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The Application of the Technology Readiness Acceptance Model on Education

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***Abstract*—The study explores the concept of technological readiness in the context of educational institutions, with a focus on the level of preparedness and extent of teacher involvement in implementing educational technology. This research is a quantitative study that examines the effect of various factors on teachers' technology readiness. The research was conducted at 10 junior high schools in Sleman, Indonesia, with a sample size of 192 teachers. The independent variable in the study is the intention, and the dependent variable is a composite score of optimism, innovativeness, discomfort, and insecurity measured using the Technology Readiness Index technique. Perceived usefulness and perceived ease to use were used as moderator variables. Data was collected using a 31-item questionnaire with a Likert scale, and the research instrument was based on an existing adoption model. The study concludes that all six variables have an impact on the use of technology in teaching and learning processes. The most significant factor is the perceived usefulness of technology, which includes six indicators such as increased productivity and improved job performance. It is suggested that interest is a crucial motivator for teachers' use of technology, as it drives their desire to improve skills, create innovative learning materials, and increase their technological literacy.**

***Index Terms*—Educational Technology, School Management, Technology Adoption, Technology Readiness**

I. Introduction

The development of science and technology has changed the work system, including in educational institutions. Rapid information and communication technology changes are now essential factors in changing education management. Improving the quality of education can leverage the quality of a nation. Technology in the teaching field provides many opportunities in various aspects of education and learning, such as academic services, access to learning materials, educational evaluation, management of lesson content, reports on student learning outcomes, and the use of digital-based learning media by teachers. The use of technology in learning can create a competitive environment for students and teachers to be more creative and innovative. Education in Technology Study (Edtech) has become a global concern, especially during a pandemic. The revitalization and development of teacher and student synergy in implementing digital technology-based education will accelerate the education revolution [1].

Educational technology has become a key solution that has proven to be a solution for distance learning by providing support to teachers with lesson planning and classroom workflow. However, in many cases, platform functionality only supports the basic level, not the complex level [2]. Integrating a technology-based curriculum is also a necessity, the involvement of technology is crucial in digital learning and teaching. However, with weak digital literacy among educators, extra training is needed to improve teaching ability [3].

Technological readiness has emerged from the study of how new technologies are adopted and capable of being implemented in an educational institution. This work begins with the analysis of telecommunication technology [4]. The concept of technology readiness is widespread, especially in the business marketing domain, where research focuses on identifying market segments that are likely to adopt new technologies, such as distance education [5]. Distance education has become a solution, especially during a pandemic, so appropriate and effective technology can be adequately realized. The Technology Readiness Index to assess technology readiness for teachers. As in the case of external customers, gaining a good understanding of teacher technology readiness is essential for making the right choices in designing, implementing, and managing teacher and technology relationships [6].

Based on the explanation above, essential factors need to be studied, and the correlation between technology readiness and acceptance in schools needs to be known. This understanding of the technology readiness index will be the basis for future strategies for implementing digital technology for education. The level of technology acceptance among educators and policymakers indicates success. This study described the level of readiness and scope of teacher mapping in schools in implementing educational technology so that it becomes an effective digital tool for students. School readiness in using technology correctly to support individual development is the key to educational success and readiness to face global competition. Government support for educating the nation's children is very influential in obtaining the best facilities, funds, and curriculum, one of which is through technology.

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A. Conceptual Model and Hypothesis

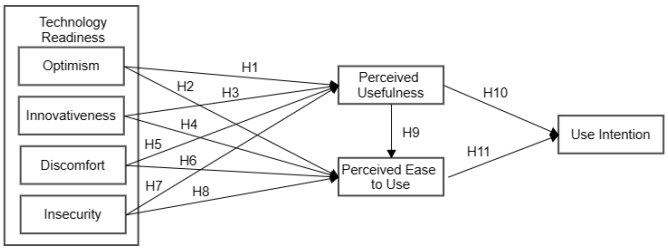

Fig. 1. The conceptual model

Based on the conceptual framework as shown in Figure 1, the hypothesis proposed in this study is as follows:

Hypothesis 1
H01: The variable optimism does not affect perceived usefulness
Ha1: The variable of optimism affects perceived usefulness

Hypothesis 2
H01: The variable optimism does not affect (perceived ease of use)
Ha1: The variable of optimism affects (perceived ease to use)

Hypothesis 3
H01: The innovativeness variable does not affect perceived usefulness
Ha1: The innovation variable influences perceived usefulness

Hypothesis 4
H01: The innovativeness variable does not affect perceived ease of use
Ha1: The innovativeness variable influences perceived ease of use

Hypothesis 5
H01: Discomfort variable does not affect perceived usefulness
Ha1: Discomfort variable affects perceived usefulness _

Hypothesis 6
H01: Discomfort variable does not affect perceived ease of use
Ha1: Discomfort variable affects perceived ease of use

Hypothesis 7
H01: The insecurity variable does not affect perceived usefulness
Ha1: The insecurity variable affects perceived usefulness

Hypothesis 8
H01: The insecurity variable does not affect perceived ease of use
Ha1: The insecurity variable affects perceived ease of use

Hypothesis 9
H01: The perceived usefulness variable does not affect perceived ease of use
Ha1: Variable perceived usefulness affects perceived ease of use

Hypothesis 10
H01: Variable perceived usefulness does not affect use intention
Ha1: Variable perceived usefulness affects the use intention

Hypothesis 11
H01: The variable perceived ease of use does not affect use intention
Ha1: The variable perceived ease of use affects use intention

II. METHODS

This quantitative research examines the effect of several variables in TRAM on teachers. Several variables, namely optimism, innovation, discomfort, insecurity, perceived usefulness, perceived ease to use, and use intention. The research was conducted at a religious-based junior high school (Madrasah Tsanawiyah) in Sleman district, Indonesia, including teachers in 10 schools (370 teachers). The sample was taken with a proportional sample and obtained from 192 teachers. An independent variable can be called an independent variable. The independent variable in this study is use intention (Z). The dependent variable is often referred to as the dependent variable, in this study using the Technology Readiness Index technique consisting of optimism (X1), innovativeness (X2), discomfort (X3), and insecurity (X4). The moderator variables are Perceived Usefulness (Y1) and Perceived Ease to Use (Y2). The data collection method uses a questionnaire method (31 items) with a Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The research instrument was an adoption instrument from research [7]. Instrument adoption adapted to field conditions.

TABLE I
THE VARIABLES AND INDICATORS

Variables	Indicator
Optimism (X_1)	live control
	Flexibility
	The belief that technology contributes to providing the latest information and influences the quality of learning
	The belief that technology offers efficiency in life
Innovation (X_2)	Ability to explore technology
	Mastery of Technology Use
	Independent in knowledge and use of technology
	Follow Technological Developments
Discomfort (X_3)	Doubts when facing technology problems
	Discomfort with using technology
	No technical understanding of the use
	Lack of understanding in using technology
Insecurity (X_4)	Doubts when facing technology problems
	Discomfort with using technology
	No technical understanding of the use
	Doubts when facing technology problems
Perceived Usefulness (Z_1)	Work done faster
	Work just got easier.
	Increase Productivity
	Improving Work Effectiveness
	Developing Job Performance
	Provide Benefits
Perceive Ease to Use (Z_2)	Easy-to-Learn System
	Easy Control System
	Easy-to-Understand System
	Job Support System
	The System Provides Convenience in the Completion of Work
	Easy-to-Use System
Use Intention (Y)	There is an Intention to Use Technology
	Using Technology Continuously
	Increasing the Use of Technology in the Future

The data analysis technique is Path Analysis using Smart PLS. Partial Least Squares (PLS) analysis is a multivariate statistical technique that compares multiple dependent and independent variables.

IV. RESULTS

A. Participants Description

The age of respondents in this study did not have any intervention. Respondents based on age range were ages <30 (5%), ages 31-35 (38%), ages 36-40 (21%), ages 41-45 (20%), ages 46-

50 (11%), and finally age> 50 (5%). Female respondents dominate the research respondents. These data show that the number of women is more than 128, and the number of men is around 64.

Respondent's employment status are government employees (174 people) and private employees (18 people).

B. Validity test

This validity test involved 5 (five) experts who understood this research. The validity test was carried out using Aiken V. Table X shows the validity test results.

TABLE II
VALIDITY TEST RESULTS

No	Expert Number					V	Remarks	Category
	1	2	3	4	5			
1	5	3	3	5	4	0.536	Valid	Moderate
2	4	5	3	5	4	0.571	Valid	Moderate
3	5	3	5	4	4	0.571	Valid	Moderate
4	4	5	4	3	4	0.536	Valid	Moderate
5	5	4	4	4	3	0.536	Valid	Moderate
6	3	3	4	5	3	0.464	Valid	Moderate
7	4	4	3	4	4	0.500	Valid	Moderate
8	3	4	5	3	5	0.536	Valid	Moderate
9	3	4	5	3	3	0.464	Valid	Moderate
10	3	5	3	4	5	0.536	Valid	Moderate
11	4	3	4	5	3	0.500	Valid	Moderate
12	5	5	5	4	5	0.679	Valid	Moderate
13	3	5	3	4	5	0.536	Valid	Moderate
14	4	4	4	5	5	0.607	Valid	Moderate
15	4	5	3	3	3	0.464	Valid	Moderate
16	5	3	5	4	4	0.571	Valid	Moderate
17	3	4	5	4	3	0.500	Valid	Moderate
18	3	5	5	5	3	0.571	Valid	Moderate
19	3	4	3	3	5	0.464	Valid	Moderate
20	5	4	4	5	5	0.643	Valid	Moderate
21	3	4	3	3	3	0.393	Valid	Low
22	3	3	3	3	5	0.429	Valid	Moderate
23	4	4	5	4	5	0.607	Valid	Moderate
24	4	3	5	5	4	0.571	Valid	Moderate
25	5	3	5	5	5	0.643	Valid	Moderate
26	3	3	5	5	3	0.500	Valid	Moderate
27	4	5	4	4	4	0.571	Valid	Moderate
28	4	3	4	5	5	0.571	Valid	Moderate
29	3	3	5	5	4	0.536	Valid	Moderate
30	5	5	3	5	3	0.571	Valid	Moderate
31	3	4	4	3	4	0.464	Valid	Moderate
						0.537	Valid	Moderate

Normality test using SPSS version 23. The results of the normality test analysis obtained a significance value of 0.200 (> 0.05), meaning that the residual values are normally distributed. The linearity test explains the deviation from the linearity value with sig. of 0.712 (> 0.05), meaning that there is a significant linear relationship between the variables X1, X2, X3, Z1, Z2, and Y. Likewise, the F value, the calculation results show that the Fcount value is 1.627 less than F table 4.35. Because the F count is smaller than the F table value, there is a significant linear relationship between the variables X1, X2, X3, Z1, Z2, and Y.

The collinearity statistics show that the tolerance value for the variable X1 is 0.247, X2 is 0.316, X3 is 0.300, X4 is 0.416, Z1 is 0.212, and Z2 is 0.315. The tolerance value is > 0.10. While the VIF value for variable X1 is 4.048, X2 is 3.165, X3 is 3.329, X4 is 2.402, Z1 is 4.716, and Z2 is 3.173. Overall VIF value less than 10.00. Therefore it can be concluded that there are no multicollinearity symptoms in the regression model.

C. The hypothesis test

The hypothesis test used in this study uses path analysis—data analysis using Smart PLS. Fig X shows the results of the analysis.

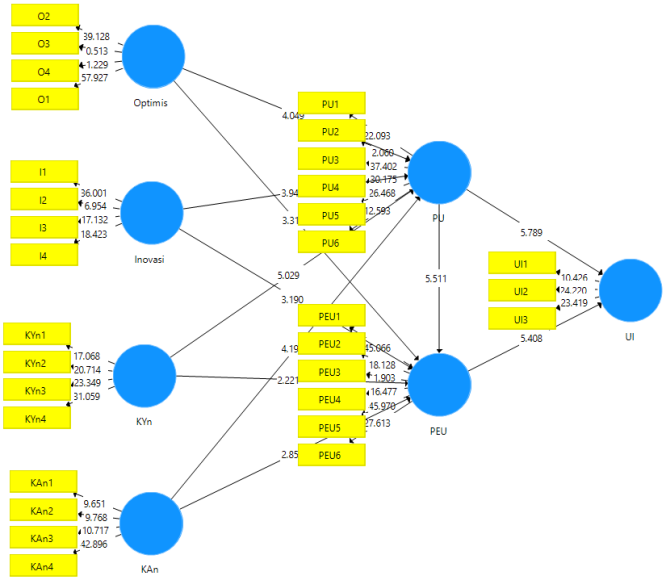

Fig. 1. Path Analysis

The figure can be explicitly interpreted from the Path Coefficients Output in Table 3.

TABLE III
PATH COEFFICIENTS OUTPUT

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Inovasi -> PEU	0.189	0.197	0.059	3.190	0.002
Inovasi -> PU	0.246	0.240	0.062	3.946	0.000
KAn -> PEU	0.141	0.143	0.050	2.850	0.005
KAn -> PU	0.222	0.232	0.053	4.197	0.000
KYn -> PEU	0.125	0.125	0.056	2.221	0.028
KYn -> PU	0.295	0.285	0.059	5.029	0.000
Optimis -> PEU	0.176	0.168	0.053	3.316	0.001
Optimis -> PU	0.234	0.239	0.058	4.049	0.000
PEU -> UI	0.428	0.437	0.079	5.408	0.000
PU -> PEU	0.383	0.381	0.069	5.511	0.000
PU -> UI	0.445	0.437	0.077	5.789	0.000

III. DISCUSSION

A. Optimism affects perceived usefulness

The optimism variable in this study uses 4 (four) indicators, namely flexibility, the belief that technology contributes to providing the latest information and influences the quality of learning, the belief that technology offers efficiency in life, and Live control. The results indicate that the variable optimism is 4.049>0.7. So that the results of this study proved that the alternative hypothesis (Ha) was accepted, namely, optimism affected perceived usefulness.

The results of this study are reinforced by research on the effect of technology readiness on perceived usefulness and perceived ease of use on the behavioral intention from the Indonesian standard quick response, which shows that optimism has a significant effect on expediency [8]. Other similar research, namely the Effects of Technology Readiness Towards Acceptance of a Mandatory Web-Based Attendance System, also found that

optimism significantly affects perceived usefulness [9]. Other studies regarding the Effects of Technology Readiness on technology acceptance in e-HRM also found that optimism significantly affects perceived usefulness [10].

Based on the discussion above, optimism influences in using and utilizing technology. Increased optimism will affect the increase in user benefits.

B. Optimism affects the perceived ease of use

The optimism variable in this study uses 4 (four) indicators, namely flexibility, the belief that technology contributes to providing the latest information and influences the quality of learning, technology offers efficiency in life, and Live control. The results means of this study indicate that the variable optimism is 3.316>0.7, so the results of this study succeeded in proving that the alternative hypothesis (Ha), namely optimism affects perceived ease of use.

This study's results align with optimism and innovativeness, which strongly drives perceived ease of use and perceived usefulness [11]. The four-factor constructs of technology readiness (innovativeness, optimism, discomfort, and insecurity) significantly impact the perceived ease of use [12]. Optimism and innovativeness dimensions of technology readiness positively influenced perceived usefulness and perceived ease of use [13].

Based on the discussion above, teacher optimism in using technology will bring convenience. The higher the teacher's optimism, the higher the confidence in using new technology.

C. Innovativeness affects perceived usefulness

The innovation variable in this study uses 4 (four) indicators: the ability to explore technology, mastery in using technology, independence in knowledge and use of technology, and keeping abreast of technological developments. The results indicate that the innovativeness variable has 3.946 > 0.7. This result proved that the alternative hypothesis (Ha), namely innovativeness affects perceived usefulness.

This study's results align with the statement that Personal innovativeness has a positive and significant effect on Perceived Usefulness [14]. Perceived ease of use (PEOU) and perceived usefulness (PU) partially mediate the relationship between personal innovativeness (PI) and behavioral intention (BI) [15].

Based on the discussion above, it can be concluded that innovation influences the use of technology. Teachers who have high innovation can make good use of technology.

D. Innovativeness affects perceived ease to use

The innovation variable in this study uses 4 (four) indicators: the ability to explore technology, mastery in using technology, independence in knowledge and use of technology, and keeping abreast of technological developments. The results mean that the innovativeness variable is 3.190>0.7. This study's results proved that the alternative hypothesis (Ha), namely innovativeness, affects perceived ease of use.

The finding supports the theory. Optimism and innovativeness are proven to positively and significantly influence perceived usefulness and ease of use. Perceived usefulness and perceived ease of use positively and significantly influence behavioral intention [8]. Perceived ease of use (PEOU) and perceived usefulness (PU) partially mediate the relationship between personal innovativeness (PI) and behavioral intention (BI) [15].

Based on the discussion above, teachers with a high innovation character will perceive the ease of using new technology.

E. Discomfort affects the perceived usefulness

The inconvenience variable in this study uses 4 (four) indicators, namely doubt when facing technology problems, discomfort in using technology, lack of technical understanding of use, and lack of understanding in using technology. The results indicate that the innovativeness variable is 5.029>0.7. So that the results of this study succeeded in proving that the alternative hypothesis (Ha), namely discomfort affects perceived usefulness.

The results are coherent with several theories which state that discomfort is proven to have a positive and significant influence on behavioral intention [16]. Therefore, discomfort is an essential point that teachers need to pay attention to be able to motivate the use of learning technology. It also affects the attitude toward using [17]. Teachers who use new technology or systems implemented in schools experience problems, which causes teachers discomfort in using digital technology [18].

Based on the discussion above, teachers' discomfort in using digital technology needs to be anticipated with the ease that can be raised by the technology used. Ease in using this technology will ultimately shape teachers' mindsets and attitudes in using and utilizing technology in learning. It means that discomfort will be substituted for understanding and usefulness in solving problems and also helping to facilitate learning in schools.

F. Discomfort affects perceived ease to use

The inconvenience variable in this study uses 4 (four) indicators, namely doubt when facing technology problems, discomfort in using technology, lack of technical understanding of use, and lack of understanding in using technology. The results indicate that the innovativeness variable is 2.221>0.7. So the results proved that the alternative hypothesis (Ha), namely discomfort, affects perceived ease of use.

The results are in line with the previous studies, which stated that discomfort makes users not want to work using technology [19]. The ease of use of technology is due to the ability of the user to avoid discomfort in using technology [20].

Ease of use of technology as a reasoned action in the context of technology users, so that someone's reasons for seeing the benefits and ease of use of IT make the person's actions/behavior a benchmark in accepting a technology [21].

Based on the discussion above, discomfort is a factor that must be avoided when using technology in learning, and this will have a direct impact on the ease of use. Discomfort is an element that needs attention, both the teacher himself and technology service providers and policymakers using technology. It aims to understand to teachers that the ease of using technology will increase comfort in completing assignments and support related to the learning process.

G. Insecurity affects the perceived usefulness

The insecurity variable in this study uses 4 (four) indicators, namely doubt when facing technology problems, discomfort in

using technology, Lack of technical understanding of use, and Doubt when facing technical problems. It indicates that the innovativeness variable is 4.197 > 0.7. So that the results of this study succeeded in proving that the alternative hypothesis (Ha), namely insecurity affects perceived usefulness.

The results are in line with the other research. Technology that is not safe and has the potential for undesirable things to happen will not be used by users [22]. Likewise, for teachers at school, if something happens, such as a system being deleted or privacy data leaking, then indirectly, the technology has no practical value [23]. The inconvenience is that users will not use it, so they choose to store data safely [21].

Based on the discussion above, technology insecurity directly impacts the usefulness of the technology itself. Users will prefer and determine the technology used to protect data and privacy. It is an essential point for expediency in the use of technology. In short, insecurity in using technology will make users not use technology. It means that the perspective of an approach to data security must be protected.

H. Insecurity affects perceived ease to use

The insecurity variable in this study uses 4 (four) indicators, namely doubt when facing technology problems, discomfort in using technology, Lack of technical understanding of use, and Doubt when facing technical problems. It indicates that the innovativeness variable is 2.850 > 0.7, so the results proved that the alternative hypothesis (Ha), namely insecurity, affects perceived ease of use.

The results of the data analysis give a high score on this variable. It means that insecurity in the use of technology has an adverse impact, so ease of use must be considered [17]. Of course, uncomfortable users will leave the technology being used [24]. That is, there is no ease in use because the user feels that insecurity must be avoided.

Based on the discussion above, teacher insecurity in using technology will affect the ease of use. So that teachers who have the technology and feel insecure in its use will choose to overcome the problem of its use. Technology is an integral part of teachers in supporting preparation, process and implementation, and evaluation in learning. Unsafe technology will certainly not be used so that it affects how the teacher as a user can handle it and is easy to use.

I. Perceived usefulness affects perceived ease to use

The variable of perceived usefulness has 6 (six) indicators. Namely, jobs were completed faster, became more manageable, increased productivity, increased work effectiveness, developed job performance, and provided benefits. The innovativeness variable is 5.511 > 0.7, so the results proved that the alternative hypothesis (Ha), namely insecurity, affects perceived ease of use.

The findings are in line with the statement that perceived ease of use plays a significant and essential role in affecting consumers' intention to repurchase, both directly and indirectly, toward customer satisfaction and trust, in which trust plays a more substantial role as a mediator as compared to satisfaction [25]. The same finding was also conveyed by other research results that perceived ease of use is positively associated with continuance intention in the context of e-text [26]. Usefulness is a strong determinant of acceptance of information technology [27].

Based on the discussion above, any technology used for the learning process or school education system can provide convenience—both ease of use and ease of completion of work. Appropriate technology will, of course, be utilized continuously. Likewise, concerning the long-term use of technology, the technology used can overcome problems and provide user convenience.

J. Perceived usefulness affects the use intention

The variable of perceived usefulness has 6 (six) indicators. Namely, jobs were completed faster, became more accessible, increased productivity, increased work effectiveness, developed job performance, and provided benefits. The results show that the innovativeness variable is 5.789 > 0.7. So that the results of this study succeeded in proving that the alternative hypothesis (Ha), namely insecurity affects use intention.

The above research results align with the statement that perceived usefulness, perceived behavioral control, perceived security, and perceived trust significantly influence behavioral intention [28]. Perceived Usefulness, Perceived Risk, and Trust significantly affect consumer interest in transacting [29]. If a system is relatively easy to use, individuals will be more willing to learn its features. Users finally intend to continue using it [24]. Perceived usefulness and trust also mediate the relationship between perceived ease of use and continuance intention [30].

Based on the discussion above, interest is an important motivation that influences the patterns and actions of users. Teachers, one of the users in the field of education, will better understand and use technology on an ongoing basis. Interest is part of the teacher's desire to use technology both in its daily use and in supporting the learning process, such as by improving skills, creating innovative learning media, and of course, related to high adaptability/technology literacy.

K. Perceived ease of use affects use intention.

The perceived ease of use variable in this study uses 6 (six) indicators, namely Easy to Learn Systems, Easy to Control Systems, Easy to Understand Systems, Work Support Systems, Systems Providing Ease in Work Completion, and Easy to Use Systems. The results explain that the innovativeness variable is 5.789>0.7, so the results of this study proved that the alternative hypothesis (Ha), namely insecurity, is influential on use intention.

Based on the discussion above, the ease of using technology is the same as what users are able and willing to do and use it. Of course, with technology that is easy to use, it will become addictive for its users, significantly increasing interest in using it [31]. Teachers who can develop themselves through innovative learning media, when they understand how to use them efficiently, will develop other learning media as this ease can increase interest in using the application or software.

IV. Conclusion

After analyzing and measuring the intensity of use, utilization, and ease of use of technology so that it can be used in daily teaching and learning processes, it can be concluded that the six existing

variables, all influence the tendency to use technology for learning activities. The variable that has a significant effect is the perceived usefulness variable to use intention. Variable perceived usefulness has 6 (six) indicators: work completed faster, work made more accessible, increased productivity, increased work effectiveness, developed job performance, and provided benefits. Based on the discussion above, interest is an important motivation that influences the patterns and actions of users. Teachers, one of the users in the field of education, will better understand and use technology on an ongoing basis. Interest is part of the teacher's desire to use technology both in its daily use and in supporting the learning process, such as by improving skills, creating innovative learning media, and of course, related to high adaptability or technological literacy.

REFERENCES

[1] A. Qurtubi, "Educational Management Using E-Learning to Maximize Learning Efficiency and Speed Up the Industrial Revolution 4.0." *AL-ISHLAH: Jurnal Pendidikan*, vol. 13, no. 3, pp 2319-2326, 2019.

[2] R. Castro, "Blended learning in higher education: Trends and capabilities," Education and Information Technologies, vol. 24, no. 4, pp. 2523-2546, 2019.

[3] C. Sánchez-Cruzado, R. Santiago Campión and M. T. Sánchez-Compaña, "Teacher digital literacy: The indisputable challenge after COVID-19," Sustainability, vol. 13, no. 4, 1858, 2021.

[4] H. Damerji and A. Salimi, "Mediating effect of use perceptions on technology readiness and adoption of artificial intelligence in accounting," Accounting Education, vol. 30, no. 2, pp. 107-130, 2021.

[5] S. El Alfy, J. M. Gómez and D. Ivanov, "Exploring instructors' technology readiness, attitudes and behavioral intentions towards e-learning technologies in Egypt and United Arab Emirates," Education and Information Technologies, vol. 22, pp. 2605-2627, 2017.

[6] A. J. Romiszowski. "Designing instructional systems: Decision making in course planning and curriculum design," Routledge, 2016.

[7] A. Parasuraman and C. L. Colby, "An Updated and Streamlined Technology Readiness Index: TRI 2.0," J Serv Res, vol. 18, no. 1, pp. 59–74, 2015, doi: 10.1177/1094670514539730.

[8] S. N. Faizani and A. D. Indriyanti, "Analisis Pengaruh Technology Readiness terhadap Perceived Usefulness dan Perceived Ease of Use terhadap Behavioral Intention dari Quick Response Indonesian Standard (QRIS) untuk Pembayaran Digital (Studi Kasus: Pengguna Aplikasi e-Wallet Go-Pay, DANA, OVO," Journal of Emerging Information System and Business Intelligence (JEISBI), vol. 2, no. 2, pp. 85–93, 2021.

[9] M. A. Nugroho and M. Andryzal Fajar, "Effects of Technology Readiness Towards Acceptance of Mandatory Web-Based Attendance System," Procedia Comput Sci, vol. 124, pp. 319–328, 2017, doi: 10.1016/j.procs.2017.12.161.

[10] E. Murat and E. Nihat, "Effects of Technology Readiness on technology acceptance in e-HRM," The journal of knowledge Economy & Knowledge Management, vol. 9, no. 11, pp. 416–419, 2014.

[11] S. A. Rahman, S. K. Taghizadeh, T. Ramayah, and M. M. D. Alam, "Technology acceptance among micro-entrepreneurs in marginalized social strata: The case of social innovation in Bangladesh," Technol Forecast Soc Change, vol. 118, pp. 236–245, 2017, doi: 10.1016/j.techfore.2017.01.027.

[12] S. Shin and W. J. Lee, "The effects of technology readiness and technology acceptance on NFC mobile payment services in Korea," Journal of Applied Business Research, vol. 30, no. 6, pp. 1615–1626, 2014, doi: 10.19030/jabr.v30i6.8873.

[13] N. Erdoğmu and M. Esen, "An investigation of the effects of technology readiness on technology acceptance in e-HRM," Procedia Soc Behav Sci, vol. 24, pp. 487–495, 2011, doi: 10.1016/j.sbspro.2011.09.131.

[14] R. S. Jaya, I. N. Udayana, and P. D. Cahyani, "Pengaruh Social Influence Dan Personal Innovativeness Terhadap Perceived Usefulness Melalui Behavioral Intention Pengguna Traveloka (Studi Kasus: Pada Mahasiswa Ust Yogyakarta)," Buletin Ekonomi: Manajemen, Ekonomi Pembangunan, Akuntansi, vol. 18, no. 1, p. 35, 2021, doi: 10.31315/be.v18i1.5622.

[15] M. S. Lee, "Effects of personal innovativeness on mobile device adoption by older adults in South Korea: the moderation effect of mobile device use experience," International Journal of Mobile Communications, vol. 17, no. 6, p. 682, 2019, doi: 10.1504/ijmc.2019.102719.

[16] S. N. Faizani and A. D. Indriyanti, "Analisis pengaruh rechnology readiness terhadap perceived usefulness dan perceived ease of use terhadap behavioral intention dari quick response indonesian standard (qris) untuk pembayaran digital (studi kasus: pengguna aplikasi e-wallet go-pay, dana, ovo, dan linkaja di surabaya)," Journal of Emerging Information Systems and Business Intelligence, vol. 2, no. 2, pp. 85–94, 2021, Accessed: Jan. 23, 2023. [Online]. Available: https://ejournal.unesa.ac.id/index.php/JEISBI/article/download/39738/34603

[17] I. E. Tyas and E. S. Darma, "Pengaruh perceived usefulness, perceived ease of use, perceived enjoyment, dan actual usage terhadap penerimaan teknologi informasi: studi empiris pada karyawan bagian akuntansi dan keuangan baitul maal wa tamwilWilayah daerah istimewa yogyakarta dan sekitarnya," Review Akuntansi dan Bisnis Indonesia, vol. 1, no. 1, pp. 25–35, 2017, Accessed: Jan. 23, 2023. [Online]. Available: http://journal.umy.ac.id/index.php/rab

[18] S. Andayani, "Analisis kesiapan penerimaan pengguna terhadap e-learning menggunakan model tram," Jurnal Sistem dan Teknologi Informasi dan Komunikasi, vol. 3, no. 2, pp. 1–8, 2021, [Online]. Available: https://forms.gle/gNfzXFVGqxdND14q9

[19] Ahmad, "Persepsi manfaat, persepsi kemudahan, keamanan danketersediaan fitur terhadapminat ulangnasabah bankdalammenggunakaninternet banking(studi pada program layananinternetbankingbri)," Jurnal Studi Manajemen, vol. 8, no. 1, pp. 1–11, 2014, Accessed: Jan. 23, 2023. [Online]. Available: http://repository.stei.ac.id/1990/1/Ratna%20Asri%20Saras%20Sati%2021177500443_ArtikelIndonesia.pdf

[20] N. W. Gita and G. Juliarsa, "Persepsi kepercayaan, kegunaan, kemudahan penggunaan, keamanan dan minat ulang menggunakan mobile banking Jenius," E-Jurnal Akuntansi, vol. 31, no. 8, pp. 2086–2090, Aug. 2021, doi: 10.24843/eja.2021.v31.i08.p16.

[21] M. W. Adhiputra, "Aplikasi tam dalam pengguna layanan internet," Jurnal Bisnis dan Komunikasi, vol. 2, no. 1, pp. 1–12, 2019.

[22] T. Y. L. Kuswanto and Z. Baridwan, "Pengaruh kepercayaan, persepsi manfaat, persepsi kemudahan, dan persepsi keamanan terhadap minat penggunaan transaksi online," Jurnal Ilmiah Mahasiswa FEB Brawijaya, vol. 4, no. 2, pp. 1–29, 2016, Accessed: Jan. 23, 2023. [Online]. Available: https://jimfeb.ub.ac.id/index.php/jimfeb/article/view/2680

[23] M. L. Kristianti and R. Pambudi, "Analisis pengaruh persepsi kemudahan, persepsi kemanfaatan, persepsi tingkat keamanan, dan fi tur layanan terhadap penggunaan mobile banking pada mahasiswa di dki jakarta," Jurnal Akuntansi, vol. 11, no. 2, pp. 50–67, 2019, Accessed: Jan. 23, 2023. [Online]. Available: https://media.neliti.com/media/publications/267907-analisis-pengaruh-persepsi-kemudahan-per-a08abd38.pdf

[24] M. S. Mahardika, A. Fauzi, and Mardi, "Pengaruh kemudahan penggunaan, keamanan dan persepsi risiko terhadap minat penggunaan financial technology (fintech) payment linkaja syariah," Indonesian Journal of Economy, Business, Entrepreneurship and Finance, vol. 1, no. 3, pp. 1–12, 2021, Accessed: Jan. 23, 2023. [Online]. Available: https://media.neliti.com/media/publications/267907-analisis-pengaruh-persepsi-kemudahan-per-a08abd38.pdf

[25] K. Keni, "How perceived usefulness and perceived ease of use affecting intent to repurchase?," Jurnal Manajemen, vol. 24, no. 3, pp. 481–477, Oct. 2020, doi: 10.24912/jm.v24i3.680.

[26] A. Abd. Hamid, F. Z. A. Razak, A. A. Bakar, and W. S. W. Abdullah, "The effects of perceived usefulness and perceived ease of use on continuance intention to use e-government," Procedia Economics and Finance, vol. 35, no. 3, pp. 644–649, 2016, doi: 10.1016/s2212-5671(16)00079-4.

[27] S. Setyo Iriani and A. Lestari Andjarwati, "Analysis of perceived usefulness, perceived ease of use, and perceived risk toward online shopping in the era of covid-19 pandemic," Systematic Reviews in Pharmacy, vol. 11, no. 12, pp. 313–320, 2020, Accessed: Jan. 23, 2023. [Online]. Available: https://statik.unesa.ac.id/simia/uploads/file_artikel/file_artikel_e0af0e94-0c65-43ea-9f42-981e714e7c9b.pdf

[28] Z. Baridwan and A. Majid Octavika, "He influence of perceived usefulness, ease of use, behavioral control, security and trust towards the behavioral intention to use go-pay," Jurnal Ekonomi dan Bisnis , vol. 5, no. 4, pp. 1–18, 2010, [Online]. Available: www.lazada.co.id

[29] Y. A. Nugroho, "The effect of perceived ease of use, perceive of usefulness, perceive risk and trust towards behavior intention in transaction by internet,"

Business and Entrepreneurial Review, vol. 9, no. 1, pp. 79–90, 2009, [Online]. Available: http://www.angkasa-online.com/

[30] A. Abd. Hamid, F. Z. A. Razak, A. A. Bakar, and W. S. W. Abdullah, "The effects of perceived usefulness and perceived ease of use on continuance intention to use e-government," Procedia Economics and Finance, vol. 35, pp. 644–649, 2016, doi: 10.1016/s2212-5671(16)00079-4.

[31] D. Jatimoyo, F. Rohman, and A. Djazuli, "The effect of perceived ease of use on continuance intention through perceived usefulness and trust," International Journal of Research in Business and Social Science (2147- 4478), vol. 10, no. 4, pp. 430–437, Jun. 2021, doi: 10.20525/ijrbs.v10i4.1223.

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