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THE ROLE OF LEARNING AGILITY ON DIGITAL STRESS

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ABSTRACT

Companies are transforming along with the increasing development of advanced digital technology. Learning agility reflects the willingness and ability of individuals to learn new competencies with the aim of being able to work in first, difficult, or different conditions (Lombardo & Eichinger, 2000). Meanwhile, digital stress is a phenomenon that arises from a person's inability or difficulty in adapting to the development of technological system whose scope of use is increasingly widespread to complete the demands of their work (Fischer et al., 2021). This study aims to see the role of learning agility on digital stress among employees. The research method used is descriptive quantitative with convenience sampling technique. Data collection was carried out using questionnaire which use Adaptation of the Learning Agility Measurement Tool for Employees to Improve Organizational Agility by Wardhani et al. (2022) consisting of 4 dimensions with a total of 18 items and the Digital Stressor Scale by Fischer et al. consisting of 10 dimensions and in each dimension, there are 5 (five) items with a total of 50 items. Both test tools have a 5-point Likert Scale consisting of never to always and strongly disagree to strongly agree. The participants in this study were 208 employees who had worked at least one year. The results of the study show that there is a significant role of learning agility on digital stress.

Keywords: *learning agility, digital stress, employee*

1. PREFACE

Changes that follow technological developments are called digital transformation. According to Royyana (2018, as cited in Panggabean, 2021), digital transformation is the use of digital technology that can radically improve and achieve the company's expected performance and goals. Digital transformation requires companies to have adequate technology and improve the capabilities of their employees with the latest technology. The use of technology in companies is not only in the IT (Information Technology) department, but also in several departments in the company such as HR (Human Resources), Finance, and others.

Digitalization in general has positive and negative impacts on employees and companies. In a study conducted by Awaluddin (2023), digitalization has a very relevant positive impact, namely (a) digitalization increases efficiency and effectiveness in work management; (b) increases objectivity in employee performance assessment; (c) increases transparency and accountability in work management; and (d) digitalization provides a form of increasing employee motivation and job satisfaction. Employee job satisfaction itself is proven by the results of research from Shidqi et al. (2023) which shows that digitalization of company systems has a positive and significant effect on job satisfaction. The negative impacts of digitalization are (a) greater complexity in performance assessment so that the obstacles experienced will be greater; and (b) increased information security risks (Awaluddin, 2023).

It is undeniable that the digitalization which is occurring can cause digital stress. Digital stress is a phenomenon that arises due to a person's inability or difficulty in adapting to the development of a technological system whose scope of use has become wider to complete the work demands (Fischer et al., 2021). Digital stress is often better known as technostress. Brod (1984) defines

technostress as a modern disease that attacks individuals because of their inability to deal with Information Communication Technology (ICT) phenomena in a healthy way. Therefore, digitalization can cause digital stress or technostress. An employee needs to adapt to digitalization to avoid digital stress as stated in the journal Rachmayanti et al. (2024) which stated that the development of digital technology encourages each individual to adapt to this technology.

A great adaptability and flexibility in learning agility are required by individuals to actively adopt digital approaches. A person's ability to quickly develop new effective behaviours based on new experiences and to easily move from one idea to another both within and across experiences is called Learning Agility (LA). According to Gravett & Caldwell (2016) in Riswan et al. (2021), learning agility is also defined as the ability of workers to adapt and have the desire to achieve optimal results.

Kim et al. (2018, as cited in Vinesian et al., 2023) stated that individuals can have a positive perception of digital technology as a learning tool and integrate it into the work process because they have good proactive intentions and learning agility. In Rachmayanti et al. (2024), it is stated that the development of digital technology encourages each individual to adapt to the technology. There are not any researches that can be found about the role among these 2 variables. Therefore, the hypothesis of this research is there is a role of learning agility on digital stress.

2. RESEARCH METHOD

Learning agility is defined as an individual's willingness and ability to learn new competencies with the aim of being able to work in new, difficult, or different conditions (Lombardo & Eichinger, 2000). Learning agility has four dimensions. There are people agility, result agility, mental agility, and change agility. Digital stress is a stress phenomenon that arises from the inability or difficulty of individuals to adapt to the development of broader technological systems to complete their work demands (Fischer et al., 2021). There are ten dimensions of digital stress. There are complexity, conflicts, insecurity, invasion (of privacy), overload, safety, social environment, technical support (lack of), usefulness (lack of), and unreliability.

H1: There is a role of learning agility on digital stress.

Samples

This study uses convenience sampling technique. Convenience sampling technique is a sampling which involves respondents who are convenient to the researcher. This means the respondents are easy to be reached out by researcher. Sampling is done by selecting participants based on certain criteria that are relevant to the research objectives. The criteria in this study include employees who have worked in the organization for at least one year, their last education is senior high school/vocational high school/equivalent, and use ICT to complete their daily tasks. Within these criteria, this study managed to collect 208 participants.

Measurement

For the learning agility variable in this study, a questionnaire from Wardhani et al. (2022) was used, which is Learning Agility Measurement Tool for Employees to Improve Organizational Agility that adapts the Learning Agility Scale by Lombardo & Eichinger (2000). This questionnaire consists of 4 dimensions with total of 18 items. This questionnaire uses 5 Likert scales with a scale of 1 (never) to scale 5 (always). The few items of this questionnaire are "*Saya*

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senang ketika bekerja dengan orang lain untuk menyelesaikan masalah.", "*Saya mengingat informasi baru dengan mudah.*", and "*Saya tetap merasa nyaman dalam kondisi pekerjaan yang berubah.*"

Table 1
Reliability Test on Learning Agility Measurement

Dimensions	*N*	*Reliability*
People Agility	5	.681
Result Agility	5	.724
Mental Agility	4	.650
Change Agility	4	.725

For the digital stress variable, The Digital Stress Scale by Fischer et al. (2021) was used, which was adapted from The Technostress Scale by Ragu-Nathan (2016). This questionnaire consists of 10 dimensions and each dimension has 5 items with total of 50 items. This measuring instrument also uses 5 Likert scales from a scale of 1 (Strongly Disagree/SD) to a scale of 5 (Strongly Agree/SA). The few items of Digital Stress Scale, there are "*Seringkali tugas yang menggunakan Teknologi Informasi dan Komunikasi (TIK) di tempat kerja terasa terlalu rumit untuk saya selesaikan.",* "*Saya takut peran saya akan digantikan oleh mesin.",* and "*Informasi pribadi saya terlalu mudah diakses dengan adanya TIK.*"

Table 2
Reliability Test on Digital Stress Measurement

Dimensions	*N*	*Reliability*
Complexity	5	.923
Conflicts	5	.946
Insecurity	5	.929
Invasion (of privacy)	5	.937
Overload	5	.926
Safety	5	.926
Social Environment	5	.915
Technical Support	5	.934
Usefulness (lack of)	5	.916
Unreliability	5	.938

Data collection and analysis
The questionnaire used Google form and was distributed through various social media, such as Instagram and LinkedIn on September 9 until September 23, 2024. The Google Form was structured into four sections. The first section contained a preface explaining the researcher's identity, participant criteria, and informed consent. The second section contains the process of filling out the learning agility questionnaire with a scale with a range of answer options from "never" to "always". This section consists of 18 positive items divided into four dimensions.

The digital stress questionnaire was in the third section and began with filling information with a scale with a range of answer options from "strongly disagree" to "strongly agree". This questionnaire has 50 items and all of them are positive items. The fourth section focused on demographic information from participants, such as name, gender, age, education level, marital status, employment status, position, division, employee tenure, and work systems. The data was analysed using SPSS 25 software. The reliability testing was conducted using Cronbach's alpha and data normality test was checked by using the One-Sample Kolmogorov-Smirnov Test. The correlation between the variables was analysed using Pearson's correlation test. Lastly, the simple linear regression was used to test the research hypothesis.

3. RESULT AND DISCUSSION

Researchers conducted a descriptive statistical test on learning agility. The results of the test which can be seen on Table 3 showed an empirical mean value on the measuring instrument of 4.32 with a hypothetical mean value on the measuring instrument used of 2.50 with a standard deviation of 0.45585. This indicates that the participants have a high level of learning agility.

Table 3
Descriptive Statistical Test on Learning Agility

	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
Learning agility	208	1.00	5.00	4.3205	.45585

The descriptive statistical test on digital stress showed an empirical mean value on the measuring instrument of 2.57 with a hypothetical mean value on the measuring instrument used of 2.5 with a standard deviation of 1.11461. This indicates that the level of digital stress among the participants can be considered moderate.

Table 4
Descriptive Statistical Test on Digital Stress

	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
Digital Stress	208	1.00	5.00	2.5738	1.11461

The One Sample Kolmogorov-Smirnov test was conducted to prove the normality. The normality test showed that the learning agility and digital stress variables are proven to have normally distributed data. The results of the normality test on the learning agility and digital stress variables obtained a residual Z value of 1.49 and p of 0.184 ($p > .05$). It can be concluded that the normality test of the two variables shows a significance result above .05 which means the data is normally distributed. This result can be seen on Table 5.

Table 5
Normality Test

	Unstandardized Residual
N	208
Kolmogorov-Smirnov Z	1.496
Asymp. Sig. (2-tailed)	.184

Researchers conducted a Pearson correlation test which can be seen on Table to answer the research hypothesis. Based on Table 6, the significance value is 0.048, which is less than 0.05, indicating that the variables of learning agility and digital stress are significantly correlated. The Pearson Correlation value of -0.137 suggests a negative correlation between the variables of learning agility and digital stress. It can be interpreted that the higher the learning agility value, the lower the digital stress value will be and vice versa.

Table 6
Correlation Test between Learning Agility and Digital Stress

		Learning Agility	*Digital Stress*
Learning Agility	Pearson Correlation	1	-.137
	Sig. (2-tailed)		.048
Digital Stress	Pearson Correlation	-.137	1
	Sig. (2-tailed)	.048	

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Based on Table 7, this test used a simple linear regression test. The p value is 0.00 <0.05, so it can be concluded that the research hypothesis is accepted, which means that learning agility has a role in digital stress. The results of the linear regression test carried out on both variables showed that R Square was 0.019. So, learning agility has an influence on digital stress of 1.9% which can be seen in table 5 and 98.1% is influenced by other variables.

Table 7
Regression Linier Test

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.137[a]	0.019	0.14	55.339

According to these results, there are a significant role of learning agility on digital stress. These findings also found that learning agility has a small influence to the digital stress. With the correlation results, it can be said that the higher level of learning agility, the smaller the level of digital stress. This can be used as a reference for preventive action against digital stress. Researcher suggest for future research can further examine learning agility with other variables, such as turnover intention or examine other variables which can be more correlated with digital stress.

Research conducted by Tripathi et al. (2020) had a result that learning agility has a negative relationship with turnover intention with a β coefficient of 0.456 and p <0.001. This shows that the higher the learning agility, the employees tend to have a stronger involvement with their work. It is also stated that when employees are agile enough in learning, they will choose an easier way to use any various technological improvements that can reduce turnover intention. In addition, it can also be seen from research conducted by Angesti et al. (2023), where the results of the study showed that digital stress and work engagement had a significant negative effect with an r of -.293. The results of this study can be interpreted that if digital stress is low, then work engagement is high and vice versa. Where this study is in line with the results of research conducted by Purisiol (2020), namely digital stress has a negative influence on work engagement.

Table 8
Digital Stress and Learning Agility Difference Test Reviewed by Age

Variable	*Gender*	*M*	*Std. Dv*	*Sig. (2-tailed)*	*Sig.*
Learning Agility	Men	4.3884	.38711	.017	.472
	Women	4.2366	.51863	.017	.472
Digital Stress	Men	2.6960	1.20406	.079	.002
	Women	2.4228	.97834	.079	.002

The test of differences in learning agility variables based on gender was carried out using the Independent Sample T-Test. Based on the table above, the Sig. value is .472 > 0.05, it can be interpreted that the data variance between men and women is homogeneous or the same. The Sig. value (2-tailed) is .017 < 0.05, it can be concluded that there is a significant difference in the level of learning agility between men and women. Based on the table above, the Sig. value on digital stress is .002 < 0.05, it can be interpreted that the data variance between men and women is not homogeneous. The Sig. value (2-tailed) is .079 > 0.05, it can be concluded that there is no significant difference in the level of digital stress between men and women.

Table 9
Digital Stress and Learning Agility Difference Test Reviewed by Employment Status

Variable	*Employment Status*	*M*	*Std. Dv*	*Sig. (2-tailed)*	*Sig.*
Learning Agility	Contract	4.3211	.47037	.988	.084
	Permanent	4.3201	.44539	.988	.084
Digital Stress	Contract	2.9691	1.13283	.000	.062
	Permanent	2.2416	.98754	.000	.062

The difference test of learning agility variables based on employment status was conducted using the Independent Sample T-Test. Based on the table above, the Sig. value is .084 > 0.05, it can be interpreted that the data variance between contract employees and permanent employees is homogeneous or the same. The Sig. value (2-tailed) is .988 > 0.05, it can be concluded that there is no significant difference in the level of learning agility between contract employees and permanent employees. Based on the table above, the Sig. value on digital stress is .062 > 0.05, it can be interpreted that the data variance between contract employees and permanent employees is homogeneous. The Sig. value (2-tailed) is .000 < 0.05, it can be concluded that there is a significant difference in the level of digital stress between contract employees and permanent employees.

Table 10
Digital Stress and Learning Agility Difference Test Reviewed by Last Education Level

Variable	*Education Level*	*M*	*Std. Dv*	*Sig. Homogen*	*Sig. Anova*
Learning Agility	SMA/SMK/Sederajat	3.8846	1.01543	.000	.023
	Diploma 1	4.5000	.00000		
	Diploma 2	4.4583	.02778		
	Diploma 3	4.4000	.26243		
	Diploma 4	4.4596	.09326		
	Sarjana 1	4.3256	.42564		
	Sarjana 2	4.3861	.21211		
Digital Stress	SMA/SMK/Sederajat	2.9400	1.00668	.001	.018
	Diploma 1	1.5200	.00000		
	Diploma 2	1.5050	.03786		
	Diploma 3	2.2213	.96633		
	Diploma 4	2.0164	.94960		
	Sarjana 1	2.7112	1.14472		
	Sarjana 2	2.2440	.97736		

The difference test of learning agility variables based on the last level of education was carried out using One Way Anova. Based on the table above, the significance value of the homogeneity test of the learning agility variable is .000 < 0.05. It can be concluded that the data variance based on the last education is not homogeneous. The significance value of Anova is .023 < 0.05, so it can be concluded that the average learning agility based on the last education is not homogeneous. The significance value of the homogeneity test of the digital stress variable is .001 < 0.05. It can be concluded that the data variance based on the last education is not homogeneous. The significance value of Anova is .018 < 0.05, so it can be concluded that the average digital stress based on the last education is not homogeneous.

This study also had a limitation in which participants tended to not be straightforward when filling out the questionnaire. This could also have caused the learning agility or digital stress levels to be inaccurately described and researched. It is being explained by Teh et al. (2023) that social desirability was defined as individuals having a tendency to present themselves in a

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favorable way to the society. This issue could have led into false or biased reports due to respondents falsifying their actual responses.

4. CONCLUSIONS AND RECOMMENDATIONS

This study demonstrates that learning agility plays a significant role in digital stress. Based on the analysis, there is a negative correlation between learning agility and digital stress. It means the higher the learning agility, the lower the level of digital stress experienced by employees. This research is limited to the sample and methods where it needs to be expanded. The results of the study show that learning agility can reduce digital stress that occurs in employees. This study shows that the willingness and ability of individuals to learn new competencies are needed in order to be able to work in first-time, difficult, or different conditions (Lombardo & Eichinger, 2000), especially in the digitalization process that can cause digital stress.

The researcher suggests that further research can examine learning agility further, such as turnover intentions or examine other variables that are more susceptible to digital stress. Research conducted by Tripathi et al. (2020) that learning agility has a negative relationship with turnover intentions. This shows that the higher the learning agility, employees tend to have a stronger involvement in their work. It is also stated that when employees are agile enough in learning, they will choose an easier way to various technological improvements that can reduce turnover intentions.

In addition, it can also be seen from the research conducted by Angesti et al. (2023), where the results of the study showed that digital stress and work engagement have a significant negative effect. The results of this study can be interpreted that if digital stress is low, then work engagement is high and vice versa. This study is in line with the results of research conducted by Purisiol (2020), namely that digital stress has a negative influence on work engagement. Additional analysis in this study was carried out by testing different learning agility and digital stress, based on demographic factors, such as gender and employment status.

Based on the gender difference test, learning agility in men and women was found to have significant differences. In line with research conducted by Silalahi et al. (2020) there is a significant difference between men and women. In the digital stress variable, no significant difference was found between men and women. However, in research conducted by La Torre et al. (2020), there is a significant difference between men and women in the technostress variable which is supported by the hypothesis that stressors activate the sympathetic nervous system and men are more susceptible to stress.

Based on the difference test of employment status, it was found that contract and permanent employment status in the learning agility variable did not have a significant difference. In the digital stress variable, contract and permanent employees have a significant difference in line with research conducted by Angesti et al. (2023) where contract employees have higher digital stress scores compared to permanent employees. This is also influenced by the fear of being dismissed by the company.

Therefore, future research can provide research results and a deeper understanding of learning agility and digital stress as well as other variables that are still interrelated. In addition, the limitations of this study are limited to employees in general so that specifications need to be added to the participant criteria, such as the technology used. The second limitation is that this

study relies on respondent assessments so that there is a possibility of bias when filling in the data.

For the next research, the variables can be developed with other research methods, such as experimental. Finally, future research can explore more deeply the relationship between digital stress and learning agility.

Proactively addressing the digital stress, companies can establish a positive and supportive work environment by offering training such as ICT training, offering ICT guidebook for employees, and building a supportive work culture to support employee's well-being. Additionally, providing training and skill development can help them cope with digital stress more effectively. By implementing and managing these proactive measures, companies can build a healthy and productive work environment which benefits both employees and the organization as a whole.

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