

FINGERPRINT ATTENDANCE AND MOTIVATION EFFECT ON WORK DISCIPLINE OF ISLAMIC HIGH SCHOOL TEACHERS IN DEPOK

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Abstract The purpose of the study was to determine the effect of the fingerprint attendance system and motivation on the work discipline of teachers at the Dian Didaktika Islamic High School in Depok City-Indonesia. Independent variables are Fingerprint Attendance (X1) and Motivation (X2), and the dependent variable is the teacher's Work Discipline (Y). This research method was carried out quantitatively with a sample of 30 active teachers in the Science and Social Sciences field. Data are taken through questionnaires. Test the quality of the instrument with a validity test and a reliability test. Classical assumption tests include normality, heteroscedasticity, multicollinearity, multiple linear regression, and R-squared tests. Test the hypothesis with a t-test and F-test. The results showed that fingerprint attendance had a positive and significant impact of 93.7%, motivation had a positive and significant impact of 93.3%, and simultaneously had a positive and significant impact of 96.2%.

Keywords Education; Human Resource Management; Islamic School; Motivation; Education Technology.

A. INTRODUCTION

Education in a country is crucial for the betterment of a nation (Sukmadinata, 2009). Indonesia is a vast nation that must consider its people's education (Surani, 2019). Indonesia has laws that every citizen has the right to education (Anam, Rumiati, & Ratnasari, 2020). The importance of reliable human resources is needed in education, especially for teaching staff (Carson & Chase, 2009; McCulloch, Hollebrands, Lee, Harrison, & Mutlu, 2018; Teo & Noyes, 2011). This is related to measurable performance. Attendance would be measured by team member performance and discipline (Budi & Sulistiyani, 2019).

Government regulations regarded electronic-based attendance also strengthen the importance of attendance for an organization (Cay, Sartika, Sumiaty, Meryanti, & Sunarsi, 2021). Ministry of State Apparatus Utilization and Bureaucratic Reform (MENPANRB) of the Republic of Indonesia through regulation B/2338/M.PANRB/06/2016 regarding optimization of the use of electronic-based attendance within the government (Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi Republik Indonesia (MENPANRB-RI), 2016). This regulation aimed to optimize electronic-based attendance to avoid fraud or manipulation of data related to attendance. Attendance results with electronic systems can be used as a measuring tool for monitoring and evaluation as well as a benchmark for team member discipline (Alsunah, 2019; Budi & Sulistiyani,

2019; Cay et al., 2021; Yuliastutik, Azhad, & Rahayu, 2021). In this regulation, many organizations use electronic-based attendance rules to measure attendance more optimally (Fadri, Zulfadil, & Taufiqurrahman, 2017).

The advantage of electronic attendance is that everyone's data is uniquely different from one another (Saini & Kumar Kapoor, 2016; Shukla & Bhandari, 2019), so electronic attendance can avoid cheating (Andhika, Qamaruddin, & Anwar, 2022). The weakness, sometimes it cannot be read correctly if problems such as fingerprints are not detected due to sweating (Shukla & Bhandari, 2019).

Attendance rules are used by the Dian Didaktika Islamic high school in Depok, West Java-Indonesia, with an electronic-based fingerprint to calculate attendance and motivate teacher performance. The work discipline applied could impact maximum performance because the absence of fingerprints can minimize teachers who are not present (Budi & Sulistiyani, 2019). Optimal service is expected from the school so that teachers who work not only during teaching hours but during open hours can still work on the school administration to improve optimal service to students, such as an incentive (Beck, 2017).

Fingerprint attendance is unique because others cannot entrust them (Alsunah, 2019; Budi & Sulistiyani, 2019; Cay et al., 2021). Everyone has different fingerprint characteristics (Saini & Kumar Kapoor, 2016), so the teacher's performance will be maximized because they must be present every day by absentee coming and absent from going home (Alsunah, 2019; Budi & Sulistiyani, 2019; Cay et al., 2021). If teacher discipline is not monitored correctly, it will impact less than optimal service to students, resulting in decreased parental trust (Yuliastutik et al., 2021). Therefore, the school motivated teachers who are seen from the results of fingerprint reports every month (Ali, Mustafa, & Khan, 2018; Budi & Sulistiyani, 2019). Motivation is a form of school appreciation for teacher performance, the amount of which varies depending on the results of the performance carried out by each teacher (Carson & Chase, 2009; Yusuf, 2020). Based on the theoretical studies, the researchers would determine two independent variables, fingerprint attendance and teacher's motivation, and the dependent variable, the teacher's work discipline, conducted in the Dian Didaktika Islamic high school.

B. METHODS

The conceptual framework of this research is based on explanatory research that forms the justification for supporting the hypotheses testing. According to the work discipline theory for the dependent variable, a teacher's performance occurs due to fingerprint attendance as well as motivation factors for the independent variables. Based on this existing proposed theoretical framework, the researchers recommended a research model, as seen in Figure 1.

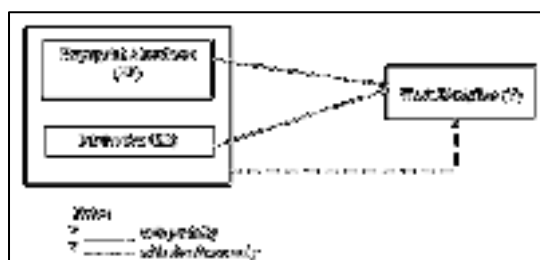


Figure 1. Research model from the conceptual framework.

Based on Figure 1, the researchers proposed three hypotheses, including (1) the hypothesis of the effect of fingerprint attendance on teacher work discipline, (2) the hypothesis of the effect of teacher's motivation on teacher work discipline, and (3) the hypothesis of both effects of fingerprint attendance and teacher's motivation on teacher work discipline. For the details as below:

(1) The hypothesis of the effect of fingerprint attendance on teacher work discipline:

H_a : There was no significant effect between the application of fingerprint attendance on teacher work discipline;

H_b : There is a significant effect between the application of fingerprint attendance on teacher work discipline.

- (2) The hypothesis of the effect of teacher's motivation on teacher work discipline:
 H_x : There was no significant effect between the motivation on teacher work discipline;
 H_y : There is a significant effect between motivation and teacher work discipline.
- (3) The hypothesis of both effects of fingerprint attendance and teacher's motivation on teacher work discipline:
 H_0 : There was no significant effect between the application of fingerprint attendance and the motivation on teacher work discipline simultaneously;
 H_1 : There is a significant effect between the application of fingerprint attendance and the motivation on teacher work discipline simultaneously.

Hypotheses (1) and (2) are the proposed hypotheses for the partial effects, respectively. Hypothesis (3) is the proposed hypothesis for the simultaneous effects. The researchers would conduct a data sampling method and statistical analysis with these proposed hypotheses. This study's research variable indicators (items, constructs, or instruments) were developed based on three variables (X1, X2, Y). The explanation of all indicators can be seen in Table 1.

Table 1. Research variable indicators for this study.

Variable	Indicator (Construct or Instrument)		Reference
Fingerprint Attendance (X1)	Filling in Absences	(X1.1)	Proposed to this study, also refer to (Alsunah, 2019; Budi & Sulistiyani, 2019; Cay et al., 2021; Yuliastutik et al., 2021)
	Up-To-Date the Technology	(X1.2)	
	Facilities Support	(X1.3)	
	Suitability	(X1.4)	
	Ease of Absence	(X1.5)	
	On-Time Scheduled	(X1.6)	
	Feeling More Important	(X1.7)	
	Honesty	(X1.8)	
	Responsibility	(X1.9)	
	Discipline Increased	(X1.10)	
	Incentives	(X1.11)	
	Incentives Claim	(X1.12)	
Motivation (X2)	Individual Responsibilities	(X2.1)	(Mangkunegara, 2011)
	Work Performance	(X2.2)	
	Progress Opportunity	(X2.3)	
	Recognition of Performance	(X2.4)	
	Work Challenges	(X2.5)	
Work Discipline (Y)	Purpose and Ability	(Y.1)	Proposed to this study, also refer to (Alsunah, 2019; Arif, Syaifani, Siswadi, & Jufrizen, 2019; Cay et al., 2021; Dapu, 2015; Rasminto, Febryantahanuji, & Danang, 2020; Razak, Sarpan, & Ramlan, 2018; Sardjana, Sudarmo, & Suharto, 2018; Soelaiman, Ahmad, Mohd, Al Hakim, & Hidayah, 2022; Sunarsi et al., 2021; Yuliastutik et al., 2021)
	Exemplary Leader	(Y.2)	
	Honor and Incentives	(Y.3)	
	Recompense	(Y.4)	
	Justice	(Y.5)	
	Understanding Regulation of B/2338/M.PANRB/06/2016	(Y.6)	
	Understanding Regulation of PP No. 53	(Y.7)	
	Punitive Sanctions	(Y.8)	
	Assertiveness	(Y.9)	
	Work Environment	(Y.10)	
	Human Relations	(Y.11)	
	Work Hours	(Y.12)	
	Late Attendance	(Y.13)	
	Prioritizing the Interests of the Organizations	(Y.14)	
	Left from Work for Personal Affairs	(Y.15)	

The researchers used data sources such as primary and secondary data. A questionnaire was distributed for the primary data to respondents; there are science and social teachers at Dian

Didaktika Islamic High School in Depok City-Indonesia. The total number of respondents is 30 active teachers between the 2021-2022 academic calendars. For the quantitative analysis, a questionnaire using a Likert scale with a range of 1-5 (Sukmadinata, 2009). The secondary data was obtained from the office's school. The respondents' profile demography based on gender can be seen in Table 2.

Table 2. Respondents' profile demography is based on gender.

Gender	Number (n)	Percentage (%)
Male	14	47
Female	16	53
Total	30	100

Data analysis was used in this study with (1) instrument tests, namely validity test (R-test) and reliability test (Cronbach's Alpha), (2) classical assumption test consisting of a normality test (Kolmogorov-Smirnov test), a multicollinearity test (tolerance and VIF or variance inflation factor), a heteroscedasticity test (Glejser test), a multiple linear regression test, and R-squared test, also (3) test the hypothesis used by partial test (t-test) and simultaneous test (F-test), respectively.

C. RESULT & DISCUSSION

First, the instrument test is a validity test for all research variable indicators (constructs or instruments). The result of the validity test can be seen in Table 3. After the validity test was completed, the instrument's reliability test was conducted. Table 4 shows the result of the reliability test for each construct. The reliability test is used to see the level of consistency of the answers in the questionnaire (Montgomery & Runger, 2018).

Table 3. Construct validity test result.

Variable	Construct	R-table	R-value	Acceptance
Fingerprint Attendance (X1)	X1.1	0.361	0.625	Valid
	X1.2	0.361	0.586	Valid
	X1.3	0.361	0.723	Valid
	X1.4	0.361	0.850	Valid
	X1.5	0.361	0.659	Valid
	X1.6	0.361	0.801	Valid
	X1.7	0.361	0.665	Valid
	X1.8	0.361	0.730	Valid
	X1.9	0.361	0.782	Valid
	X1.10	0.361	0.477	Valid
	X1.11	0.361	0.718	Valid
	X1.12	0.361	0.544	Valid
Motivation (X2)	X2.1	0.361	0.672	Valid
	X2.2	0.361	0.681	Valid
	X2.3	0.361	0.725	Valid
	X2.4	0.361	0.850	Valid
	X2.5	0.361	0.725	Valid
Work Discipline (Y)	Y1	0.361	0.563	Valid
	Y2	0.361	0.622	Valid
	Y3	0.361	0.769	Valid
	Y4	0.361	0.878	Valid
	Y5	0.361	0.705	Valid
	Y6	0.361	0.748	Valid
	Y7	0.361	0.654	Valid
	Y8	0.361	0.719	Valid
	Y9	0.361	0.789	Valid
	Y10	0.361	0.405	Valid

Y11	0.361	0.622	Valid
Y12	0.361	0.769	Valid
Y13	0.361	0.878	Valid
Y14	0.361	0.705	Valid
Y15	0.361	0.636	Valid

Table 4. Variable's reliability test (Cronbach's Alpha) results in a significance level of 5%.

Variable	Cronbach's Alpha	N of Items
Fingerprint Attendance (X1)	0.894	12
Motivation (X2)	0.779	5
Work Discipline (Y)	0.919	15

Based on Table 3, it can be seen that the R-value is higher than 0.374, so each question item in the questionnaire is declared valid. Based on Table 4, all variables are reliable and are higher than 0.60, respectively. According to (Hair, Celsi, Ortinau, & Bush, 2010), if the reliability test result is higher than 0.60 (Cronbach's Alpha value > 0.06), it can be determined as the reliable variable.

This section includes a normality test, a multicollinearity test, a heteroscedasticity test, a multiple linear regression test, and an R-squared test, respectively. The normality test used one sample Kolmogorov-Smirnov test. The value of the normality test is higher than $\alpha/2$ ($0.20 > 0.025$, two-tailed), so the data sample is normally distributed (Arifin, 2017). Besides, the result of the multicollinearity test shows in Table 5. A good regression model is characterized by the absence of intercorrelations between independent variables that can be tested by tolerance and VIF.

Table 5. The result of the multicollinearity test for independent variables X1 and X2, respectively.

Independent Variable	β	Significance*	t-value	Tolerance	VIF
Fingerprint Attendance (X1)	0.515	Yes	4.623	0.112	8.939
Motivation (X2)	0.480	Yes	4.308	0.112	8.939

*Note: significant status lower than α (0.05, one-tailed).

Based on the results of the multicollinearity test (Table 5), the fingerprint attendance tolerance value (X1) is 0.112 and motivation (X2) is 0.112, both of which were higher than 0.01, and the VIF value was smaller than 10.00, so that multicollinearity did not occur. In addition, a heteroscedasticity test was conducted by the Glejser test (Table 6). The heteroscedasticity test will assess whether there is an inequality of variants from residual to all observations on linear regression models (Sarstedt, Ringle, & Hair, 2017).

Table 6. The result of the heteroscedasticity test for independent variables X1 and X2, respectively.

Independent Variable	Std. Error	β	t-value	Sig.*
Fingerprint Attendance (X1)	0.103	0.268	0.474	0.640
Motivation (X2)	0.219	-0.406	-0.716	0.480

*Note: significant status higher than α (0.05, one-tailed).

Based on the results of the heteroscedasticity test (Table 6), the value of significance of fingerprint attendance (X1) and motivation (X2), both of which were higher than α (0.05, one-tailed), heteroscedasticity does not occur. Meanwhile, the result of the multiple linear regression test between (X1) and (X2) on (Y) can be seen in Equation (1).

$$Y = 1,622 + 1,371 FA + 0,692 Mo \quad (1)$$

With:

FA: Fingerprint Attendance (X1);

Mo: Motivation (X2);

Both of them are independent variables.

Based on Equation (1), the constant value of 1.622 is a state when the fingerprint attendance variable (X1) has not also been affected by the motivation variable (X2) or is in a constant state, then the teacher's work discipline variable (Y) is positive. Besides, the b1 value (regression coefficient value X1) is 1.371, meaning that if fingerprint attendance (X1) increases while other variables are constant, in this case, the motivation variable (X2), then the teacher's work discipline variable (Y) will also increase. In addition, the b2 (regression coefficient value X2) 0.692 means that if the motivation variable (X2) increases while the other variable (in this case it is the fingerprint attendance variable, X1) is constant, then the teacher's work discipline variable (Y) will also increase.

The last classical assumption test is an R-squared test, which determines how much the degree of variability of the independent variable is related to explaining its independent variable (). The result of the R-squared test of (X1) is 0.937, which means that the fingerprint attendance variable (X1) has a 93.7% influence contributed to the teacher work discipline variable (Y). In comparison, the remaining 6.3% by other factors were not studied in this study. In addition, the result of the R-squared test of (X2) is 0.933, which means that the motivation variable (X2) has a 93.3% influence contributed to the teacher work discipline variable (Y). In comparison, the remaining 6.7% of other factors were not studied.

Hypothesis testing aims to determine whether the previously obtained regression equation can be accounted for or vice versa (Sarstedt et al., 2017). If the hypothesis test results show that the regression equation (Equation 1) is significant or accountable, then the regression equation can be used to foresee the dependent variable (Y) and, simultaneously, prove the proposed hypothesis. In this study, the research was carried out partially (using a t-test) and simultaneously (using F-test), respectively.

Partial tests were carried out to determine the influence of each independent variable on the dependent variable. To test whether each independent variable significantly affects the dependent variable partially or individually. For the result, Table 7 shows the t-test for Hypothesis (1) and (2), respectively. Meanwhile, a simultaneous test was carried out to determine the influence of all independent variables on the dependent variable. To test both independent variables (X1) and (X2) significantly affect the dependent variable (Y) simultaneously. For the result, Table 8 shows the F-test for Hypothesis (3).

Table 7. Summary of hypotheses testing of the partial test.

Hypothesis	Std. Error.	Bias	t-value	p-value*	Decision
(1)	0.150	0.692	4.623	0.000	Accepted
(2)	0.318	1.371	4.308	0.000	Accepted

*Note: p-value $\leq$ 0.05 (one-tailed test).

Table 8. Summary of hypotheses testing of the simultaneous test.

Hypothesis	F-value	p-value*	Decision
(3)	346.233	0.000	Accepted

*Note: p-value $\leq$ 0.05 (one-tailed test).

Based on the hypotheses tested in Table 7, Hypothesis (1) and (2) are significantly positive between fingerprint attendance (X1) and motivation (2) on the teacher's work discipline. Besides, in Table 8, Hypothesis (3) is significantly positive for all independent variables, such as fingerprint attendance (X1) and motivation (2) on the teacher's work discipline.

D. CONCLUSION

The fingerprint attendance study results were positive, had significant implications on teacher work discipline, and had an effect of 93.7% at the Dian Didaktika Islamic High School. At the same time, other factors influence the rest. Motivation has positive and significant implications for teacher work discipline and had an effect of 93.3% at the Dian Didaktika Islamic High School. At the same time, the rest is influenced by other factors. F-test showed that fingerprint attendance and

motivation had positive and significant implications for teacher work discipline simultaneously, or that fingerprint attendance and motivation variables could explain teacher work discipline by 96.2% at the Dian Didaktika Islamic High School. The remaining 3.8% was explained by the variability of other variables that were not studied.

REFERENCES

- Ali, Abid, Mustafa, Javed, & Khan, Ihsan Ullah. (2018). Relationship of Biometric Attendance System with Performance, Job Related Stress and Satisfaction of University Teachers in Pakistan. *Liberal Arts and Social Sciences International Journal (LASSIJ)*, 2(2), 42–49. <https://doi.org/10.47264/idea.lassij/2.2.5>
- Alsunah, M. Dhany. (2019). PENGGUNAAN ABSENSI SIDIK JARI (FINGER PRINT) DAN MOTIVASI TERHADAP DISIPLIN KERJA ASN DI SEKRETARIAT DAERAH KABUPATEN KERINCI. *Jurnal Administrasi Nusantara*, 2(1), 29–41. <https://doi.org/10.51279/JAN.V2I1.37>
- Anam, Arif Khoirul, Rumiati, Agnes Tuti, & Ratnasari, Vita. (2020). Klasterisasi Mutu Pendidikan SMA di Indonesia dan Analisis Pola Hubungan Antar Standar Nasional Pendidikan pada Masing-Masing Klaster Menggunakan SEM-PLS. *Jurnal Sains Dan Seni ITS*, 9(2), D2018–D2215.
- Andhika, Andhika, Qamaruddin, Muh. Yusuf, & Anwar, Suhardi M. (2022). Implementation of Fingerscan Absence and Additional Employee Income (TPP) on Work Behavior and Performance of Employees in Wara Utara District Office. *Kontigensi: Jurnal Ilmiah Manajemen*, 10(1), 77–85. <https://doi.org/10.56457/JIMK.V10I1.255>
- Arif, Muhammad, Syaifani, Putri Endah, Siswadi, Yudi, & Jufrizen, Jufrizen. (2019). Effect of Compensation and Discipline on Employee Performance. *Proceeding of The 3rd International Conference on Accounting, Business & Economics (UII-ICABE 2019)*, 263–276. Retrieved from <https://journal.uui.ac.id/icabe/article/view/14723>
- Arifin, Johar. (2017). *SPSS 24 untuk Penelitian dan Skripsi*. Jakarta (ID): Elex Media Komputindo.
- Beck, Jaime L. (2017). The Weight of a Heavy Hour: Understanding Teacher Experiences of Work Intensification. *McGill Journal of Education*, 52(3), 617–636. <https://doi.org/10.7202/1050906AR>
- Budi, Romayanto, & Sulistiyani, Sulistiyani. (2019). Application of Fingerprint and Preventive Discipline Online Presence System on Employee Performance with Motivation as an Intervening Variable (Study of Civil Servants in Pemalang District High Schools). *Proceeding: International Conference on Business, Economics and Governance (ICBEG)*, 110–116. Retrieved from <https://feb.untagsmg.ac.id/proceeding/index.php/icbeg/article/view/12>
- Carson, Russell L., & Chase, Melissa A. (2009). An examination of physical education teacher motivation from a self-determination theoretical framework. *Physical Education and Sport Pedagogy*, 14(4), 335–353. <https://doi.org/10.1080/17408980802301866>
- Cay, Sam, Sartika, Dewi, Sumiaty, Raden Yati, Meryanti, Ani, & Sunarsi, Denok. (2021). The Effect of Fingerprint Attendance and Work Motivation On Employee Discipline On CV Story Of Copyright. *Jurnal Office*, 7(2), 333–340. <https://doi.org/10.26858/10.V7I2.31369>
- Dapu, Valensia Angelina Wisti. (2015). THE INFLUENCE OF WORK DISCIPLINE, LEADERSHIP, AND MOTIVATION ON EMPLOYEE PERFORMANCE AT PT. TRAKINDO UTAMA MANADO. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 3(3). <https://doi.org/10.35794/EMBA.3.3.2015.9395>
- Fadri, Hayatul, Zulfadil, Zulfadil, & Taufiqurrahman, Taufiqurrahman. (2017). Analisis Kinerja Karyawan Pada PT Perindustrian Dan Perdagangan Bangkinang. *Jurnal Online Mahasiswa Fakultas Ekonomi Universitas Riau*, 4(1), 414–425. Retrieved from <https://www.neliti.com/publications/121480/>
- Hair, J. F., Celsi, M., Ortinau, D. J., & Bush, R. P. (2010). *Essentials of marketing research (Vol. 2)*. New York (US): McGraw-Hill/Irwin.
- Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi Republik Indonesia (MENPANRB-RI). (2016, June 27). *Surat Menteri PANRB tentang Penggunaan Absensi Berbasis Elektronik di Lingkungan Instansi Pemerintah*. Retrieved from <https://www.menpan.go.id/site/berita-terkini/info-terkini/surat-meteri-panrb-tentang-penggunaan-absensi-berbasis-elektronik-di-lingkungan-instansi-pemerintah>

- Mangkunegara, A. A. Anwar Prabu. (2011). *Manajemen sumber daya manusia perusahaan*. Bandung (ID): Remaja Rosdakarya.
- McCulloch, Allison W., Hollebrands, Karen, Lee, Hollylynne, Harrison, Taylor, & Mutlu, Asli. (2018). Factors that influence secondary mathematics teachers' integration of technology in mathematics lessons. *Computers and Education*, 123, 26–40. <https://doi.org/10.1016/j.compedu.2018.04.008>
- Montgomery, Douglas C., & Runger, George C. (2018). *Applied Statistics and Probability for Engineers* (7th ed.). Wiley.
- Rasminto, Hendri, Febryantahanuji, Febryantahanuji, & Danang, Danang. (2020). Pengaruh Disiplin Kerja Terhadap Kinerja Karyawan Dengan Lingkungan Kerja Sebagai Variabel Moderasi. *E-Bisnis: Jurnal Ilmiah Ekonomi Dan Bisnis*, 13(1), 82–87. Retrieved from <https://journal.stekom.ac.id/index.php/Bisnis/article/download/179/155>
- Razak, Abdul, Sarpan, Sarpan, & Ramlan, Ramlan. (2018). Effect of Leadership Style, Motivation and Work Discipline on Employee Performance in PT. ABC Makassar. *International Review of Management and Marketing*, 8(6), 67–71. <https://doi.org/10.32479/irmm.7167>
- Saini, Monika, & Kumar Kapoor, Anup. (2016). Biometrics in Forensic Identification: Applications and Challenges. *Journal of Forensic Medicine*, 1(2). <https://doi.org/10.4172/2472-1026.1000108>
- Sardjana, Evie K., Sudarmo, Sudarmo, & Suharto, Didik G. (2018). The Effect of Remuneration, Work Discipline, Motivation on Performance. *International Journal of Multicultural and Multireligious Understanding*, 5(6), 136–150. <https://doi.org/10.18415/IJMMU.V5I6.529>
- Sarstedt, Marko, Ringle, Christian M., & Hair, Joseph F. (2017). Partial Least Squares Structural Equation Modeling. In *Handbook of Market Research*. https://doi.org/10.1007/978-3-319-05542-8_15-1
- Shukla, Vinod Kumar, & Bhandari, Nisha. (2019). Conceptual Framework for Enhancing Payroll Management and Attendance Monitoring System through RFID and Biometric. *Proceedings - 2019 Amity International Conference on Artificial Intelligence, AICAI 2019*, 188–192. <https://doi.org/10.1109/AICAI.2019.8701316>
- Soelaiman, Nur F., Ahmad, Sharifah S. S., Mohd, Othman, Al Hakim, Rosyid Ridlo, & Hidayah, Hexa A. (2022). Modeling the civil servant discipline in Indonesia: partial least square-structural equation modeling approach. *ASEAN International Journal of Business*, 1(1), 43–58. <https://doi.org/10.54099/aijb.v1i1.72>
- Sukmadinata, N. S. (2009). *Metode Penelitian Pendidikan*. Bandung: PT Remaja Rosdakarya.
- Sunarsi, Denok, Akbar, Irfan Rizka, Jasmani, Jasmani, Rozi, Achmad, Khoiri, Ahmad, & Salam, Rudi. (2021). The Influence of Motivation and Work Discipline on Employee Performance at the Yogyakarta Tourism Service. *Proceeding The First International Conference on Government Education Management and Tourism*, 1(1), 1–7. Retrieved from <http://conference.loupiasconference.org/index.php/ICoGEMT/article/view/120>
- Surani, Dewi. (2019). Studi literatur: Peran teknolog pendidikan dalam pendidikan 4.0. *Prosiding Seminar Nasional Pendidikan FKIP*, 2(1), 456–469.
- Teo, Timothy, & Noyes, Jan. (2011). An assessment of the influence of perceived enjoyment and attitude on the intention to use technology among pre-service teachers: A structural equation modeling approach. *Computers & Education*, 57(2), 1645–1653. <https://doi.org/10.1016/J.COMPEDU.2011.03.002>
- Yuliasutik, Aisyah Kurnia, Azhad, Muhamad Naely, & Rahayu, Jekti. (2021). The Effect of Work Systems, Work Environment, and Work Motivation to Employee Work Discipline. *Jurnal Manajemen Bisnis dan Kewirausahaan (JAMANIKA)*, 1(2), 149–156. <https://doi.org/10.22219/JAMANIKA.V1I2.17108>
- Yusuf, Furtasan Ali. (2020). The Effect of Organizational Culture on Lecturers' Organizational Commitment in Private Universities in Indonesia. *International Journal of Higher Education*, 9(2), 16–24. <https://doi.org/10.5430/ijhe.v9n2p16>