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## Confirmatory Factors Influencing Innovative Schools in Indonesian Rural Areas

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<p><b>Article History</b></p> <p><b>Article Submission</b> 13 April 2023</p> <p><b>Revised Submission</b> 11 May 2023</p> <p><b>Article Accepted</b> 16 June 2023</p>	<p style="text-align: center;"><b>Abstract</b></p> <p>This study aims to describe the results of research on how schools in the rural areas of West Pasaman sub-district, Indonesia lead innovation at individual, class, and institutional levels. The study particularly identify the leadership role of school principals and school readiness to make changes. This research was conducted quantitatively with an expost facto and correlational study approach. The population was principals and elementary school teachers selected based on geographical considerations, namely the location or distance of the schools from the district administration center. 200 elementary school teachers were selected as participant of the research. Structural Equation Modeling - Partial Least Square (SEM-PLS) was used for the analysis of quantitative data using an algorithm, bootstrapping, and blindfolding techniques. The results of this study prove that change leadership and readiness for change have a positive and significant impact on school innovation in Indonesian rural areas. Change leadership can foster readiness for change for school residents, especially teachers so that school innovation ultimately occurs. The results of this study prove that change leadership and readiness for change have a positive and significant impact on school innovation in Indonesian rural areas. Linearly, it can also be interpreted that change leadership can build readiness for change among school members, especially teachers, so that in the end a school innovation is formed. The role of the principal in the context of change starts from initiation, then implementation to the institutionalization of change.</p> <p><b>Keywords:</b> Change Leadership; Innovative School; Readiness; School in Rural Areas</p>
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## Introduction

Education is still considered a strategic effort to solve social problems in society (Sakina & A., 2017; Dale & Newman, 2005; Little & Green, 2009; Nasibulina, 2017). For a developing country like Indonesia, attention to education is part of the big agenda of sustainable development of the country. The paradigm of equal distribution of education services has shifted from merely fulfilling school infrastructure standards to the implementation of quality education services; adaptable to the demands of the times for all educational institutions in Indonesia.

Innovation has become a strategic issue in the world of education and is considered as part of innovation in the economy and social sectors which emphasize productivity and efficiency. For many large and developing countries, education is seen as a catalyst in promoting equality and prosperity. Innovation in education is one form of policy to provide services and guarantees for the quality and relevance of education to improve people's lives (Asante & Ngulube, 2020; Nasibulina, 2017). Education must remain relevant to the challenges of national and even global social and economic change. The education sector needs to interpret the current and future challenges resulting from a change; then innovate to adapt to social needs (Korhonen et al., 2014; Manea, 2015). The closest expectation of the educational innovation is to increase student learning outcomes and the efficiency of educational service delivery.

Innovation in school management can be used as for strategic choice in solving various educational problems (Manea, 2015). Innovation is defined as a new way/breakthrough in solving problems to increase the effectiveness and added value of a job. In general, the problems of Indonesian education are related to the low learning outcomes of elementary and middle school students. The problem of student learning outcomes is always correlated with the learning process involving aspects of teacher professionalism (Didion et al., 2020; Wayne & Youngs, 2003), school leadership (Özdemir, 2019), infrastructure (Jannah & Sontani, 2018; Sawamoto & Marshall, 2020), curriculum, and policy implementation (Kemdikbud, 2020). At the lowest level, namely the school, the problems above are the scope of management tasks of the principal's leadership. Innovation in education governance or management is a strategic choice in solving various educational problems.

Geographical factors have long been a fundamental problem in the management of education in Indonesia at a macro level. The affordability of national education policies is always pursued by increasing the empowerment of various elements of education in schools. However, it should be understood that every school in the regions of remote rural areas in Indonesia has its own characteristics. Sometimes, they have a unique way of adapting to change, innovating, and maintaining the quality of education; although not infrequently face many obstacles.

Change requires agents in its implementation, they are individuals or groups who are involved in planning change and implementing it. Change agents consist of school leaders (a must) and employees who are selected based on certain criteria. Change leadership in this study identifies how school principals initiate change, make changes, and institutionalize changes in the context of the innovations carried out. In the process, the principal performs several roles, namely: (a) catalyst; the role of the principal is a leader to convince educators and education staff in each of the schools he leads that the changes made will make the school better, (b) providing solutions; the role of the principal is a leader who can provide a way out for solving problems experienced by school residents in making changes, (c) mediator; the principal's role is a leader to help smooth the change process, and (d) resource liaison; the role of the principal is a leader to connect employees in one school (Abdul Rashid et al., 2004; Beycioglu & Kondakci, 2020).

School readiness in making changes is identified from knowledge to change, attitude to change, and school support system. These aspects identify the readiness of interventions in the form of innovations that will enable changes to the school structure, both structurally and socially (Dievernich & Tokarski, 2015). Knowledge and attitude of human resources in organizations towards the urgency and concept of change is a key component of their readiness to engage in an applied innovation. Concern at the individual level is often the main challenge for organizations to implement change or innovation. This individual concern in more severe cases results in rejection and even resignation; systemically, it can harm the organization. Thus, the readiness of the individuals to make changes in both their attitudes and knowledge is important to be prepared.

Change is seen as a factor that plays an important role in the success of organizations including educational institutions. As a social system, schools that receive a major impact from modernization need to be adaptable by making changes. Every element of the school, especially the principal, needs to innovate in an effort to improve the relevance, effectiveness and efficiency of school management.

This study will describe the efforts of schools in rural Indonesia to lead innovation at the individual, class, and institutional levels by identifying the leadership role of school principals and school readiness to make changes. Identification of leadership is carried out on aspects of change initiation, change implementation, and institutionalization. Furthermore, school readiness to make changes is identified from the aspects of knowledge, attitudes, and school support systems in implementing changes. This study aims to describe the results of research on how schools in the rural areas of West Pasaman sub-district, Indonesia lead innovation at individual, class, and institutional levels. The study particularly identify the leadership role of school principals and school readiness to make changes.

Thus, this study formulates the following hypotheses (Figure 1):

H1: Change leadership is positively and significantly related to school innovation.

H2: Change leadership is positively and significantly related to readiness for change.

H3: Readiness for change is positively and significantly related to school innovation.

H4: Change leadership is positively related to school innovation through readiness for change.

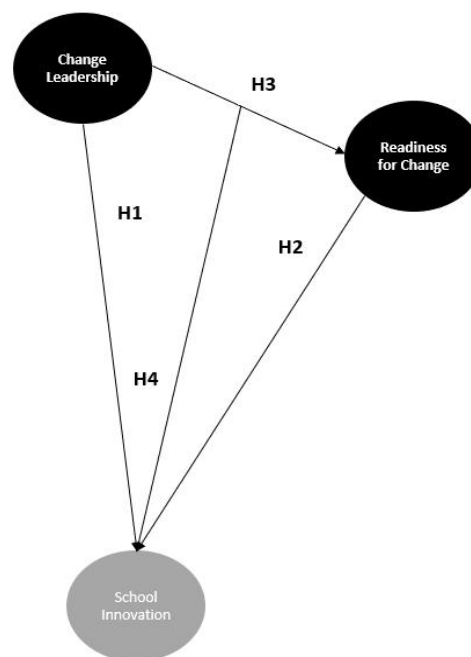


Figure 1. The Conceptual Model

## Literature Review

### Change Leadership

Leadership is still seen as the main element in determining the success of an organization regardless of its form. Leadership is always associated with the use of power to bring about participation. This participation is the result of the use of power from a leadership where followers begin to give their commitment and loyalty to achieve the goals set with their leaders. Richard L. Daff put forward the concept of leadership in just one definition, namely an influence relationship between leaders and followers that intends to change and concrete results that reflect a common goal. This definition includes seven essential elements in leadership, (1) change, (2) influence, (3)

followers, (4) intention, (5) shared purpose, (6) leader, (7) personal responsibility.

Change is one of the most popular goals of leadership today. The dynamics of the times require everyone, including organizations, to adapt, one of which is by making changes. In this case, change leadership is the right thing to discuss. Change leadership is an effort for leaders to influence subordinates in order to change the "current" subordinate paradigm to the "expected" paradigm. Efforts to influence this will be more directed to the style and role performed by a leader in order to change the paradigm. Change is seen as a factor that plays an important role in organizational success. Pasmore (2008) explains that changing the meaning is changing the way of thinking and doing things. Robbins (2001) explains "Change is to make something different". Then Potts and LaMarsh (2008) explain that change is a shift from the present state of an organization to the desired state in the future which is seen from the aspect of structure, process, people, and culture. From these opinions, it can be concluded that change is a difference in several aspects (structure, process, people, and culture) from the old paradigm to the current paradigm (which is expected).

Change is interpreted as an effort to change the way of thinking and doing things; make something different; the shift from the present state of an organization to the desired state in the future which is seen from the aspects of its structure, process, people, and culture (Beycioglu & Kondakci, 2020; Jacobs et al., 2013). Changes in organization are not of the same degree. In educational organizations, every policy, system, and program as a form of change determined by the principal in order to change the organization has different levels. Based on the level of depth and the method of change, the types of changes consist of: (a) routine changes that are almost always faced every day; (b) emergency changes, namely changes that are very sudden and unexpected; (c) changes in quality, namely changes in product quality; (d) radical changes, namely changes in the management system or organizational structure due to a new legislation; and (e) changes in macro conditions, namely changes in economic, political and security conditions, as well as environmental conditions.

#### Readiness for Change

Organizational readiness in making changes is a determinant in the effectiveness of the implementation of intervention efforts carried out in Organizational Development. Various literacy shows almost the same concept that organizational readiness for change is measured from two dimensions or levels: organizational and individual levels (Choi & Ruona, 2011; Helfrich et al., 2018; Weiner, 2009a, 2009b). Readiness to change refers to the collective determination of organizational members to implement the change with collective confidence and ability (Weiner, 2009b). Organizational readiness for change varies as a function of how many members of the organization appreciate the change and how capable they are at the implementation level, which is related to: task demands, availability of resources, and situational factors (Walinga, 2008). When organizational readiness for change is high, organizational members are more likely to initiate change, exert greater effort, show greater persistence, and display more cooperative behavior. The result is a more effective implementation.

The concept of a multi-dimensional construct in readiness for change at the individual level is belief in the specific efficacy of change, suitability of change, management support for change, and personal benefits from change (Ferry, 2016). Individual readiness to implement change needs to be preceded by a clear concept of change initiative and organizational capacity to make the desired change (Choi & Ruona, 2011; Weiner, 2009b). Individual readiness to make changes is the result of the individual's own evaluation of their own capacity and organizational capability to make changes well; by providing a support system in the form of mechanisms, infrastructure, and even policies that ensure change for innovation can benefit organizations and individuals (Choi & Ruona, 2011; Håkansson Lindqvist, 2019). Readiness at the individual level for organizational change is influenced by organizational readiness to make changes related to the availability of the organization's main infrastructure (Choi & Ruona, 2011; Dievernich & Tokarski, 2015).

#### Innovative School

Organizational innovation refers to the organization's efforts to make breakthroughs, change the status quo, develop characteristics in terms of products, processes, or services so that organizational performance can be improved. Innovation is one of the reforms; it is a new concept

applied to a product, process, promotion or service. Innovation is involved in difficult environmental changes, but not all changes will use new concepts or have a significant enhancing effect (Taylor et al., 2009).

Innovative schools refer to the idea of renewal carried out by schools. There are two categories of factors that are targeted in building innovation in schools: (1) properties of innovations and (2) school characteristics (Korhonen et al., 2014). The properties of an innovation can be approached from the point of view of the usefulness or added value it provides. The properties of an innovation indicate the extent to which users can use it to achieve certain goals set by the designer. The usefulness of an innovation can be determined by quality metrics, such as learning ability and perceived ease of use of the innovated product by users (Muijs & Harris, 2006).

#### **Theoretical Framework**

Leadership is still considered an important factor to provide success in school organizing; improving, maintaining, and even increasing adaptation and competitiveness in the midst of such rapid changes (Litz & Blaik-Hourani, 2020; Rafidah Syariff MFuad et al., 2020; Sağnak et al., 2015; Seong et al., 2015; Zuckerman et al., 2018). Change leadership is a familiar construct in educational research that is often used as a predictor of innovation and school organizational development (Bhattacharjee & Muddgal, 2019; Aurelio Villa Sánchez, 2019; Seong et al., 2015; Ubaidillah et al., 2018). In this case, some research uses the term transformational leadership. Many studies have proven the significant influence of leaders starting from recognizing, planning, and leading change and improving school achievement (Bell, 2018; Burnes et al., 2018; Busari et al., 2020; Erwin & Garman, 2010; Jacobs et al., 2013; Penalva, 2022; A.V. Sánchez, 2019; Vennebo & Aas, 2020). The construct of change leadership is also often associated with readiness for change. Theoretically, readiness for change is made as part of a change leadership study and one of its duties is to ensure that every sector in the organization is ready for change (Rafferty et al., 2013; Wang et al., 2020). Readiness for change is no less important than change itself; it is an initial indicator that is used as a benchmark for initiating and evaluating change plans (Khedhiri, 2018; Rafferty et al., 2013; Vakola, 2013; Wang et al., 2020).

Based on the above studies, the researcher identifies and analyzes whether the change leadership construct has an influence on readiness for change which in turn also has an effect on school innovation in rural schools in Indonesia. This research is likely to give rise to further discussion and empirical study in particular on the school change framework.

### **Methodology**

This research was conducted quantitatively with an ex post facto and correlational study approach. This research approach is selected as it is considered appropriate to measure the relationship between the constructs studied, namely change leadership, readiness for change, and school innovation in rural areas of Indonesia. Schools in rural areas are the terminology used in this study to refer to schools that are relatively far from the district administration center and have a low population density with homogeneous social interactions.

#### **Population and Sample**

The population in this study was principals and elementary school teachers in the West Pasaman sub-district of Indonesia. The selection of the research sample was carried out on the basis of geographical considerations, namely the location or distance of the school from the district administration center. The selection of schools as research samples was carried out randomly from five sub-districts: Lembah Melintang, Ranah Batahan, Sasak Ranah Pesisir, Gunung Tuleh, and Sungai Beremas. Furthermore, 200 elementary school teachers were selected as participant of the researched and asked to fill out a questionnaire.

#### **Demographic Detail of the Sample**

Demographic factors in this study are intended to describe the situation of schools in rural areas. The rural school in this study is characterized by a low population density with homogeneous social interactions. The average number of students from grades 1 to 6  $\leq 100$  with 8-10 teachers. Most of the population work as laborers and farmers with an average level of junior



high school education. Furthermore, geographical factors such as the distance between the region and the district administrative center are also taken into consideration because they indirectly have a relationship with demographic factors. The five sub-districts in this study sample have a distance of  $\pm 70$ -90 km from the district administrative center. Meanwhile, the distance between these five regions and the provincial capital reaches an average of 230 km with a journey time of  $\pm 7$ -8 hours.

The characteristics of the rural areas described above form the basis for considering the selection of the sample in this study. Demographic aspects are supported by geographical aspects; the distance of the region affects the school administration system in this rural area. The distance between regions and the relatively small number of school-age children allows for weakening factors to emerge, such as: less attention from the local government, limited access to technology, less competitiveness, and limited ability to innovate.

#### Research Instrument

The development of the questionnaire refers to the theoretical study of change leadership, readiness for change, and school innovation. Each construct is developed into three indicators. Indicators of the change leadership construct: change initiation (CI), change implementation (CP), and institutionalization (IZ). Indicators of the readiness for change construct: attitude for change (AC), knowledge (KL), and school support system (SS). Lastly, the variables of the school innovation construct: innovation at the class (CL), at individual level (ID), and at institutional (IT) levels.

The research instrument is in the form of a questionnaire consisting of two types: (1) A questionnaire with a combination of the Guttman scale and the Likert scale was used to explore data on the change leadership and school innovation construct. The questionnaire is presented with the answer choices "Yes" and "No". The alternative answer "Yes" is derived on a Likert scale with five alternative scores of 1 to 5 (1 = not good, 2 = not good, 3 = quite good, 4 = good, and 5 = very good). While the alternative answer "None" is interpreted as not being implemented with a score of 0. (2) Closed questionnaire with a differential semantic scale was used to explore data on the readiness for change construct. The questionnaire used was tested for validity first through expert judgment. The data obtained from this questionnaire is interval data. The check list is arranged on a continuum from the most negative answer on the left to the most positive answer on the right of each item in the questionnaire. Respondents were asked to determine their attitude by choosing one alternative answer (score 1 to 5) between 2 questionnaire statements.

#### Data Analysis

Structural Equation Modeling Partial Least Square (SEM-PLS) was used for the analysis of quantitative data using an algorithm, bootstrapping and blindfolding techniques. The output algorithm is used to determine the value of the validity and reliability of the research instrument. Bootstrapping output is used to assess the level of significance or probability of direct effects, indirect effects and total effects, r-square, adjusted r-square, f-square. Output blindfolding is used to assess the level of relevance of the predictions of a construct model.

## Results

#### Validity and Reliability

The data in Tables 1 and 2 below show the goodness of each indicator of the measurement instrument in this study. The analysis uses the SEM-PLS algorithm to determine the value of the validity and reliability of the instrument. The number of constructs analyzed are the three constructs of the indicators: (1) change leadership: CI, CP, and IZ, (2) readiness for change: AC, KL, and SS, (3) school innovation: CL, ID, and IT.

Validity and reliability tests of the instrument was administered to non-sample 30 teachers but still in the same population. The analysis was carried out to test convergent validity and discriminant validity. Validity test was carried out by using measurement outer model with convergent validity. The loading factor used as the standard to determine the validity of each indicator is 0.60 against the intended construct (Hair et al., 2014). Cronbach's alpha must be  $> 0.5$ ;

as well as the average variance extract (AVE) value must be  $> 0.5$ ; and the value of Composite reliability (CR) must be  $> 0.7$ . Table 1 shows the values of outer loadings, Cronbach alpha, CR, and AVE for each construct and its indicators. The value of outer loadings in Table 1 shows that the value of each indicator in the construct is  $> 0.6$ , meaning that each indicator has met the criteria for good convergent validity. Furthermore, the Cronbach alpha, CR, and AVE values in each construct have exceeded the standard criteria specified above. It can be concluded that the constructs and indicators of the instrument have met good convergent validity so that they are convergently feasible to be used in the research.

Table 1. Outer Loadings Construct Reliability and Validity

Construct	Outer Loadings	Cronbach' alpha	CR	AVE
Change Leadership		0.675	0.819	0.602
CI	0.773			
CP	0.781			
IZ	0.773			
Readiness for Change		0.638	0.805	0.679
AC	0.770			
KL	0.721			
SS	0.790			
School Innovation		0.693	0.766	0.631
CL	0.721			
ID	0.769			
IT	0.853			

Discriminant validity testing was conducted to determine whether there was a correlation between the constructs of the instrument. If the correlation value between constructs is more than 0.9, the correlation between the constructs studied is high and there is a possibility of multicollinearity; thus, the instrument is considered to have a weak discriminant validity value (U. Seharan, 2006). Therefore, in order to have a good discriminant validity value, the AVE of the construct studied must be less than 0.8. Otherwise, discriminant validity is met if the AVE of the extracted mean variance is higher than the correlation involving the latent variable (Kock & Lynn, 2012).

Table 2. Discriminant Validity (Fornell-Larcker Criterion)

Construct	Change Leadership	Readiness for Change	School Innovation
Change Leadership	0.622		
Readiness for Change	0.594	0.661	
School Innovation	0.416	0.495	0.628

The data in Table 2 show the AVE value of the construct studied has level of  $< 0.8$ . Furthermore, the AVE value of the extracted mean variance is already higher than the correlation involving latent variables. It can be concluded that each construct on the instrument has met a good discriminant validity value.

### Structural Model Assessment

Structural Model Assessment testing was conducted with the aim of predicting the relationship between constructs based on substantive theory. Model Fit (Table 3) or the accuracy of the model with the data is a statistical model that shows how capable the developed model is to



explain the data. The model consists of Standardized Root Mean Square Residual (SRMR), d\_ ULS (the squared Euclidean distance), d\_ G (the geodesic distance), Chi Square, and Normal Fit Index (NFI).

Table 3. Model Fit

	<b>Saturated Model</b>	<b>Estimated Model</b>
SRMR	0.666	0.666
d_ ULS	1.694	1.694
d_ G	0.406	0.406
Chi-Square	408.571	408.571
NFI	0.812	0.812

Table 3 shows the structural model fit characteristics developed for this study. The SRMR value assessed the correlated fit of the observed relationships, shows that the structural model developed is considered fit as the value of (0.066) < 0.1 (Sarstedt et al., 2020). Furthermore, the NFI value also shows a value close to 1, which is (0.812), meaning that the model developed can be considered fit.

Table 4. R Square Values

<b>Construct</b>	<b>R Square</b>	<b>R Square Adjusted</b>	<b>Q<sup>2</sup> (=1-SSE/SSO)</b>
Readiness for Change	0.507	0.445	0.425
School Innovation	0.603	0.486	0.399

The coefficient of determination (R<sup>2</sup>) in Table 4 shows how much the dependent construct can be explained by the independent construct, as well as showing the prediction accuracy of the model built in this study. In this study, readiness for change and school innovation are dependent constructs of the independent construct, namely change leadership. In table 4, it is known that the R<sup>2</sup> readiness for change value is (0.507); this implies that the construct is influenced by the change leadership construct and has a predictive power of 50%, the rest is influenced by other constructs outside this study. The school innovation construct is the dependent construct of the entire model with an R<sup>2</sup> value of (0.603); this implies that the construct is influenced by the independent construct and has a predictive value of 60% on the model structure, the rest is influenced by other constructs outside this study.

Q<sup>2</sup> analysis was conducted to determine the value of predictive relevance between dependent constructs. The Q<sup>2</sup> value must be greater than zero to qualify for good predictive relevance (Sarstedt et al., 2020). The results of the analysis in Table 4 show that the Q<sup>2</sup> value of the readiness for change construct is (0.425) and the Q<sup>2</sup> school innovation is (0.399); both Q<sup>2</sup> values of this dependent construct are already more than zero. It can be concluded that the construct has met the predictive relevance where the model has been reconstructed properly.

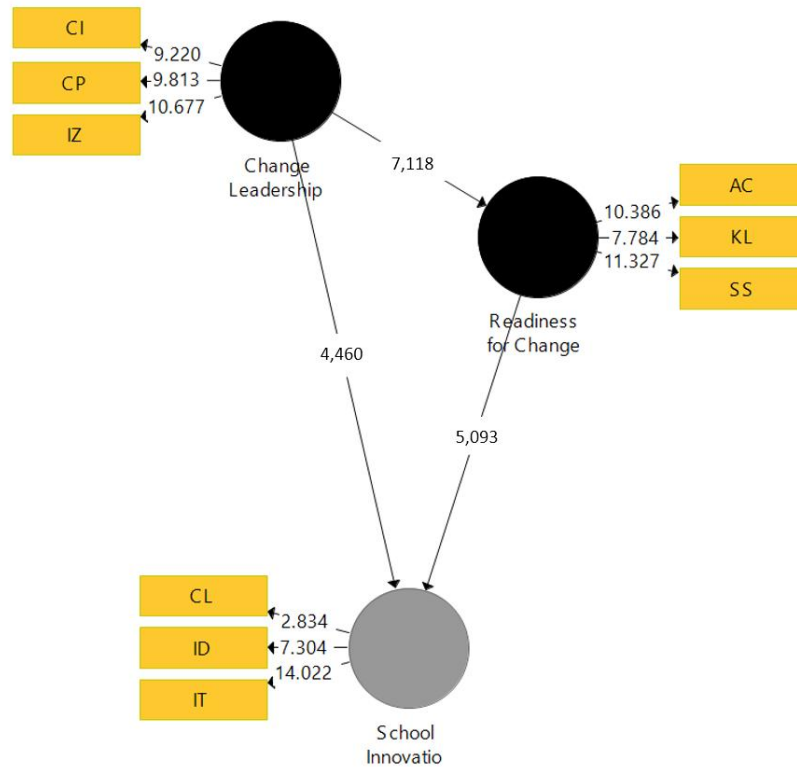


Figure 2. Structural Model (Bootstrapping)

Figure 2 shows the output of the bootstrapping technique from SEM-PLS which shows the predictive value of the structural model in this study. Furthermore, Table 5 describes the direct effect and indirect effect test values between constructs as shown in Figure 1. The test was carried out with a significance level of 0.05 (2-tailed). The predictive value criterion or the relationship between constructs is set with a T statistic value > 1.96. There are three constructs tested with each having three indicators. Indicators of the change leadership construct: CI, CP, and IZ. Indicators of the readiness for change construct: AC, KL, and SS. School innovation construct indicators: CL, ID, and IT.

Table 5. Direct and Indirect Effect

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Change Leadership -> Readiness for Change	0.394	0.373	0.052	7.118	0.000
Change Leadership -> School Innovation	0.262	0.260	0.057	4.460	0.000
Readiness for Change -> School Innovation	0.390	0.286	0.057	5.093	0.000
Change Leadership -> Readiness for Change -> School Innovation	0.258	0.233	0.070	3.355	0.001

Table 5 shows the direct and indirect effect parts of the construct of change leadership, readiness for change, and school innovation. All effects of the path built on the model show a good significance value with a positive effect. The first path shows the effect of the change leadership construct on the readiness for change construct with T statistic (7.118) > 1.96 and a positive effect with O 0.396. The second path shows the effect of the change leadership construct on the school innovation construct with T statistic (4.460) > 1.96 and a positive effect with O (0.262). The third path shows the effect of the readiness for change construct on the school innovation construct with T statistic (5.093) > 1.96 and a positive effect with O (0.390). These three analyses conclude that change leadership has an effect on readiness for change and school innovation in rural areas of Indonesia. Furthermore, on the fourth path, readiness for change is a moderating construct that mediates the relationship between change leadership and school innovation. The results of the analysis show that there is a relationship between change leadership and school innovation through readiness for change with T statistic calculation results of (3.355) > 1.96 and a positive effect with O (0.258).

The innovations made by principals in rural Indonesia in this study were identified and analyzed from three levels: individual, class, and institutional. The identification at these three levels can be summarized in table 6 below.

Table 6. Determinant of Innovative School in Rural Areas Indonesia (three level analysis)

Individual	Classroom	Institution
Contribution of ideas or thoughts in the school's innovation program. Ability to use new technology in learning. Efforts to improve collaboration, problem-solving, and creative thinking skills. School support in career development and teacher competency improvement. Support networking or learning communities for teachers and employees in collaborating to increase competence independently.	Implementation of syllabus, teaching materials, or new learning resources. Class setting that supports the creation of a competitive and collaborative classroom climate. Utilization of technology as a learning medium. The use of new pedagogies or new educational approaches to increase the effectiveness of learning in the classroom. Utilization of simple technology for coordination and collaboration of classroom teachers and parents of students.	Activity orientation on achieving school goals. The influence of principal's leadership in increasing school community participation and collaboration. Development of a simple technology-based learning management system. Managing a school environment that supports the achievement of educational program goals in schools. Increase school collaboration with parents.

## Discussion

The results of this study prove that change leadership and readiness for change have a positive and significant impact on school innovation. Linearly, it can also be interpreted that change leadership can build readiness for change among school members, especially teachers, so that in the end a school innovation is formed. The role of the principal in the context of change starts from initiation, then implementation to the institutionalization of change.

Readiness for change is a determinant in the effectiveness of the implementation of intervention efforts carried out by school principals, which is one of the tasks of change leadership. Various literacy shows almost the same concept that readiness for change is measured from two dimensions or levels: organization and individual (Choi & Ruona, 2011; Helfrich et al., 2018; Weiner, 2009a, 2009b). Readiness to change refers to the collective determination of the school community to implement change with collective confidence and ability (Weiner, 2009b). Schools as organizations that will implement an innovation must be prepared to respond to the stimulus changes made. Responses to school readiness to make changes from individual dimensions can vary from acceptance, mediocrity, rejection, to more extreme response, resignation. How well individuals respond to changes in schools can be supported by school readiness to structurally

plan and provide a good support system for innovation. When organizational readiness for change is high, school members are more likely to initiate change, exert greater effort, show greater persistence, and display more cooperative behavior (Burke & Schmidt, 1981; Lemcke, 2021; McKenna, 2020).

Organizational innovation refers to organizational efforts to make breakthroughs, change the status quo, develop characteristics in terms of products, processes, or services so that school performance can be improved. Innovation is involved in difficult environmental changes, but not all changes will use new concepts or have a significant enhancing effect (Taylor et al., 2009). The analysis of school innovation in rural areas as in this study should not be imagined like innovations carried out in schools in urban areas; quantitative. Observations of school innovations in rural areas even begin with fundamental things; such as shifting paradigms and increasing school community involvement.

Almost all schools in rural areas have limitations in accessibility and technology to support learning and school operations. However, for schools in the rural areas, is not appropriate to interpret innovation only in terms of the development of supporting facilities for the learning process based on the latest technology. Adoption of an innovation is an individual mental process that begins with initial awareness of the innovation and results in the actual adoption of the innovation (Korhonen et al., 2014). Every innovation in education has almost the same goal, namely how to create meaningfulness in learning by increasing activity and intensity, reflection, self-evaluation, collaboration, interaction, construction, and contextualization in learning (Fernsler, 2004; Nrc, 2005).

### **Conclusion**

Rural schools make up almost half of the number of schools spread throughout Indonesia. Attention to education in rural areas continues to increase both at the policy level and from research developments from the past to the present. School life in rural areas always displays interesting characteristics, especially their adaptability to the challenges of education itself. This requires rural schools; however, with all limitations, participate in innovating to be adaptive to change. However, for schools in rural areas, is not appropriate to interpret innovation only in terms of the development of supporting facilities for the learning process based on the latest technology. The good news is that they have unique ways of taking an innovative, albeit limited, approach to accommodate the needs of teachers, students and society.

The results of this study prove that change leadership and readiness for change have a positive and significant impact on school innovation in Indonesian rural areas. Linearly, it can also be interpreted that change leadership can build readiness for change among school members, especially teachers, so that in the end a school innovation is formed. The role of the principal in the context of change starts from initiation, then implementation to the institutionalization of change.

### **Limitation**

This study was limited to the subjects in the rural areas with certain characteristics; the village being a certain distance from the district administration center, having a low population density with homogeneous social interactions. Other rural areas may have different characteristics.

### **Future Recommendation**

This research is expected to add to the repertoire of literature on education in rural areas and provide inspiration for further researchers to explore other sectors of school innovation in rural areas with their respective characteristics.

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