

Digital Competency, Self-Leadership, and Innovative Work Behavior towards Teacher Performance in Islamic Educational Foundation Samarinda Indonesia

Fetty Poerwita Sary

Lecturer, Management Business of Telecommunication and Informatics
Faculty of Economics and Business
Telkom University
Bandung, Jawa Barat, Indonesia
fettyps@telkomuniversity.ac.id

Nidya Dudija

Lecturer, Management Business of Telecommunication and Informatics
Faculty of Economics and Business
Telkom University
Bandung, Jawa Barat, Indonesia
[nidyardudija@telkomuniversity.ac.id](mailto:nidyadudija@telkomuniversity.ac.id)

Milleniarta Moslem

Student, School of Master Management
Faculty of Economics and Business
Telkom University
Bandung, Jawa Barat, Indonesia
milleniarta@student.telkomuniversity.ac.id

Abstract

The term VUCA refers to a volatile, complex, and uncertain environment caused by the new normal. In responding to VUCA's volatile environmental conditions, the education sector must adapt to the conditions. Teachers as educators must do various ways to achieve teacher performance. Teachers must have innovations to prepare skills that are ready to face the changes in the educational sector. This research aims how the competency of teachers in dealing with 21st century education through digital competency, the leadership of a teacher towards themselves through self-leadership, innovative behavior of a teacher through innovative work behavior and its effect on teacher performance with quantitative approach. The novelty in this research is the addition of the theory to its application on Islamic educational sector. Structural equation model (SEM) is applied to assess the model fit and to test the research hypothesis and was processed using SmartPls 3. Based on the hypothesis testing, the findings of the study indicate that digital competency and innovative work behavior have a positive and significant influence on employee performance. However, self-leadership does not have a positive and significant influence on employee performance. This is explained with supported literature in this paper.

Keywords

Digital Competencies, Self-Leadership, Innovative Work Behavior, Teacher Performance

1. Introduction

The term VUCA refers to a volatile, complex, and uncertain environment caused by the new normal (Hadar et al., 2020). In responding to VUCA's volatile environmental conditions, the education sector must adapt to the conditions. Teachers as educators must do various ways to achieve teacher performance in accordance with their implementation. Currently, Indonesia faces many challenges in producing good quality teachers (Ulfatun, 2021). Based on the Program

for International Student Assessment (PISA) in 2018, Indonesia's reading score is currently at its lowest point, which is below level 2 with 71.9% and is the country with the 7th worst student score out of 77 countries surveyed (Revina, 2020). This is inseparable from the role of the teacher in leading their students.

The cause of the declining quality of teachers is the management of human resources for teachers (Firdausi, 2021). In practice, the management of human resources for teachers is done by measuring teacher performance. Based on the Regulation of the Minister of National Education 35 of 2010 (Solihin et al., 2021) which regulates teacher assessment, it is stated that the ideal teacher figure is a teacher who has scientific publications or innovative work that they can produce to build good academic knowledge and skills. However, the fulfillment of teacher performance is only limited to administrative assessments and has not been able to capture teacher performance in the classroom (Solihin et al., 2021). Therefore, it is necessary to conduct further research on behavioral factors that affect teacher performance to encourage the quality of the resulting teachers.

In essence, a teacher is required to have pedagogical, personal, professional, and social competencies (Ulfatun, 2021). However, with the VUCA context above conceptually, teachers become professionals who can answer the needs and challenges in the world of education (Prayogi and Estetika, 2019). Therefore, to adapt to the development of the digital era of the 21st century, the profession as a teacher must have the ability requirements that continue to follow the times, one of which is a digital competency. Digital competence is one of this century's important skills that every person must acquire (Jarad and Shaalan, 2020). Krumsvik (2014) said that the application of digital competency in the educational context is more complex because digital competency refers to the ability to use technology seamlessly to encourage students to think about using technology and pedagogical, where while at the same time continuing to conduct pedagogical assessments that focus on how ICT can improve learning opportunities for student subjects.

Based on previous research, it shows that digital competency has an influence in building quality teacher performance. According to research conducted by Palimbong et al., (2022) it is proven that the digital competency of teachers affects teacher performance. This is also supported by other studies by Marguna and Sangiasseri (2020), Hidayatullah et al., (2020), Hizam et al. (2020), Adenekan and Jimoh (2021) and Waskito et al. (2021) and other studies that have not been mentioned.

According to the International Society for Technology in Education (Hapudin, 2021) in Palimbong et al., (2022) there are 5 skills that teachers must have, namely being able to facilitate and inspire student creativity, design, and develop digital-based learning, become a model in digital learning and encourage the use of technology in society and participate in development professional leadership. It is stated that one of the skills required is leadership. This is related to the fact that a teacher must improve leadership. According to Nadelson et al. (2020) teachers are responsible for improving learning, managing students in the classroom, getting students' attention, inspiring students to be involved, ensuring effective learning and being able to assess students where all these activities are related to leadership such as inspiring and motivating others, providing vision for the future, acting as mentor and community building, and implementing the vision. Therefore, before acting as a leader, essentially a teacher must have leadership in himself which is called self-leadership.

Self-leadership refers to the concept by Manz (1986) in Neck and Houghton (2006) regarding self-leadership which holds that self-leadership is a series of behaviors and strategies for personal direction and self-motivation which he calls the art of self-leadership. Based on the self-leadership approach, it is said that everyone is a leader for themselves which in this way will produce their own work ability to the maximum (Zembar et al., 2020). Cheung et al. (2018) stated teacher self-leadership shapes how they deliver values, skills, and expertise to their students. It is supported that teacher leadership starts with self-leadership. In addition, self-leadership in organizations plays a role in supporting the ability of individuals to meet the organizational standards and enhance work performance (Manz, 1986; Neck and Houghton, 2006) in Inam et al., (2021). According to Manshi and Mishra (2019), individuals who practice self-leadership at personal level can improve employee performance.

Based on previous research, it shows that self-leadership has an influence on performance. According to research conducted by Sarmawa et al., (2017) This implies that a stronger self-leadership ability of employees can significantly improve employee performance. This is also supported by other studies by Rahmawaty dan Rochmach (2014), Putra dan Suwandana (2021) dan Marnis dan Marzolina (2010) and other studies that have not been mentioned.

In addition, as explained above, teachers must do various ways to achieve teacher performance. This requires innovation from teachers in completing work for better teacher performance. According to Sesen et al., (2017) the innovation that exists in individuals becomes the foundation for achieving high performance. In addition, increasing innovative behavior can make work more efficient and effective so that company performance can increase (Anshari et al., 2018). In terms of education, teachers are also required to have innovative behavior for learning as a response to changes that continue to occur (Sesen et al., 2017).

Based on previous research, it shows that innovative work behavior has an influence on performance. According to research conducted by Ferdinan and Lindawati (2021) it is proven that innovative work behavior affects performance. This is also supported by other studies by Femia and Rahwamati (2018), Musneh et al., (2021), Silalahi et al., (2022), Astrama et al., (2020) and other studies that have not been mentioned.

Based on the explanation above, it can be underlined that with the changes that occur in the environment this requires an increase in digital competency, self-leadership, and innovative work behavior of teachers in achieving the teacher performance required for the quality of school teaching. It is important to know how each variable that is conducted in this study will affect teacher performance. The novelty of this research is the addition of the theory to its application in the Islamic educational sector.

1.1 Objectives

This study aims to propose to find out how digital competency, self-leadership, innovative work behavior and teacher performance are descriptively and to find out how the influence of digital competencies, self-leadership, and innovative work behavior on teacher performance at the Islamic educational foundation Samarinda Indonesia.

2. Literature Review

2.1 Digital Competency

Digital competency is a set of skills needed to create and use technology that has a positive impact on performance and service (Marguna, 2020). Digital competency has two things, namely basic skills (related to knowledge) and soft skills (related to attitudes and skills) to use a technology (Hidayat and Khotimah, 2019). Meanwhile, according to Perifanou and Economides (2019) digital competency is related to a person's knowledge, skills, and attitudes to access, use, create, and share digital resources efficiently, as well as communicate and collaborate with others using digital technology to achieve certain goals.

2.2 Self-Leadership

Self-leadership has been part of the field of academic study since 1986, with the publication of "Self-leadership: Toward an Expanded Theory of Self-Influence Processes in Organizations" by Manz (1980) (Goldsby et al., 2021). Manz conceptualizes self-leadership as a development of the self-management literature in which self-leadership is a process of completing menial and unpleasant tasks and pursuing activities that one finds naturally beneficial. According to Satria et al. (2020) self-leadership is a process where a person can become a leader through continuous activities so that they can influence those they lead (followers) to achieve organizational goals. Another understanding by Mustaffa and Ghani (2020) about self-leadership can be interpreted as the ability to influence oneself to achieve the goals desired by oneself. Decisions made by yourself will reflect your level of leadership, good or bad, or open to improvement.

2.3 Innovative Work Behavior

Referring to the notion of Valle and Jimenez (2018) identify innovation of work behavior as "the intentional creation, introduction, and application of new ideas in work roles, groups or organizations, to benefit the performance of roles, groups, or organizations". According to Fatonah and Helmy (2021) innovative work behavior is closely related to innovation, where innovative behavior emphasizes creative attitudes so that a process of changing attitudes from traditional to modern occurs, or attitudes that have not progressed to more advanced attitudes. According to Kmiecik (2020) innovative work behavior is defined as the intentional creation and application of new ideas or innovations (new products or processes) in the workplace to improve individual, group, or organizational performance.

2.4 Teacher Performance

Performance is the result of work that is measured in quality and quantity that must be fulfilled by employees in carrying out their work and existing responsibilities (Mangkunegara, 2017: 67). According to Priansa (2017: 48) performance is the level of success of employees in completing work that comes from the company which is the embodiment of the talent or ability possessed by the employee. Based on the Regulation of the Minister of State for Empowerment of State Apparatus and Bureaucratic Reform Number 16 of 2009/1 in Mulyasa (2017: 88) that teacher performance appraisal is an assessment of each item of the teacher's main task activities in the context of fostering career ranks and positions. Teacher is located as a functional technical implementer in the field of guidance learning and certain tasks at the level of early childhood education through formal education, basic education, and secondary education. The success of the teacher's performance is measured according to the criteria set by the organization or educational institution where they work, if the teacher's performance meets the specified criteria, it can be declared an achievement, otherwise it is declared not yet accomplished.

2.5 Research Framework and Hypothesis

Based on some of the statements that have been mentioned, teacher performance will be influenced by good digital competency, self-leadership, and innovative work behavior in teachers. Based on this statement, this research will formulate the following research framework: (Figure 1)

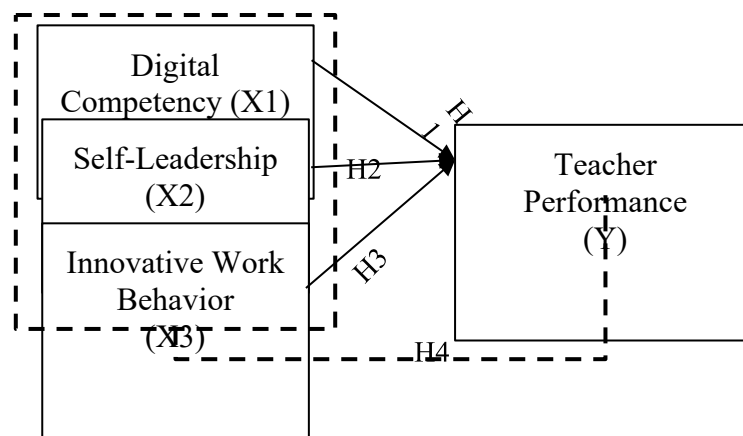


Figure 1. Research Framework

According to Hair et al. (2020:42) a hypothesis is a formal statement of some unproven conjecture that tentatively explains certain facts or phenomena. The following are the hypotheses that will be examined in this study:

- H1: Digital Competency has a significant positive effect on Teacher Performance
- H2: Self-Leadership has a significant positive effect on Teacher Performance
- H3: Innovative Work Behavior has a significant positive effect on Teacher Performance
- H4: Digital Competency, Self-Leadership and Innovative Work Behavior have a significant positive effect on Teacher Performance

3. Methods

The method used in this study is a quantitative study. In quantitative research, the knowledge generated is based on numerical data collection and analysis. In general, quantitative research is confirmatory and deductive in nature with statistical data analysis (Thomas, 2021:60). The type of this research is descriptive. Based on the time of the study, this research is a cross-sectional type, meaning that the elements are measured only once during the research process in accordance with the applicable time and are completed when this research is completed (Hair et al., 2020:165).

3.1 Sample and Data Collection

In this study using non-probability sampling with saturated sampling technique. According to Unaradjan (2019:122) in the saturated sampling technique the sample is the entire population. Therefore, in this study the sample was all teachers under the Islamic Educational Foundation Samarinda Indonesia totaling 108 teachers consisting of 60 elementary school teachers, 29 junior high school teachers and 19 high school teachers.

3.2 Measurement

All the items were measured by using a five-point Likert-type. This research used “1” to record “strongly disagree” and “5” to record “strongly agree”. Digital Competencies (DC). The 22-item scale was adopted from Machmud et al. (2021) using the ICT Competency Framework for Teachers created by UNESCO (2011). The dimensions used are Understanding ICT in Education, Curriculum and Assessment, Pedagogy, Digital Skills, Organization and Administration and Teacher Professional Learning. A sample item is “I try to analyze the effectiveness of the application of ICT in the learning process”.

Self-Leadership (SL). The 11-item scale was adopted from Slambi (2021). The dimensions used are Behavior Awareness and Volition, Task Motivation and Constructive Cognition. A sample item is “I make a plan to reward myself when I complete a target”.

Innovative Work Behavior (IWB). The 11-item scale was adopted from Sari and Najmudin (2021). The dimensions used are Behavior Awareness and Volition, Task Motivation and Constructive Cognition. A sample item is “I invite my colleagues to try a more innovative way of learning”.

Teacher Performance (TP). The 20-item scale was adopted from Uno and Nina (2012). The dimensions used are Quality of Work, Work Accuracy, Initiative in Work, Work Ability and Communication. A sample item is "Before starting teaching at the beginning of the semester, I do a test to determine the students' initial abilities".

The procedure used was designed with 61 sets of questionnaires. This questionnaire is then made into a form. Then the questionnaire was distributed to all responden. All of our questionnaires briefly introduced the research purpose. Every item of the questionnaire is given a code based on the item number. The participants were asked to rate how much they agree with these descriptions.

3.3 Data Analysis

Data analysis in this study used descriptive data analysis and hypothesis analysis using Structural Equation Modeling-Partial Least Square (SEM-PLS). There are several things that must be considered in analyzing quantitative data, namely reviewing the research framework, preparing data to be analyzed, determining whether the research uses descriptive analysis or hypothesis analysis, analyzing and evaluating the results of data analysis (Thomas, 2021: 327).

4. Results

4.1 Descriptive Analysis

The characteristics of the respondents in this study are based on gender, age, school, education, and length of employment. Based on the results, it can be concluded that the dominant gender of respondents is men with 64 teachers and 59,3%. In terms of age, it can be concluded that the dominant age of respondents was >30-35 with 32 teachers and 29,6%.

Table 1. Characteristics of Respondents

	Classification	Frequency	Percentage
Gender	Men	64	59,3%
	Female	44	40,7%
	Total	108	100%
Age (year)	<25	13	12,0%
	>25-30	27	25,0%
	>30-35	32	29,6%
	>35-40	24	22,2%
	>40-45	5	4,6%
	>45	7	6,5%
	Total	108	100%
School	Elementary School	60	55,6%
	Junior High School	29	26,9%

	Senior High School	19	17,6%
	Total	108	100%
Education	Bachelor	84	77,8%
	Master	24	22,2%
	Total	108	100%
Length of employment (year)	<1	21	19,4%
	>1-3	24	22,2%
	>3-5	23	21,3%
	>5	40	37,0%
	Total	108	100%

Based on school, Table 1 it can be concluded that the dominant respondent were teachers from elementary school with 60 teachers and 55,6%. Based on the education background of the respondent the dominant respondent were from bachelor’s degree with 84 teachers and 77,8%. Based on length of employment of the respondent the dominant respondent were teachers with length of employment >5 years with 40 teachers and 37,0%.

4.2 Outer Model

Convergent validity is done to see the validity of each measurement indicator on the variable. Convergent validity shows which measures are positively correlated with other measures (eg, reflective) of the same construct using different indicators. The convergent validity value is obtained by looking at the results of the outer loading factor value on endogenous and exogenous variables. Based on the criteria, the recommended value is the loading factor value > 0.7 but this value can be tolerated up to 0.5 (Musyaffi et al., 2021:11). (Table 2)

Table 2. Outer Model

Variable	AVE	Composite Reliability	rho A	Cronbach Alpha
Digital Competency	0,507	0,942	0,938	0,935
Self-Leadership	0,682	0,945	0,935	0,933
Innovative Work Behavior	0,558	0,932	0,928	0,920
Teacher Performance	0,555	0,961	0,959	0,957

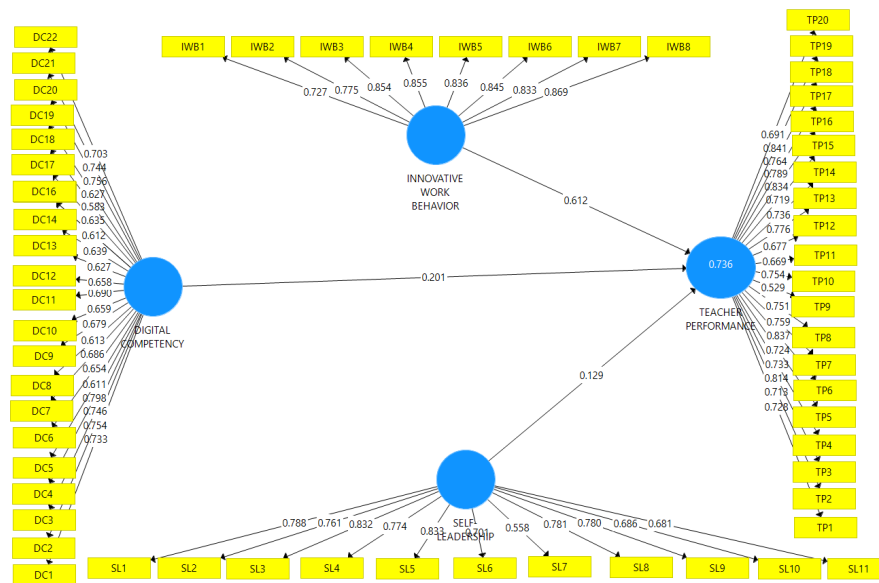


Figure 1. Outer Model

AVE is used to see how the quality of the indicators is related to the research variables. The criterion is the expected AVE value 0.5. Based on the above calculation, the AVE results in the variable 0.5. This is in accordance with the criteria that all variables have a high level of convergent validity.

Internal consistency reliability tests consist of composite reliability and cronbach alpha. Composite reliability is a measure to measure the reliability of an indicator. The resulting value indicates whether a construct that is built has reliability (Musyaffi et al., 2021:126). Based on the criteria, the expected value is at least 0.7. If the value is 0.8, it can be concluded that the existing data has a high level of reliability (Musyaffi et al., 2021:118). Based on the calculation results, the results of the composite reliability test are obtained. From these calculations it can be concluded that all variables have a result of 0.8. Thus, the variables in this study have met the criteria for composite reliability or can be said to have a high level of reliability.

Cronbach alpha is also an assessment of reliability. The resulting value is used to measure the internal consistency of a variable. Based on the criteria, the expected value is at least 0.7. This value can still be tolerated up to 0.6 (Musyaffi et al., 2021:118). Based on the results of calculations, the results of the Cronbach alpha test were obtained. From these calculations it can be concluded that all variables get results > 0.7 . Thus, the variables in this study have met the criteria of Cronbach alpha or can be said to be reliable

Discriminant validity means that each reflective construct must share more variance with its own indicators than with other constructs in the path model (Hair et al., 2017). Fornell Larcker is done by comparing the correlation of latent variables with constructs in the AVE. The test criteria is if the value of square-roots or square roots must have a greater value compared to the existing construct in the variable compared to other construct variables (Musyaffi et al., 2021:126).

Table 3. Fornell Larcker

	DC	IWB	SL	TP
DC	0,680			
IWB	0,646	0,826		
SL	0,624	0,720	0,747	
TP	0,677	0,834	0,694	0,745

The results of the Fornell Larcker test were obtained. (Table 3). From these calculations it can be concluded that all variables have a value greater than the value below it. Thus, the variables in this study have met the Fornell larcker criteria.

4.3 Inner Model

R^2 is a test that is carried out to see together the effect on the Y variable. The R value explains the variation of the exogenous variable to the endogenous variable (Musyaffi et al., 2021: 135). The criteria for the value of R^2 is that if it has a value of 0.67 it means strong, 0.33 means moderate and 0.19 means weak (Musyaffi et al., 2021:138).

Table 4. Coefficient of Determination - R^2

	R Square	R Square Adjusted
TEACHER PERFORMANCE	0,736	0,728

Based on the results Table 4 of calculations using Smart-PLS 3, the results of the coefficient of determination test are obtained. From these calculations it can be concluded that the value of R^2 is 0.736. Thus, it can be interpreted that the results of the strength of the model are stated to be strong simultaneously at 0.736 or 73.6% while the remaining 26.4% is influenced by other variables not examined in this study.

Predictive relevance testing is carried out to determine the ability of a prediction through a blindfolding procedure (Musyaffi et al., 2021:138). Q^2 becomes a measure of the predictive power of the model that checks whether the model accurately predicts data that is not used in the estimation of model parameters (Hair et al., 2017). This characteristic

makes Q^2 a measure of predictive power out of the sample. Based on the criteria, the value of Q^2 is categorized as small if it is 0.02, medium if 0.15 and large is 0.35 (Musyaffi et al., 2021:13).

Table 5. Predictive Relevance - Q^2

	SSO	SSE	$Q^2 (=1-SSE/SSO)$
DC	2376,000	2376,000	
IWB	864,000	864,000	
SL	1188,000	1188,000	
TP	2160,000	1310,784	0,393

From Table 5 these calculations, the result of the Q^2 value is 0.393. This means that it can be concluded that this study has a good / good observation value because the Q^2 value is in the category of large value criteria.

4.4 Hypothesis Testing

Based on T-Statistics, it shows that the research model produces a positive T-Statistics number and T-Table = df (n-k = 108-4=106) of 1.983. It can be concluded that the greater the value of an exogenous variable on an endogenous variable, the stronger the effect. Meanwhile, the largest indirect effect of endogenous variables is on innovative work behavior (4,956), digital competency (2,451) and self-leadership (1,354). (Table 6)

Table 6. Path Coefficient dan t-statistics

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	Path Coefficients	P Values	Result of Hypothesis
DC → TP	0,201	0,209	0,082	2,451	0,201	0,015	Accepted
IWB → TP	0,612	0,591	0,123	4,956	0,612	0,000	Accepted
SL → TP	0,129	0,145	0,095	1,354	0,129	0,176	Rejected

The level of significance used in this study is 5%. Therefore, the criterion is that the p-value must be <0.5. Based on the results above, it is obtained that 2 (two) hypotheses are accepted, and the other hypotheses are rejected which are described as Digital competency has a significant positive effect on teacher performance, Self-leadership has no significant positive effect on teacher performance and Innovative work behavior has a significant positive effect on teacher performance.

5. Discussion

Table 6. shows the statistical value where the t-statistics generated by the digital competency variable on teacher performance is 2.451. This shows T-Table 1.983 < 2.451 and p-values 0.015 < 0.05. The resulting path coefficient value of 0.201 is positive. In this case H01 is rejected and Ha1 is accepted, it can be concluded that the digital competency variable has a positive and significant influence on teacher performance. The results of this study are supported by previous research by Hizam et al. (2020) using the SEM method with the teacher object where digital competency has an influence of 0.451 or 45.1%. According to Hizam et al. (2020) digital competency of teachers in mastering technology will facilitate the delivery of learning and make it easier for teachers to achieve productive performance.

Research conducted by Waskito (2021) on university lecturers shows that digital competency has an effect of 0.883 or 88.3% on performance. According to Waskito (2021) educators who have competencies that can be aligned with needs will be easier to meet performance targets considering that the current learning process requires technology to be more effective. In addition, research conducted by Adenekan and Jimoh (2021) also shows the effect of 0.507 or 50.7% digital competency on performance. According to Adenekan and Jimoh (2021) digital competency is an ability that must exist in each individual because every day work to fulfill performance is tied to technology, with digital competency, individuals are able to choose and utilize technology according to their needs. Based on the literature that discusses digital competency on performance, this is related to the teaching profession as educators who will deliver material to students, this is also one of the fulfillment aspects of teacher performance. Rapid technological

developments require teachers to have digital competencies so that the teaching and learning process becomes effective and teacher performance is met.

Table 6. shows the statistical value where the t-statistics produced by the self-leadership variable on teacher performance is 1.354. This shows $T-Table\ 1.983 > 1.354$ and $p-values\ 0.176 > 0.05$. The resulting path coefficient value of 0.129 is positive. In this case $H02$ is accepted and $Ha2$ is rejected, it can be concluded that the self-leadership variable does not have a positive and significant effect on teacher performance. The results of this study reject several previous studies which state that self-leadership has an influence on performance such as research by Sarmawa et al., (2017) and Putra and Suwandana (2021).

The results in this study are supported by previous research by Markham and Markham (1995) doubting that self-leadership influences performance. In addition, Lee and Koh (2001) suggest that self-leadership does not directly affect performance because employees do not feel self-leadership in the organization. This means that self-leadership is also something that must be built and grown from the organization, if someone is not encouraged from the internal organization then self-leadership itself will not grow.

In addition, another study by Neubert and Wu (2006) conducted in China, showed that self-leadership has no direct effect on performance in this case it is necessary to pay attention to the culture within the organization. Recent research by Fachrizal et al., (2022) also shows that self-leadership does not directly affect performance. According to Fachrizal et al., (2022) self-leadership is a personal factor that must be combined with other factors to help employee performance. Based on the literature that discusses self-leadership on employee performance, it can be concluded that as a teacher it is important to consider other factors to improve performance other than self-leadership.

Table 6. shows the statistical value where the t-statistics produced by the innovative work behavior variable on teacher performance is 1.354. This shows $T-Table\ 1.983 < 4.956$ and $p-values\ 0.000 < 0.05$. The resulting path coefficient value of 0.612 is positive. In this case $H03$ is rejected and $Ha4$ is accepted, it can be concluded that the innovative work behavior variable has a positive and significant influence on teacher performance.

The results of this study are supported by previous research by Purwanto (2020) who said that innovative work behavior has a significant effect on performance. This shows that an increase in innovative work behavior can make work more effective and efficient so that company performance can increase. Research by Sanusi and Dibyantor (2022) shows that the direct effect of innovative work behavior is 0.703.

Berisha et al. (2020) shows the results of innovative work behavior have a positive effect on employee performance by 0.451. Organizations need to raise awareness to create a healthy work environment for employees by giving them space to generate and present new ideas, procedures and products/services that will improve their work. Employees with a high level of innovative work behavior can become superior employees in the workplace. This will lead to a win-win situation, where organizations will increase the effectiveness of their overall performance while employees will increase self-satisfaction and motivation to achieve higher levels of performance (Berisha et al., 2020).

The overall effect of this research is R^2 value of 0.736. Thus, it can be interpreted that the results of the strength of the model are stated to be strong simultaneously at 0.736 or 73.6% while the remaining 26.4% is influenced by other variables not examined in this study.

6. Conclusion

Based on data analysis and hypothesis testing this study concluded: Digital Competency has a significant positive effect on Teacher Performance, Self-Leadership does not have a significant positive effect on Teacher Performance, Innovative Work Behavior has a significant positive effect on Teacher Performance. Together, Digital Competency, Self-Leadership, and Innovative Work Behavior effect on Teacher Performance simultaneously by 0.736 or 73.6%.

This study reported several limitations. The weakness of this study is that the variables are limited to digital competency, self-leadership, innovative work behavior and teacher performance. This study has not considered other variables such as motivation, self-efficacy or organizational culture as the previous literature mentioned. This research also only covers the education sector and is limited to one foundation, foundation or other school in the same industry being excluded due to various constraints. In the future, this research is expected to be continued in different schools, for example public schools. This study used a cross-sectional approach where data were collected at once during the

study period. Such a technique does not allow the researcher to create causal relationships among important research variables. This research can be continued in depth and comprehensively with other variables and other methodologies.

The findings of this research imply that the foundation must maintain aspects of digital competency and innovative work behavior to achieve teacher performance with the expected quality. Meanwhile, as the literature states that self-leadership that grows within the individual teacher to complete his work will grow with support from the organization. Therefore, it is important for the foundation to support leadership in teachers through self-development programs.

References

- Adenekan, Tolulope Elizabeth, and Tajudeen Adisa Jimoh. "Technological Innovation, Digital Competence and Job Performance of Secretaries in Public Tertiary Institutions in Ogun State, Nigeria." *International Journal of Innovative Science and Research Technology* 6 (12): 5–12. 2021.
- Anshari, Arief, Nurdin Brasit, and Nurdjanah Hamid. "Pengaruh Leader Member Exchange (LMX) Dan Organizational Citizenship Behavior (OCB) Terhadap Innovative Work Behavior (IWB) Untuk Meningkatkan Kinerja Organisasi (Studi Pada PT. (Persero) Angkasa Pura I Bandar Udara Internasional Hasanuddin)." *Jurnal Bisnis Manajemen Dan Informatika* 14 (3): 1–14. 2018. <https://doi.org/10.26487/jbmi.v14i3.3334>.
- Astrama, I. Made, Ni Nyoman Kerti Yasa, Gede Adnyana Sudibia, and Desak Ketut Sinta Asih. "The Role of Innovative Work Behavior Mediates Organizational Culture on Employee's Performance." *Wseas Transactions on Advances in Engineering Education* 17: 66–76. 2020. <https://doi.org/10.37394/232010.2020.17.8>.
- Bersiha, Besar, Veland Ramadani, Shqipe Gërguri-Rashiti, and Ramo Palalić. "The Impact of Innovative Working Behaviour on Employees' Working Performance." *Intrapreneurship and Sustainable Human Capital*, 37–49. 2020. https://doi.org/10.1007/978-3-030-49410-0_3.
- Cheung, Rebecca, Thomas Reinhardt, Elisa Stone, and Judith Warren Little. "Defining Teacher Leadership: A Framework." *Phi Delta Kappan* 100 (3): 38–44. 2018. <https://doi.org/10.1177/0031721718808263>.
- Fachrizal, Muhammad Adam, and Mukhlis Yunus. "The Mediation Role of Employee Performance on The Effect of Self Leadership, Communication Competency, And Emotional Intelligence on Performance of PT. Pertamina (PERSERO) (Case Study on Marketing Operation Region 1 Banda Aceh)." *International Journal of Business Management and Economic Review* 5 (3): 181–96. 2022. <https://doi.org/10.35409/IJBMER.2022.3399>.
- Fatonah, and Irfan Helmy. "Pengaruh Perilaku Kerja Inovatif, Budaya Organisasi, Dan Etika Kerja Islam Terhadap Kinerja Guru (Studi Pada Guru PNS Madrasah Tsanawiyah Negeri 6 Kebumen)." *Jurnal Ilmiah Mahasiswa Manajemen, Bisnis Dan Akuntansi* 3 (6): 1063–79. 2021. <https://doi.org/10.32639/jimmba.v3i6.954>.
- Feminia, Prella Antiga, and Rina Rahmawati. "The Influence of Leadership, Work Environment, and Innovative Work Behavior on Performance." *IOSR Journal of Business and Management (IOSR-JBM)* 20 (9): 54–59. 2018. <https://doi.org/10.9790/487X-2009055459>.
- Ferdinan, Bernardus Aris, and Tuty Lindawati. "The Effect of Transformational Leadership and Organizational Culture on Lecturer Performance Through Innovative Work Behavior at Catholic Universities in Surabaya." *International Journal of Applied Business and International Management (IJABIM)* 6 (2): 113–23. 2021. <https://doi.org/10.32535/ijabim.v6i2.1106>.
- Firdausi, Queen. "Kualitas Guru Pengaruhi Kualitas Pendidikan di Indonesia." *Kastara.id*. June 9, 2021. 2021. <https://kastara.id/09/06/2021/kualitas-guru-pengaruhi-kualitas-pendidikan-di-indonesia/>.
- Goldsby, Michael G., Elizabeth A. Goldsby, Christopher B. Neck, Christopher P. Neck, and Rob Mathews. "Self-Leadership: A Four Decade Review of the Literature and Trainings." *Administrative Sciences* 11 (1). 2021. <https://doi.org/10.3390/admsci11010025>.
- Hadar, Linor L., Oren Ergas, Bracha Alpert, and Tamar Ariav. "Rethinking Teacher Education in a VUCA World: Student Teachers' Social-Emotional Competencies during the Covid-19 Crisis." *European Journal of Teacher Education* 43 (4): 573–86. 2020. <https://doi.org/10.1080/02619768.2020.1807513>.
- Hair, Joe F., Michael Page, and Niek Brunsveld. *Essentials of Business Research Methods*. Routledge. 2020.
- Hair, Joseph F., G. Tomas M. Hult, Christian M. Ringle, and Marko Sarstedt. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Los Angeles: SAGE Publications, Inc. 2017.
- Hidayat, Nandang, and Husnul Khotimah. "Pemanfaatan Teknologi Digital Dalam Kegiatan Pembelajaran." *Jurnal Pendidikan & Pengajaran Guru Sekolah Dasar* 2 (1): 10–15. 2019. <https://doi.org/10.33751/jppguseda.v2i1.988>.
- Hidayatullah, Danang, Anis Eliyana, Hamidah, Tuty Sariwulan, and Agung Dharmawan Buchdadi. "Testing the Role of Competence and Supervision of Job Satisfaction and Its Impact on Teacher Performance." *Systematic Reviews in Pharmacy* 11 (9): 668–75. 2020. <https://doi.org/10.31838/srp.2020.9.98>.

- Hizam, S. M., H. Akter, I. Sentosa, and W. Ahmed. "Digital Competency of Educators in the Virtual Learning Environment: A Structural Equation Modeling Analysis." In: Yogyakarta, Indonesia: IOP Conference Series: Earth and Environmental Science, Volume 704, International Symposium of Geoscience, Oil & Gas Engineering, Sustainable and Environmental Technology. 2020. <https://doi.org/10.1088/1755-1315/704/1/012023>.
- Inam, Aneeq, Jo Ann Ho, Adnan Ahmed Sheikh, Marium Shafqat, and Usama Najam. "How Self Leadership Enhances Normative Commitment and Work Performance by Engaging People at Work?" *Current Psychology* 26 (1): 81–96. 2021. <https://doi.org/10.1007/s12144-021-01697-5>.
- Jarad, Ghayth Ali, and Mundher Abbas Shaalan. "Assessment of Digital Competence of Employees and Teaching Staff at the Technical College of Management – Kufa." *International Journal of Innovation, Creativity and Change* 12 (12): 1027–43. 2020.
- Kmieciak, Roman. "Trust, Knowledge Sharing, and Innovative Work Behavior: Empirical Evidence from Poland." *European Journal of Innovation Management* 24 (5): 1832–59. 2020. <https://doi.org/10.1108/EJIM-04-2020-0134>.
- Krumsvik, Rune Johan. "Teacher Educators' Digital Competence." *Scandinavian Journal of Educational Research* 58 (3): 269–80. 2014. <https://doi.org/10.1080/00313831.2012.726273>.
- Lee, Mushin, and Joon Koh. "Is Empowerment Really a New Concept?" *International Journal of Human Resource Management* 12 (4): 684–95. 2001.
- Machmud, Muhammad Takwin, Rosidah, Della Fadhilatunnisa, and M. Miftach Fakhri. "Indonesia Teacher Competencies in Integrating Information and Communications Technology for Education." *Athens Journal of Technology and Engineering* 8 (4): 331–48. 2021. <https://doi.org/10.30958/ajte.8-4-4>.
- Mangkunegara, A. A. Anwar Prabu. *Manajemen Sumber Daya Manusia Perusahaan*. Bandung: Remaja Rosdakarya 2017..
- Manshi, and Sunil K. Mishra. "Self-Leadership as a Tool for Enhancing Performance at Workplace." *GIS Business* 4 (16): 76–88. 2019.
- Marguna, Andi Milu, and Sangiasseri. "Pengaruh Kompetensi Digital (E-Skills) Terhadap Kinerja Pustakawan Di UPT Perpustakaan Universitas Hasanuddin." *JUPITER* 17 (2): 104–16. 2020.
- Markham, Steven E., and Ina S. Markham. "Self-Management and Self-Leadership Reexamined: A Levels-of-Analysis Perspective." *Leadership Quarterly* 6 (3): 343–59. 1995. [https://doi.org/10.1016/1048-9843\(95\)90013-6](https://doi.org/10.1016/1048-9843(95)90013-6).
- Marnis, and Marzolina. "Pengaruh Self Leadership Terhadap Kinerja Karyawan PT. Perkebunan Nusantara V Riau." *Jurnal Ekonomi* 8 (4). 2010. <https://doi.org/10.31258/je.18.04.p.%p>.
- Mustaffa, Edria Nita, and Muhammad Faizal A. Ghani. "Self-Leadership: Challenges of Malaysian Students Toward Industrial Revolution 4.0." In *Proceedings of the 3rd International Conference on Research of Educational Administration and Management (ICREAM 2019)*, 426–30. Atlantis Press. 2020.
- Musyaffi, Ayatulloh Michael, Hera Khairunnisa, and Dwi Kismayanti Respati. *Konsep Dasar Structural Equation Modelpartial Least Square (Sem-Pls) Menggunakan Smartpls*. Tangerang Selatan: Pascal Books. 2021.
- Nadelson, Louis S., and Michael Turley. "Leaders in the Classroom: Using Teaching as a Context for Measuring Leader Identity." *Frontiers in Educa* 5: 1–13. 2020. <https://doi.org/10.3389/feduc.2020.525630>.
- Neck, Christopher P., and Jeffery D. Houghton. "Two Decades of Self-leadership Theory and Research: Past Developments, Present Trends, and Future Possibilities." *Journal of Managerial Psychology* 21 (4): 270–95. 2006. <https://doi.org/10.1108/02683940610663097>.
- Neubert, Mitchell J., and Ju-Chien Cindy Wu. "An Investigation of the Generalizability of the Houghton and Neck Revised Self-Leadership Questionnaire to a Chinese Context." *Journal of Managerial Psychology* 21 (4): 360–73. 2006. <https://doi.org/Neubert,MitchellJ.Wu,Ju-ChienCindy>.
- Palimbong, Agustinus, Mesta Limbong, and Witorsa Tambunan. "The Effect of Digital Competence on Improving Teacher Performance: A Case of Harapan Christian Vocational School in Rantepao." *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* 5 (3): 21043–50. 2022. <https://doi.org/10.33258/birci.v5i3.6122>.
- Perifanou, Maria A., and Anastasios A. Economides. "An Instrument for The Digital Competence Actions Framework." In *Proceedings of ICERI2019 Conference*, 11139–45. Seville, Spain: 12th annual International Conference of Education, Research and Innovation. 2019.
- Prayogi, Rayinda Dwi, and Estetika Rio. "Kecakapan Abad 21: Kompetensi Digital Pendidik Masa Depan." *Jurnal Manajemen Pendidikan* 14 (2): 144–51. 2019. <https://journals.ums.ac.id/index.php/jmp/article/view/9486/5193>.

- Purwanto, Agus, Innocentius Bernarto, Masduki Asbari, Laksmi Mayesti Wijayanti, and Choi Chi Hyun. "The Impacts of Leadership and Culture on Work Performance in Service Company and Innovative Work Behavior As Mediating Effects." *Journal of Research in Business, Economics, and Education* 2 (1): 283–91. 2020. <https://doi.org/10.13140/RG.2.2.20095.36001>.
- Priansa, Donni Junni. *Perilaku Organisasi*. Bandung: Alfabeta. 2017.
- Putra, I. Gustingurah Yogi Ari, and I. Gusti Made Suwandana. "The Effect of Self-Leadership on Employee Performance Moderated by Organizational Support (Case Study at the Personnel and Human Resources Development Agency of Tabanan, Bali, Indonesia)." *American Journal of Humanities and Social Sciences Research (AJHSSR)* 5 (1): 618–23. 2021.
- Revina, Shintia. "Mengapa Kualitas Guru Di Indonesia Masih Rendah?" *Magdalene.Co*. 2020. <https://magdalene.co/story/mengapa-kualitas-guru-di-indonesia-masih-rendah>.
- Sanusi, Fauji, and Dibyantoro. "Improving Employee Performance Through Innovative Work Behavior, Tbk Periode 2011–2020." *Syntax Literate: Jurnal Ilmiah Indonesia*, 7 (5): 5190–5202. 2022. <https://doi.org/10.36418/syntax-literate.v7i5.6910>.
- Sari, Angri Puspita, and Najmudin. "Perceptions of Proactive Personality and Innovative Work Behavior During the Covid-19 Pandemic." *Southeast Asia Journal of Contemporary Business, Economics and Law*, 24 (5): 162–70. 2021.
- Sarmawa, I. Wayan Gde, I. Wayan Gede Suparta, I. Gede Riana, and I. Gst Ayu Dewi. "Influence of Self-Leadership on Employee Performance with Work Culture as Mediator: Study at Tenun Ikat Industries in Klungkung-Bali, Indonesia." *International Journal of Economics, Commerce and Management* 5 (12): 264–76. 2017. <http://ijecm.co.uk/wp-content/uploads/2017/12/51216.pdf>.
- Satria, Bobi, Aprizawati, and Romadhoni. "Pengaruh Disiplin Dan Kepemimpinan Diri Dengan Kinerja Pegawai Direktorat Perkapalan Dan Kelautan." *Journal Of Administration and Educational Management (ALIGNMENT)* 3 (1): 66–75. 2020.
- Şeşen, Harun, Akif Tabak, and Ozgur Arli. "Consequences of Self-Leadership: A Study on Primary School Teachers." *Kuram Ve Uygulamada Egitim Bilimleri* 17: 945–68. 2017. <https://doi.org/10.12738/estp.2017.3.0520>.
- Silalahi, Marto, Abdurohim, Elly Romy, Vivi Candra, and Acai Sudirman. "The Involvement Locus of Control, Servant Leadership, and Innovative Work Behavior to Improve Teacher Performance." *Jurnal Pendidikan Progresif* 12 (2): 751–63. 2022. <https://doi.org/10.23960/jpp.v12.i2.20222>.
- Slambi, James. "The Effect of Self-Leadership Competencies on The Perceived Ability of School Leaders to Cope with COVID-19 Pandemic Crisis Challenges in Jeddah Schools, Saudi Arabia." *Research & Reviews: Journal of Educational Studies* 7 (1): 1–13. 2021.
- Solihin, Lukman, Indah Pratiwi, Diyan Nur Rakhmah, Teguh Supriyati, and Utama Bakti. "Penguatan Regulasi Untuk Mendorong Peningkatan Kompetensi Guru Dalam Jabatan Secara Berkelanjutan." *Badan Penelitian dan Pengembangan dan Perbukuan Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi*. 2021. <http://repositori.kemdikbud.go.id/23376/>.
- Thomas, C. George. *Research Methodology and Scientific Writing*. 2nd ed. Cham, Switzerland: Springer Nature. 2021.
- Ulfatun, Titik. "Good Teachers: Indonesia's Perspective." *Education and Learning Journal* 28 (1): 23–29. 2021. <https://doi.org/10.17977/um047v28i12021p023>.
- Unaradjan, D. D. *Metode Penelitian Kuantitatif* (1st Ed.). Jakarta: Penerbit Unika Atma Jaya. 2019.
- Uno, Hamzah B., and Nina Lamatenggo. *Teori Kinerja Dan Pengukurannya*. Jakarta: PT. Bumi Aksara. 2012.
- Valle, Sanz R., and D. Jiménez-Jiménez. "HRM and Product Innovation: Does Innovative Work Behaviour Mediate That Relationship?" *Management Decision* 56 (6): 1417–29. 2018. <https://doi.org/10.1108/MD-04-2017-0404>.
- Waskito, Saptono Kusdanu. "The Role Digital Competence on Lecturer Performance Of S1 Accountancy Study Program Of Private Universities In Bandung Metropolitan Area Through Work Satisfaction With Servant Leadership As Moderating Variable." *Dinasti International Journal of Management Science* 3 (1): 83–99. 2021. <https://doi.org/10.31933/dijms.v3i1.981>.
- Zembat, Rengin, Hande Arslan Ciftci, and Aysenur Duran. "Analysing the Relationship between Pre-Service Preschool Teachers' Self-Leadership Skills and Motivation to Teach." *Cypriot Journal of Educational Sciences* 5: 95–103. 2020. <https://doi.org/10.18844/cjes.v15i1.3248>.

Biographies

Fetty Poerwita Sary is a lecturer at School of Master Management, Faculty of Economics and Business, Telkom University, Bandung, Jawa Barat Indonesia. She graduated Doctoral from University of Pendidikan Indonesia in 2014, obtained her M.Pd (English Language Education) from University of Pendidikan Indonesia in 2006 and S.S (English

Language) from University of Padjadjaran. She is an academician with more than 20 years of teaching experience. She is also a lecturer in the courses of HRM, Organizational Behavior, Global Leadership, and Interpersonal Business Communication at the Faculty of Economics and Business – Telkom University. She was a former Director of Postgraduate and Advanced Learning, former Head of Study Program of Management of Business in Telecommunication and Informatics, former Secretary of the International ICT Business Study Program, and is still active as an Internal Auditor of Telkom University and a researcher at the Digital Business Ecosystem Research Center. She has also produced books related to the HR field and is also active in conducting research and community service related to the subjects she teaches, apart from being a consultant and speakers/ presenters.

Nidya Dudija She is a lecturer at School of Master Management, Faculty of Economics and Business, Telkom University, Bandung, Jawa Barat, Indonesia. She graduated Doctoral (Psychology) from University of Gadjah Mada in 2018, obtained her M. A (Master of Arts in Industrial Psychology) from University of Gadjah Mada in 2009 and S.Psi (Psychology) in 2007 from University of Ahmad Dahlan. She is an academician with more than 12 years of teaching experience. She is also a lecturer in the courses of organizational behavior, research methodology, human resource management, leadership, talent management and interpersonal business communication. She was a Head of Talent Management Unit in Telkom Institute, Head of Counseling Unit and Associate Consultant. She has also produced books related to the digital and psychology field and is also active in conducting research and community service related to the subjects she teaches, apart from being a consultant and speakers/ presenters.

Milleniartha Moslem She is an undergraduate student from School of Master Management, Faculty of Economics and Business, Telkom University, Bandung, Jawa Barat, Indonesia. She graduated her bachelor S.M (Management) from Telkom University, Bandung, Jawa Barat Indonesia in 2021. Her interest is in human resource management, organizational behavior, leadership, digital talent management and education. Currently she has and active in produced research journal. She is also a lecturer research assistant and working at an Indonesian education start-up company.