

# Digital Workplace and E-Leadership at the University of Riau's Civic Education Study Program

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**Abstract.** This study aims to investigate the contribution of the digital workplace to the e-leadership of the academic community at the Civic Education Study Program, University of Riau. To do so, 124 people comprising lecturers (N=10) and students (N=114) were selected as samples. The experiences of participants were documented using questionnaire surveys which were divided into three parts. Part A and B were 4-Likert scale questions aimed at digital workplace and e-leadership, respectively, while part C contained some open questions regarding obstacles, strategies, and hopes in ICT use. The quantitative data were analyzed using SPSS 28.0.0.0. Based on the statistical analysis, it was found that there was a strong correlation between the digital workplace and e-leadership. While most of the respondents were facing difficulties in using ICT due to the lack of facilities, familiarity, and security, they mentioned that they had tried any possible measures to address these issues by themselves. Therefore, it is expected that the institution could support them through the improvement of ICT facilities and training.

## 1 Introduction

The Faculty of Teacher Training and Education (FKIP) University of Riau is a higher education institution that strives to produce the best, most qualified, dignified, and competitive graduates on a national and international scale. Many factors must be considered and implemented in order to produce graduates with these qualities. One thing that must be considered is increasing the academic community's ability to use information and communication technology (ICT). In the age of the Fourth Industrial Revolution, it is impossible to avoid the use of ICT in the field of education. The rapid advancement of ICT has had a significant impact on the implementation of the education system at the local, national, and international levels. As a result, FKIP Riau University must encourage the entire academic community to use and utilize ICT in all learning activities.

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Reference [1] concerning the Implementation of Education Policies in the Emergency Period for the Spread of Coronavirus Disease (Covid-19), followed by [2] concerning the Follow-up to the Spread of Coronavirus Disease. This causes the implementation of learning activities to be carried out at home through an online learning system (online) starting from March 15, 2020.

Working from home prevents institutional leaders, including the Riau University FKIP's leadership, from interacting directly with lecturers, education staff, and students. This condition necessitates the role of the Riau University FKIP leadership as a team sponsor in directing the work in accordance with the current conditions. Leadership is required in educational institutions such as FKIP Riau University, and not just by the Dean and Deputy Deans. Educators/lecturers, education staff, and students are all expected to be leaders. Lecturers lead learning activities in their classes, education staff lead administrative tasks in their respective fields of work, and students become leaders for their friends and peers.

These digital workplace phenomena are worth investigating in order to determine their impact on the e-leadership ability of the FKIP academic community at Riau University. Therefore, this study aims to investigate the contribution of the digital workplace and e-leadership at one of FKIP Riau University's study programs, which is the Civic Education Study Program.

## **2 Literature Review**

### **2.1 Digital Workplace**

Experts have various interpretations of what constitutes a digital workplace. Reference [3] proposed one of them. According to him, the digital workplace includes all digital devices around workers that can interfere with their ability to complete tasks or work assigned to them. Meanwhile, [4] define the digital workplace as "everything in the workplace environment that can affect work either directly or indirectly against a person or group of people in carrying out their activities at work." According to [5], the environment is an external force that can have an impact on a person's work in an organization. It is understandable that the environment surrounding the workplace is very important to an individual.

Supardi expressed a similar viewpoint, which [6] reviewed. The digital workplace, according to him, is a state in which an individual or group of people works, both physically and non-physically, that can give a pleasant impression, secure, reassure, and make you feel at home at work. A digital workplace is a new way of working that makes use of technology. In a digital workplace, employees can work from home or from the office. Employees benefit from this digital workplace concept because they can gain insights that are not only found in office buildings. This encourages employees to think outside the box, which benefits the organization for which they work. Furthermore, employees can foster collaboration among themselves. This means that employees will work comfortably and efficiently, finishing on time which then makes the office where he works will receive perfect results and reciprocal value from his employees' efforts.

### **2.2 E-leadership**

E-Leadership is a type of digital leadership that has emerged as a result of the advancement of Internet technology. Many leaders in institutions or organizations use technology media, specifically the internet, to carry out their duties and functions as managers. Leadership is

the activity or art of influencing others to cooperate based on that person's ability to guide others in achieving the group's desired goals. According to Kartono [7], leadership can be seen as a result of one-way influence because leaders have characteristics that set them apart from their followers. Meanwhile, [8] contends that leadership is the executor of authority and decision-maker and that it can also take the form of an authority figure.

Meanwhile, [9] defines a leader as a leader or guide. As a result, the leader is physically in the lead. But, in essence, someone can be a leader in providing leadership wherever they are. This is consistent with Ki Hajar Dewantoro's expression in [10], which is famous for "*ing ngarso sung tulodo, ing madyo mangun karso, tut wuri handayani*," which means that if someone is in front of giving an example, being in the middle gives encouragement/motivation, whereas being behind can exert a decisive influence and impetus.

Based on several theories that have been put forward, it can be synthesized that leadership is the ability of a person/leader to lead an organization or institution to influence and direct people by setting an example of obedience, trust, respect, and cooperation with enthusiasm and providing assistance, ease of interaction, prioritizing goals, and the ease of working in achieving goals and as a decision-making authority with a consistent pattern in achieving goals.

Leadership is more than just a position or job; it encompasses a broader perspective. Leaders can integrate multiple roles and carry them out while utilizing information and communication technology to achieve organizational goals. This type of leadership is known as e-Leadership. According to [11], e-leadership is the formalization, safeguarding, and ensuring the success of information technology in supporting organizational goals. E-leadership can occur at any level of an organization's hierarchy and can involve interactions between individuals or groups.

According to Baharuddin and Umiarso in [12], there are five main functions of leadership or leadership: 1) Instructive function; The leader as a decision-maker has the function of ordering the implementation of tasks for the people he leads. The communicator leader is the party who determines what (the order's content), how (how to carry out the order), when (the time to begin, carry out, and report the results), and where (where to carry out the order) so that decisions can be carried out effectively. 2) Consultative function; Leaders frequently require consideration that necessitates consultation with those they lead. Consultation can also be carried out in the opposite direction, from the people who are led to the leader who makes decisions. This means that this function occurs and that there is two-way communication, though its implementation is highly dependent on the leader. 3) Participatory function; this refers to the leader's willingness to not sit back and watch as the people he leads carry out their decisions. Leaders should be able to not only make decisions and order their implementation but also participate in the process within the constraints of not shifting and replacing the officers in charge of carrying them out. 4) Delegate function; requires leaders to prioritize the organization's main tasks and determine what can and cannot be delegated to people they trust. The delegate function is essentially synonymous with trust. Leaders must be willing and capable of trusting others based on their position. 5) Control function; capable of directing and effectively coordinating the activities of its members in order to maximize the achievement of shared goals.

## 3 Research Methodology

### 3.1 Population and Sample

This study's population consists of all lecturers and students from the Civic Education Study Program at FKIP University of Riau. The Simple Random Sampling Technique was used to select samples. In the even semester of 2021-2022, there are ten active lecturers in the Study Program, all of whom will be chosen as research subjects. Furthermore, 291 students are currently enrolled. According to the Required Sample Size table with a 95% confidence level and a 5% margin of error, the number of samples required is 166 people. However, due to time constraints, only 124 people were sampled, reducing the margin of error to approximately 7%.

### 3.2 Technique of Data Collection

In this study, questionnaires were used to gather information and data about the digital workplace and e-leadership of the academic community of the Civics Education Study Program at Riau University's Faculty of Teacher Training and Education. This questionnaire is divided into three sections, two of which use a Likert scale of 1-4. (Very Good, Good, Fairly Good, Poor). Part A is intended to collect as many as nine items of data about the Digital Workplace, which are compiled based on [13]'s theory (2014). Part B is designed to collect information on E-Leadership and consists of six items compiled based on Anwaruddin's theory [14]. Section C aims to collect information about the academic community of the Civics Study Program FKIP Riau University's challenges, expectations, and responses to the digital workplace. This questionnaire was distributed online from April to July 2022.

Data analysis was carried out using descriptive statistical analysis and inferential statistical analysis with the help of Microsoft Excel and SPSS version 28 for Windows to determine the contribution of the digital workplace to e-leadership in the Civics Education Study Program academic community at the University of Riau, as well as to identify challenges, expectations, and responses from the FKIP academic community at the University of Riau towards the digital workplace.

## 4 Findings and Discussion

Considering the tasks and responsibilities in higher education, both lecturers and students are required to have sufficient technical skills and knowledge to ease them in accomplishing their tasks. A digital workplace could be defined as anything in the surrounding which can affect their working activities. Previous studies have proven that a digital workplace is vital to job satisfaction as it helps workers to improve their performance. This should also be supported by someone's ability to make use of this digital workplace [15], which means they have to equip themselves with e-leadership.

A questionnaire to measure digital workplace and e-leadership was distributed online using Google Forms to all lecturers and students at the Civic Education Study Program FKIP Riau University. Due to time limitations, the questionnaire was given out within a limited time frame. Therefore, the number of data collected from students was only 114, resulting in a 7% of margin of error, while the data from the lecturers resulted in a 100% return rate (N=10). The details of the distribution can be seen in **Table 1**.

**Table 1.** Participant Distribution

Participants	N	%
Lecturers	10	8.1
Students	114	91.9
<b>Total</b>	<b>124</b>	<b>100</b>

#### 4.1 Descriptive Analysis

Regarding the digital workplace, the questionnaire contained nine questions representing each indicator outlined, such as connection, collaboration, communication, technology as a digital toolbox, governance, risk management, and business values. The data collected are described in the following **Table 2**.

**Table 2.** Digital Workplace of Students and Lecturers at the Civic Education Study Program, FKIP Riau University

No	Statement	Responses (N)			
		Very Good	Good	Fairly Good	Poor
Connection, Collaboration, and Communication					
1	Availability of digital connectivity	21	60	38	5
2	I can collaborate and communicate in a virtual environment.	18	76	30	0
Technology as a digital Toolbox					
3	I can engage in virtual activities.	21	65	38	0
4	Availability of Virtual Activity Support Tools	21	57	43	3
Management, compliance, and risk management					
5	I am able to monitor digital needs.	9	76	36	3
6	I am able to evaluate the use of digital media.	9	80	35	0
7	I am able to anticipate the risks associated with the use of digital needs.	6	83	35	0
Measuring business value through business drivers					
8	I am able to access digital pages.	27	59	38	0
9	I can make changes to my digital activities.	18	68	38	0

**Table 3** shows the digital workplace among the academic community at the Civic Education Study Program, Riau University. Most respondents felt that their digital workplace was Good, with their ability to anticipate potential risks as the highest score in this category. The highest response for the Very Good category was on item 8, where 27 people believed

that they could access the digital page. More than a quarter of people rate all items as Fairly Good. While most people rated each item positively, there were still three to five people who claimed that the availability of facilities and connectivity at their workplace was Bad. This result is relatively similar to many previous studies [16–19]. Even though many people in the education field, especially in higher education, have been able to use technology in teaching and learning, they might still face many challenges which make them not confident enough to claim their level of ICT use as proficient. This, according to some studies, might be due to age [16], familiarity [18], or even support [19].

**Table 3.** E-Leadership of Students and Lecturers at the Civic Education Study Program, FKIP Riau University

No	Statement	Responses (N)			
		Very Good	Good	Fairly Good	Poor
Visionary					
1	I can see the bigger picture and communicate it to others.	18	70	33	3
Convener					
2	I can bring together various organizations and people to solve problems.	21	57	40	6
Team Leader					
3	I am capable of forming and leading a team to achieve the desired goals or outcomes.	9	60	52	3
Manager					
4	I am fully responsible for acquiring and allocating resources, as well as managing resources within the organization.	9	74	41	0
Innovator					
5	I discover a breakthrough or a new route to the unexpected.	5	69	47	3
Mentor					
6	I assist in the formation of new leaders.	12	61	48	3

Turning to the level of e-leadership, it appeared to follow a similar trend as the digital workplace. Most respondents chose the Fair to Very Good category, even though there were still some people who chose the Bad category in most items (except item 4). One of the most interesting points to note is that item 2 had the highest score for both the Very Good and Bad categories. In this item, the convener, 21 people, felt very confident that they could bring people together to solve problems, while 6 believed the opposite. This finding broadly resonates with the previous study by Aurangzeb & Mazhar [20], which also suggest that e-leadership is now at an early phase and needs to be developed.

Furthermore, the data were checked to verify its reliability and validity. Based on statistical results, it was found that the data were valid and reliable ( $\alpha= 0.898$  and  $0.887$  for both variables, respectively). However, as the data were not normally distributed, the statistics fall into the non-parametric category. Therefore, the data were calculated using non-parametric statistics. To measure the contribution of the digital workplace on e-leadership, the Sommers' D and Gamma tests were used. The results can be seen in **Table 4** and **Table 5**.

**Table 4.** Relationship Between the Digital Workplace and E-Leadership of the Civic Education Study Program, FKIP Riau University

		<b>Directional Measures</b>			
		Value	Asymptotic Standardized Error	Approximate T <sup>b</sup>	Approximate Significance
Ordinal by Somers'd	Symmetric	.525	.065	6.794	.000
Ordinal	Digital Workplace Dependent	.514	.070	6.794	.000
	E_Leadership Dependent	.536	.064	6.794	.000

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

**Table 5.** The strength of the Relationship Between the Digital Workplace and E-Leadership of the Civic Education Study Program, FKIP Riau University

		<b>Symmetric Measures</b>			
		Value	Asymptotic Standardized Error	Approximate T <sup>b</sup>	Approximate Significance
Ordinal by Kendall's	tau-b	.525	.065	6.794	.000
Ordinal	Kendall's tau-c	.401	.059	6.794	.000
	Gamma	.864	.062	6.794	.000
	Spearman Correlation	.536	.067	7.021	.000 <sup>c</sup>
Interval by Pearson's R		.558	.066	7.427	.000 <sup>c</sup>
Interval					
N of Valid Cases		124			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Based on the tables, it can be clearly seen that the Sommers' D value was 0.525, which indicates a strong relationship between the two variables. Besides, the gamma test also shows a significant number of 0.864 (very high correlation). In terms of sig. value, the score was <0.05, which means that there is a significant correlation between digital workplace and e-leadership.

The significant correlation between the digital workplace and e-leadership speaks to previous studies in the same field. [21], for example, suggest the importance of a leader implementing a digital workplace to boost productivity and innovation. This is also supported by [22], who reveals that the improvement of e-leadership can boost productivity at Tanggamus Regency's General Secretary Division. Therefore, it is clear that digital workplaces and e-leadership are imperative in transforming higher education. Even though there is limited information related to digital workplace contribution towards e-leadership, this study has revealed that there is a strong relationship between the two variables.

In the last part of the questionnaire, three open questions were added to explore people's thoughts about the digital workplace. The questions involved the challenges they faced, the measures they took, and their hopes regarding the digital workplace. Based on the data, there are some big themes appeared. There are around six themes that emerged related to the challenges, such as: 1. Connectivity/unstable internet connection, 2. Human resources, 3. Too much virtual workload, 4. Cost to provide supporting facilities, 5. Lack of facilities, 6. Lack of motivation to master IT.

From the six themes, lecturers only mentioned theme 1, which was related to internet connection, while the rest belonged to students' comments. When asked about the ways they overcome the challenges, however, both referred to self-effort: 1. To find locations with a better internet connection, 2. To combine media, 3. To join some training, 4. To provide own facilities, 5. To learn independently, 6. Ask others who understand. Therefore, all respondents resonate similar hopes, such as; 1. Stable internet connection, 2. The provision of digital workplace guidelines, 3. The availability of adequate facilities, 4. Training related to a digital workplace, and 5. Socialization related to Digital Workplace.

This, too, shows broadly similar results as other previous studies. The obstacles related to connectivity, facility, and human resources also emerged in other studies (such as [23] [24]). However, unlike [23]'s findings which showed no issue found related to internet connectivity, this study indicated the issue as the major obstacle for both lecturers and students at the Civic Education Riau University. This gives an insight into real obstacles faced by the academic community in the context of Riau University. Besides, the findings are somewhat different from the previous finding, which show age might contribute to readiness to embrace ICT integration. In some studies, it was found that students tend to have better readiness levels compared to lecturers when it comes to adapting to ICT-based learning [17,25]. However, this study found the opposite, as lecturers showed fewer problems compared to students in adapting to the new way of learning.

Even though different trends in ICT challenges were identified, the findings related to solutions and hopes are relatively similar. Most respondents said that they have taken a number of measures to address the challenges, most of which are self-initiated. Therefore, they mostly hope that they can receive support from their institution to solve the issues, which is consistent with other findings [19,23,24]. This implies an urgency for the university to provide support in terms of training and facilities so the academic community at the Civic Education Study Program at Riau University can utilize technology for their learning activities.

## **5 Conclusion**

From the findings, it can be concluded that the digital workplace and e-leadership among the academic community at the Civic Education Study Program FKIP Riau University is already good, albeit with some challenges. It was also found that there was a strong correlation between the digital workplace and e-leadership. While most of the respondents were facing difficulties in using ICT due to the lack of facilities, familiarity, and security, they mentioned that they had tried any possible measures to address these issues by themselves. Therefore, it is expected that the institution could support them through the improvement of ICT facilities and training.

It is important to note that the findings of this study are not generalizable. As the study is carried out in one particular study program, the results are likely applicable to this particular context only. However, this could be an incentive for universities and researchers to look deeper into this issue. Therefore, further research involving a larger sample with various contexts is considered necessary.



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