



The effect of digital literacy and transformational leadership on employee performance mediated by innovative work behavior at the Padang city population and civil registration service

Isnandar Putra¹, Laura Syahrul², Yulihhasri³

¹Master of Management, Faculty of Economics and business, Universitas Andalas , Padang, Indonesia

^{2,3}Department of Management, Faculty of Economics and Business, Universitas Andalas, Padang, Indonesia

ARTICLE INFO

Article history:

Received Jan 30, 2023

Revised Feb 15, 2023

Accepted Feb 28, 2023

Keywords:

Digital Literacy
Employee Performance
Innovative Work Behavior
Transformational Leadership

ABSTRACT

This study aims to see the effect of digital literacy and transformational leadership on employee performance with innovative work behavior as a mediating variable. Research conducted on Department of Population and Civil Registration of the City of Padang. The population in this study were all employees of the state civil apparatus (ASN) and non-state civil servants (Non ASN) of the Padang City Population and Civil Registration Service. The sample collection technique is a saturated sample, that is the entire population is used as a sample 74 people. The data analysis technique uses Structural Equation Modeling (SEM) using Smart PLS 4. The results of the study show that digital literacy and transformational leadership have no effect on employee performance. Digital literacy and transformational leadership variables affect innovative work behavior and innovative work behavior affects employee performance. Indirectly digital literacy affects employee performance through mediation of innovative work behavior and transformational leadership influences employee performance through innovative work behavior as mediation.

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Corresponding Author:

Isnandar Putra,
Master of Management,
Faculty of Economics and Business, Andalas University,
Limau Manis, Pauh, Padang City, 25175, Indonesia,
Email: isnandarputra@gmail.com

INTRODUCTION

Various elements in the life of public services in Indonesia are experiencing what is called the phenomenon of disruption, namely the phenomenon of changing something because initially or so far it has been running smoothly and normally, but then changed into a very different form. (Adhar, 2020). Adhar, (2020) gave examples of the use of online-based information technology in public services such as online registration, online complaint facilities and online monitoring of service provision to inherent supervision through monitoring for state civil servants while at work. In Law no. 25 of 2009 concerning Public Services, the evaluation of public services aims to

determine the extent to which the implementation of policies in the field of public services, as well as to obtain an overview of the performance conditions of public service delivery employees. The performance of public service employees provided by service providers, especially those from government agencies, KemenPANRB initiated the formation of the Public Service Index. It is hoped that with this index number it will be possible to map the capacity of public service delivery and the results of the index measurement can become the basis for ranking employee performance. Implementation of public services by organizational leaders that can support organizational effectiveness, namely the behavior of human resources in the workplace. Organizational effectiveness is at the individual level.

According to Puspitasari & Marsudi (2022) performance is a level of achievement of all tasks that have become the job and responsibility of an employee. Employee performance in an organization refers to the PANRB Ministerial Regulation No. 17 of 2017 concerning guidelines for evaluating the performance of public service delivery units, where the locus being evaluated is units that provide services directly to the public. The Service Provider Units (UPP) that will be implemented directly to the public who will be evaluated in 2021 are: Provincial UPTD Regional Financial and Asset Agencies (UPTD BKAD/Samsat), Provincial Investment Services and One-Stop Integrated Services (DPMPTSP), Regency/City DPMPTSP, as well as District/City Population and Civil Registration Services (Disdukcapil). The Department of Population and Civil Registration provides population administration services, namely a series of structuring and controlling activities in the issuance of documents and Population Data through Population Registration, Civil Registration (Government Regulation, 2019). Based on the data obtained in the annual report on population data from the West Sumatra Province Population and Civil Registration Office, the birth certificate data can be seen that the percentage of those who have birth certificates in Padang City in 2019 was 234,157 people or 80%, in 2020 there were 246,561 people or 86% and in 2021 there were 277,077 people or 96%. In terms of employee performance targets issued by the Director General of Population and Civil Registration of the Ministry of Home Affairs of the Republic of Indonesia in 2021, it is 97%.

The city of Padang has not reached the target that has been set, so it is suspected that the low performance of the leadership of the Padang City Population and Civil Registration Service is caused by the processing of birth certificates that have not been integrated with other documents, such as in arranging new family cards for adding new family members who are not integrated with the certificate document births so that people come to dukcapil repeatedly. In addition, agencies have also not implemented cooperation with all government agencies and non-governmental institutions such as midwives, government or private hospitals and health facilities in Padang City in issuing population documents (birth certificates, KIA, and family cards) for residents who give birth and lack infrastructure in carrying out population document services in the office environment is also the cause. Then the difficulty for employees to build trust with co-workers which is a weakness of a virtual work environment (Graves & Karabayeva, 2020) and of course this will have a negative impact on employee performance (Caputo & Hyland, 2020). Companies that provide a better work-life balance through virtual work options pave the way for a more productive workforce as employees feel more motivated (Stevens, 2019).

According to Graves & Karabayeva (2020) states that virtual work gives employees flexibility in working, increased availability of time due to no travel and more importantly access to better talent worldwide which can increase average individual performance. By maintaining the quality of service and the value of satisfaction felt by the public, it will encourage an increase in the image of the Padang City Population and Civil Registration Service in the community (Son, 2020). One important factor that supports digital information is through digital literacy. Digital literacy is a form of ability to obtain, understand and use information that comes from various sources in digital form. According to the opinion of Naufal (2021) digital literacy is also very necessary to overcome the problem of the ever-increasing explosion of information in digital sources. Digital

literacy dimensions include tools and systems, information and data, sharing and creation, historical and cultural contexts (Naufal, 2021). Digital literacy does not only involve the ability to use software or operate digital devices but also includes a wide range of complex cognitive, motor, sociological and emotional skills that users need to function effectively in a digital environment that can improve employee performance in organizations (Nikou et al., 2022). In research conducted by Mohd Abas et al. (2019) found that there is a strong relationship between digital literacy in influencing employee performance.

Another factor that can affect performance is the leadership style factor. According to Abbas & Ali (2021) shows that transformational leadership has a stronger effect on organizational success than transactional leadership. Transformational leaders provide intellectual stimulation. Inspiring and motivating transformational leaders who can provide direction and advice on how to achieve set goals and objectives (Santoso et al., 2019). The results of research conducted by Karkaningdyah & Utami (2018) states that transformational leadership has a positive effect on employee performance. This indicates that the transformational leadership style has a good impact on the performance of its employees. Innovative work behavior is a comprehensive behavior related to idea generation, support of ideas in the organization and also providing implementation of ideas (Santoso & Heng, 2019). According to Riswan et al. (2021) the success of a company is inseparable from how the performance of its employees in understanding and providing innovative efforts at work. Through this, organizations need to pay special attention to employees so that they are able to develop innovative new ideas. In this study, the main reference is based on research conducted by Mohd Abas et al. (2019) with the title digital literacy and its relationship to employee performance in 4IR, with research results showing that in an organizational context it has a strong relationship with employee performance. And then reference based on research conducted by Pilav-Velić et al (2021) with the title digital or innovative: understanding “digital literacy-practice- Innovative work Behavior”, which shows that innovative work behavior is a good mediation to see employee performance. So that in the end the authors decided to conduct research related to digital literacy and transformational leadership variables on performance mediated by innovative work behavior

RESEARCH METHOD

This study uses a quantitative approach, namely a research method that refers to a particular population or sample, uses research instruments, statistical data analysis, which aims to test the established hypothesis (Sugiyono, 2018). This research uses Cross Section data, which is a study conducted with data collected only once, perhaps during daily, weekly or monthly periods in order to answer the researcher's questions (Sekaran & Bougie, 2018). The population in this study were all employees of the state civil apparatus (ASN) and non-state civil servants (Non ASN) at the Padang City Population and Civil Registration Service. The sample collection technique is a saturated sample, that is, the entire population is used as a sample 74 people. The data analysis technique uses Structural Equation Modeling (SEM) using PLS software. After the questionnaires have been distributed and collected, the data is processed using SmartPLS. Test data will be seen from characteristic respondent, descriptive analysis and test instruments. The test instrument consists of validity, reliability and inner model tests which contain hypothesis testing and mediation tests.

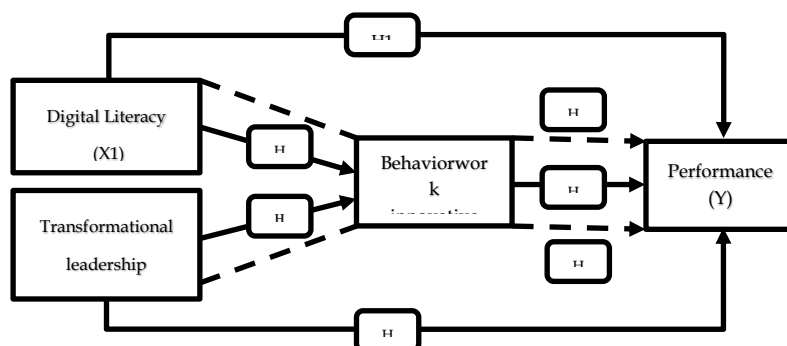


Figure.1 Research Model

RESULTS AND DISCUSSIONS

Characteristics of Respondents

Analysis of the characteristics of respondents based on gender was dominated by female respondents totaling 38 people or 52.05% of the total of all respondents and men totaling 35 people or equal to 47.95%. Characteristics of respondents based on age, the majority of respondents are in the age group 26 - 35 years namely as many as 30 people or 41.10%. The characteristics of respondents based on educational background were dominated by respondents with an undergraduate education level of 34 people or 46.58%. Based on the length of time the employee has worked is more than 5 years, namely as many as 49 people or equal to 67,12%. Characteristics of respondents based on income and benefits, shows that most of the respondents have income ≤ IDR 3,000,000 as many as 34 people or 46.58%. Characteristics based on marital status were dominated by 57 married respondents or 78.08%.

Validity and Reliability

Validity testing was carried out by 74 respondents with the aim of measuring whether the questionnaire was valid or not. To test convergent validity, the outer loading indicator value > 0.7 is used. Evaluation of discriminant validity can be done using the Average Variance Extracted (AVE) method for latent variables. The AVE value describes the magnitude of the diversity of variables that can be owned by the latent construct. A minimum AVE value of 0.5 indicates a good measure of convergent validity. Discriminant validity is seen by paying attention to the cross loading value. The cross loading value aims to assess the level of discriminatory validity that is adequate for each construct, by comparing the correlations between constructs. Then the Fornell Larcker test for this assessment is to compare the square root of the AVE value with the correlation of latent variables and *Heterotrait-Monotrait Ratio (HTMT)* declared valid with a value of not more than 0.85. The reliability test shows the extent to which the measuring instrument is reliable or trustworthy. The reliability test in this study used the coefficient measurement technique of Composite Reliability and Cronbach Alpha. Composite reliability is considered better if it has a composite reliability value > 0.6. Reliability tests with composite reliability can be strengthened by using the Cronbach alpha value. A variable is declared reliable if it has a Cronbach alpha value > 0.6. All data analyzed has fulfilled the validity and reliability tests.

Inner Model

Tabel 1. R-Square Values

	R Square	R Square Adjusted
Performance	0,516	0,495
Innovative Work Behavior	0,476	0,461

Source: Data processing from SmartPLS 4.0 (2023)

Employee performance variables can be explained by digital literacy and transformational leadership of 51.6% while the remaining 48.4% are influenced by other variables that are not in this study. Innovative work behavior can be influenced by employee performance, digital literacy and transformational leadership by 47.6%, while the remaining 52.4% is influenced by other variables not explained in this study.

Hypothesis Testing

Hypothesis testing between variables using bootstrapping techniques through path coefficients aims to identify the result of the formulated hypothesis. Second Order Confirmatory used for the assessment of the significance of the influence between variables will be carried out by a bootstrapping procedure. The bootstrapping procedure uses the entire original sample for resampling. In the resampling bootstrapping method, the significance value used (two-tailed) with the t-value is 1.96

Table 2. Path Coefficient (T-Values, P-Values)

Variable	Original Sample (O)	Sample Means (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Leadership_Transformational -> Performance	-0.128	-0.128	0.088	1,448	0.148
Leadership_Transformational -> Behaviour_Work_Innovative	0.251	0.259	0.087	2,875	0.004
Digital_literacy -> Performance	0.207	0.213	0.14	1,472	0.141
Digital_literacy -> Innovative_Work_Behavior	0.549	0.555	0.083	6,634	0.000
Behavior_Work_Innovative -> Performance	0.621	0.623	0.109	5,717	0.000

Source: Data processing from SmartPLS 4.0 (2023)

From table 3 it can be seen that there are two hypotheses that are rejected namely H1 "The effect of digital literacy on employee performance" because it has a P-Values of 0.148 which is greater than the significance level of 0.05 and the T-statistic value of 1.448 is smaller than the T-table of 1.962 and H2 "The effect of transformational leadership on employee performance" because it has a P-value of 0.148 is greater than the significance level of 0.05 and the T-statistic value of 1.448 is smaller than the T-table of 1.962

Table 3. Indirect Influence Variabel Intervening

Variable	Original Sample (O)	Sample Means (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Leadership_Transformational -> Behavioral_Work_Innovative -> Performance	0.156	0.162	0.064	2,443	0.015
Digital_literacy -> Innovative_Work_Behavior -> Performance	0.341	0.344	0.072	4,707	0.000

Source: Data processing from SmartPLS 4.0 (2023)

From table 4 it can be seen that indirectly the variables of digital literacy and transformational leadership are moderated by innovative behavior affecting employee performance.

Table 4. Summary of Hypothesis Testing Results

Hypothesis	Research result	Information
H1 : It is suspected that digital literacy affects employee performance	There is no effect digital literature to employee performance	Rejected
H2 : It is suspected that transformational leadership influences employee performance	There is no effect transformational leadership to employee performance	Rejected
H3 : It is suspected that digital literacy influences innovative work behavior	There is influence digital literacy on innovative work behavior positively and significantly	Supported
H4 : It is suspected that transformational leadership influences innovative work behavior	The influence of transformational leadership on innovative work behavior positively and significantly	Supported
H5 : It is suspected that innovative work behavior influences employee performance	There is influence innovative work behavior to employee performance positively and significantly	Supported
H6 : It is suspected that digital literacy influences employee performance through innovative work behavior	There is influence digital literacy on employee performance through innovative work behavior positively and significantly	Supported
H7 : It is suspected that transformational leadership influences employee performance through innovative work behavior	There is influence transformational leadership on employee performance through innovative work behavior positively and significantly	Supported

The first hypothesis shows that there is no effect of digital literacy on employee performance Department of Population and Civil Registration of the City of Padang. This is influenced by the respondent's data. First, at the Padang City Population and Civil Registry Office there are still many employees who do not master digital technology and skills in the effective use of digital devices such as smartphones, laptops and desktop PCs in completing community documents, this affects their respective performance. Then the second, namely the respondent, in this case ASN, who in carrying out their duties prioritizes technical instructions or standard operating procedures in serving the community, causing digital literacy has no significant effect on employee performance.

The results of this study are not in accordance with previous studies conducted by Mohd Abas et al., (2019) which explains the impact digital literacy in the context of technology, organizational context, environmental context on employee performance. This study also contradicts the results of the study Boysilan Kelerey et al., (2020) who conducted research on librarian employees at Malang State University, which showed results that technological literacy had a significant effect on employee performance. From the results of data processing of respondents at the Padang City Population and Civil Registry Service, it was found that digital literacy did not affect employee performance.

The second hypothesis shows that leadership is transformational does not affect employee performance Department of Population and Civil Registration of the City of Padang. From the research results and respondent data obtained, the researchers saw that the main factors causing transformational leadership did not affect performance were direct supervisors not providing rewards and rewards for employees who complete employee tasks well and employee direct supervisors not providing various perspectives and solutions to problems in the workplace that have an impact on employee performance. The results of this study are not in accordance with previous studies namely Nasirin & Asrinaa (2020) which states that transformational leadership has a positive and significant direct effect on performance. Then, this study also contradicts

research conducted by Yani et al., (2021) who say that transformational leadership has a significant and positive direct effect on employee performance.

The results of testing the third hypothesis indicate that there is an effect of digital literacy on innovative work behavior. The results of this study are in accordance with previous research by Pilav-Velić et al. (2021) who said that digital literacy plays a more important role in stimulating attitudes towards innovative work behavior in 106 respondents who work in pharmaceutical companies in Slovenia. The fourth hypothesis shows that transformational leadership has a positive effect on innovative work behavior. This shows that the leadership style used by a leader can trigger innovative work behavior of the Padang City Population and Civil Registration Service employees. This research is supported by research conducted by Nasirin & Asrinaa (2020) which states that transformational leadership has a direct, positive and significant influence on innovative work behavior in 230 private university lecturers in Indonesia.

The fifth hypothesis shows that innovative work behavior positively affect employee performance. The results of this study are in accordance with previous research from Nasirin & Asrinaa (2020) which states that innovative work behavior has a positive and significant direct influence on employee performance. Employees carry out improvement efforts to work hard to accept the company's goals and principles, employees who are proud are employees who have high organizational commitment. This is in line with what happened at the Padang City Population and Civil Registry Service, that employees carry out pure work for hard work and organizational commitment. With this it can be concluded that innovative work behavior positive effect on employee performance.

The sixth hypothesis shows the result that digital literacy through innovative work behavior affects employee performance. The results of this study are in line with research conducted by Pilav-Velić et al (2021) which states that innovative work behavior has a positive and significant effect in mediating digital literacy and the results of his research show that there is a double mediation chain in which digital practices and attitudes towards digital innovation mediate a positive relationship between digital literacy and innovative work behavior. Then this research is also supported by what was done by Nasirin & Asrinaa (2020) which explains that there is a positive influence between innovative work behavior and employee performance. The seventh hypothesis shows the result that transformational leadership through innovative work behavior affects employee performance. At the Department of Population and Civil Registration of the City of Padang, the leadership of a superior is influenced by employee performance, because this performance greatly influences innovative work behavior. The results of this study are in accordance with previous research from Sudiyani et al. (2021) which states that innovation behavior has a positive and significant effect in mediating the influence of leadership on performance to 42 employees of PT. BPR Desa Sanur.

CONCLUSION

The results of the study show that digital literacy and transformational leadership have no effect on employee performance. Digital literacy and transformational leadership variables affect innovative work behavior and innovative work behavior affects employee performance. Indirectly through the mediation of innovative work behavior digital literacy affects employee performance and transformational leadership influences employee performance through innovative work behavior as mediation. Based on research experience while conducting this research, the researcher realizes that the results of this study are not perfect and have many limitations that affect the expected results. Therefore, it is hoped that these limitations will be given more attention for future studies. Limitations in this study only use digital literacy variables, transformational leadership, employee performance and innovative work behavior, respondents in this study only focused on employees in Department of Population and Civil Registration of the City of Padang and limitations in providing questionnaire statements that still need to be developed. It is

recommended for future researchers to examine other variables that are not used in this study, the respondents who are used as future research are not ASN/PNS such as private employees and the community and it is hoped that future research will conduct research in the public service sector at other agencies.

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