	0.668
D23	**0.758**	0.587	0.595
D24	**0.797**	0.647	0.627
D25	**0.646**	0.535	0.467
D3	**0.696**	0.486	0.543

D4	**0.726**	0.557	0.554
D5	**0.709**	0.551	0.573
D6	**0.702**	0.573	0.648
D7	**0.657**	0.553	0.538
D8	**0.610**	0.568	0.521
D9	**0.793**	0.607	0.609
S1	0.706	**0.744**	0.701
S10	0.550	**0.740**	0.542
S15	0.589	**0.794**	0.695
S19	0.551	**0.721**	0.517
S2	0.703	**0.810**	0.705
S20	0.564	**0.770**	0.669
S22	0.578	**0.730**	0.682
S3	0.493	**0.650**	0.593
S4	0.553	**0.639**	0.538
S5	0.647	**0.770**	0.658
S8	0.592	**0.763**	0.570
S9	0.565	**0.736**	0.539
T10	0.711	0.722	**0.866**
T11	0.755	0.727	**0.883**
T12	0.725	0.719	**0.867**
T14	0.707	0.710	**0.858**
T15	0.667	0.717	**0.861**
T2	0.549	0.547	**0.690**
T3	0.630	0.738	**0.794**
T4	0.650	0.704	**0.809**
T7	0.649	0.680	**0.811**

Source: Research processing results, 2024

The bold values in the table show the correlation between each indicator and its construct. This shows that each indicator has a higher correlation with its construct than with the other constructs. Therefore, all indicators have good discriminant validity.

4.3 Data Reliability Testing

The reliability test is a test of data consistency, which was the answer of 103 respondents. The reliability test in this study used a composite reliability test with a value higher than 0.7 and Croncbach's alpha must be greater than 0.6. The results of the reliability tests are listed in table below.

Table 9. Internal Consistency Reliability

	Cronbach's Alpha	**Composite Reliability**	**Average variance Extracted (AVE)**	**Conclusion**
DC	0.963	0.965	0.534	
SL	0.925	0.928	0.548	Reliable
TP	0.942	0.945	0.686	

Source: Research processing results, 2024

Based on the above calculation, the AVE value obtained for the variable was more than 0.5. All variables have a high level of convergent validity, in accordance with the basis for decision-making.

The composite reliability test showed that all variables had results of 0.9. Thus, the variables in this study met the criteria for composite reliability or could be considered to have a high level of reliability. Cronbach's alpha values obtained were greater than 0.7. Therefore, the variables in this study met the criteria for Cronbach's alpha and can be considered reliable.

4.4 Inner Model Testing

4.4.1 Collinearity Issues

The first stage of the inner model evaluation check is to check for the absence of multicollinearity between the variables using the inner VIF measure. According to Hair et al. (2021), the VIF value must be below 5 (no multicollinearity).

Table 10. Inner model VIF

	DC	SL	TP
DC			2.806
SL			2.806
TP			

Source: Research processing results, 2024

The results of the examination of the table above show that between the variables, the VIF value is below 5, in accordance with the basis for decision-making, so that the variables in this study do not have multicollinearity problems.

4.4.2 Coefficient of Determination – R^2

The coefficient of determination (R2) was used to test the contribution in percentage form. The R2 value must be more than 0.67, strong, less than 0.33 for moderate, and less than 0.19 for weak. The following are the test results for the R-square value.

Table 11. Test of determination coefficient (R^2)

	R-square	R-square adjusted
TP	0.763	0.758

Source: Research processing results, 2024

Based on the results of the determination coefficient calculation, the R^2 value in this study shows that teacher performance is influenced by digital competency and self-leadership by 76.3%, while 23.7% is influenced by the model caused by other variables not included in this study.

4.5 Hypothesis Testing

The relationship between variables in the smart PLS was tested using the bootstrapping method on the sample. Then, to determine whether the hypothesis is rejected, it is necessary to see the results of the path coefficient; here are the results of hypothesis testing. If the p-value is below 0.05, it is considered significant, and the hypothesis can be accepted. Then, to determine the magnitude of the influence of the model, it can be seen from the f-squared value. According to Hair et al. (2021), if the f square value is 0.02, the influence is low, 0.15 moderate and 0.35 high. The results of the hypothesis tests are shown in table below.

Table 12. Hypothesis test results

Hypothesis	*Path Coefficien*	P Value	Decision	*f Square*	Big Influence
DC -> TP	0.385	0.000	Accepted	0.223	Moderate
SL -> TP	0.534	0.000	Accepted	0.429	High

Source: Research processing results, 2024

Based on the results of the hypothesis test presented in the table above, the hypothesis that Digital Competency has a significant effect on teacher performance can be accepted with a path coefficient of 0.385 and a p value of 0.000 (<0.05). This indicates that a teacher's digital competence can affect teacher performance. However, teachers' digital competence in improving teacher performance has a moderate/moderate influence (f square 0.223).

In addition, the hypothesis that self-leadership has a significant effect on teacher performance can also be accepted, with a path coefficient of 0.534 and a p-value of 0.000 (<0.05). It can be interpreted that teachers' self-leadership can affect their performance. Unlike digital competence, self-leadership had a strong influence on teachers' performance (f square = 0.429).

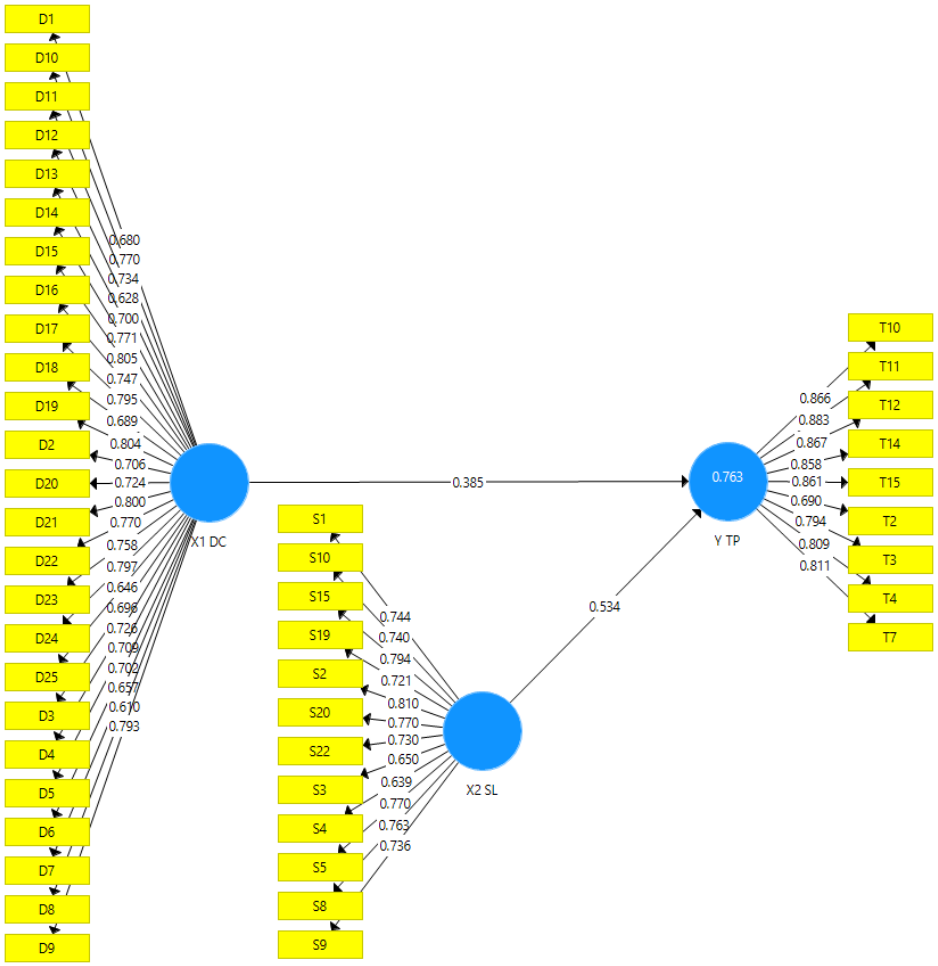

Figure 2. Final Model
Source: Research processing results, 2024

4.6 Discussion

4.6.1 The Influence of Digital Competency on Teacher Performance

Based on the results, there was a significant relationship between digital competency and teacher performance. From the path coefficient value of 0.385 and p-value of 0.000 (<0.05). In line with the results of Elisnawati et al. (2023), digital competency affects a teacher's performance. Sary et al. (2023) in their research also concluded that digital competency has a positive and significant influence on employee performance. Thus, the better the teacher's digital competency, the better the teacher's teaching performance. Digital competency is one solution to the challenges of learning in the digital era (Sitompul, 2022). In contrast to the results of this study, which show that teachers' digital competency in improving teacher performance has a moderate/moderate influence (f square 0.223), which means that the magnitude of the influence of teachers' digital ability on teacher performance is not too high. As in the previous research conducted by Sarinten and Raharja (2023), the influence of digital competency on teacher performance was only 30.4%. This problem can be caused by the large number

of teachers who come from Gen Z circles and have quite a high interaction with gadgets, but are not skilled in using them.

The forms of teachers' digital competence include information, communication, educational content creation, security, and educational problem-solving (Blyznyuk, 2018). Information and teachers have good data-literacy skills. Communication: Teachers have the skills to interact both directly and through digital technology. Educational content creation can create digital learning content. Security teachers guarantee protection against the impact of technological products on students. Educational problem-solving can solve and overcome technical problems (Prayogi et al., 2019). Digital skills are important for teachers during the learning process. Several researchers have proven that digital skills influence the quality of teacher performance. According to Howard et al. (2021), the OECD (2020) concluded that strong digital competence in teachers is a key component for students to develop the skills to utilize new technologies.

Based on the discussion above, it can be concluded that a teacher who has good digital competence will create high-quality students. In addition, with good digital competence, teachers can wisely face the current digitalization era. Therefore, the first hypothesis, which states that digital competence has a significant positive effect on teacher performance, is **accepted**.

4.6.2 The Influence of Self-leadership on Teacher Performance

In addition to external influences (digital competence), internal influences (self) play a major role in performance. The influence of self-leadership on teacher performance in this study can be seen from the path coefficient value of 0.534 and p-value of 0.000 (<0.05). These results are in line with the research results of Satria et al. (2020), who state that a person's self-leadership can affect their performance results. Özdemir (2020) concluded that a person's performance can increase along with increasing leadership within themselves (self-leadership).

Self-leadership among teachers is an evidence of authority, values, interests, and personality (Yaacob & Don, 2018). The attitude of teachers who can direct themselves and are satisfied with their work is very important because they are workers in educational organizations and have a major impact on the level of development in any country (Özdemir, 2020). The higher the level of self-leadership of a teacher, the higher the motivation to teach, and vice versa; the lower the level of self-leadership, the lower the motivation to teach, which will certainly be detrimental to schools and students (Zembat et al., 2020). According to Carmeli (2014) and Sary et al. (2023), self-leadership has a positive impact on innovative work behavior. Individuals with self-leadership tend to be innovative in their work. Thus, teachers find it easier to perform their duties.

Based on the above discussion, it can be concluded that the results of a teacher's performance are influenced by self-leadership. As explained by Sary et al. (2023a), good leadership reflects good performance, and bad leadership reflects poor performance. Therefore, the decision for the second hypothesis which states "Self-Leadership has a significant positive effect on teacher performance" is **accepted**.

5. Conclusion

Based on the above results and discussion, this study discusses how digital competency and self-leadership influence teacher performance. The results of this study can be summarized as follows; Teacher Performance at Yayasan Indonesia Juara School is included in the good category, with an average percentage of 84%. This means that teachers can plan, implement, and evaluate learning effectively. The digital Competency of teachers at Yayasan Indonesia Juara School was included in the good category, with an average percentage of 80%. This means that teachers have the knowledge and ability to operate digital technologies well.

The self-leadership of teachers at Yayasan Indonesia Juara School was also included in the good category, with an average percentage of 82%. This means that teachers can develop visions, goals, and

strategies to achieve success in their personal and professional lives. Digital competence had a significant positive effect on teacher performance. This means that the higher the digital competence of a teacher, the higher their performance. Self-leadership had a significant positive effect on teacher performance. This means that good teacher performance comes from teachers with a strong leadership spirit.

Limitations and futures Study

This study was limited to teachers at Yayasan Indonesia Juara School, which may affect the generalizability of the findings to other educational institutions. Additionally, the study relied on self-reported data, which may be subject to bias. Future research could explore the role of external factors such as organizational culture, peer collaboration, and access to digital resources in enhancing teacher performance. It would also be valuable to conduct comparative studies across different schools or regions to determine whether similar trends exist in varying educational contexts. Longitudinal studies could provide deeper insights into how sustained improvements in digital competency and self-leadership influence teacher effectiveness over time.

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