

## ADAPTIVE PRINCIPAL FOR FLEXIBLE LEARNING IN A DEVELOPING COUNTRY: LESSONS LEARNT FROM THE PAST COVID-19 PANDEMIC IN LOMBOK- EASTERN INDONESIA

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**Abstract-** This study aimed at unveiling the roles of school principals in facilitating flexible learning (FL) to overcome the digital divide amid the covid-19 pandemic in Elementary schools on the island of Lombok, Eastern Indonesia. This grounded theory research garnered the data through in-depth interviews and focus group discussion involving 20 purposively selected principals. The findings uncovered various roles of the school principals, namely, having a sense of emergences, being responsive to emergence, preparing internal human and non-human school resources; mapping parents and students' digital divide; situational extending roles; deciding FL with multi-involvement; execute, monitor and evaluate the decided policy. All of these roles were aimed at realizing FL in the pandemic era, where its implementation in such a remote learning context is distinctive from its use in the ordinary virtual classrooms; however, schools that were initially dominated by face to face (F2F) learning system had to be more flexible that accords with the pandemic in either School Closure (SC) or New Normal (NN) form.

**Index Terms-** Adaptive leadership, Flexible learning, Covid-19

### I. INTRODUCTION

Flexible learning (FL) has recently gained popularity in the educational landscape because of the sudden emergence of challenges such as natural disasters, air pollution, and pandemic disease. Unlike the previous threats posed by viral pandemics, such as H5N1 in 2004, H1N1 Flu in 2009, Ebola Virus in 2012 (Bentata, 2020), the Covid-19 is undeniable chaos (Hargreaves & Fullan, 2020) and has unprecedented adverse impacts on the education sector (Christie, 2021a; Sohail & Sohail, 2022). This virus causes the most significant disruption in the history of education because of the drastic changes it has brought about (Bentata, 2020, p. 1) and learning teaching process needs to be reorganized (Harris & Jones, 2020; Zhao, 2020). One way of reorganizing learning-teaching process is FL. Consequently, FL is no longer an alternative in the teaching and learning process, but also an obligation to be implemented (Purwanto et al., 2020).

One of the impetuses for the implementation of FL is to respond to the pandemic situation immediately, accurately, and flexibly by paying attention to the worse state of the digital divide. Initially, the digital divide became a prominent issue among academics, researchers, or other educated groups. Currently, teachers, parents, and students have also undergone this drawback. The sudden shift from face-to-face (F2F) to online learning has worsened the digital divide. Meanwhile, not all teachers have the relevant competencies to respond to these drastic changes (Purwanto et al., 2020). Parents experience the

digital divide because they have to accompany and prepare relevant learning facilities for their children during this increasingly difficult economic condition. Students, especially in elementary education, depend on the ability of their parents to assist and facilitate their learning amid School Closure (SC) or New Normal (NN) policies. In Indonesian context, (Puspasari, 2020) found some new emerging learning shortages during this Covid-19 pandemic, namely; (1) the students work as a labor or newspaper, tissue and soup sellers to get some additional fee for their online learning, (2) the students go to higher site, climb trees or hills to gain the Internet signal, (3) the students walk on foot for 8 km to get access to the internet, (4) the students could not join the online class because of a lack of supporting facilities and accessibilities, (5) parents steal laptops and hand phones to facilitate their kids to learn online, (6) the parents with one hand phone but have to facilitate their kids' learning fairly, (7) a mother killed her son because of his difficulty to understand the lesson from his teacher online and many other uncountable problems.

Illustrations above indicated that the digital divide is no longer a matter of the dichotomy between rich and poor because the concept has evolved into a broader meaning. The disparity of access and resources can cause this technology gap, especially in the pandemic era (Bormann, 2021; Dijk, 1999). The access consist of material, intellectual, motivational, and social, while resources consist of material, intellectual, psychological, social, spatial-temporal, industrial, and public (Dijk, 1999). The digital divide is undeniable, but it can be narrowed by implementing FL. One element that plays a role in this context is the Principal because the Principal's leadership plays an essential role in the success of pursuing the desired learning outcomes (Delcker & Ifenthaler, 2020; Leithwood, Harris, & Hopkins, 2020; Pekkola, Siekkinen, Kujala, Kanninen, & Laihonon, 2021; Wardman, 2020). The psychological impacts of this Covid-19 pandemic are also inevitable because the inadequacy of the interaction between the teachers and students, and a lack of self-control and independent learning. This indicates that online learning doesn't guarantee the success of students' learning because of the environmental factors and students' characters (Nakayama, Yamamoto, & Santiago, 2007).

Several recent studies on leadership in this pandemic era have been carried out by previous researchers, such as: school leadership in covid-19 Era (Harris & Jones, 2020); effective leadership strategy in instability and uncertainty in Canada (Farhan, 2021); impact of covid-19 on leadership in Finnish university (Pekkola et al., 2021). Among those researchers, an interesting study was conducted by (Dirani et al., 2020) and (Menon & Motala, 2021). According to (Dirani et al., 2020),

there are differences between a leadership in a normal and pandemic era. They explained specific leadership practices in the crisis era consisting of; *sense maker, technology enabler, emotional stability and employee wellbeing, innovative communication and maintaining financial health of organization*. Meanwhile, Menon and Motala (2021) in their article about pandemic leadership found eight critical factors that enable an institution to respond the crisis namely; agile decision, data-driven decision, future oriented strategy, opportunity –driven leadership, a caring institution, social media, distributive leadership, and clear communication. It means that educational institutions need an agile framework (Al-Sholi, Shadid, Alshare, & Lane, 2021)

Besides, among the previous studies on learning process in the covid 19 era are; challenges and opportunities for utilizing information technology in the Covid-19 era (Astini, 2020a, 2020b); agile frameworks for education in covid-19 (Al-Sholi et al., 2021); integrating information and technology in education process during covid-19 (Christopoulos & Sprangers, 2021); the impact of the Covid-19 Pandemic on online learning in elementary schools (Purwanto et al., 2020). Different with those previous researches, this study focuses on the adaptive role of principal's leadership on facilitating FL amid covid-19 outbreak in elementary education at Lombok-West Nusa Tenggara. This study argues that educational leadership plays a pivotal role in responding to learning in the pandemic era through flexible learning, particularly regarding the digital divide among educational elements. Here, the elementary school level was chosen because the challenges of FL during SC and NN in elementary school were more significant than FL in high school or college because elementary students remain strongly dependent on the teachers and parents. The guiding question of this study is: What are the principal's roles in facilitating FL amid The Covid-19 Pandemic in Lombok- Eastern Indonesia?. This study contributes to enrich ideal leadership model of principal to run educational process in his/her institution.

## II. THEORETICAL FRAMEWORK

Yukl & Mashud (2010) stated that the flexible and adaptive leadership relates to changing behavior in suitable ways because of the situational changes. Many other terms refer to the characteristics of the leader's behavior in response to changing situations are: flexible, agile, versatile, and adaptable (Kaiser, Lindberg, & Craig, 2007; Yukl & Mashud, 2010). In this case, flexible leadership is associated with the emergence of unprecedented challenges leaders face in the era of covid-19. Another similar term for flexible leadership is adaptive leadership. According to Northouse, "*adaptive leadership focuses on the adaptations required of people in response to changing environments* (Northouse, 2016, p. 257). *Adaptive leadership is the practice of mobilizing people to tackle tough challenges and thrive*" (Northouse, 2016). Adaptive leadership consists of "*get a clear view, identify the challenge, regulate stress, maintain disciplined attention, give the work back to the people and protect leadership voices from below*" (Heifetz & Laurie, 2001)

Based on the illustration above, an adaptive or flexible leader is required to; (1) respond to unusual events that have caused immediate crises and emerging threats with adaptive leaders (Yukl & Mashud, 2010); (2) accurately diagnose the situation to determine appropriate and effective responses to different and changing contextual demands by adapting leadership styles, methods and approaches (Kaiser & Overfield, 2010); (3) respond to dynamics that occur continuously and systematically (Yawson, 2020). Flexible leaders are essentially responsive leaders who show their responsiveness to the situation (Leithwood et al., 2020). They provide the following steps as illustrated in table II below.

Table II: Practical Guideline of Flexible leadership (Yukl & Mashud, 2010, p. 87)

NO	Practical Guideline of Flexible leadership
1	Monitor external changes and identify emerging threats and opportunities
2	Identify relevant strategies, decisions, and actions for responding to external changes
3	Articulate an appealing vision of the likely benefits from proposed changes
4	Identify reasons for resistance to change and seek to convert opponents to change agents
5	Build optimism for a new strategy but balance it with the recognition that change will not be easy
6	Monitor progress for the effects of major changes and make any necessary adjustments.
7	Keep people informed about the progress of change and maintain commitment for it
8	Use information about the outcomes of strategic decisions to refine mental models

Illustration above indicated that flexible educational leaders can be understood as a leader who respond quickly and effectively to emerging conditions (such as the COVID-19 pandemic) by facilitating flexible learning through various roles relevant to various strategies. Relating to leadership flexibility, (Muna & Zennie, 2010) explained as follows:

"leadership is highly situational and contextual: the leader who succeeds in one context at one point in time will not necessarily succeed in a different context at the same time, or in the same context at a different time, or in different cultures, or even with a different group of followers(Muna & Zennie, 2010, p. 9)"

Even though a leadership is situational, there are some constant practices based on their statement below;

"Some practices are likely to remain constant, whereas the capabilities that underpin these practices can change. We have for some time used seven domain frameworks to help order our knowledge base about educational leadership: understanding the context, setting direction, developing the organization, developing people, improving teaching and learning, influencing, and leading self (Drysdale & Gurr, 2017, p. 131)"

Then, Flexible learning (FL) is an approach that makes educational institutions more relevant and responsive (Beaudoin, 2016) and is characterized by three critical elements: pace, place, and mode (Gordon, 2014). Pace refers to accelerated or part-time learning; the place can be in the form of classroom, home, mobile learning, experiential learning, or work-based learning; and modes related to delivery methods (Gordon, 2014; Andrade & Rivers, 2019). Another way to understand FL is the flexibility given to students by paying attention to where, when, and how students learn (Palmer, 2011; Unesco, 2020). Based on China's experience in designing the FL, Huang et al. (2020) detailed the dimensions of the FL as shown in Figure 1.

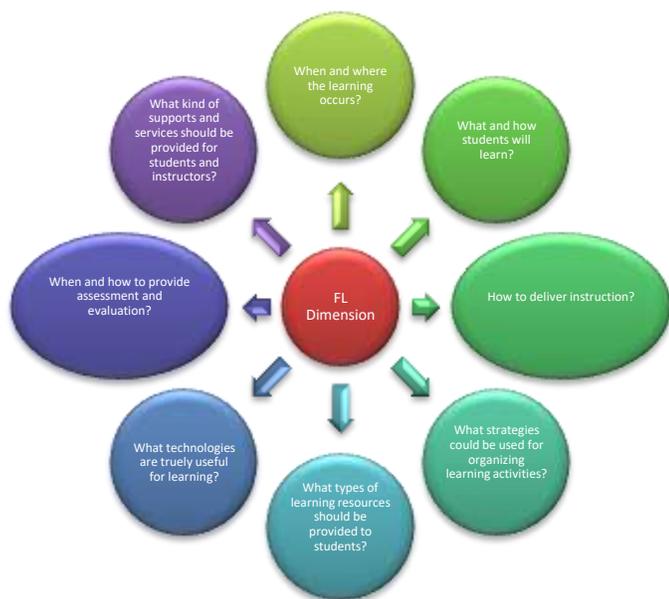


Image 1; FL Dimension (Huang, Liu, Tlili, Yang, & Wang, 2020)

Here, FL is a flexibly designed learning in terms of place, pace, and mode to respond to the condition and the digital divide to continuity of the learning process during SC and NN. SC requires FL because school closure does not mean closing the learning process (Zhou, Wu, Zhou, & Li, 2020), while NN demands FL as schools no longer use standard rules. In its application, FL can be in the form of face-to-face (F2F), online learning, blended/hybrid learning (a combination of online and offline learning), or blended online learning (a combination of synchronous and asynchronous learning).

Who is responsible for facilitating FL in schools? FL demands the involvement of various parties(Huang et

al., 2020). However, without intending to simplify matters, the Principal is responsible for designing FL (Pollock, 2020). Consequently, FL requires flexible leadership.

III. METHOD

This study drew on the grounded theory design, a systematic, qualitative procedure that researchers use to generate a general explanation (grounded in participants' views, called a grounded theory) that explains a process, action, or interaction among people (Creswell, 2012). The procedures for developing this theory include primarily collecting interview data, developing and relating categories (or themes) of information, and composing a figure or visual model that portrays the general explanation. In this way, the explanation is "grounded" in the data from participants. From this explanation, researchers construct predictive statements about the experiences of individuals.

Research sites and participant

This study was conducted at Lombok, it is a small island located in the eastern part of Indonesia and part of West Nusa Tenggara Province. This study involves 10 principals of Municipal Elementary education and 10 principals of Peripheral Elementary education.

Tabel IV: The Geographical Distribution of Data Sources

Location	No. of School	No. of Subject	Coding
Municipal Elementary education	10	10 Principals	L-1, L-2, L-3, L-4-L5, L-6, L-7, L-8, L-9, L-10
Peripheral Elementary education	10	10 Principals	L-11, L-12, L-13, L-14-L15, L-16, L1- 7, L-18, L-19, L-20
Total	20	20	20

Data Collection Techniques and Instruments

Data were elicited from April to September 2021 through semi-structured in-depth interviews with 20 principals who were purposively selected. This non-random sampling technique was used to obtain certain informants based on the quality of

knowledge. In this context, the researcher selected individuals who could provide insight, knowledge, or experience about principals' leadership in facilitating FL. Therefore, the researchers first determined information and experiences needed to be known from the informants and found individuals who could provide knowledge and experience to answer the given research questions (Bernard, 2002).

Guided by an interpretive paradigm, this study examined an event from the participant's point of view and experience (Esch & Esch, 2013) because the purpose of qualitative research was to investigate a phenomenon from the point of view of people who have had this experience, and interviews were an appropriate data collection method to obtain the data regarding that perspective (Beatty & Willis, 2007; Kvale, 2006). This study used semi-structured interviews to obtain desired data from school principals in FL facilitation during the covid-19 pandemic. Twelve semi-structured interviews were conducted to address the purpose of this study, and all interviews were conducted face-to-face. All interviews were conducted in Indonesian language, recorded manually, and audio-recorded after the interviewees were informed of the study's code of ethics and operating procedures. All interviews were transcribed for analysis, and the average interview time was 40 minutes.. Beside interview, FGD was applied to sharpen the data collected.

#### Data Analysis Techniques

To analyze the data, the researcher constructed the meanings and understandings that emerged during the analysis of interview data. For this study, transcripts were first developed from the interviews. The transcription was converted into audio tape recordings or field notes into text data. During the second reading, the researchers used content analysis to establish the presence and frequency of various themes. All data were coded and organized into meaningful themes, and patterns, relevant quotes, and examples. All data also were integrated into various themes to support or contest the findings. The next step was to present the data, including organizing, summarizing, comparing the data with the theories, and presenting the data. The data were qualitatively displayed. The final stage of the data analysis was interpreting data. Interpretation in qualitative research means that the researcher reviewed and extracted more significant meaning about the phenomenon based on personal views, comparisons with past studies, or both (Creswell, 2012, p. 257). Personal reflections about the meaning of the data and personal views were compared or contrasted with the literature. The study's limitations and suggestions for future research were also discussed (Creswell, 2012). The last step was concluding the empirical evidence.

#### IV. Results

Based on data from interviews in the elementary schools in Lombok-NTB, this study unveiled the flexibility of the Principal's role in facilitating FL as delineated beneath:

#### Context and regulatory analysis

The responsiveness of the Principal's role in Lombok begins with an analysis of the context and regulations. The analysis was carried out to diagnose the situation accurately and identify the appropriate response to the needs. This context analysis can also be understood as an anticipating role to determine "where we are," whether a school is in the green, yellow, orange, or red zone. Besides, the analysis of government policies was carried out to seek the legal legitimacy of the FL policy to be taken. The initiative to respond to FL is a must, but the government's legitimacy cannot be ignored. The following is an example of an interview excerpt from an informant, L-1, which confirms this statement:

School principals are required to respond to the pandemic quickly and accurately, but school principals must also be careful in making policies by seeking legal basis from the government either at the local, regional, or national level.

Another school principal, L-2, added that;

"...a situation analysis was conducted to find out whether the school is in a zone that is prohibited for the face to face system because it is in the yellow, orange, red zone or allowed because it is in the green zone followed by the covid-19 protocol...".

To examine the current situation, speed and accuracy were needed because it could suddenly change any time. The informant, L-3, explained:

"in analyzing this situation, as a school principal, I must respond quickly and carefully to the conditions faced because a school may have a red zone status one day, but tomorrow morning or Sunday will change...".

Another informant, L-6, also expressed the same thing:

"Speed of response are needed because neighboring schools or schools in the same village and sub-district do not automatically have the same status."

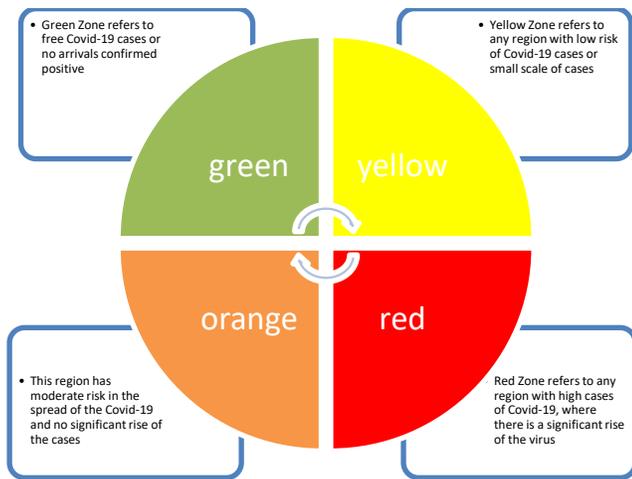


Figure 3: Classification of learning zones by color in Indonesia

Based on the first role mentioned above, at least four role characteristics found, namely; fast, accurate, actual and legal. The fast response was needed because the conditions were emergence challenges; actual responses were needed because the roles needed must be adjusted to the actual conditions faced; accuracy and caution were needed because the emerging challenges were dynamic in elementary schools at Lombok-West Nusa Tenggara. Finally, legal means that what is applied by the Principal needs legal legitimacy. Uniquely, there are several principals at Lombok Elementary education who decided F2F system even though they are in yellow zone and are prohibited by government to do it because of parents' force to F2F. In this case, F2F system was conducted at certain places out schools and out of students' home. This statement was proved by a principal, L-3 as follow:

“as a principal, I have to obey any regulation given by Indonesian government, but sometime I have to follow what students' parent want, they want F2F system even though it's prohibited. I further decide F2F system out of school, for example at my house ”

### Setting direction and preparing internal school resources

After determining "where we are" with context and regulation analysis, the Principal determined "where do we go" by identifying what he/she has and has not owned to select a relevant next strategy. Most elementary school principals in Lombok stated that learning in the pandemic era was to ensure the teaching and learning process by paying attention to the physical safety and psychological comfort of students, teachers, and parents as expressed by several principals, namely; “to ensure the fulfillment of children's rights to obtain education services during Covid-19.” (L-6) ; "to protect education community from the negative impact of Covid-19 (L-7) ; "to prevent the spread and transmission of Covid-19 in education units." (L-8); “to ensure the fulfillment of psychosocial support for educators, students, and parents (L-9)”

After setting direction, preparing internal resources is a must to do. Preparing internal resources were part of the internal institutional preparation for two elements: human and non-human resources as evidenced by the results of interviews with the informants as follow;

“FL needs the facilities and the ability of teachers. In general, teachers at my school have the facilities to implement FL. However, the problem was that many teachers did not understand all of FL learning models. The strategy was that teachers who had mastered the FL model share their experiences with teachers who did not. Finally, I took a quick step by providing training with a peer training system (L-4).”

The finding above showed that the digital divide occurred among elementary school teachers in Lombok. The leading cause of this digital divide was the drastic and rapid change from the F2F tradition to online learning, as evidenced by one of the results of interviews with informants, L-8, as follows;

“The primary cause of the digital divide among teachers was the lack of teacher mastery in various new learning models according to the demands of a combination of online and offline learning. Consequently, many teachers in Lombok did not implement synchronous learning in elementary schools because teachers experience cultural shock, namely a drastic and rapid change from F2F to distance online learning”.

In addition, the participant, L-12, added another element, where the digital divide was caused by material resources, especially teachers with honorary status with salaries of less than one or two million in one month. It is undeniable because many private teachers in public schools earn around 1.2-1.5 million per month. They fight for their competence as teachers in one side and as backbone of family in another one. An interview excerpt from an informant, L-6, confirms this statement:

“Digital divide at my school was caused mainly by economical problem, even though my school is a public school under government management, but there are many teachers with non-civil servant status. Consequently, they got salary less than civil servants' salary. This case is not only at my school where I lead but also at many other schools. This is a local and national problem in Indonesia”.

### Mapping parents and students digital divide

Mapping the digital divide among parents is very important for implementing FL because parents play a role in preparing facilities, learning, and assisting their children to study at home. An example of the urgency of this map is shown by the results of an interview with the informant, L-8, as follows; "mapping the condition of parents and students must be done to determine the readiness of parents and students when teachers apply FL,

especially for elementary school level". Another principal, L-9, added: "For elementary school level, parents and students cannot be separated. The readiness of parents is the readiness of parents and vice versa".

Based on the interview and FGD, several important points to consider regarding parents are; geographical condition of parents (between rural or urban); economic considerations (between high or low income); consideration of education (educated or uneducated), and e-readiness (digital literate or illiterate) and opportunities for parents to accompany their children. When interviewed about the methods used in the mapping, the Principal applied various methods, namely: first, mapping based on the data provided by parents when registering their children to school (L-5); second, mapping by visiting students' homes (L6); third, receiving direct reports from parents about the conditions they face (L-9). The biggest challenge in implementing FL was the digital divide caused by education, economy, opportunity, and parental apathy based on this map. For example, the Principal, coded as L-11, explained;

"Many parents cannot accompany their children because they are illiterate (especially in villages). In addition, many parents are educated, but they are not accustomed to teaching children at the elementary school level because the learning styles are different from high school or college levels".

Meanwhile, economic problems occur when many parents cannot afford to buy learning facilities for their children. One Principal, L-12, explained, "Many parents cannot afford to buy online learning facilities for their children, so I ordered the teacher to visit students' homes with the F2F system". Another principal L-13, also stated; "many parents are apathetic with their children, assuming that school is the business of teachers and the government."

The subsequent identification relates to the facilities and accessibility of students to apply to FL, which means that the Principal narrows the digital divide among students by ensuring facilities and student accessibility. Based on the data from the FGD, there were four categories of students required full attention to bridge the digital divide through FL, namely the students who have with HP/Gadgets/Laptops but do not have internet quota and internet access; those who have HP/Gadgets/Laptops and Internet data but do not have internet access; those who have HP/Gadgets/Laptops and vital internet access but do not have internet quota; those who have HP/Gadget/Laptop, Internet quota, and internet access; and those who do not have a cellphone/gadget/laptop. All these types of students need to be bridged through FL to narrow the digital divide.

#### Designing FL through Data-Driven Policy

After mapping the actual conditions of parents and students, the next role was to design FL based on the data obtained by involving various elements such as teachers, parents, covid officers, and the local education office. The data-driven policy

was manifested in two principal policies: FL with SC system and FL with NN system.

Furthermore, there are two FL policies taken, namely; SC and NN. Meanwhile, there are three selected FL models, namely; F2F, online learning, and blended learning. First, F2F with NN system in schools with green zone status; second, F2F outside school by visiting students' homes or gathering students in certain representative places; third, blended learning using F2F and online learning with familiar media such as; WA, learning videos, or learning applications provided by teachers and the government. Table 3 above also shows that one of the ideal models that the Principal s didn't implement in FL is blended online learning (a combination of a-synchronous learning with synchronous learning) through *google meet*, *zoom*, and other synchronous learning models.

#### Extending Roles

To implement FL amid covid-19, the Principal had additional roles such as the counselor role. The counselor role is needed when SC is applied because many students feel bored studying from home and want to meet their classmates. Parents of students also experience this feeling of boredom because they have to accompany their children to study at home for a long time with various difficulties faced. The role of this counselor is also related to efforts to convince parents of students about the existence of Covid-19. A Principal, coded as L-15, explained that the Principal's additional role was to convince some parents that Covid-19 was real because some think Covid-19 did not exist. Consequently, many parents ignored the covid-19 protocol or forced schools to reopen. Other additional roles of principal is designing an emergency curriculum, a principal, L-16, explains that the additional role of the Principal in the Covid-19 era is to design an "emergency curriculum" which is to abbreviate and integrate various subject matter without reducing the substance of each existing material.

The next additional role is mitigation roles (especially in the NN era), such as manage student attendance, health screening, quarantine procedures, social distancing in classrooms. One informant, L18, stated:

*"the things that need to be prepared by the Principal to implement the new normal are; prepare masks for teachers, students, and staff, arrange physical distancing inside or outside the classroom: prepare hand sanitizer and soap; instructions on coughing or sneezing etiquette, preparing disinfection, managing incoming visitors, managing who will drop off or pick up students; water systems, classroom ventilation and forth."*

The last additional role was leaders as teachers and leaders as a learner. L-2 stated that;

*"The Principal also acts as a teacher who teaches students while learning about many things experienced in the field related to this unprecedented challenge."*

*Like a blessing in disguise, the informant L-18 stated that "COVID-19 was educating school principals and school community to care about health behind the negative impacts that appeared."*

**Disseminating, executing, monitoring, and evaluating policy**

This role aimed to socialize the learning system policies implemented by school principals to teachers, education staff, parents, and students. One Principal, L-11, stated that:

*"This policy dissemination is carried out to provide information about policies implemented in schools to teachers, parents, and students. This dissemination is the execution of policies in SC or NN."*

A school principal, L-14, added that policy execution requires dissemination to all school members, parents, and students. After the policies are disseminated and executed, the Principal then monitors and evaluates the policies implemented for further process improvement. Another question to answer was what has been done and the results?; what has not been done and why? For example, a school principal, L-3, explained;

*"from the interim evaluation results, the teacher needed a particular guidebook for FL during SC and NN and a specific guide for parents in accompanying children during SC and NN".*

**V. DISCUSSIONS**

Based on the data above, this study found several roles of school principals in facilitating FL amid covid-19 and responding to digital divide that occurred among parents, students, or even teachers, namely; *having a sense of emergence and responsive to emergencies, identifying context and government regulation, mapping parent and students digital divide, pay attention to extending roles, decide FL, Execute, monitor and evaluate the decided policy.* These roles reinforce various characteristics needed by a leader when facing emerging conditions, namely; responsive and adaptive attitude to the conditions being faced (Leithwood et al., 2020; Yukl & Mashud, 2010); role suitability with different and dynamic contextual realities (Kaiser & Overfield, 2010; Yawson, 2020). This different and dynamic response is needed because a school's status can differ in a day or two, a week, or a month. For example, today, a school is banned from F2F because it is in a red zone, but its status could change to a green zone tomorrow morning or next week. In addition, neighboring schools do not guarantee equal status. Consequently, fast, accurate, and conditional responses are part of a leader's flexibility.

This study found similarities and differences with the theory or previous research regarding the Principal's role. Similarities were found when school principals in Lombok played several roles: monitoring external changes and identifying emerging threats (Yukl & Mashud, 2010); sense maker, technology enabler (Dirani et al., 2020). The difference is found when not all best practices in the theory or previous research are applied. It

indicated that the role of the Principal of elementary schools on the island of Lombok shows three things, namely; (1) implementing some of the best practices from several experts (Leithwood et al., 2020; Yukl & Mashud, 2010); (2) randomly taking best practices proposed by experts or previous research. The previous theories were not fully acceptable due to educational leadership in the pandemic era differed from before the pandemic. In addition, the adaptiveness of leadership at one time does not guarantee its adaptiveness elsewhere. An example of good leadership practices in the pandemic era found by Dirani et al., (2020) is also not fully implemented in leadership practice in elementary schools in Lombok-West Nusa Tenggara, as shown in table 4.

Table VI: The differences between leadership during the Pandemic

Leadership In Pandemic Era (Dirani et al., 2020)	Educational Leadership to Facilitating FL
<b>Practical Guide</b>	<b>Practical Guide</b>
Sense maker	Sense of emergence and Responsive to the emergence
Technology enabler	Understanding the context and regulation
Emotional stability and employee well being	Setting direction and Preparing internal school resources
Innovative communication	Adjusting school resources with parents and students Conditions
Maintain financial health of Organization	Pay attention to the extending roles
	Decide FL with multi-involvement
	Execute, monitor, and evaluate the decided policy

Table above shows that Elementary school principals need a sense of emergence and responsiveness with context analysis to apply FL. This step supports the practical guide proposed by Yukl and Mashud (2010), in which an adaptive leader first monitors external changes and identifying emerging threats. Likewise, understanding the context is the first role before setting direction for the success of the educational process (Drysdale & Gurr, 2017). Understanding the context requires a sense of emergence from a leader or what Dirani et al. (Dirani et al., 2020) call a "sense maker." Context analysis is carried out to diagnose the situation at hand accurately and then identify the appropriate response to the needs (Kaiser & Overfield, 2010) whether they are in a prohibited zone or allowed to perform F2F. In addition, this context analysis is strengthened by an analysis of government regulations so that school principals get the legal umbrella of the policies to be taken or the role they will play.

Here, the role played by the Principal is a technology enabler (Dirani et al., 2020). After conducting a context and regulatory analysis, the Principal determines the direction of FL in the pandemic era by preparing human resources, especially in information technology that supports FL. This role is following what is called by Leithwood et al. (2020) as "setting direction" and "developing people." Meanwhile, the preparation of non-human resources is part of the "adjusting tools" (Gordon, 2014; Huang et al., 2020) to ensure flexible resources. For school principals, all of these roles are part of internal institutional preparation. The challenge found by school principals in Lombok is the digital divide among some teachers, especially regarding intellectual access and intellectual resources, namely the lack of teachers' ability to understand relevant information technology to implement FL. The cause is cultural shock, namely the complexity of the new demands created by the new challenges faced (Matveev, 2017). In this context, the new challenge is Covid-19 in the teaching and learning process. This kind of challenge is not only in a developing country (such as Indonesia) but also in China (Shi & Sercombe, 2020; Wu & McGoogan, 2020; Zhao, 2020).

Internal preparation is followed by external preparation by mapping parents' and students' conditions, especially the digital divide. Digital divide mapping is considered for implementing FL because parents assist and prepare learning facilities for their children (Purwanto et al., 2020). Mapping of students' conditions is also carried out to ensure students' readiness in participating in FL. Here there is a close relationship between the readiness of parents and students (Purwanto et al., 2020), especially for students in elementary schools, the FL design amid a crisis requires preparations such as considering different students with different needs and considering parents. When a leader uses data in a leadership, it can be called as "*data-driven leadership*" (Menon & Motala, 2021).

The designed FL and digital divide to respond to the outbreak are included SC and NN through F2F, online learning, and blended learning with the following details; F2F in schools for schools with green zone status through the NN system; F2F by visiting students' homes or gathering students in certain representative places outside the school for schools that are in the yellow, orange and red zones with SC policy; blended learning is using models 1 and 2 while paying attention to several dimensions of FL.

Ideally, the various dimensions of FL proposed by several experts (Collis & Nikolova, 1998; Gordon, 2014; Huang et al., 2020) can be applied by school principals in Lombok, but the digital divide makes not all of these dimensions applicable. Therefore, their role is to narrow the digital divide through FL because they cannot erase it (Puspasari, 2020). Among teachers, the digital divide is caused by the factor of Intellectual access and resources, where many teachers do not have the intellectual abilities to use information technology that supports FL. Meanwhile, among parents, the digital divide is caused by the lack or absence of facilities or Internet connections to facilitate their children's learning. Also, this study unveiled that they had low motivation which refers to the lack of motivation of parents

to master and use information technology based on the assumption that teaching is the task of the teacher, not the task of parents. Besides, parent' digital divide is caused by intellectual access, namely many parents who do not have intellectual abilities to use information technology that supports FL.

Before executing the policies that have been designed, the Principal in the pandemic era has additional roles as; (1) counselor role; (2) emergency curriculum designer; (3) mitigation roles; and (4) leaders as teacher and leader as a learner. After implementing these roles, the role of the Principal is executing the decided design, which is to invite teachers to commit to implementing FL by paying attention to the covid-19 protocol. These additional roles are followed by monitoring, evaluating and following up for better policies in the future. All of problems faced by principals become catalyst for change (Zhou et al., 2020) as happened in other countries such as; China (Zhou et al., 2020), Africa (Christie, 2021); Turkey (Elbay, 2022) etc.

## VI. CONCLUSIOS

This study encapsulates that principal leadership in the pandemic era requires flexibility to facilitate FL in schools. Flexibility is associated with various dimensions of FL (pace, places, and modes) and the digital divide between parents, students, or even teachers in schools. Some of the leadership best practices from many experts or previous researchers (Kouzes & Posner, 2017; Leithwood et al., 2020; Yukl & Mashud, 2010) were applied by school principals in Lombok-West Nusa Tenggara. Some of them were not applied, which shows that the leadership role's flexibility before the pandemic is different from the leadership role during the pandemic. Although Dirani et al., (2020) provide leadership practices during a pandemic, the school principals in this study did not fully apply them that showed that flexibility was also conditional-situational, where the flexibility of a role in one place did not guarantee flexibility elsewhere (Drysdale & Gurr, 2017) because the Principal was also struggling to face the digital divide that occurs among teachers, parents, or students. At the same time, the digital divide in one place or country was different from one another. This study concludes several roles of school principals in facilitating FL amid covid such as; analyzing context and regulation, setting direction, identifying internal resources (human and non-human resources), mapping parent and students digital divide, adjusting internal human resources and parent and students digital divide with the relevant model of FL; paying attention to extending roles; deciding FL (SC or NN); and execute, monitor and evaluate policy.

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