

## Measuring the effectiveness of smart digital organizations on digital technology adoption: An empirical study of educational organizations in Indonesia

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### ABSTRACT

This study investigates the mediating effect of smart digital organizations on the relationship between digital leadership, digital talent scholarships, and learning management systems on digital technology adoption. This idea was tested using a quantitative methodology in this study. The research instrument was a questionnaire filled out by the respondents. Participants in this study were all lecturers and students at Palangka Raya University, Kalimantan, Indonesia. Two hundred thirty-six participants were randomly selected for this study, and data were analyzed using a structural equation model (SEM). This study found that digital leadership, digital talent scholarships, and learning management systems have a beneficial and statistically significant influence on digital technology adoption. In addition, smart digital organizations mediate the link between digital leadership, digital talent scholarships, and learning management systems on digital technology adoption. This research is helpful for higher education institutions because information technology is necessary to face the era of globalization. The novelty of this research offers its research analysis with quantitative analysis.

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## 1. Introduction

The rapid development of information technology in this era requires appropriate adjustments in the use of information technology (Alreemy et al., 2016; Purwanto et al., 2022). Information technology's utilization includes all areas of life, including organizations and digital industries (Ales et al., 2018; Gretzel, 2022). An organization or digital sector will require an application or information system (Aldawood et al., 2019; Banjarnahor et al., 2022; Masrur, 2021). The capability of information technology to increase the efficiency and effectiveness of business processes in an organization is a tool for accelerating the organization's steps towards a smart digital organization as a digital agency (Suharno et al., 2020; Wamba-Taguimdje et al., 2020). To create an information system then needed software development methods (Bratha, 2022; Farich & Kustono, 2022; Wahono & Ali, 2021), qualified hardware infrastructure, and digitally oriented users are needed (Tulungen et al., 2022). So that in this fast-paced era, elements (leaders or employees) are required to follow the pattern of organizational needs (Maryati & Siregar, 2022). A digital leader can inspire his employees to fight for and defend ideas (Kaplan & Haenlein, 2019; Kupiek, 2021; Murashkin & Tyrväinen, 2020). An insight into implementing digital leadership benchmarks demonstrates a fast, cross-hierarchical, cooperative and team-oriented approach that often integrates innovation (Abbu et al., 2020; Ehlers, 2020; Temelkova, 2020). Digitization of education is an educational system innovation that refers to transforming or changing the system towards digital by using technology (Farich & Kustono, 2022; García-Morales et al., 2021) that can support new

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learning processes so that students have good digital talent (Gilch & Sieweke, 2021; Nurulpaik et al., 2022) and employability skills to be able to compete in society and industry (Demirkan & Spohrer, 2018; McGunagle & Zizka, 2020).

Proper digital-oriented leadership management also influences the process of adopting information technology in a company (Hashim et al., 2021; Tsou & Chen, 2022). Leaders who are adaptive to the environment, especially digital technology, are leaders who have an excellent response to change, including the decision to adopt digitalization (Ageyo & Muchunku, 2020; AlNuaimi et al., 2022). The digitalization of the world of work has provided opportunities and challenges for business people (Hervé et al., 2021). The fact is that digital technology has had a significant impact on economic growth (Brodny & Tutak, 2022; Solomon & van Klyton, 2020). The combination of digital technology and entrepreneurial orientation triggers the positive effects of digital technology on economic growth (Masa'deh et al., 2018). It is essential for companies to be able to facilitate a learning culture at all levels, both at the individual, team and organizational levels, as a vehicle for realizing smart digital organizations. Such a company will then form a learning organization. It will rely on team learning, open discussion, organizational structure and empowering employees who can make decisions and solve problems creatively by prioritizing talent management as a corporate requirement (Lenka & Chawla, 2015). One of the most important topics for the future of the workplace is the notion of digital talent (Jacobs, 2019). Digital talent has gained popularity in management literature, with a strong emphasis on digital transformation studies (Tavoletti et al., 2022). Although there is no universal definition of "digital talent," it is used to describe digital technology-related abilities and skills for a particular job (Karaboğa et al., 2021). But in building digital talent, there is a gap between supply and demand for skills, and digital talent poses a severe dilemma for many companies: they are faced with a choice of whether to acquire technology start-ups as a talent strategy or reinvent the company as a technology company, recruit new digital talent and retrain current employees (Nafi, 2021; Cardenas-Navia & Fitzgerald, 2019).

In addition to digital leadership and digital talent scholarships in the development of smart digital-oriented educational organizations, learning facilities that adopt information technology are needed, one of which is a learning management system (LMS). Because LMS be at the forefront of technology improvements to meet all of the needs of teachers and students (Cavus, 2015). Most higher education organizations have connected the LMS with other institutions' facilities, encouraged faculty use of the LMS, and offered user training and assistance (Rhode et al., 2017). The LMS aims to automate classroom administration, monitor users, archive courses, capture information about the learning process, and offer course management with reports (Horváth, 2015). E-learning necessitates significant changes in the culture and organization of institutions that choose to implement it. It also aids in the generation of new knowledge supported by IT. An integrated perspective can enable the design and control of internal and external activities as components of a smart organizational system (Oliveira et al., 2016).

## 2. Related work

Given the fundamental nature of the changes it tries to bring about in the education sphere, digital leadership is a daring leadership style. Digital leadership drives educational reform and attempts to involve learners, teachers, and all other stakeholders in the process. Transformational and transactional leadership styles with an emotional intelligence approach align well with digital leadership methods. The importance of emotional intelligence in both digital and transformational leadership centres on a leader's capacity to favourably engage students, teachers, and other educational personnel (Aldwood et al., 2019). A digital leadership style for a creative working environment must be available to inspire employees to undertake challenging and possibly hazardous innovative behaviours because the dependence on technological data and infrastructure is what enables these habits to be risky and complicated. Masrur's (2021) findings indicate that digital leadership significantly influences lecturers' instructional abilities. However, providing digital advice and cooperative learning are two areas that must improve the digital leadership quality. Improving lecturers' talents in curriculum building and comprehension of student learning styles, as well as their capability to grasp the emotional elements of students, are some items to consider while aiming to boost lecturers' academic competencies (Abbu et al., 2020; Jameson et al., 2022; Masrur, 2021). According to Antonopoulou et al. (2021), digital leadership has a somewhat favourable association with leadership effectiveness, as high performance and pleasure coincide with elevated numbers of digital leadership implementations. Furthermore, the study's findings indicate that competent leaders who implement transformational leadership and are equipped with essential digital literacy will be greater capable of carrying out organisational obligations in an academic setting (Antonopoulou et al., 2021; Maryati & Siregar, 2022). Furthermore, the research results of Tulungen et al. (2022) show that the role of digital leadership is crucial in realizing digital transformation by utilizing information technology, which will increasingly assist work processes in the government sector. In addition, with the use of big data, the leadership decision-making process will be more straightforward in implementing digital-based learning as a vehicle for dealing with digital transformation, the main implication of which is when leaders think about investing in technology, and they have to think about investing in people who can make that valuable technology by developing digital talent (Farich & Kustono, 2022). Corporations must entice digital talents to thrive in digital transformation and achieve a competitive edge (Gomez-Trujillo & Gonzalez-Perez, 2022; Liew et al., 2022). The impact of digital change and digital shortage of skills on governments, corporations, and universities, as well as the importance of their

collaboration in developing and sustaining digitally talented people in a country, was emphasized (Karaboža et al., 2021). According to the research findings of Sukma et al. (2020), the Digital Talent Scholarship (DTS) was influenced by the use of a contented use Learning Management System (LMS). LMS is a broad phrase that refers to various systems that provide online educational tools to students, professors, and administrators. It is a general phrase that refers to multiple mechanisms that organize and give students, instructors, and administrators online access to learning resources. These services generally have several core features, such as restricted access control to authorized individuals, various forms of learning content, and various communication tools. Another term for a learning management system is an online learning platform (Aldiab et al., 2019). The significance of LMS in informing the creation of future-generation educational environments or other technological innovations (Rhode et al., 2017).

Therefore, this study offers empirical research that intends to evaluate the influence of Digital Leadership (DL), Digital Talent Scholarship (DTS), and Learning Management System (LMS) via Digital Smart Organizations (DSO) on Digital Technology Adoption (DTA) as a conceptual framework. Section 3 describes the most prevalent forms of measurement.

### 3. Measurement

The measurement model had 55 items about Digital Leadership (DL), Digital Talent Scholarship (DTS), Learning Management System (LMS), Digital Smart Organizations (DSO), and Digital Technology Adoption (DTA). Digital Leadership use 17 items adopted from Masrur (2021), whereas Digital Talent Scholarship is measured across three items adopted from Farich & Kustono (2022). The Learning Management System uses 20 items adopted from Cavus (2015). 12 items for The Digital Smart Organizations adopted from Sarker et al. (2018) and Adamik & Sikora-Fernandez (2021). Finally, three items of Digital Technology Adoption Variable adopted from Purnomo et al. (2021). Five-point Likert scale information was obtained (1 means strongly disagree, and 5 means strongly agree). Sugiyono (2019) recommended conducting pilot research to determine Indonesia's accepted constructs' validity and dependability. Thirty of respondents were surveyed (10 representatives per faculty). According to Ghozali (2018), a sample size of thirty is adequate for a preliminary survey. 20 of the 30 samples were polled online, while the remaining 10 were interviewed face-to-face. As proposed by Ghozali (2018), the Cronbach alpha test was used to determine the dependability of the acquired data. The constructs' internal consistency values varied from 0.81 to 0.92, consistent with Hair et al. (2014) and Ghozali (2018) assessing that the minimal condition value is 0.7. Thus, this study expands upon a rather exhaustive preliminary survey.

**Table 1**  
Measurement

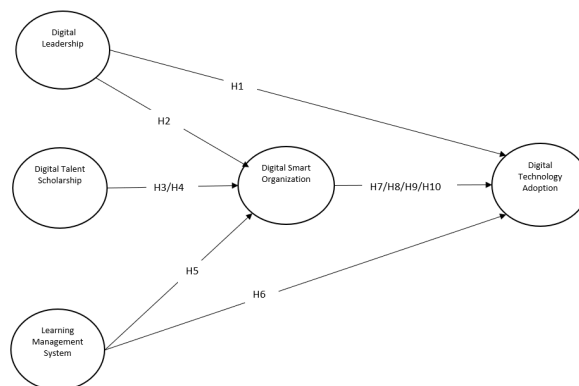
Variable	Item	Latent construct	Source
Digital Leadership	DL1	Impact the thoughts of others	Masrur (2021)
	DL2	Impact group activities	
	DL3	Intensify loyalty	
	DL4	Intensify commitment	
	DL5	Intensify discipline	
	DL6	As a performer	
	DL7	Spokesman	
	DL8	Influencer	
	DL9	Give others directions	
	DL10	Digitally provide directions	
	DL11	Obtain organizational objectives	
	DL12	Utilize digital tools	
	DL13	Creating a digital world	
	DL14	Using digital data to forecast future situations	
	DL15	Produce innovative ideas	
	DL16	Motivating subordinates to deliver greater items	
	DL17	Product evaluation	
Digital Tal-	DTS1	Instilling the importance of digital mastery of vocational students as	Farich & Kustono
	DTS2	Carrying out digital-based learning, both delivered theoretically and	
	DTS3	Developing a digital mindset so that whatever is done must be considered according to developments in the business and industrial world	

**Table 1**

Measurement

Variable	Item	Latent construct	Source
Learning Management System	LMS1	Students are guided in the path of education	Cavus (2015)
	LMS2	Knowledge is delivered to pupils in a variety of formats, including text, word, powerpoint, flash, video, audio, and so on.	
	LMS3	Students' ability to create interactive apps	
	LMS4	Students are evaluated through assignments and exams.	
	LMS5	Results distribution to pupils	
	LMS6	Communication between students and between students and teachers (e.g. discussion boards, chat, e-mail etc.)	
	LMS7	Interaction between student-led lessons	
	LMS8	Procedure for Registration	
	LMS9	Scheduling	
	LMS10	Class administration	
	LMS11	Keeping track of students, teachers, and the system (i.e. logs),	
	LMS12	Entering the exams and keeping track of the outcomes	
	LMS13	Organizing the schoolwork	
	LMS14	Keeping track of grades	
	LMS15	Reporting	
	LMS16	Student monitoring	
	LMS17	Keeping track of student attendance data	
	LMS18	Students who are aware of their own educational times,	
	LMS19	Online distribution of e-learning content	
	LMS20	Knowledge and ideas are shared	
Digital Smart Organization	DSO1	Smart administration	Sarker et al. (2018)
	DSO2	Smart communication	
	DSO3	Smart security	
	DSO4	Smart infrastructure	
	DSO5	Knowledge skill	
	DSO6	Mutual aid	
	DSO7	Individual learning	
	DSO8	Usage of new, advance technology	
	DSO9	Process support	
	DSO10	Innovation support	
	DSO11	Creation and usage of green processes and products	
	DSO12	Circular economy	
Digital Technology Adoption	DTA1	Acceptance and use of the product	Purnomo et al. (2021)
	DTA2	Acceptance and use of the service	
	DTA3	Ideas on an ongoing basis	

Based on the measurement with descriptions from previous researchers, we propose a framework as shown in Fig. 1 below.

**Fig 1.** Research Framework

Based on related work, the measurement, and the research framework, we propose the hypothesis below:

H1: Digital leadership relates to digital smart organization.

H2: Digital leadership relates to digital technology adoption.

H3: Digital talent scholarship relates to digital smart organization.

H4: Digital talent scholarship relates to digital technology adoption.

H5: Learning management systems relate to digital smart organization.

H6: Learning management systems relate to digital technology adoption.

H7: Digital smart organization relates to digital technology adoption.

H8-H10: Digital smart organization mediates the relationship between digital leadership, digital talent scholarship, and learning management system on digital technology adoption.

#### 4. Study Design

Statistical data were collected from the Faculty of Teacher Training and Education at Palangka Raya University, Kalimantan. The researchers focused on students and lecturers in the campus environment (Suseno & Basrowi, 2023)(Basrowi & Utami, 2020). Data collection includes face-to-face meetings and electronic correspondence from Oktober 2022 to December 2022. The researchers distributed 300 questionnaires and obtained 279 full responses; however, only 236 were considered valid for the final study analysis (Basrowi & Maunnah, 2019). The SEM method is used to investigate the relationship between previously mentioned variables: The Digital Leadership, Digital Talent Scholarship, Learning Management System, Digital Smart Organization, and Digital Technology Adoption (Suwarno et al., 2020). The researchers performed their descriptive analysis with Microsoft Excel 2019 and their statistical and structural analysis using SmartPLS version 3.0. SEM practice can eliminate the effect of bias (Soenyono & Basrowi, 2020). This bias, caused by measurement errors and the development of latent construct hierarchies, can be eliminated (Marwanto et al., 2020); (Suseno et al., 2018). Applying structural equation modeling, multivariate assumptions must be met, including appropriate sample size and multicollinearity evaluation (Chin, 2010); (Mustofa et al., 2023). The inflation variance factor (VIF) is used to evaluate the multicollinearity component. The value needed for this test is less than 4, which means it does not show multicollinearity. The empirical findings show that the data meet all multivariate statistical assumptions for the SEM model.

#### 5. Results

##### Outer Model Analysis

Using the convergent technique, we could determine the indicator's validity, which was then expressed as the value of the external loading factor. It specifies that the value range of 0.836 to 0.989 for the loading factor is more than enough for exploratory investigations, which are the preliminary phases of constructing a measurement scale. In this particular investigation, the outer loading value of each indicator was more than 0.70, which allowed it to pass muster in terms of convergent validity (see Table 2). The following step evaluated a variable's discriminant validity by contrasting the extracted square root coefficient of variance (AVE) from each latent factor to the correlation coefficient between the other factors in the model. It was done to determine whether or not the variable could distinguish between groups. The AVE value suggests it has a significance greater than 0.5. According to Table 1, the constructs investigated in this research had a discriminant validity greater than 0.50 (Fornell & Larcker, 1981). The value of the variable indicators is determined through the utilization of composite reliability in the very last phase. Results were judged reliable whenever the composite reliability and Cronbach's alpha were significantly higher than 0.70 (Chin, 2010).

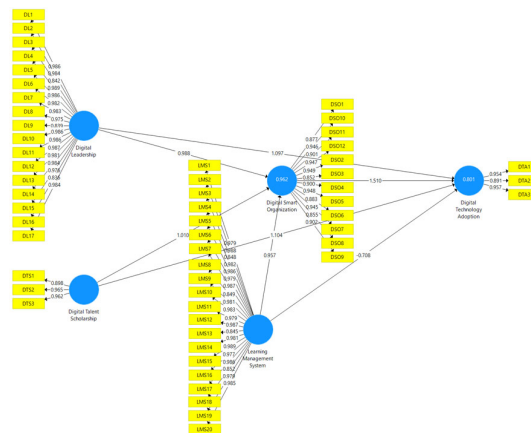


Fig 2. Run PLS Algorithm

Fig.2 depicts the findings of data processing using SmartPLS, which indicate that all construct manifestations in this investigation have loading values larger than 0.70. It demonstrates that the manifest variable with a loading value greater than 0.70 satisfies convergent validity due to its high level of validity.

**Table 2**  
Factor loading and cross loading

Variable	Items	Cross Loading	Cronbach's Alpha	rho_A	CR	AVE
Digital Leadership	DL1	0.986	0.994	0.994	0.995	0.921
	DL2	0.984				
	DL3	0.842				
	DL4	0.989				
	DL5	0.986				
	DL6	0.982				
	DL7	0.983				
	DL8	0.975				
	DL9	0.839				
	DL10	0.986				
	DL11	0.986				
	DL12	0.987				
	DL13	0.981				
	DL14	0.984				
	DL15	0.976				
	DL16	0.836				
	DL17	0.984				
Digital Talent Scholarship	DTS1	0.898	0.936	0.938	0.959	0.887
	DTS2	0.965				
	DTS3	0.962				
Learning Management System	LMS1	0.979	0.995	0.995	0.995	0.917
	LMS2	0.988				
	LMS3	0.848				
	LMS4	0.982				
	LMS5	0.986				
	LMS6	0.979				
	LMS7	0.987				
	LMS8	0.849				
	LMS9	0.981				
	LMS10	0.983				
	LMS11	0.979				
	LMS12	0.987				
	LMS13	0.845				
	LMS14	0.981				
	LMS15	0.989				
	LMS16	0.977				
	LMS17	0.986				
	LMS18	0.852				
	LMS19	0.979				
	LMS20	0.985				
Digital Smart Organization	DSO1	0.877	0.981	0.981	0.983	0.827
	DSO2	0.949				
	DSO3	0.852				
	DSO4	0.900				
	DSO5	0.948				
	DSO6	0.883				
	DSO7	0.945				
	DSO8	0.855				
	DSO9	0.902				
	DSO10	0.946				
	DSO11	0.901				
	DSO12	0.947				
Digital Technology Adoption	DTA1	0.954	0.928	0.941	0.954	0.873
	DTA2	0.891				
	DTA3	0.957				

\*) DL=Digital leadership; DTS= Digital Talent Scholarship; LMS= Learning Management System; DSO= Digital Smart Organization; DTA= Digital Technology Adoption

The calculation of the composite reliability yielded a range of 0.954 to 0.995 (more than 0.70), which demonstrated that the variable's indicators were dependable. Cronbach's alpha scores varied from 0.928 to 0.995, greater than 0.70, indicating that the indications were reliable and could be considered free of errors (Chin, 2010).

Inner Model Analysis

On the sample, each relationship is examined using a simulation based on the bootstrap approach. This test tries to reduce the incidence of anomalous research data. Test outcomes using the bootstrap approach (see Fig. 3).

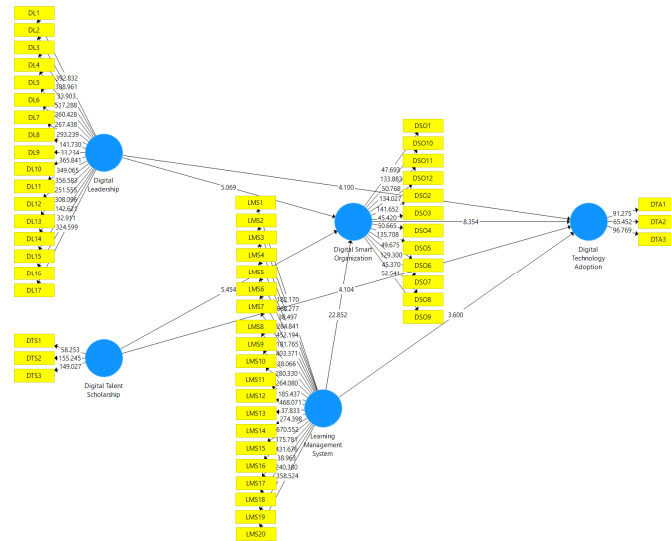


Fig 3. Bootstrapping Inner Model

Path coefficient evaluation is used to demonstrate the strength of the effect or influence of the independent variable on the dependent variable. From Figure 3, it can be deduced that the influence of Learning Management System on Digital Smart Organization has the highest path coefficient value, 22.852. Then comes the 8.354 impact of Digital Smart Organization on Digital Technology Adoption. Then, Digital Talent Scholarship on Digital Smart Organization (5.454). The impact of Digital Leadership on the Digital Smart Organization is 5.069. In addition, Digital Leadership on Digital Technology Adoption is 4.100. Finally, the influence of the Learning Management System on Digital Technology Adoption is the smallest with a value of 3.600. According to the description of the above results, all variables in this model have positive path coefficients. It indicates that the influence of an independent variable on a dependent variable is proportional to its path coefficient value.

Examining the P-Values allows one to determine the significance level attached to accepting a hypothesis. The study hypothesis may be validated if the P-Values are less than 0.05. In SmartPLS, a bootstrapping procedure is performed on a model that is valid and trustworthy, and that satisfies the feasibility requirements in order to get the P-value of the model. It can see the results of bootstrapping are in the table that follows (Table 4).

Table 4  
Path Coefficient Result

Hypothesis	Constructs*)	Original Sample	Standard Deviation	T Statistics	P Values	Results
H1	DL → DSO	0.988	0.195	5.069	0.000	Accepted
H2	DL → DTA	1.097	0.268	4.100	0.000	Accepted
H3	DTS → DSO	1.010	0.185	5.454	0.000	Accepted
H4	DTS → DTA	1.104	0.269	4.104	0.000	Accepted
H5	LMS → DSO	0.957	0.042	22.852	0.000	Accepted
H6	LMS → DTA	0.708	0.197	3.600	0.000	Accepted
H7	DSO → DTA	1.510	0.181	8.354	0.000	Accepted

\*) DL=Digital leadership; DTS= Digital Talent Scholarship; LMS= Learning Management System; DSO= Digital Smart Organization; DTA= Digital Technology Adoption

Based on the path coefficient derived between Digital Leadership and Digital Smart Organization of 0.988 with a P-Value of  $0.000 < 0.05$ , it can be stated that Digital Leadership significantly influences Digital Smart Organization. A parameter coefficient with a positive value signifies that the greater the Digital Leadership, the greater enhancement of Digital Smart Organization; hence H1 is accepted. Given that the correlation between Digital Leadership and Digital Smart Organization is 1.097 with a P-Value of  $0.000 < 0.05$ , it can be inferred that there is a meaningful relationship between the two. The parameter coefficient value, which is positive, indicates that the boost implementation of the Digital Leadership means the more robust

the Digital Technology Adoption; therefore, H2 is supported. Moreover, given that the correlation between Digital Talent Scholarship and Digital Smart Organization is 1.010 with a P-Value of  $0.000 < 0.05$ , it can be stated that there is a meaningful relationship between the two variables. If the parameter coefficient is positive, then the hypothesis that Digital Talent Scholarship increases Digital Smart Organization is H3 accepted. In conclusion, for Digital Talent Scholarship on Digital Technology Adoption of 1.104 and P-Value of  $0.000 < 0.05$ , it was determined that there was a significant relationship between Digital Talent Scholarship on Digital Technology Adoption. If the parameter coefficient has a positive value, indicating that the greater the Digital Talent Scholarship, the greater the Digital Technology Adoption, hypothesis H4 is accepted. In addition, the relationship between Learning Management System and the Digital Smart Organization and Digital Technology Adoption has a value of 0.957 and 0.708, respectively, so it can be concluded that H5 and H6 are accepted. Finally, the seventh hypothesis (H7) is also accepted, showing that the original sample value is 1.510. So, it can be concluded that the Digital Smart Organization affects Digital Technology Adoption.

In addition, to determine if The Digital Smart Organization can mediate the link between Digital Leadership, Digital Talent Scholarship, and Learning Management System on Digital Technology Adoption, the following route coefficients are examined (Table 5).

**Table 5**  
Mediation Test

Hypothesis	Constructs*)	Specific Indirect Effects		Constructs*)	Total Indirect Effects		Result
		Original Sample (O)	P Values		Original Sample (O)	P Values	
H8	DL → DSO → DTA	1.492	0.000	DL → DTA	1.492	0.000	Significant
H9	DTS → DSO → DTA	1.525	0.000	DTS → DTA	1.525	0.000	Significant
H10	LMS → DSO → DTA	1.445	0.000	LMS → DTA	1.445	0.000	Significant

\*) DL=Digital leadership; DTS= Digital Talent Scholarship; LMS= Learning Management System; DSO= Digital Smart Organization; DTA= Digital Technology Adoption

According to the mediation test (Specific Indirect Effects and Total Indirect Effects), The Digital Leaderships have the favorable effect on Digital Technology Adoption, with a significance level of 5%. Consequently, it is possible to argue that The Digital Smart Organization can influence the association between Digital Leadership and Digital Technology Adoption; therefore, Hypothesis 8 is accepted. With P values of  $0.000 < 0.05$  and a significance level of 5%, either Digital Leaderships or Digital Smart Organization enhances Digital Technology Adoption. With a 5% level of significance, The Digital Smart Organization can mediate the link of Digital Talent Scholarship and Digital Technology Adoption, where P values are  $0.004 < 0.05$ . Consequently, The Digital Smart Organization can influence the relationship between Digital Talent Scholarship and Digital Technology Adoption, so hypothesis H9 is accepted. With P values of  $0.005 < 0.05$  and a significance level of 5%, either Learning Management System or The Digital Smart Organization increasing Digital Technology Adoption level. Consequently, it may be argued that The Digital Smart Organization can mediate the relationship between Learning Management System and Digital Technology Adoption; therefore, Hypothesis 10 is accepted.

## 6. Summary and Conclusion

### *The Direct relationship*

The first hypothesis (H1) is whether Digital Leaderships positively affect The Digital Smart Organization. The results of this study prove that Digital Leaderships positively affect The Digital Smart Organization. It demonstrates that the higher the Digital Leaderships in Palangka Raya University, Kalimantan, the higher The Digital Smart Organization. Good digital leadership can create an organizational environment that is innovative and flexible, practical and transparent. Smart digital organizations can create a digital environment by utilizing several existing smartphone technologies with various supporting applications, such as various instant messenger applications currently circulating, ranging from the popular ones used are WhatsApp, line, and telegram. Besides instant messengers, many remote conferencing applications have also emerged, such as zoom meeting, google meet, Microsoft teams, etc. So that in this case, leaders can communicate and interact with their followers to exchange information. In today's digital era, it can do every job with cloud computing technology. Leaders and followers can work simultaneously on office tasks such as making bid proposals, company reports, payroll calculations, etc. So, even though we don't meet face to face, we can still improve the quality of work to be more effective and efficient and still maintain the cohesiveness of the work team.

The second hypothesis (H2) is whether Digital Leaderships positively affect Digital Technology Adoption. The results of this study did not prove that Digital Leaderships positively affect Digital Technology Adoption. It demonstrates that opening the Digital Leadership means something other than that achieving a Digital Technology Adoption can be realized. The adoption of digital technology will help leaders in various sectors, including university leaders, in making decisions to solve problems.



Digital leadership can at least do several things to adopt digital technologies, including: a) building a digital organization, b) integrating and taking advantage of technology trends and c) developing a deep understanding of the people involved (themselves, their teams and stakeholders) and their customers.

The third hypothesis (H3) is whether Digital Talent Scholarship positively affects The Digital Smart Organization. The results of this study prove that Digital Talent Scholarship positively affects The Digital Smart Organization. With the advancement of technology, educational institutions will more easily achieve their goals, compete in the era of globalization, and implement their roles according to the required circumstances. Successful education is only sometimes determined by teaching materials, learning media, infrastructure or other tools but by talent management and the organization that manages it. If you want to improve the delivery of education, then education must be involved in information and communication technology and must be creative as well as innovative in implementing talent management in education to be able to create educational organizations that are smart and digitally oriented and able to show themselves as an advantage amid global civilization.

The fourth hypothesis (H4) is whether Digital Talent Scholarship positively affects Digital Technology Adoption. The results of this study prove that Digital Talent Scholarship has a positive effect on Digital Technology Adoption. It shows that the higher the Digital Talent Scholarship held by Palangka Raya University, Kalimantan, the higher the possibility that a Digital Technology Adoption can be achieved. Human resources who can adapt to the industrial revolution paradigm must be able to adapt to future challenges with High Order Thinking Skills. With a high, flexible and systematic mindset, human resources can use modern knowledge so that digital talent in tertiary institutions will have digital capabilities. Exemplary digital implementation is an institutional success in implementing digital technology.

The fifth hypothesis (H5) is whether the Learning Management System positively affects The Digital Smart Organization. The results of this study prove that the Learning Management System has a positive effect on Digital Technology Adoption. It shows that the higher the Learning Management System held by Palangka Raya University, Kalimantan, the higher the possibility that The Digital Smart Organization can be achieved. With the Learning Management System, there are at least five benefits that can be achieved by organizations towards digital smarts in the education system, namely: 1) facilitating and expanding access to education, 2) increasing educational equality, 3) improving the quality of learning, 4) increasing teacher professionalism and 5) improve the effectiveness and efficiency of education management, governance, and administration.

The sixth hypothesis (H6) is whether the Learning Management System positively affects The Digital Technology Adoption. The results of this study prove that the Learning Management System has a positive effect on Digital Technology Adoption. It shows that the higher the Learning Management System held by Palangka Raya University, Kalimantan, the higher the possibility that a Digital Technology Adoption can be achieved. The application of the Learning Management System at Palangka Raya University, Kalimantan forces the academic community to adopt learning technology/media as a tool for developing current learning in the current pandemic era. It raises the awareness of lecturers and students about technology/learning media to be utilized, applied, and adopted by the technology to improve the quality of learning.

The seventh hypothesis (H7) is whether The Digital Smart Organization positively affects Digital Technology Adoption. The results of this study prove that The Digital Smart Organization has a positive effect on Digital Technology Adoption. It shows that the higher the Digital Smart Organization held by Palangka Raya University, Kalimantan, the higher the possibility that a Digital Technology Adoption can be achieved. A smart digital organization's success depends on the organization's extent to which it is oriented and the ability to understand the customer's perspective in its readiness to adopt social media technology innovations. Adopting technological innovation is inseparable from the speed of absorption of each user. Fast absorption can encourage digitally oriented organizations consistently and increase collectivism-based collaboration, strengthening organizational cohesion so that it becomes more agile in achieving its goals.

#### *The Indirect relationship*

The eighth hypothesis (H8) is whether the Digital Smart Organization can mediate the link between Digital Leaderships and a Digital Technology Adoption. The results of this study prove that the Digital Smart Organization can mediate this relationship. The ninth hypothesis (H9) is whether the Digital Smart Organization can mediate the link between Digital Leaderships and a Digital Technology Adoption. The results of this study prove that the Digital Smart Organization can mediate this relationship. The tenth hypothesis (H10) is whether the Digital Smart Organization can mediate the link between Digital Leaderships and a Digital Technology Adoption. The results of this study prove that the Digital Smart Organization can mediate this relationship. Forming a smart digital organization with technology can increase employees' achievement of organizational goals so that in addition to describing organizational identity, a smart organizational culture provides boundaries for organizational values that are different from other organizational cultures. The characteristics of an intelligent organization are values that guide employees in shaping their work behaviour with the help of today's digital technology. Employees must be more innovative, take risks, be creative, operate data in computers, pay attention to work details and be oriented towards achieving results. On the part of management, in making decisions, they must pay attention to the interests of employees and teamwork so that all members of the organization are required to be dynamic in achieving growth without neglecting the need for stability in the job.

Although selecting Palangka Raya University, Kalimantan as the sample in this study increases internal validity, consideration must be taken when extrapolating these results to other tertiary institutions. Our findings show that all independent variables have an impact on the dependent variable. The correlation between all variables is explained by combining these findings with previous studies to determine the degree of influence of Digital Leadership, Digital Talent Scholarship, Learning Management System, and Digital Smart Organization on Digital Technology Adoption relations. This research provides an academic contribution for future researchers, in contrast to previous studies, which used to use qualitative-analytic, while this study uses descriptive quantitative analysis as a novelty study which is expected to become additional literature for future researchers.

## References

- Abbu, H., Mugge, P., Gudergan, G., & Kwiatkowski, A. (2020). DIGITAL LEADERSHIP-character and competency differentiates digitally mature organizations. *2020 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC)*, 1–9.
- Adamik, A., & Sikora-Fernandez, D. (2021). Smart organizations as a source of competitiveness and sustainable development in the age of industry 4.0: Integration of micro and macro perspective. *Energies*, *14*(6). <https://doi.org/10.3390/en14061572>
- Ageyo, J., & Muchunku, I. G. (2020). Beyond the right of access: a critique of the legalist approach to dissemination of climate change information in Kenya. *Sustainability*, *12*(6), 2530.
- Aldawood, H., Alhejaili, A., Alabadi, M., Alharbi, O., & Skinner, G. (2019). Integrating Digital Leadership in an Educational Supervision Context: A Critical Appraisal. *2019 International Conference on Engineering Applications, ICEA 2019 - Proceedings*, 1–7. <https://doi.org/10.1109/CEAP.2019.8883484>
- Aldiab, A., Chowdhury, H., Kootsookos, A., Alam, F., & Allhibi, H. (2019). Utilization of Learning Management Systems (LMSs) in higher education system: A case review for Saudi Arabia. *Energy Procedia*, *160*(2018), 731–737. <https://doi.org/10.1016/j.egypro.2019.02.186>
- Ales, E., Curzi, Y., Fabbri, T., Rymkevich, O., Senatori, I., & Solinas, G. (2018). Working in Digital and Smart Organizations: Legal, Economic and Organizational Perspectives on the Digitalization of Labour Relations. In *Working in Digital and Smart Organizations: Legal, Economic and Organizational Perspectives on the Digitalization of Labour Relations*. <https://doi.org/10.1007/978-3-319-77329-2>
- AlNuaimi, B. K., Singh, S. K., Ren, S., Budhwar, P., & Vorobyev, D. (2022). Mastering digital transformation: The nexus between leadership, agility, and digital strategy. *Journal of Business Research*, *145*, 636–648.
- Alreemy, Z., Chang, V., Walters, R., & Wills, G. (2016). Critical success factors (CSFs) for information technology governance (ITG). *International Journal of Information Management*, *36*(6), 907–916.
- Antonopoulou, H., Halkiopoulou, C., Barlou, O., & Beligiannis, G. N. (2021). Associations between traditional and digital leadership in academic environment: During the COVID-19 pandemic. *Emerging Science Journal*, *5*(4), 405–428. <https://doi.org/10.28991/esj-2021-01286>
- Azizatun Nafi, B. (2021). Kesiapan Kebijakan Digital Talent Di Indonesia. *Public Administration Journal of Research*, *3*(1), 17–28. <https://doi.org/10.33005/paj.v3i1.75>
- Banjarnahor, A. R., Sinaga, J. B. M., Handiman, U. T., Samosir, K., Purba, B., Siagian, V., Gandasari, D., Army, W. L., Harizahayu, H., & Sihotang, J. I. (2022). Transformasi Digital dan Perilaku Organisasi. Yayasan Kita Menulis.
- Basrowi, B., & Maunnah, B. (2019). The Challenge of Indonesian Post Migrant Worker’s Welfare. *Journal of Advanced Research in Law and Economics*; Vol 10 No 4 (2019): JARLE Vol X Issue 4(42) Summer 2019DO - 10.14505/jarle.v10.4(42).07. <https://journals.aserspublishing.eu/jarle/article/view/4716>
- Basrowi, B., & Utami, P. (2020). Building Strategic Planning Models Based on Digital Technology in the Sharia Capital Market. *Journal of Advanced Research in Law and Economics*, *11*(3) (2020): JARLE Volume XI Issue 3(49) Summer 2020DO - 10.14505/jarle.v11.3(49).06. <https://journals.aserspublishing.eu/jarle/article/view/5154>
- Bratha, W. G. E. (2022). Literature Review Komponen Sistem Informasi Manajemen: Software, Database Dan Brainware. *Jurnal Ekonomi Manajemen Sistem Informasi*, *3*(3), 344–360.
- Brodny, J., & Tutak, M. (2022). Analyzing the Level of Digitalization among the Enterprises of the European Union Member States and Their Impact on Economic Growth. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(2). <https://doi.org/10.3390/joitmc8020070>
- Cardenas-Navia, I., & Fitzgerald, B. K. (2019). The digital dilemma: Winning and losing strategies in the digital talent race. *Industry and Higher Education*, *33*(3), 214–217. <https://doi.org/10.1177/0950422219836669>
- Cavus, N. (2015). Distance Learning and Learning Management Systems. *Procedia - Social and Behavioral Sciences*, *191*, 872–877. <https://doi.org/10.1016/j.sbspro.2015.04.611>
- Chin, W. W. (2010). How to write up and report PLS analyses. In *Handbook of Partial Least Squares* (hal. 188–194).
- Demirkan, H., & Spohrer, J. C. (2018). Commentary—cultivating T-shaped professionals in the era of digital transformation. *Service Science*, *10*(1), 98–109.
- Ehlers, U. D. (2020). Digital Leadership in Higher Education. *Journal of Higher Education Policy and Leadership Studies*, *1*(3), 6–14. <https://doi.org/10.29252/johepal.1.3.6>

- Farich, R., & Kustono, D. (2022). Digitalisasi Sarana Prasarana SMK Dalam Menyiapkan Digital Talent dan Employability Skills. *Jupiter: Jurnal Pendidikan Teknik ELEktro*, 07(01), 26–33.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- García-Morales, V. J., Garrido-Moreno, A., & Martín-Rojas, R. (2021). The transformation of higher education after the COVID disruption: Emerging challenges in an online learning scenario. *Frontiers in psychology*, 12, 616059.
- Ghozali, I. (2018). Aplikasi Analisis Multivariate dengan Program IBM SPSS 25. Badan Penerbit Universitas Diponegoro.
- Gilch, P. M., & Sieweke, J. (2021). Recruiting digital talent: The strategic role of recruitment in organisations' digital transformation. *German Journal of Human Resource Management*, 35(1), 53–82.
- Gomez-Trujillo, A. M., & Gonzalez-Perez, M. A. (2022). Digital transformation as a strategy to reach sustainability. *Smart and Sustainable Built Environment*, 11(4), 1137–1162.
- Gretzel, U. (2022). The smart dmo: A new step in the digital transformation of destination management organizations. *European Journal of Tourism Research*, 30(2022), 1–12. <https://doi.org/10.54055/ejtr.v30i.2589>
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. . (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, 26(2), 106–121.
- Hervé, A., Schmitt, C., & Baldegger, R. (2021). Digitalization, entrepreneurial orientation & internationalization of micro-, small-, and medium-sized enterprises. *Technology Innovation Management Review*, 10(4).
- Horváth, K. (2015). The Current Ecosystem of Learning Management Systems in Higher Education. *Teaching Mathematics and Computer Science*, 2(2), 357–383. <https://doi.org/10.13140/RG.2.1.3751.6005>
- Jacobs, R. L. (2019). Knowledge Work and Digital Talent BT - Work Analysis in the Knowledge Economy: Documenting What People Do in the Workplace for Human Resource Development (R. L. Jacobs (ed.); hal. 245–252). Springer International Publishing. [https://doi.org/10.1007/978-3-319-94448-7\\_18](https://doi.org/10.1007/978-3-319-94448-7_18)
- Jameson, J., Rummyantseva, N., Cai, M., Markowski, M., Essex, R., & McNay, I. (2022). A systematic review and framework for digital leadership research maturity in higher education. *Computers and Education Open*, 3(September), 100115. <https://doi.org/10.1016/j.caeo.2022.100115>
- Kaplan, A., & Haenlein, M. (2019). Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business horizons*, 62(1), 15–25.
- Karaboğa, T., Gürol, Y., Binici, C. M., & Sarp, P. (2021). Sustainable Digital Talent Ecosystem in the New Era: Impacts on Businesses, Governments and Universities. *Istanbul Business Research*, 49(2), 360–379. <https://doi.org/10.26650/ibr.2020.49.0009>
- Kupiek, M. (2021). Digital Leadership in the Agile World and the Present of Change Management. In *Digital Leadership, Agile Change and the Emotional Organization: Emotion as a Success Factor for Digital Transformation Projects* (hal. 1–40). Springer.
- Lenka, U., & Chawla, S. (2015). Higher educational institutes as learning organizations for employer branding. *Industrial and Commercial Training*, 47(5), 265–276. <https://doi.org/10.1108/ICT-01-2015-0001>
- Liew, A., O'Leary, D. E., Perdana, A., & Wang, T. (2022). Digital transformation in accounting and auditing: 2021 international conference of the Journal of Information Systems panel discussion. *Journal of Information Systems*, 36(3), 177–190.
- Marwanto, I. G. G. H., Basrowi, B., & Suwarno, S. (2020). The Influence of Culture and Social Structure on Political Behavior in the Election of Mayor of Kediri Indonesia. *International Journal of Advanced Science and Technology*, 29(05 SE-Articles), 1035–1047. <http://serc.org/journals/index.php/IJAST/article/view/9759>
- Maryati, S., & Siregar, M. I. (2022). Kepemimpinan Digital dalam meningkatkan kinerja organisasi peran Teknologi Informasi dan Komunikasi. *Owner*, 6(4), 3616–3624. <https://doi.org/10.33395/owner.v6i4.1176>
- Masa'deh, R., Al-Henzab, J., Tarhini, A., & Obeidat, B. Y. (2018). The associations among market orientation, technology orientation, entrepreneurial orientation and organizational performance. *Benchmarking: An International Journal*, 25(8), 3117–3142. <https://doi.org/10.1108/BIJ-02-2017-0024>
- Masrur. (2021). Digital Leadership to Improve the Pedagogical Competence of University English Lecturers in Samarinda. *Journal of Social Studies Education Research*, 12(4), 424–446.
- McGunagle, D., & Zizka, L. (2020). Employability skills for 21st-century STEM students: the employers' perspective. *Higher education, skills and work-based learning*, 10(3), 591–606.
- Mohamed Hashim, M. A., Tlemsani, I., & Matthews, R. (2021). Higher education strategy in digital transformation. *Education and Information Technologies*, 1–25.
- Murashkin, M., & Tyrväinen, J. (2020). Adapting to the new normal: A qualitative study of digital leadership in crisis.
- Mustofa, M. A., Suseno, B. D., & Basrowi. (2023). Uncertain Supply Chain Management Technological innovation and the environmentally friendly building material supply chain : Implications for sustainable environment. 11, 1405–1416. <https://doi.org/10.5267/j.uscm.2023.8.006>
- Nurulpaik, I., Purnama, W., & Ardiansyah, N. P. (2022). Development of Vocational School Facilities for Teachers to Prepare Graduates with Digital Talent and Employability Skills. *4th International Conference on Innovation in Engineering and Vocational Education (ICIEVE 2021)*, 193–197.
- Oliveira, P. C. de, Cunha, C. J. C. de A., & Nakayama, M. K. (2016). Learning Management Systems (LMS) and e-learning management: an integrative review and research agenda. *Journal of Information Systems and Technology Management*, 13(2), 157–180. <https://doi.org/10.4301/s1807-17752016000200001>

- Purnomo, M., Maulina, E., Wicaksono, A. R., & Rizal, M. (2021). Implementasi Technology Acceptance Model terhadap Adopsi Teknologi Artificial Intelligence pada Startup Digital. *Jurnal Manajemen dan Kewirausahaan*, 9(2), 173–181. <https://doi.org/10.26905/jmdk.v9i2.6516>
- Purwanto, A., Novitasari, D., & Asbari, M. (2022). The Role of Leadership, Teaching Factory (TEFA) Program, Competence of Creative Products and Entrepreneurship On Entrepreneurial Interest of the Vocational School Students. *International Journal of Social and Management Studies*, 3(5), 58–64.
- Rhode, J., Richter, S., Gowen, P., Miller, T., & Wills, C. (2017). Understanding faculty use of the learning management system. *Online Learning Journal*, 21(3), 68–86. <https://doi.org/10.24059/olj.v%vi%i.1217>
- Sarker, M. N. I., Wu, M., & Hossin, M. A. (2018). Smart governance through bigdata: Digital transformation of public agencies. 2018 International Conference on Artificial Intelligence and Big Data, ICAIBD 2018, 62–70. <https://doi.org/10.1109/ICAIBD.2018.8396168>
- Soenyono, S., & Basrowi, B. (2020). Form and Trend of Violence against Women and the Legal Protection Strategy. *International Journal of Advanced Science and Technology*, 29(05 SE-Articles), 3165–3174. <http://sersec.org/journals/index.php/IJAST/article/view/11636>
- Solomon, E. M., & van Klyton, A. (2020). The impact of digital technology usage on economic growth in Africa. *Utilities Policy*, 67(December 2020), 101104. <https://doi.org/https://doi.org/10.1016/j.jup.2020.101104>
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta.
- Suharno, H. R., Gunantara, N., & Sudarma, M. (2020). Analisis Penerapan Metode Scrum Pada Sistem Informasi Manajemen Proyek Dalam Industri & Organisasi Digital. *Majalah Ilmiah Teknologi Elektro*, 19(2), 203. <https://doi.org/10.24843/mite.2020.v19i02.p12>
- Sukma, Y. A. A., Kusumawardani, Q. D., & Wijaya, F. P. (2020). The Influence of Satisfaction Using Learning Management System on the Competencies of Digital Talent Scholarship Thematic Academy Participants. 504(ICoIE), 247–252. <https://doi.org/10.2991/assehr.k.201209.228>
- Suseno, B. D. (2023). Role of the Magnitude of Digital Adaptability in Sustainability of Food and Beverage Small Enterprises Competitiveness. *HighTech and Innovation Journal*, 4(2), 270–282.
- Suseno, B. D., Sutisna, Hidayat, S., & Basrowi. (2018). Halal supply chain and halal tourism industry in forming economic growth Bambang. *Uncertain Supply Chain Management*, 6(4), 407–422. <https://doi.org/10.5267/j.uscm.2023.8.003>
- Suwarno, S., Basrowi, B., & Marwanto, I. G. G. H. (2020). Technology of Qualitative Analysis to Understand Community Political Behaviors in Regional Head Election in Wates District, Kediri, Indonesia. *International Journal of Advanced Science and Technology*, 29(05 SE-Articles), 2624–2635. <http://sersec.org/journals/index.php/IJAST/article/view/11159>
- Tavoletti, E., Kazemargi, N., Cerruti, C., Grieco, C., & Appolloni, A. (2022). Business model innovation and digital transformation in global management consulting firms. *European Journal of Innovation Management*, 25(6), 612–636. <https://doi.org/10.1108/EJIM-11-2020-0443>
- Temelkova, M. (2020). Digital Leadership Added Value in the Digital Smart Organizations. *Journal of Engineering Science and Technology Review, Special Issue*, 252–257.
- Tsou, H.-T., & Chen, J.-S. (2022). How does digital technology usage benefit firm performance? Digital transformation strategy and organisational innovation as mediators. *Technology Analysis & Strategic Management*, 1–14.
- Tulungen, E., Maramis, J., Saerang, D., Tulungen, E. E., Saerang, D. P., Maramis, J. B., Studi Doktor Ilmu Manajemen, P., Ekonomi dan Bisnis, F., & Kunci, K. (2022). Digital Transformation: Role of Digital Leadership. 1116 *Jurnal EMBA*, 10(2), 1116–1123.
- Wahono, S., & Ali, H. (2021). Peranan Data Warehouse, Software Dan Brainware Terhadap Pengambilan Keputusan (Literature Review Executive Support Sistem for Business). *Jurnal Ekonomi Manajemen Sistem Informasi*, 3(2), 225–239.
- Wamba-Taguimdje, S.-L., Fosso Wamba, S., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2020). Influence of artificial intelligence (AI) on firm performance: the business value of AI-based transformation projects. *Business Process Management Journal*, 26(7), 1893–1924.

