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E-Leadership: Unveiling the Role of Digital Era Leadership in Enhancing Employee Performance in Higher Education Institution

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ABSTRACT: This study examines the role of E-Leadership, a leadership concept in the digital era on employee performance in higher education institutions. It investigates the impact of management information systems, digital culture, and work discipline. The research methodology is Structural Equation Modelling (SEM) based on Partial Least Squares (PLS). The sample consists of 120 participants who work as Educational Staff at Pancasakti University, Tegal, Indonesia. Data analysis uses the SmartPLS v.4 software with the Second Order method. The findings of the study indicate that: 1) management information system has a positive impact on employee performance, 2) digital culture has a positive impact on employee performance, 3) work discipline has a positive impact on employee performance, 4) E-Leadership moderates the influence of management information systems on employee performance, 5) E-Leadership does not moderate the influence of digital culture on employee performance, and 6) E-Leadership does not moderate the influence of work discipline on employee performance.

KEYWORDS: Digital Culture, E-Leadership, Employee Performance, Management Information System, Work Discipline.

INTRODUCTION

The information technology has undergone significant growth, leading to a revolution in various aspects of life, encompassing both societal and organizational domains [1]. The rapid growth necessitates agile adaptation and demands leadership capable of effectively steering change and leveraging technology across diverse sectors [2]. The immense transformations will undoubtedly reshape the business patterns across organizations, including a comprehensive shift in human resource management practices and the accompanying changes in organizational practices [3]. Digitalization is an undeniable imperative that demands the focused attention of every organizational leader to devise strategies for implementing a digital culture, thereby fostering improved employee performance, and securing a competitive advantage. Digitalization cannot be achieved without undergoing organizational and cultural transformation within it [4]

According to the International Data Group (IDG, Inc) in 2021, it is estimated that global expenditures on digital transformation in business, production, and organizations will reach $2.8 trillion by 2025, which is twice the amount allocated in 2020. Each organization should allocate investments towards digital transformation in accordance with strategic priorities that align with the desired vision and mission. These priorities include operational objectives, encompassing core business functions such as accounting and finance, human resources, legal, security and risk management, as well as corporate information technology [5].

Table 1. Top Strategic Priority Based on 2021 Market Share

	Percentage
Innovate, Scale, Operate Other	22,9%
Smart Manufacturing	13,1%
Digital Supply Chain Optimization	6,5%
Back-Office Support and Infrastructure	15,4%
Customer Experience	8,1%
Others	34,1%

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Information technology has brought about numerous transformations to human life. Through computer devices and other gadgets, various types of information have become readily accessible and easily disseminated. The Ministry of Communication and Informatics (Menkominfo) collaborates with Katadata Insight Center (KIC) to conduct the measurement of Indonesia's digital literacy index for the years 2021 and 2022, with the results being announced through a Press Release No. 10/HM/KOMINFO/02/2023.

Table 2. Indonesia's Digital Literacy Index

	Index (Scale 1-5)
2021	
Digital Culture	3,90
Digital Ethic	3,53
Digital Skill	3,44
Digital Safety	3,10
2022	
Digital Culture	3,84
Digital Ethics	3,68
Digital Skill	3,52
Digital Safety	3,12

Table 1.2 provides an overview of the Measurement of Indonesia's Digital Literacy Index in 2021. The measurement was conducted through face-to-face surveys involving 10,000 respondents from 514 districts/cities across Indonesia. The respondents were internet users aged between 13 and 70 years old. The findings indicate that digital culture received the highest score of 3.90, followed by digital ethics at 3.53, and digital skills at 3.44. Digital safety obtained the lowest score of 3.10, just slightly above the moderate level. The status of Indonesia's Digital Literacy in 2022 showed an improvement, with the index increasing from 3.49 to 3.54. The pillars of digital skills, digital ethics, and digital safety experienced an increase, while digital culture witnessed a slight decline [6]. Higher education institutions, especially universities, inevitably face the effects of the digitalization era. Coordination and teamwork are essential in addressing various changes and challenges. Educational staff are a crucial element in determining the quality of university performance and providing services to students, faculty, and the community, encompassing the activities of the *Tridharma* of Higher Education. Three pillars form the core responsibilities of higher education institutions consists of three fundamental duties: education, research, and community service [7]. Everyone within the educational staff is encouraged to have the competence and capability to adapt to the digital transformations happening both externally and internally within the organizational setting, as it serves as a catalyst for their performance and contributes to the overall development of the organization. The development and improvement of human resources, along with the capacity building of faculty members and students in higher education institutions, play a vital role in effectively navigating the advancements in digital technology [8]. Recognizing and comprehending the significance of information technology is a crucial element in the transformation of universities into advanced institutions. Information technology also plays a significant role in enhancing capabilities to foster excellence and increase the competitiveness of higher education institutions [8].

Pancasakti University is a higher education institution located in the city of Tegal, Central Java, Indonesia. Prioritized key programs that include enhancing systematic literacy in implementing the *Tridharma* of Higher Education, internationalization, and digitalization [10]. A modern and internationally scaled educational institution necessitates the utilization of information technology as an obligation. Considering that education as a public service requires the principles of good governance, it involves transparency, accountability, efficiency, and effectiveness in its implementation. Efforts to improve performance, productivity, and innovation to maintain a competitive advantage can be accomplished by reinforcing digital culture [11].

LITERATURE REVIEW

Leadership is an universal phenomenon that holds significant importance in various types of organizations, including business, social, political, religious, and educational organizations. The process of interaction to achieve the goals of an organization requires

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someone who can provide direction, coordinate activities, and provide a vision to ensure the attainment of those goals. Leadership encompasses the abilities, processes, and art of influencing individuals or groups to willingly exhibit the will and enthusiasm needed to achieve the stated objectives [12].

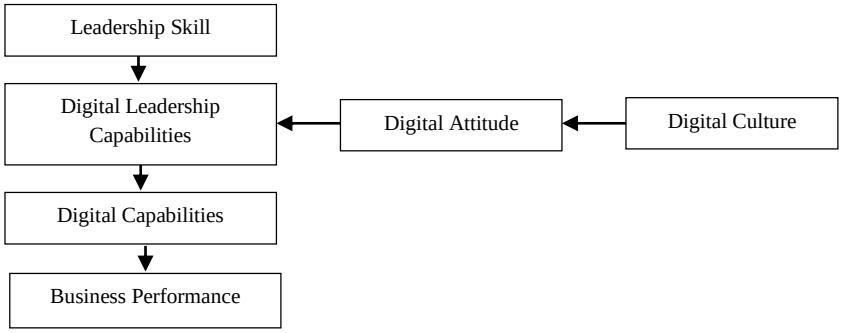

Figure 1. Digital Mastery Conceptual Model

1. E-Leadership

E-Leadership or digital leadership, is a leadership concept that pertains to the utilization of information and communication technology in the context of leadership [13]. E-Leadership is not about replacing traditional leadership, but rather about developing leadership capabilities that align with the demands of the digital era [14]. Digital leadership combines leadership factors with its ability to leverage technological advancements. Digital leadership is a critical factor in improving effective management processes. The results indicate that among the two constructs investigated for their impact on the process, the construct with the greatest influence is E-Leadership [15]. The digital capability of an organization is significantly determined by human factors such as leadership, work culture, mindset, and other humanistic factors [16].

Figure 1. indicated that Digital Culture is strongly influenced by Digital Leadership Capability, implying that the establishment of digital capabilities within an organization is greatly influenced by the quality of leadership. Therefore, it can be concluded that digital capabilities are heavily influenced by the leadership abilities of leaders at all levels of the organization in driving digital transformation to achieve desired business performance.

2. Employee Performance

Performance is a dependent variable that is influenced by multiple factors that hold significance in achieving organizational objectives. This means that mismanagement of independent variables, which are the factors influencing performance, whether in the form of negative or positive effects, will have consequences on performance, which is the result of the combined influence of multiple factors in achieving organizational objectives [17]. Employee performance can be assessed through work time, which includes the number of absences or attendance, lateness, duration of work, as well as the quantity and time spent on work-related activities [18]. Employee performance can be summarized based on quality, quantity, work timeliness, and collaboration to achieve the goals set by the company [19]. Individual employee performance is influenced by factors including ability, effort invested, and organizational support.

3. Management Information System

Management Information System (MIS) is a formal computer-based system designed to provide management with a continuous and relevant flow of information regarding structured and planned organizational operations, supported by technology. The system should be designed to collect and analyze data from various sources, and present it for decision-making [20]. MIS is the combination of human resources and computer resources used to generate a collection of data storage, communication, and data utilization to achieve efficient management operations and effective business planning [21]. Some indicators that can measure the effectiveness of a management information system in assisting a manager in making better decisions and achieving organizational goals effectively include information availability, information accuracy, information relevance, ease of use, system integration, and resource availability [22].

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4. Digital Culture

Organizational culture is a collection of values, beliefs, behaviors, and work practices collectively performed by employees within an organization, which then forms the identity of the organization. On the other hand, digital culture refers to a culture within an organization that promotes and supports the adoption and development of digital technology [16]. The term digital cultur refers to the culture that emerges from the emergence and use of digital technology. Without technology, digital culture would not exist and would not be experienced by society [23]. The concept of digital culture reflects the idea that technology and the internet will shape the way people interact, behave, think, and communicate with each other [24]. Indicators of digital culture include awareness of digital values, customer experience, innovation and creativity, data-driven decision making, openness, and collaboration [25].

5. Work Discipline

Work discipline is one of the operational functions in human resource management that plays a crucial role, as better employee discipline leads to higher achievements and performance that can be attained [26]. Discipline is the result of an individual's awareness and willingness to comply with established rules and norms. This means that discipline is not a result of coercion but should originate from individual consciousness. Therefore, in its implementation, discipline is not only driven by the threat of punishment for violations but also by the sense of responsibility held by the individual. With the presence of discipline formed within each individual, it can enhance work motivation and assist in achieving organizational and individual goals more effectively [27]. Work discipline can be measured through several indicators, including adherence to time rules, adherence to company rules, and adherence to behavioral rules [19].

METHODOLOGY

The type of research in this study is quantitative research using a survey method to assess the behavior of individuals or groups through data collection using a questionnaire. The study using the Structural Equation Modeling (SEM) technique based on Partial Least Squares (PLS) with a sample size of 120 respondents who are educational staff members at Pancasakti University, Tegal, Indonesia. The data analysis is performed using the SmartPLS v.4 software utilizing the second-order method. Using a Likert‘s scale ranging from 1 to 5 for measurement. The purpose of this study is to examine the influence of management information systems, digital culture, and work discipline (independent variables) on the performance (dependent variable) of educational staff at Pancasakti University, with E-Leadership as the moderating variable.

RESULT AND DISCUSSION

The method of descriptive statistical analysis is used to analyze data by providing an overview or description of the collected data according to the circumstances. The scale used in this research is the Likert‘s scale with a score range of 1-5. The calculation of the index is done using the index formula [28]. The interpretation of index scores is determined using the three-box method with the following intervals: 10.00-40.00 is considered low, 40.01-70.00 is considered moderate, and 70.01-100 is considered high.

Table 3. Descriptive Analysis of the Variable Employee Performance

Dimension	Indicator	Respondents Answer Frequency					Index (%)
		(1)	(2)	(3)	(4)	(5)	
Job Quantity	I am consistently able to complete all the assigned tasks according to the predetermined quantity	1	2	12	77	28	81,54%
		0,8%	1,7%	10%	64,2%	23,3%	
	The quantity of work I receive is realistic and aligned with my skills and expertise	1	4	11	87	17	79,2%
		0,8%	3,3%	9,2%	72,5%	14,2%	
Job Quality	I am consistently able to complete all the assigned tasks according to the predetermined quality standards	0	2	11	24	83	91,4%
		0%	1,7%	9,2%	20%	69,2%	
		0	2	10	25	83	91,5%

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Dimension	Indicator	Respondents Answer Frequency					Index (%)
		(1)	(2)	(3)	(4)	(5)	
	The quality of work I produce is in accordance with the established standards	0%	1,7%	8,3%	20,8%	69,2%	
Time and Target	I am consistently able to complete tasks on time	0	1	8	92	19	81,5%
		0%	0,8%	10%	74,2%	15%	
	I am consistently able to achieve the set work targets	1	0	8	28	83	80,68%
		0,8%	0%	6,7%	23,3%	69,2%	
Obey the Principles	The work I perform is based on the correct methods and procedures	0	2	8	22	88	92,64%
		0%	1,7%	6,7%	18,3%	73,3%	
	The work I do is transparent and accountable	1	2	4	26	87	92,52%
		0%	1,7%	3,3%	21,7%	72,5%	
Average Index							**86,37 %**

Table 3. shows the average index for the descriptive analysis of Employee Performance is 86.37%. According to the three-box method, categorized as high. Indicates that employees at Pancasakti University, Tegal, in general, have successfully met or exceeded the expectations set for their performance. This category reflects the achievement of assigned tasks, positive contributions to organizational goals, and represents responses to performance indicators in the questionnaire, including quantity, quality, timeliness, and responsibility towards their work.

Tabel 4. Descriptive Analysis of the Management Information System (MIS)

Dimension	Indicator	Respondents Answer Frequency					Index (%)
		(1)	(2)	(3)	(4)	(5)	
Effective and Efficient	MIS helps me to complete work tasks more quickly	0	1	18	88	13	78,76%
		0%	0,8%	15%	73,3%	10,8%	
	MIS helps me save time in performing work tasks	0	2	14	92	12	79,06%
		0%	1,7%	11,7%	76,7%	10%	
Data Safety	MIS has adequate security systems to protect sensitive data and information	0	3	88	23	6	65,34%
		0%	2,5%	73,3%	19,2%	5%	
Users Friendly	MIS is user-friendly and does not require a long learning period	1	4	84	22	9	65,62%
		0,8%	3,3%	70%	18,3%	7,5%	
	MIS) is easy to navigate and ensuring a clear and intuitive user experience.	1	5	89	17	8	64,42%
		0,8%	4,2%	74,2%	14,2%	6,7%	
Average Index							**70,64%**

Table 4. shows the average index for the descriptive analysis of the Management Information System which is determined to be 70.64%. According to the three-box method, it is categorized as high. Indicates that the management information system at Pancasakti University, Tegal, has successfully achieved the established standards for effectively managing information and managerial processes.

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Table 5. Descriptive Analysis of the Digital Culture

Dimension	Indicator	Respondents Answer Frequency					Index (%)
		(1)	(2)	(3)	(4)	(5)	
Acceptance of Digital Technology	The institution are adopting digital technology as part of their institutional development strategies	0	2	20	84	14	78,4%
		0%	1,7%	16,7%	70%	11,7%	
	I have a high level of trust and interest in using digital technology	0	1	7	34	78	91,44%
		0%	0,8%	5,8%	28,3%	65%	
Digital Creativity	The institution have the capability to optimize the use of digital technology to achieve institutional goals	0	2	18	92	8	77,74%
		0%	1,7%	15%	76,7%	6,7%	
Digital Literacy	I have adequate skills in using digital technology	0	2	19	82	17	79%
		0%	1,7%	15,8%	68,3%	14,2%	
Collaboration	Collaboration through digital technology in higher education has successfully achieved the desired goals	0	3	89	22	6	65,16%
		0%	2,5%	74,2%	18,3%	5%	
Average Index							**78,34%**

Table 5. displays an average index of 78.34% for the criteria in the descriptive analysis of the Digital Culture variable. According to the three-box method, it is classified as high. This signifies a high level of success and implementation of digital culture. The category reflects the readiness of higher education institutions in implementing digital technology and effectively utilizing it across various aspects of academic and administrative activities.

Table 6. Descriptive Analysis of the Work Discipline

Dimension	Indicator	Respondent Answer Frequency					Index (%)
		(1)	(2)	(3)	(4)	(5)	
Attendance and punctuality in the office	I consistently arrive at the workplace on time every day	2	3	8	77	30	81,72%
		1,7%	2,5%	6,7%	64,2%	25%	
	I do not leave the office without a valid reason	1	3	10	81	25	80,94%
		0,8%	2,5%	8,3%	67,5%	20,8%	
Commitment on Job Quality	I constantly strive to improve myself to enhance the quality of my work	0	3	5	82	30	83,16%
		0%	2,5%	4,2%	68,3%	25%	
	I provide satisfactory service	0	3	9	21	87	92%
		0%	2,5%	7,5%	17,5%	72,5%	
Obey the Rules	I consistently perform my duties in accordance with rules and procedures	0	3	6	17	94	93,66%
		0%	2,5%	5%	14,2%	78,3%	
	I do not violate the established rules and procedures	0	3	8	19	90	92,66
		0%	2,5%	6,7%	15,8%	75%	
Initiative and Responsibility	I take responsibility for my work and do not blame others for any mistakes	1	2	3	18	96	94,34%
		0,8%	1,7%	2,5%	15%	80%	
	I consistently contribute and take initiative in improving organizational performance	0	1	10	93	16	80,6%
		0%	0,8%	8,3%	77,5%	13,3%	
Cooperate and communication	I am always ready to cooperate with the team	0	3	4	20	93	93,84
		0%	2,5%	3,3%	16,7%	77,5%	
	The work I perform is transparent	0	4	4	22	90	92,94%
		0%	3,3%	3,3%	18,3%	75%	

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Norms and Ethics	I always adhere to the organization's code of ethics and values	0	3	6	22	89	92,84%
		0%	2,5%	5%	18,3%	74,2%	
	I always follow the procedures to carry out my tasks	0	2	4	81	33	84,16%
		0%	1,7%	3,3%	67,5%	27,5%	
Average Index							**88,57%**

Table 6. shows the average index for the variable Work Discipline in the descriptive analysis is 88.57%. According to the three-box method, it is categorized as high. Indicates that the employees at Pancasakti University, Tegal, have a high level of work discipline. This category reflects their adherence to work rules and procedures, punctuality, attendance, as well as their commitment to tasks and responsibilities within the university's work environment.

Tabel 7. Descriptive Analysis of the Variable E-Leadership

Dimension	**Indicator**	**Respondents Answer Frequency**					**Index (%)**
		(1)	**(2)**	**(3)**	**(4)**	**(5)**	
Visionary Leadership	My leaders have a clear and organized digital strategy	1	4	78	27	10	66,78%
		0,8%	3,3%	65%	22,5%	8,3%	
	My leaders can effectively communicate the digital vision	0	10	72	26	12	66,68%
		0%	8,3%	60%	21,7%	10%	
	My leaders are capable of motivating staff to engage in digital development	0	9	70	26	15	67,84%
		0%	7,5%	58,3%	21,7%	12,5%	
Digital Capability	My leaders can utilize digital technology	0	4	78	25	13	67,76%
		0%	3,3%	65%	20,8%	10,8%	
	My leaders are capable of effectively implementing digital technology in the business	0	8	77	22	13	66,64%
		0%	6,7%	64,2%	18,3%	10,8%	
	My leaders can leverage digital technology	0	3	22	79	16	77,92%
		0%	2,5%	18,3%	65,8%	13,3%	
Digital Culture	My leaders can create a digital culture within the organization	0	1	77	27	15	69,34%
		0%	0,8%	64,2%	22,5%	12,5%	
	My leaders can inspire staff to cultivate a digital culture	0	3	73	31	13	68,92%
		0%	2,5%	60,8%	25,8%	10,8%	
Collaborative Communication	My leaders always strive to communicate openly about the use of digital technology	0	4	81	22	13	67,26%
		0%	3,3%	67,5%	18,3%	10,8%	
	My leaders always provide support and guidance in the use of digital technology	0	3	85	19	13	66,92%
		0%	2,5%	70,8%	15,8%	10,8%	
Transformational Leadership	My leaders always set an example in using digital technology	0	2	81	24	13	67,98%
		0%	1,7%	67,5%	20%	10,8%	

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	My leaders always encourage me to seek better ways in utilizing digital technology	1 0,8%	1 0,8%	21 17,5%	82 68,3%	15 12,5%	78,12%
Average Index							**69,34%**

Table 7. shows the average index for the Descriptive Analysis of the E-Leadership variable to be 69.34%. According to the three-box method, it is moderate category. Indicates that the implementation of digital leadership or e-leadership at Pancasakti University, Tegal is at a moderate level. This category suggests that the university may still be in the process of developing and implementing digital leadership strategies and practices, which include the leader's and staff's abilities to adopt and leverage digital technologies, lead digital transformation, motivate the use of digital technologies, and foster a digital culture within the organization.

This research utilized data processing technique through Structural Equation Modeling (SEM) based on Partial Least Square (PLS) using the data analysis software SmartPLS version 4 with the Second Order method, which is applied when a variable measurement consists of multiple measurement dimensions, and each measurement dimension comprises several measurement items [29].

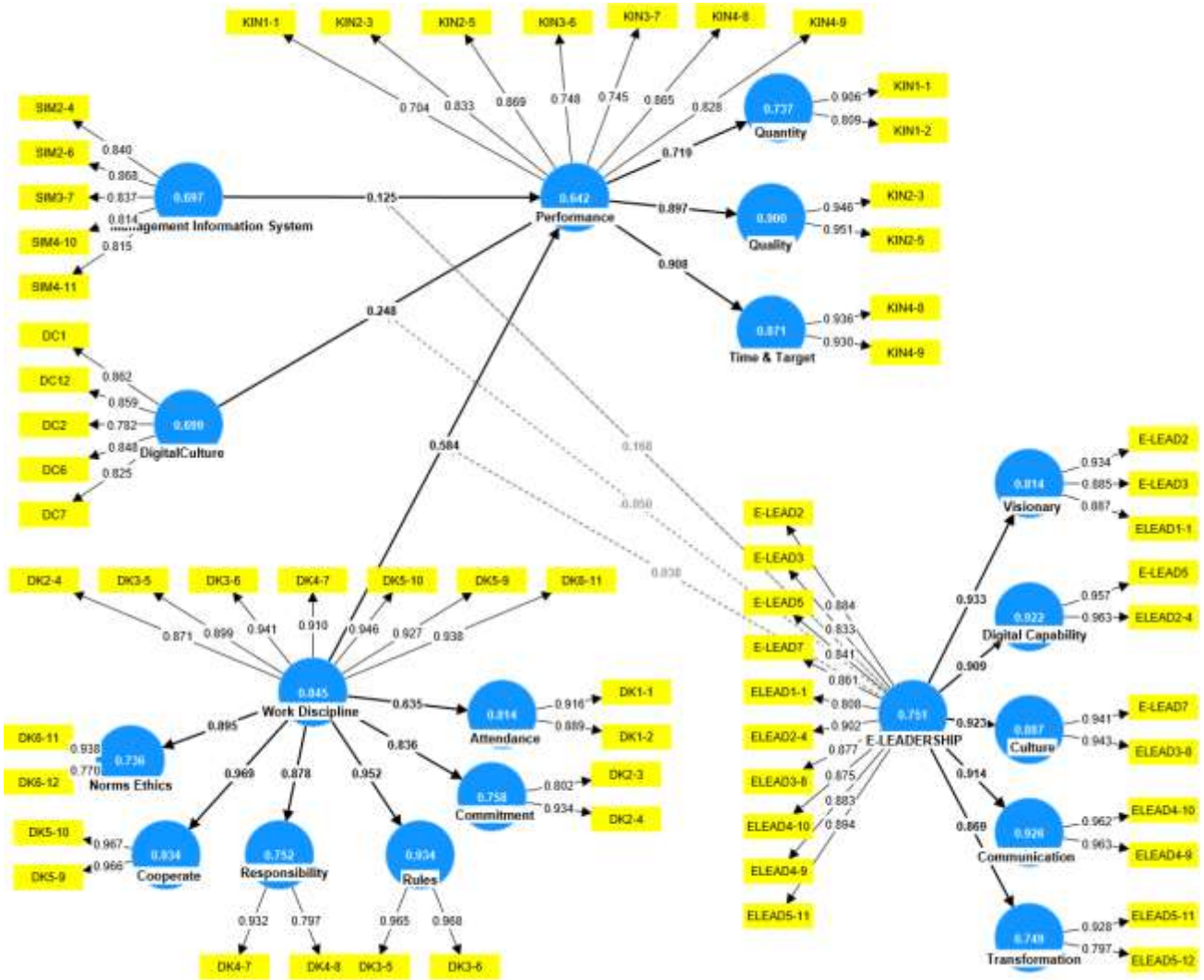

Figure 2. Construct Model with Second Order in SmartPLS V.4

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An item in the questionnaire is considered valid and meets convergent validity if the Loading Factor (LF) > 0.70. A construct is deemed to have good validity and reliability if the Average Variance Extracted (AVE) > 0.50, and the Cronbach Alpha, rho_A, and Composite Reliability are all above 0.60. A construct is considered to meet the criteria if the square root of AVE > the correlation between constructs of variables [30].

Table 8. Convergent Validity – Outer Loading

Item	Outer loadings	Criteria	Item	Outer loadings	Criteria
DC1	0,862	Qualify	ELEAD1-1	0,887	Qualify
DC12	0,859	Qualify	ELEAD1-1	0,808	Qualify
DC2	0,782	Qualify	ELEAD2-4	0,963	Qualify
DC6	0,848	Qualify	ELEAD2-4	0,902	Qualify
DC7	0,825	Qualify	ELEAD3-8	0,877	Qualify
DK1-1	0,916	Qualify	ELEAD3-8	0,943	Qualify
DK1-2	0,889	Qualify	ELEAD4-10	0,875	Qualify
DK2-3	0,802	Qualify	ELEAD4-10	0,962	Qualify
DK2-4	0,871	Qualify	ELEAD4-9	0,963	Qualify
DK2-4	0,934	Qualify	ELEAD4-9	0,883	Qualify
DK3-5	0,899	Qualify	ELEAD5-11	0,928	Qualify
DK3-5	0,965	Qualify	ELEAD5-11	0,894	Qualify
DK3-6	0,941	Qualify	ELEAD5-12	0,797	Qualify
DK3-6	0,968	Qualify	KIN1-1	0,906	Qualify
DK4-7	0,932	Qualify	KIN1-1	0,704	Qualify
DK4-7	0,910	Qualify	KIN1-2	0,809	Qualify
DK4-8	0,797	Qualify	KIN2-3	0,946	Qualify
DK5-10	0,946	Qualify	KIN2-3	0,833	Qualify
DK5-10	0,967	Qualify	KIN2-5	0,951	Qualify
DK5-9	0,927	Qualify	KIN2-5	0,869	Qualify
DK5-9	0,966	Qualify	KIN3-6	0,748	Qualify
Dk6-11	0,938	Qualify	KIN3-7	0,745	Qualify
DK6-11	0,938	Qualify	KIN4-8	0,936	Qualify
DK6-12	0,770	Qualify	KIN4-8	0,865	Qualify
E-LEAD2	0,884	Qualify	KIN4-9	0,828	Qualify
E-LEAD2	0,934	Qualify	KIN4-9	0,930	Qualify
E-LEAD3	0,885	Qualify	SIM2-4	0,840	Qualify
E-LEAD3	0,833	Qualify	SIM2-6	0,868	Qualify
E-LEAD5	0,957	Qualify	SIM3-7	0,837	Qualify
E-LEAD5	0,841	Qualify	SIM4-10	0,814	Qualify
E-LEAD7	0,861	Qualify	SIM4-11	0,815	Qualify
E-LEAD7	0,941	Qualify			

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Based on Table 8. each item within the variable has a Loading Factor score > 0.70, indicating their validity and meeting the criteria for convergent validity. The item DC1 specifically has a LF 0.862 > 0.70. This means that the item is valid in measuring the variable of Digital Culture. Any changes in the Digital Culture variable will be reflected in a 74.30% variation in DC1 (0.862 x 0.862). Among the four items measuring Digital Culture, DC1 has the highest Outer loading score, indicating that any changes in the Digital Culture variable strongly manifest in the DC1 item. The same approach is applied to interpreting the items in other variables.

Tabel 9. Construct Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Digital Culture	0,893	0,900	0,921	0,699
Work Discipline	0,969	0,970	0,974	0,845
E-Leadership	0,963	0,964	0,968	0,751
Employee Performance	0,906	0,912	0,926	0,642
Management Information System	0,894	0,913	0,920	0,697

Based on Table 9. the items measuring each variable have Cronbach's alpha score > 0.60, indicating their reliability. The AVE score for the Digital Culture variable is 0.699, which means that 69.9% of the variation in the measurement items DC1, DC6, DC7, and DC12 is captured by the Digital Culture variable. Since the AVE score 0.699 > 0.50, the criteria for good Validity and Reliability are met.

Tabel 10. R-Squared

	R-square	R-square adjusted
Employee Performance	0,613	0,589

Based on Table 10. the R-Square score for the dependent variable Employee Performance is 0.613. Indicates that the structural model is moderate. The R-Square value can be used to explain the influence of specific independent variables on the dependent variable, whether it has a substantive effect. R-Square scores of 0.75, 0.50, and 0.25 can be interpreted as strong, moderate, and weak models, respectively. In Table 10, the R-Square score is 0.613, suggesting that the dependent variable Employee Performance has a moderate-level structural model [31].

The R-Square score serves as an indicator of the proportion of the dependent variable, Employee Performance, that can be explained by the independent variables. In Table 10, the R-Square score is reported as 0.613 or 61.3%. This implies that 61.3% of the variation observed in the dependent variable, Employee Performance, can be accounted for by the independent variables, namely Management Information System, Digital Culture, and Work Discipline. The remaining 38.7% of the variation is attributed to factors beyond the scope of the research model.

Tabel 11. Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	ρ-value
Management Information System → Employee Performance	0,125	0,136	0,056	2,230	0,026
Digital Culture → Employee Performance	0,248	0,259	0,101	2,449	0,014

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Work Discipline → Employee Performance	0,584	0,562	0,123	4,738	0,000
E-Leadership X MIS → Employee Performance	0,168	0,179	0,084	1,999	0,046
E-Leadership X Digital Culture → Employee Performance	-0,050	-0,042	0,090	0,555	0,579
E-Leadership X Work Discipline → Employee Performance	0,038	0,035	0,117	0,327	0,744

1) According to the test results, the path coefficient for the impact of Management Information System on Employee Performance is determined to be 0.125, with a t-statistic of 2.230 > 1.96. Additionally, the p-value of 0.026 is found to be less than the significance level of 0.05. These findings indicate a positive and significant influence of System Information Management on Employee Performance.
2) According to the test results, the path coefficient for the impact of Digital Culture on Employee Performance is determined to be 0.248, with a t-statistic of 2.449 > 1.96. Additionally, the p-value of 0.014 is found to be less than the significance level of 0.05. These findings suggest that Digital Culture has a positive and significant effect on Employee Performance.
3) According to the result, the path coefficient for the influence of Work Discipline on Employee Performance is determined to be 0.584, with a t-statistic of 4.738 > 1.96. Furthermore, the p-value of 0.00 is found to be less than the significance level of 0.05. These findings indicate a significant positive effect of Work Discipline on Employee Performance.
4) Based In accordance with the test results, the influence of Management Information System on Employee Performance, moderated by E-Leadership, is evidenced by a path coefficient of 0.168, with a t-statistic of 1.99 > 1.96. Additionally, the p-value of 0.046 is found to be less than the significance level of 0.05. These findings suggest that E-Leadership plays a significant moderating role in the relationship between Management Information System and Employee Performance. The positive interaction coefficient (0.168) indicates that E-Leadership effectively enhances the impact of Management Information System on Employee Performance.
5) Based on the test results, the influence of Digital Culture on Employee Performance, moderated by E-Leadership, exhibits a path coefficient of -0.050, with a t-statistic of 0.555, which falls below the critical value of 1.96. Furthermore, the p-value of 0.579 is greater than the significance level of 0.05. These findings indicate that E-Leadership does not significantly moderate the relationship between Digital Culture and Employee Performance.
6) Based on the test results, the influence of Work Discipline on Employee Performance, moderated by E-Leadership, is indicated by a path coefficient of 0.038, with a t-statistic of 0.327, which is below the critical value of 1.96. Additionally, the p-value of 0.744 is greater than the significance level of 0.05. These findings suggest that E-Leadership does not significantly moderate the relationship between Work Discipline and Employee Performance.

CONCLUSION

Based on the explained analysis results, we conclude the following:

1) Management Information System has a positive influence on Employee Performance. This result indicates that with an effective management information system, universities can optimize information management processes, communication, decision-making, and coordination between work units.
2) Digital Culture has a positive influence on Employee Performance. This result indicates that with a strong digital culture, universities can create a work environment that supports the use of digital technology, online collaboration, digital innovation, and adaptation to technological changes.
3) Work Discipline has a positive influence on Employee Performance. This result indicates that with good work discipline, employees tend to have high work quality, strong commitment to tasks and responsibilities, and the ability to meet deadlines and performance standards.
4) E-Leadership moderates the influence of Management Information System on Employee Performance. This result indicates that the effectiveness of implementing Management Information Systems to improve employee performance can be influenced by the presence of good E-Leadership.

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5) E-Leadership does not moderate the influence of Digital Culture on Employee Performance. This result indicates that the influence of Digital Culture on Employee Performance in universities is not dependent on the presence of E-Leadership.
6) E-Leadership does not moderate the influence of Work Discipline on Employee Performance. This result indicates that the influence of Work Discipline on Employee Performance in universities is not dependent on the presence of E-Leadership.

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