



## E-leadership capacity and readiness for change in tackling learning innovation disruption in implementing *Merdeka Belajar* policy

Rusdinal<sup>1\*</sup>, Aan Komariah<sup>2</sup>, Bambang Budi Wiyono<sup>3</sup>, Ranti Meizatri<sup>1</sup>, Rifma<sup>1</sup>

<sup>1</sup>Universitas Negeri Padang, Indonesia

<sup>2</sup>Universitas Pendidikan Indonesia, Indonesia

<sup>3</sup>Universitas Negeri Malang, Indonesia

\*Corresponding Author: [rusdinal@fip.unp.ac.id](mailto:rusdinal@fip.unp.ac.id)

### ABSTRACT

This study aims to analyze the e-leadership capacity of school principals and change readiness in dealing with the disruption of learning innovations to implement independent learning policies. This research was conducted using an ex post facto approach with a correlational study. The respondents were teachers (N=300) from 30 junior high schools in Sumatra Barat Province, Indonesia. The data were then analyzed using SEM Smart PLS. The analysis of the relationships between the variables was determined by referring to the original sample value and the T-statistic outputs from Smart PLS. The significant value of the path was determined using testing criteria with a significant value of ( $\alpha$ ) 5% and a T-statistic standard < 1.96. The results show that every relationship formed has a positive and significant relationship. It can be concluded that the e-leadership capacity variable has a positive and significant impact on readiness for change, learning innovation disruption, and *Merdeka Belajar* policy, as well as their indicators. This research recommends that school principals and school management teams increase e-leadership capacity so that the readiness of every element in the school to face changes is better. Thus, the disruption of learning innovation that continues to develop can be accommodated with good capacity from institutions and individuals. In this context, the *Merdeka Belajar* policy as an educational innovation in Indonesia can be implemented optimally.

**Keywords:** e-leadership, disruption, innovation, *Merdeka Belajar*, learning, readiness for change

### Article history

Received:

4 October 2023

Revised:

7 March 2024

Accepted:

5 April 2024

Published:

31 May 2024

**Citation (APA Style):** Rusdinal, R., Komariah, A., Wiyono, B. B., Meizatri, R., & Rifma, R. (2024). E-leadership capacity and readiness for change in tackling learning innovation disruption in implementing *Merdeka Belajar* policy. *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan*, 43(2), 398-410. DOI: <https://doi.org/10.21831/cp.v43i2.71589>

### INTRODUCTION

Education is a critical sector that is influenced by disruption or massive global changes. The term disruption initially emerged in the economics, business, and industrial sectors at the end of the 20th century and was eventually used in the education sector in the 21st century (Millar et al., 2018). Disruption in the education sector is also a consequence of the emergence of the fourth industrial revolution, which is marked by the mass use of digital technology and the development of artificial intelligence. Additionally, like in economics, business, and industry, the impact of disruption on education is also related to Volatility, Uncertainty, Complexity, and Ambiguity (VUCA) (Millar et al., 2018). These four aspects are also challenges faced by the education sector. Furthermore, these affect the education system and management from the central to the lowest level, the education unit (Kaivo-oja & Lauraeus, 2018; Millar et al., 2018; Pultoo & Ojorah, 2020).

The effect of disruption on the education sector has been strengthened due to the Covid-19 pandemic, which has forced every element of education to quickly adapt to the new situation. This results in changes in the education system and management, especially in the aspects of the

curriculum, teachers' professionalism, learning facilities, and school collaboration/partners (Christensen et al., 2001; Pol & Castrechini, 2013). Therefore, pandemic and technology have become a popular pair of words that is also often linked to schools. In other words, the pandemic has forced people to utilize technology. The use of technology is a disruption that demands quick adaptation from all elements of the school (Pokhrel & Chhetri, 2021; Selwyn, 2013).

Moreover, disruption also demands innovation (Pol & Castrechini, 2013). This innovation is not only the key to survival in a difficult environment, but it is also a critical point for schools to improve their education quality and fulfil social needs (Innovation, 2016; Kools et al., 2020; Kools & Stoll, 2016; Korhonen et al., 2014; Penalva, 2022). Furthermore, it is a strategic issue in the education sector. In education, it is considered a part of economic and social innovation that emphasizes productivity and efficiency (Fullan, 2001; Joyce & Calhoun, 1991). It can also be defined as a product of schools' adaptation to disruption or change (Pol & Castrechini, 2013). Then, it can be carried out in every aspect of school management. This is a continuous challenge for school principals and teachers as the innovation itself is a change; an innovation will give way or be overcome by subsequent innovations.

The Ministry of Education and Culture of the Republic of Indonesia has prepared and implemented innovative programs for schools and tertiary education to respond to educational disruption. One of those programs is named *Merdeka Belajar*. This program is an educational development concept where all stakeholders are expected to become agents of change. These stakeholders include families, teachers, educational institutions, the industrial world and society. The word *Merdeka* is interpreted as freedom in learning. The essence of freedom of thought must be preceded by teachers before they teach it to students. Teachers' competence at any level, without a process of translating the basic competencies and the existing curriculum, learning will never occur. The *Merdeka Belajar* program supports many innovations in the world of education, especially the progress of various educational institutions by forming teachers' competencies. Independent driving teachers in teaching know the needs of students according to the environment and culture of their students. On top of all of these, the *Merdeka Belajar* has three achievement indicators championed by the Ministry of Education and Culture of the Republic of Indonesia, namely (1) showing equal participation of all students, (2) performing effective learning, and (3) having no students left behind (Azmi & Iswanto, 2022).

However, this program is still experiencing various obstacles in its implementation. The fundamental problem that weakens this program's effectiveness is its implementers' personal and institutional readiness. The results of previous research found that teachers who were used to following complete guidelines from the previous curriculum were less creative in implementing the *Merdeka Belajar* curriculum (Ahid & Sufirmansyah, 2022; Hattarina et al., 2022; Nurulaeni & Rahma, 2022). Furthermore, teachers' weak technological literacy causes teachers to be hampered in exploring learning resources and developing media and learning methods (Ahid & Sufirmansyah, 2022; Anggreini & Priyojadmiko, 2022). This causes no innovation to occur in learning, in which students do not get innovative learning experiences and liberate their potential (Yulianto, 2022). In principle, implementing the *Merdeka Belajar* curriculum requires the independence of teachers, including school principals, in innovation at the institutional and class levels.

Schools' obstacles in implementing the program require reliable school principals' management skills. The school principals are responsible for developing innovation at the institutional level and facilitating teachers in developing learning innovation at the class level. On the other hand, the school's financial capacity also influences the effectiveness of implementing the program. The research results found that there are still many schools that are hampered in providing learning facilities and infrastructure to implement the *Merdeka Belajar* program well (Ahid & Sufirmansyah, 2022; Sihombing et al., 2021). On average, students' parents' financial capabilities are also weak, so it was found difficult to collaborate to get support from the students' parents.

In order to tackle disruption in learning innovation technology, school principals must have e-leadership capacity (Gurr, 2004); however, several school principals may be confused in tackling these changes in practice. The principals must take quick action and have foresight, make

careful decisions, consider different options and consequences, communicate empathically and humanely, and move forward as the credibility of the school community (Adams et al., 2021). Tense situations may arise, and they may not have the confidence to solve school issues, especially the issue of using technology to lead. This is due to the principals' insufficient capacity and capability to accept crucial and incidental challenges in using technology to learn (Bhattacharjee & Muddgal, 2019; Huong, 2020; Torres et al., 2020). For that, the role of principals is not yet optimal to lead by implementing e-leadership in online learning (Penalva, 2022; Zuckerman et al., 2018).

Moreover, organizational readiness in conducting change determines the effectiveness of implementing intervention efforts by schools. Various literature portrays similar concepts; that organizational readiness in change is measured on two dimensions or levels: organizational and individual (Halle et al., 2019; Khedhiri, 2018b, 2018a; Muafi et al., 2019; Oppi et al., 2022; Rusdinal et al., 2019; T. Wang et al., 2020). This so-called readiness for change refers to the collective determination of organization members to implement change with mutual beliefs and abilities (Weiner, 2009). Added to this, the organizational readiness for change also functions as an indicator to see how many organization members appreciate the change and their capabilities in implementing it in terms of work demands, resource availability and situational factors (Walinga, 2008). The higher the organizational readiness, the more the organization members are likely to initiate change, exert greater effort, display more persistence, and show more cooperative behavior (Litz & Blaik-Hourani, 2020; Oppi et al., 2022; Vakola, 2013; T. Wang et al., 2020). Thus, it can be said that this results in more effective implementation.

The assumption underlying this research is that e-leadership and readiness for change are variables affecting learning innovation in implementing the *Merdeka Belajar* policy. The e-leadership variable is a set of processes mediated by technology that affects society and aims to change the organizational attitudes, feelings, mindset, behavior, and performance (Dasgupta, 2011; Kulshreshtha & Sharma, 2021). There are six effective e-leadership competencies required in this case, including e-communication, e-change skills, e-social skills, e-team skills, e-tech, and e-trustworthiness (Dasgupta, 2011; Liu et al., 2018; X. H. Wang et al., 2022). Meanwhile, learning innovations are new ideas and practices carried out by teachers in the classroom to increase the effectiveness of the process and student achievement. This learning innovation in this study was identified by five aspects, namely: teacher support, student support, leadership, culture; transformation, technology for learning, and evidence-based practice (Education Review Office, 2018; Kools et al., 2020; Osborne, 2016; Penalva, 2022; Voogt et al., 2011; Zuckerman et al., 2018). After that, the organizational readiness to conduct change is a determinant factor in the effectiveness of implementing intervention efforts schools perform. Various pieces of literature portray similar concepts that organizational readiness in change is measured on two dimensions or levels: organizational and individual (Khedhiri, 2018a; Muafi et al., 2019; Rusdinal et al., 2019; T. Wang et al., 2020). The *Merdeka Belajar* policy in this study is assumed as a policy that responds to the education system needs during the Industrial Revolution 4.0, as well as reconstructing a national education system that prioritizes freethinking (Azmi & Iswanto, 2022; Mazid et al., 2021; Sherly et al., 2020). The *Merdeka Belajar* indicators employed consist of learning in different times and places, individual learning, students' freedom to have the choice of their learning method, project-based learning, field experience, and interpretation.

Based on the explanations above, this study aims to analyze the e-leadership capacity of school principals and change readiness in dealing with the disruption of learning innovations to implement *Merdeka Belajar* policies.

## **METHOD**

This research used an ex post facto approach with a correlational study. The subjects of this study included teachers from public junior high schools in Padang. The research instrument was developed based on theoretical studies of the variables e-leadership, readiness for change, learning innovation, and *Merdeka Belajar* policy. The data were then garnered using a questionnaire, which is a group of written questions on the theme and issues being studied used

to obtain data from the respondents. The score assessment was determined using the Likert Scale. Table 1 displays the variables of the research questionnaire.

**Table 1. Variables of research questionnaire**

Variables	Indicators	Total of Questionnaire Item
E-Leadership	E-Communication	3
	E-Social	3
	E-Team	3
	E-Change	3
	E-Tech	3
	E-Trust	3
	<i>Merdeka Belajar</i> Policy	Learning in Different Times and Places
Individual Learning		3
Students' Choices		2
Project-Based Learning		3
Field Experience		3
Data Interpretation		2
Varying Assessments		2
Students Involvement		2
Mentoring		2
Learning Innovation		Teacher Support
	Student Support	2
	Leadership, Culture, and Transformation	2
	Technology for Learning	2
	Evidence-based Practice	2
Readiness for Change	Knowledge	7
	Attitude and Values	8
	School Support System	5
Total		70

The samples were taken using the proportional random sampling technique. A total sample of 300 teachers was from 30 public junior high schools in West Sumatra province. The sample areas were selected proportionally so that 5 districts/cities in West Sumatra province were selected. The selection of schools as research subjects was randomly chosen based on the characteristics of the schools implementing the *Merdeka Belajar* program. Furthermore, the selection of teachers as research samples was determined based on length of teaching experience, namely a period of  $\pm$  1-5 years and of  $\pm$  5-12 years. This Table 2 displays the profiles of research respondents.

**Table 2. Profile of respondents**

District	Number of Schools	Teacher's Period of Teaching Experience		Number of Respondent
		$\pm$ 1-5 years	$\pm$ 5-12 years	
Padang	7	25	45	70
Sawahlunto	5	18	24	42
Payakumbuh	6	25	35	60
Bukittinggi	6	28	37	65
Pesisir Selatan	6	25	38	63
Total	30			300

The obtained data were then analyzed using SEM SmartPLS. The analysis was initially done by determining each item's discriminant and convergent validity values in the research variables. The discriminant validity determined based on the Variance Extract (AVE) value was higher than the correlation emphasizing the latent determinant. Meanwhile, the convergent validity was determined based on the value of the outer model. The loading factor implemented as the standard for determining the validity of each indicator was also  $\geq$  0.50 on the target variable. Furthermore, the relationship between the variables was analysed by referring to the original

sample value and the T-statistic output from the SmartPLS. The significant value of the path was determined using testing criteria with a significant value of ( $\alpha$ ) 5% and a T-statistic standard < 1.96 (J. F. Hair et al., 2019; Setiaman, 2020).

## FINDING AND DISCUSSION

### Finding

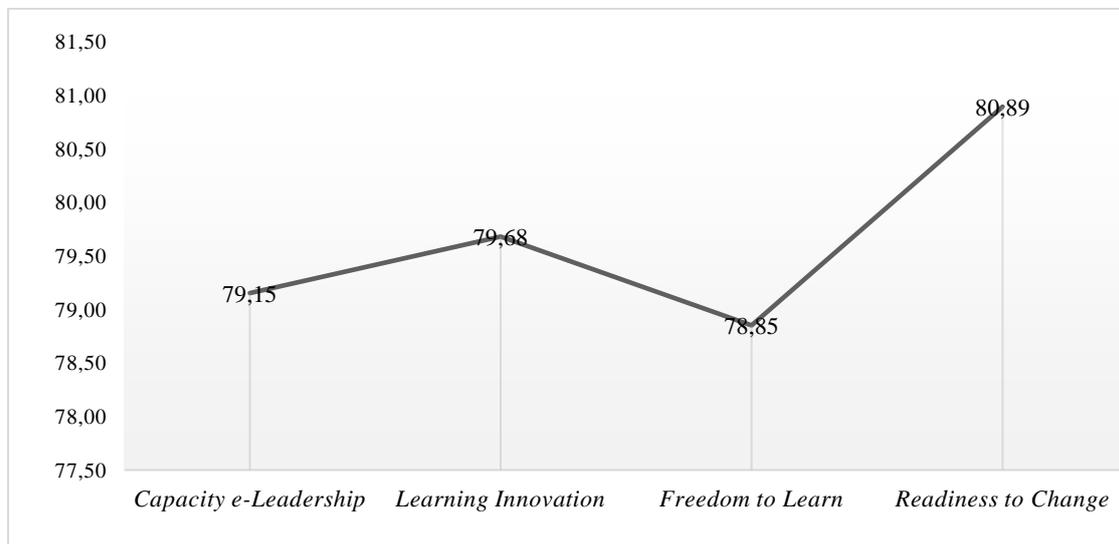
#### General descriptions of research variables

The data in Table 3 shows the recapitulation of the general descriptions of the research variables for implementing the *Merdeka Belajar* in public junior high schools in Padang. Table 1 shows that the average attainment of the four variables is 79.78%, which is classified as medium. The variable with the highest attainment is the readiness for change variable, with an attainment percentage of 80.89%. On the other hand, implementing the *Merdeka Belajar* variable has the lowest attainment at 78.85%, which is in the medium category. It can be concluded that the public junior high schools in Padang are ready to innovate while being supported by good learning innovation to carry out the *Merdeka Belajar* policy. However, the policy and e-leadership have not been implemented optimally.

**Table 3. General descriptions of research variables**

No	Indicators	Ideal Score	Total Score	Attainment	Category
1.	E-Leadership Capacity	1500	1187	79.15	Medium
2.	Learning Innovation	1500	1203	80.22	High
3.	Implementation of <i>Merdeka Belajar</i> Policy	1500	1213	78.85	Medium
4.	Readiness for Change	1500	1213	80.89	High
	Average		1204	79.78	Medium

A clearer comparison of the attainment for each variable can be seen in Figure 1 below.



**Figure 1. Comparison Diagram of the Attainment of Research Variables**

#### Structural modeling

The structural modeling used in this study was the Partial Least Squares Structural Equation Modelling (PLS-SEM) analysis. The measurement was done in a reflective-formative manner. This is because latent or construct variables are measured in two stages; the first stage is reflective and the second is formative. There were 27 latent or construct variables where 23 of them were measured using stage one (the first-order construct), while the remaining 4 were measured using stage two (the second-order construct) (Sarstedt et al., 2020).

**Evaluation of outer model stage 1 (First order)**

The outer loading, average variance extracted (AVE), and composite reliability (CR) were evaluated on the first stage of outer model analysis. The analysis results are shown in Table 4.

**Table 4. The First Stage Outer Loading Values**

First Order Latent	Outer Loading	CR	AVE
E-Communication	0.896	0.915	0.785
E-Social	0.913	0.918	0.790
E-Team	0.909	0.941	0.841
E-Change	0.970	0.945	0.851
E-Tech	0.927	0.914	0.779
E-Trust	0.919	0.941	0.841
Learning in Different Times and Places	0.898	0.901	0.752
Individual Learning	0.854	0.881	0.711
Students' Choices	0.907	0.891	0.803
Project-Based Learning	0.903	0.921	0.794
Field Experience	0.902	0.899	0.747
Data Interpretation	0.886	0.887	0.797
Varying Assessments	0.906	0.902	0.822
Students Involvement	0.910	0.898	0.788
Mentoring	0.900	0.904	0.825
Teacher Support	0.853	0.897	0.744
Student Support	0.899	0.881	0.788
Leadership, Culture, and Transformation	0.924	0.847	0.735
Technology for Learning	0.868	0.865	0.762
Evidence-based Practice	0.896	0.885	0.794
Knowledge	0.808	0.937	0.778
Attitude and Values	0.892	0.841	0.841
School Support System	0.919	0.953	0.716

Outer loading is a value that describes the correlation between an indicator with its latent variable. The higher the value, the stronger the relationship between the indicator with its latent variable. An outer loading value higher than 0.7 or outer loading  $> 0.7$  means that  $0.72 \approx 50\%$  of the variability of an indicator can be explained or absorbed by its latent variable (Gaston Sanchez, 2013). Indicators with an outer loading value of more than 0.7 or outer loading  $> 0.7$  can be accepted. However, indicators with an outer loading value of less than 0.4 or outer loading  $< 0.4$  are always eliminated in the analysis process. Generally, outer loading values between 0.4-0.7 are considered for elimination, and when they are eliminated, they can increase the composite reliability or average variance extracted values ( et al. Hair, 2017; J. F. Hair et al., 2014).

Average Variance Extracted (AVE) is an average value that explains the extent to which a latent or construct variable can explain the variance of its indicators; it is a value that measures the convergent validity of a latent variable. The higher the AVE value, the better the latent or construct variable at explaining the variance of its indicators. An AVE of higher than 0.5 or AVE  $> 0.5$  means that a latent or construct variable has absorbed more than 50% of the information from its indicators. The minimum limit of AVE value is 0.5; where a latent or construct variable with AVE  $> 0.5$  can be accepted (Hair et al., 2014). Table 2 shows that all latent or construct variables have an AVE value of higher than 0.5 or AVE  $> 0.5$ , meaning that more than 50% of the variance from each indicator has been absorbed by its latent variable. In other words, the latent or construct variables are adequate in representing each indicator.

Composite Reliability (CR) evaluates the internal consistency reliability. Compared to Cronbach's Alpha, the CR value is a more appropriate measure of reliability in SEM-PLS ( et al. Hair, 2017; J. F. Hair et al., 2014, 2019). Dillon-Goldstein's rho (or Composite Reliability) is another measurement that can be used for unidimensionality (dimension singleness). Dillon-Goldstein's rho is perceived to be better than Cronbach's Alpha as its measurement considers the extent to which a latent or construct variable is able to describe its indicator block. A Dillon-Goldstein's rho value higher than 0.7 means that an indicator block is unidimensional. The

accepted CR values are the ones with more than 0.7 or  $CR > 0.7$ . CR values between 0.6-0.7 can still be accepted in exploratory research (Hair et al., 2014).

***Evaluation of the outer model***

The outer model analysis evaluates outer loading, AVE, and composite reliability (CR). The analysis results are presented in Table 5.

**Table 5. Outer loading evaluation (The second outer latent)**

Variables	First Order Latent	Outer Loading	CR	AVE
E-Leadership	E-Communication	0.826	0.915	0.785
Capacity	E-Social	0.906	0.918	0.790
	E-Team	0.919	0.941	0.841
<i>Merdeka Belajar</i> Policy	E-Change	0.919	0.945	0.851
	E-Tech	0.875	0.914	0.779
	E-Trust	0.924	0.941	0.841
	Learning in Different Times and Places	0.840	0.901	0.752
	Individual Learning	0.874	0.881	0.711
	Learning Method Choices	0.886	0.891	0.803
	Project-Based Learning	0.681	0.921	0.794
	Field Experience	0.801	0.899	0.747
	Data Interpretation	0.686	0.887	0.797
	Varying Assessments	0.899	0.902	0.822
Learning Innovation Disruption	Students Involvement	0.835	0.898	0.788
	Mentoring	0.842	0.904	0.825
	Teacher Support	0.915	0.897	0.744
	Student Support	0.838	0.881	0.788
	Leadership, Culture, and Transformation	0.649	0.847	0.735
Readiness for Change	Technology for Learning	0.838	0.865	0.762
	Evidence-based Practice	0.837	0.885	0.794
	Knowledge	0.947	0.895	0.748
	Attitude and Values	0.925	0.864	0.754
	School support system	0.968	0.941	0.841

From Table 5 above, two indicators have outer loading values of  $< 0.7$ , which are the project-based learning (0.681) and data interpretation (0.686) indicators. However, the instrument maintains these indicators as their CR and AVE values are  $> 0.7$ . Therefore, all latent or construct variables can be maintained in the next analysis process. Table 5 shows that all latent or construct variables have AVE values higher than 0.5 or  $AVE > 0.5$ , meaning that more than 50% variance of the indicators is absorbed by each of its latent variables. In other words, the latent or construct variables adequately represent each indicator. Therefore, the next analysis process maintains every latent or constructed variable. Table 5 shows that all latent or construct variables have a CR value of more than 0.7 or  $CR > 0.7$ , meaning that they have already fulfilled the reliability requirements. Therefore, all instruments or questionnaires designed are reliable.

***Structural model***

The inner model analysis tests how significant the influence of latent or construct variables is on the latent variables. For dependent variables (endogen), the structural model is evaluated using R-square and its significant value is tested based on T-values on each path. The inner model testing refers to observing the relationships between latent constructs by analyzing the estimation results of the path coefficient and its significance level. R-square values between 0.67 to 1 indicate that the structural model is adequate; R-square values between 0.34 to 0.66 indicate that the structural model is moderate; while R-square values of less than 0.33 indicate a weak structural model (J. F. Hair et al., 2019).

**Table 6. Inner model analysis**

	R-Square	R-Square Adjusted
Learning Innovation	0.562	0.561
<i>Merdeka Belajar</i> Policy	0.651	0.649
Readiness for Change	0.827	0.821

The coefficient of determination or R-square is a value that describes the extent to which the independent variables are able to explain the variance of the dependent variables. Table 6 shows that the R-square value of the Learning Innovation Disruption latent variable is 0.562, meaning that the E-leadership Capacity variable is able to explain 56.2% of the variance of the Learning Innovation Disruption variable. Additionally, the R-square value of the *Merdeka Belajar* Policy latent variable is 0.651, meaning that the Learning Innovation Disruption variable can explain 65.1% of the variance of the *Merdeka Belajar* Policy variable. Furthermore, the R-square value of the Readiness for Change latent variable is 0.827, meaning that the E-leadership Capacity variable can explain 82.7% of the variance of the Readiness for Change variable.

**Table 7. Path coefficient**

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
E-Leadership Capacity -> Readiness for Change	0.508	0.506	0.035	14.403	0.000
E-Leadership Capacity -> Learning Innovation	0.354	0.353	0.039	9.180	0.000
E-Leadership Capacity -> <i>Merdeka Belajar</i>	0.673	0.672	0.027	24.579	0.000
Readiness for Change -> Learning Innovation	0.505	0.503	0.034	14.792	0.000
Readiness for Change -> <i>Merdeka Belajar</i>	0.605	0.602	0.036	16.708	0.000
E-Leadership Capacity -> Readiness for Chang-> <i>Learning Innovation</i>	0.509	0.508	0.035	14.739	0.000
E-Leadership Capacity -> Readiness for Change -> Learning Innovation Disruption -> <i>Merdeka Belajar</i>	0.412	0.410	0.035	11.748	0.000

Note. \*\*\* = sig. value of less than  $p < 0.05$

Table 7 above shows that every relationship formed has a positive and significant relationship. It can be concluded that the e-leadership capacity variable has a positive and significant impact on readiness for change, learning innovation disruption, and *Merdeka Belajar* policy, as well as their indicators.

This research has produced a number of indicators of e-leadership capacity, readiness for change, learning innovation, and *Merdeka Belajar* policy (table 5). The aforementioned e-leadership is confirmed through indicators of e-communication, e-social skills, e-change skills, e-team skills, e-tech, and e-trust which are capabilities in implementing this leadership, supported by previous research (Liu et al., 2020). It is understood that traditional followers do not understand the concept of e-leadership; they assume leadership is someone who is valued more to obey his orders. Responding to massive technological disruption like today, another variation of leadership is needed. The e-leadership results from the development of leadership theory that brings digital characteristics to leadership practice (Dasgupta, 2011; Oh & Chua, 2018). The research results in Table 5 also prove that this is very much needed as well as being a predictor in dealing with the disruption of learning innovations in educational institutions (Avolio et al., 2014; Contreras et al., 2020; Mazzoni, 2017). It resonates the previous explanation that readiness for change is also a predictor of learning innovation. The data in Table 5 shows indicators of readiness for change affecting the disruption of learning innovations in schools. This is in line with the results of previous research which concluded that leadership is needed to be able to prepare individuals and organizational elements to be "ready" to face the challenges of change, in this case, innovation disruption in education and learning (By, 2020; Torre & Sarti, 2020).

Meanwhile, the *Merdeka Belajar* policy is basically a learning innovation and in a broader scope it is an educational management innovation prepared by the Indonesian government to face

the disruption of learning innovation. This is also done to prepare graduates who are adaptive and competitive in this current situation and the future. Implementation of school innovation programs is always related to the leadership capacity of the school principals (Birasnav et al., 2023; Gil et al., 2018; Sliwka et al., 2024). How they prepare for change at the institutional and individual levels within the organization determines the effectiveness of an implemented innovation program. This research has proven that preparing and implementing policies as a form of innovation in learning requires good leadership capacity. In line with that, the e-leadership is a new concept that was introduced as a new capacity needed for reliable leadership (Kulshreshtha & Sharma, 2021; Toleikienė et al., 2020; Torre & Sarti, 2020). In this respect, the school principal's leadership capacity to implement good e-communication, e-social skills, e-change skills, e-team skills, e-tech, and e-trust are competencies needed for reliable leadership in the current digital era.

This research has also proven that the e-leadership capacity of school principals is able to increase readiness for change to implement learning innovations. The context of *Merdeka Belajar* as an educational innovation provides opportunities for all personnel: school principals, teachers, employees and stakeholders to innovate independently at the institutional and class levels. School innovation refers to ideas of school reform (By, 2020; Imran & Iqbal, 2021; Racaite-Samusiene et al., 2021; Sarfraz Ahmed Dakhan et al., 2020). There are two targeted categorical factors in creating school innovations: (1) properties from the innovations and (2) school characteristics (Korhonen et al., 2014). The usefulness of innovation can be determined by quality metrics such as learning ability and users' ease of use of the products of innovation (Education Review Office, 2018; Muijs & Harris, 2006). The characteristics of the schools can affect the adoption of innovation by the teachers and students. These characteristics include teachers' pedagogical orientation, their beliefs in teaching and learning, and the available leadership and support in schools (Fullan, 2001; Joyce & Calhoun, 1991).

## CONCLUSION

Facing the disruption of learning innovation requires the leadership capacity of reliable school principals. Great leadership will be able to provide readiness for change for institutions and individuals to be ready to implement reforms, namely school innovation. E-leadership is a new concept that was introduced as a new capacity needed for reliable leadership. The e-leadership variable is a set of processes mediated by technology that affects society and aims to change the organizational attitudes, feelings, mindset, behavior, and performance. *Merdeka Belajar* policy is one of learning innovation, and in a broader scope, it is an educational management innovation prepared by the Indonesian government to face the disruption of learning innovation. This research has proven that there is a positive and significant correlation between school principals' e-leadership and readiness for change in tackling learning innovation disruption in implementing the *Merdeka Belajar* policy. This research recommends that school principals and school management teams increase e-leadership capacity so that the readiness of every element in the school to face change is better. In other words, the disruption of learning innovation that continues to develop can be accommodated with good capacity from institutions and individuals. In this context, the *Merdeka Belajar* policy as an educational innovation in Indonesia can be implemented optimally.

## REFERENCES

- Adams, D., Cheah, K. S. L., Thien, L. M., & Md Yusoff, N. N. (2021). Leading schools through the COVID-19 crisis in a South-East Asian country. *Management In Education*. <https://doi.org/10.1177/08920206211037738>.
- Ahid, N., & Sufirmansyah, S. (2022). The implementation of *Merdeka Belajar* policy in East Java. *Didaktika Religia: Journal of Islamic Education*, 10(1). <https://doi.org/10.30762/didaktika.v10i1.8>.
- Anggreini, D., & Priyojadmiko, E. (2022). Peran guru dalam menghadapi tantangan implementasi *Merdeka Belajar* untuk meningkatkan pembelajaran Matematika pada era Omricon dan era

- Society 5.0. *Prosiding Seminar Nasional Pendidikan Guru Sekolah Dasar 2022*, 1(1)
- Avolio, B. J., Sosik, J. J., Kahai, S. S., & Baker, B. (2014). E-leadership: Re-examining transformations in leadership source and transmission. *Leadership Quarterly*, 25(1). <https://doi.org/10.1016/j.leaqua.2013.11.003>.
- Azmi, F., & Iswanto, J. (2022). *Merdeka Belajar*. *International Journal of Islamic Education, Research And Multiculturalism (Ijierm)*, 3(3). <https://doi.org/10.47006/ijierm.v3i3.90>.
- Bhattacharjee, J., & Muddgal, A. (2019). School leadership for sustaining pedagogical innovation such as inquiry based learning in ict implementation: An experimental evaluation of a high school in India. *International Journal of Recent Technology and Engineering*, 8(3 Special Issue). <https://doi.org/10.35940/ijrte.c1091.1083s19>.
- Birasnav, M., Gantasala, S. B., Gantasala, V. P., & Singh, A. (2023). Total quality leadership and organizational innovativeness: The role of social capital development in American Schools. *Benchmarking*, 30(3). <https://doi.org/10.1108/bij-08-2021-0470>.
- By, R. T. (2020). Organizational change and leadership: Out of the Quagmire. *Journal of Change Management*, 20(1). <https://doi.org/10.1080/14697017.2020.1716459>.
- Christensen, C., Aaron, S., & Clark, W. (2001). Disruption in education | Educause. *Educause Review*, 38(February).
- Contreras, F., Baykal, E., & Abid, G. (2020). E-leadership and teleworking in times of Covid-19 and beyond: What we know and where do we go. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.590271>.
- Dasgupta, P. (2011). Literature review: E-leadership. *Emerging Leadership Journeys*, 4(1)
- Education Review Office. (2018). *Leading innovative learning in New Zealand schools* (Issue April). <http://www.ero.govt.nz/assets/uploads/leading-innovative-learning-in-schools.pdf>.
- Fullan, M. (2001). The new meaning of educational change. *The New Meaning of Educational Change*. <https://doi.org/10.4324/9780203986561>.
- Gil, A. J., Rodrigo-Moya, B., & Morcillo-Bellido, J. (2018). The effect of leadership in the development of innovation capacity: A learning organization perspective. *Leadership and Organization Development Journal*, 39(6). <https://doi.org/10.1108/lodj-12-2017-0399>.
- Gurr, D. (2004). ICT, leadership in education and e-leadership. *International Journal of Phytoremediation*, 25(1). <https://doi.org/10.1080/0159630042000178518>.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (Pls-Sem). Thousand Oaks. In *Sage*.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). A primer on partial least squares structural equation modeling (Pls-Sem). Sage Publications. *European Journal of Tourism Research*, 6(2).
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of Pls-Sem. *European Business Review*, 31(1). <https://doi.org/10.1108/ebv-11-2018-0203>.
- Halle, T., Partika, A., & Nagle, K. (2019). Measuring readiness for change in early care and education. *Administration For Children & Families*, August.
- Hattarina, S., Saila, N., Faradila, A., Putri, D. R., & Putri, R. G. A. (2022). Implementasi kurikulum Merdeka Belajar di lembaga pendidikan. *Seminar Nasional Sosial Sains, Pendidikan, Humaniora (Senassdra)*, 1.
- Huong, V. T. M. (2020). Factors affecting instructional leadership in secondary schools to meet Vietnam's general education innovation. *International Education Studies*, 13(2). <https://doi.org/10.5539/ies.v13n2p48>.
- Imran, M. K., & Iqbal, S. M. J. (2021). How change leadership affects change adaptability? Investigating the moderated mediation effect of cognitive resistance and change efficacy. *Pakistan Journal of Commerce and Social Science*, 15(1)
- Innovation, E. (2016). *Innovating education and educating for innovation*. <https://doi.org/10.1787/9789264265097-en>.
- Joyce, B., & Calhoun, E. (1991). The new meaning of educational change. *School Effectiveness and School Improvement*, 2(4). <https://doi.org/10.1080/0924345910020406>.
- Kaivo-Oja, J. R. L., & Lauraeus, I. T. (2018). The Vuca approach as a solution concept to

- corporate foresight challenges and global technological disruption. *Foresight*, 20(1). <https://doi.org/10.1108/fs-06-2017-0022>.
- Khedhiri, M. (2018a). Readiness for change in public education: A discrete empirical investigation. *Higher Education For The Future*, 5(2).
- Khedhiri, M. (2018b). Readiness for change in public education. *Higher Education for the Future*, 5(2). <https://doi.org/10.1177/2347631118767293>.
- Kools, M., & Stoll, L. (2016). What makes a school a learning organisation? *Oecd Education Working Papers*. <https://doi.org/10.1787/5jlwm62b3bvh-en>.
- Kools, M., Stoll, L., George, B., Steijn, B., Bekkers, V., & Gouëdard, P. (2020). The school as a learning organisation: The concept and its measurement. *European Journal Of Education*, 55(1). <https://doi.org/10.1111/ejed.12383>.
- Korhonen, T., Lavonen, J., Kukkonen, M., Sormunen, K., & Juuti, K. (2014). The innovative school as an environment for the design of educational innovations. *Finnish Innovations and Technologies in Schools* (Pp. 99–113). Sensepublishers. [https://doi.org/10.1007/978-94-6209-749-0\\_9](https://doi.org/10.1007/978-94-6209-749-0_9).
- Kulshreshtha, K., & Sharma, G. (2021). Understanding e-leadership: Please mind the gap. *Technological Forecasting and Social Change*, 168. <https://doi.org/10.1016/j.techfore.2021.120750>.
- Litz, D., & Blaik-Hourani, R. (2020). Transformational leadership and change in education. *Oxford Research Encyclopedia of Education*. <https://doi.org/10.1093/acrefore/9780190264093.013.631>.
- Liu, C., Ready, D., Roman, A., Van Wart, M., Wang, X. H., Mccarthy, A., & Kim, S. (2018). E-leadership: An empirical study of organizational leaders' virtual communication adoption. *Leadership and Organization Development Journal*, 39(7). <https://doi.org/10.1108/lodj-10-2017-0297>.
- Liu, C., Van Wart, M., Kim, S., Wang, X., Mccarthy, A., & Ready, D. (2020). The effects of national cultures on two technologically advanced countries: The case of e-leadership in South Korea and the United States. *Australian Journal of Public Administration*, 79(3), 298–329. <https://doi.org/10.1111/1467-8500.12433>.
- Mazid, S., Futaqi, S., & Farikah, F. (2021). The concept of “freedom of learning” in a multicultural education perspective. *Ta'dib*, 24(1). <https://doi.org/10.31958/jt.v24i1.2759>
- Mazzoni, M. J. (2017). A Principal striving for effective instructional leadership in an era of accountability. *Proquest Llc*.
- Millar, C. C. J. M., Groth, O., & Mahon, J. F. (2018). Management innovation in a Vuca world: Challenges and recommendations. *California Management Review*, 61(1). <https://doi.org/10.1177/0008125618805111>.
- Muafi, Fachrunnisa, O., Siswanti, Y., El Qadri, Z. M., & Harjito, D. A. (2019). Empowering leadership and individual readiness to change: The role of people dimension and work method. *Journal of the Knowledge Economy*, 10(4). <https://doi.org/10.1007/s13132-019-00618-z>.
- Muijs, D., & Harris, A. (2006). Teacher led school improvement: Teacher leadership in the UK. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2006.04.010>.
- Mustajab, D., Bauw, A., Irawan, A., Rasyid, A., Aldrin Akbar, M., & Amin Hamid, M. (2020). Covid-19 pandemic: What are the challenges and opportunities for e-leadership? *Fiscaoeconomia*, 4(2). <https://doi.org/10.25295/fsecon.2020.02.011>.
- Nurulaeni, F., & Rahma, A. (2022). Analisis problematika pelaksanaan Merdeka Belajar Matematika. *Jurnal Pacu Pendidikan Dasar*, 2(1).
- Oh, S. P., & Chua, Y. P. (2018). An explorative review of e-leadership studies. *International Online Journal of Educational Leadership*, 2(1). <https://doi.org/10.22452/iojel.vol2no1.2>
- Oppi, P., Eisenschmidt, E., & Jögi, A. L. (2022). Teacher's readiness for leadership—a strategy for school development. *School Leadership and Management*, 42(1). <https://doi.org/10.1080/13632434.2021.2016685>.
- Osborne, M. (2016). How can innovative learning environments promote the diffusion of innovation? *Teachers and Curriculum*, 16(2). <https://doi.org/10.15663/tandc.v16i2.134>.
- Penalva, J. (2022). Innovation and leadership in teaching profession from the perspective of the design: Towards a real-world teaching approach. A reskilling revolution. *Journal of the*

- Knowledge Economy*. <https://doi.org/10.1007/s13132-022-00916-z>.
- Pokhrel, S., & Chhetri, R. (2021). A literature review on impact of Covid-19 pandemic on teaching and learning. *Higher Education For The Future*, 8(1). <https://doi.org/10.1177/2347631120983481>.
- Pol, E., & Castrechini, A. (2013). Disruption in education for sustainability? *Revista Latinoamericana De Psicologia*, 45(3). <https://doi.org/10.14349/rlp.v45i3.1477>.
- Pultoo, A., & Oojorah, A. (2020). Designing remote education in a Vuca world. *International Journal of Computers & Technology*, 20. <https://doi.org/10.24297/ijct.v20i.8713>.
- Racaite-Samusiene, V., Saparniene, D., & Juknevičienė, V. (2021). Change leadership at local self-government in the context of COVID-19: The case study of Lithuanian municipal administration. *Scientific Papers of The University of Pardubice, Series D: Faculty of Economics and Administration*, 29(3). <https://doi.org/10.46585/sp29031364>
- Rusdinal, R., Tasrif, E., Alnedral, A., Defi, W. F., & Meizatri, R. (2019). School readiness for implementing vocational education revitalization. *International Journal of Scientific and Technology Research*.
- Sarfraz Ahmed Dakhan, Sheraz Rajput, Tariq Aziz, & Khalil Ahmed Channa. (2020). Implicit change leadership, affective commitment to change, and the mediating role of organizational trust. *Journal of Business and Social Review in Emerging Economies*, 6(4). <https://doi.org/10.26710/jbsee.v6i4.1510>
- Sarstedt, M., Ringle, C. M., Cheah, J. H., Ting, H., Moisescu, O. I., & Radomir, L. (2020). Structural model robustness checks in Pls-Sem. *Tourism Economics*, 26(4). <https://doi.org/10.1177/1354816618823921>.
- Selwyn, N. (2013). Discourses of digital ‘disruption’ in education: A critical analysis. *Fifth International Roundtable on Discourse Analysis, City University Hong Kong, May 23-25, 2013*.
- Setiawan, S. (2020). Analisa parsial model persamaan struktural dengan software Smart-Pls versi 3. In *Tutorial*.
- Sherly, S., Dharmasari, E., & Sihombing, B. H. (2020). *Merdeka Belajar: Kajian literatur. Konferensi Nasional Pendidikan I*.
- Sihombing, A. A., Anugrah Sari, S., Parlina, N., & Kusumastuti, Y. S. (2021). *Merdeka Belajar* in an online learning during the Covid-19 outbreak: Concept and implementation. *Asian Journal of University Education*, 17(4). <https://doi.org/10.24191/ajue.v17i4.16207>
- Sliwka, A., Klopsch, B., Beigel, J., & Tung, L. (2024). Transformational leadership for deeper learning: Shaping innovative school practices for enhanced learning. *Journal of Educational Administration*, 62(1). <https://doi.org/10.1108/jea-03-2023-0049>
- Toleikienė, R., Rybnikova, I., & Juknevičienė, V. (2020). Whether and how does the crisis-induced situation change e-leadership in the public sector? Evidence from Lithuanian public administration. *Transylvanian Review of Administrative Sciences*, 2020(Special Issue). <https://doi.org/10.24193/tras.si2020.9>
- Torre, T., & Sarti, D. (2020). The “way” toward e-leadership: Some evidence from the field. *Frontiers In Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.554253>
- Torres, A. C., Bulkley, K., & Kim, T. (2020). Shared leadership for learning in Denver’s portfolio management model. *Educational Administration Quarterly*, 56(5), 819–855. <https://doi.org/10.1177/0013161x20906546>
- Vakola, M. (2013). Multilevel readiness to organizational change: A conceptual approach. *Journal of Change Management*, 13(1). <https://doi.org/10.1080/14697017.2013.768436>
- Voogt, J., Westbroek, H., Handelzalts, A., Walraven, A., Mckenney, S., Pieters, J., & De Vries, B. (2011). Teacher learning in collaborative curriculum design. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2011.07.003>
- Walinga, J. (2008). Toward a theory of change readiness: The roles of appraisal, focus, and perceived control. *Journal of Applied Behavioral Science (JABS)*, 44(3), 315–347. <https://doi.org/10.1177/0021886308318967>
- Wang, T., Olivier, D. F., & Chen, P. (2020). Creating individual and organizational readiness for change: Conceptualization of system readiness for change in school education.

*International Journal of Leadership in Education.*  
<https://doi.org/10.1080/13603124.2020.1818131>

- Wang, X. H., Wei, X. N., Van Wart, M., Mccarthy, A., Liu, C., Kim, S., & Ready, D. H. (2022). The role of e-leadership in ICT utilization: A project management perspective. *Information Technology and Management*. <https://Doi.Org/10.1007/S10799-021-00354-4>
- Weiner, B. J. (2009). A theory of organizational readiness for change. *Implementation Science*, 4(1), 1–9. <https://doi.org/10.1186/1748-5908-4-67>
- Yulianto, H. (2022). An implementation of learning assessment model on the curriculum of *Merdeka Belajar*. *Technical and Vocational Education International Journal*, 2(2)
- Zuckerman, S. J., Wilcox, K. C., Durand, F. T., Lawson, H. A., & Schiller, K. S. (2018). Drivers for change: A study of distributed leadership and performance adaptation during policy innovation implementation. *Leadership and Policy in Schools*, 17(4). <https://doi.org/10.1080/15700763.2017.1384500>