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Research Article

The Role of School Supervisors in Encouraging Teachers to Manage Postflood Recovery Actions

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Abstract

This study aims to reveal the supervisors' role in motivating and encouraging teacher creativity and learning innovation in elementary and junior high schools in South Kalimantan after the flood. Methodology This study adopted a sequential mixed method approach that combines quantitative and qualitative studies conducted sequentially and at different times. In the first stage, data were collected by distributing questionnaires to 53 school supervisors. The variables in this quantitative study are the role of supervisors as an independent variable (X) and motivation (Y1), creativity (Y2) and learning innovation (Y3) as the dependent variables. Second, in-depth interviews were conducted to collect qualitative data from the 10 respondents. Correlations between research variables were conducted on the quantitative data, while qualitative data were analyzed. Finding The results showed that there was a significant positive relationship between Supervisor Role and Teacher Motivation on Teacher Creativity and Learning Innovation. Implication This study highlights the important role of supervisors in advising school management and coordinating the engagement of other stakeholders for flood mitigation actions as well as encouraging teachers to continue carrying out teaching and learning activities.

Keywords: Supervisor's Role, Motivation, Creativity, Management and Learning Innovation

1. Introduction

Floods are the most pervasive hazard affecting Indonesia. Flood occurrence during 1995-2015 accounted for 43% of all catastrophic events, affected the second highest number of people within the same period (after earthquakes), and caused overall damage similar to other catastrophic disasters (Islam et al., 2016). In January 2021, large-scale flooding occurred in many areas of Indonesia, including South Kalimantan. This flood has caused enormous material and human losses. The Center for Disaster Information and Communication of the National Disaster Management Agency reported that as many as 10 regencies/cities were affected by flooding in South Kalimantan Province

(Puspitarini, 2021). Several public facilities, including schools, were badly damaged which disrupted the education process. The value of losses due to the flood that hit the South Kalimantan region was approximately IDR 1.35 trillion. The flood destroyed many school facilities, including learning equipment, buildings, and sportfascilities. The impact of flooding on school infrastructure was also reported in several previous studies. The results of this study support those of previous studies (Achoka & Julius, 2008; Okuom et al., 2012). Flood disasters can cause negative impacts, including damaged infrastructure and disruption of the learning environment of school students, leading to an increase in students dropping out of school. This situation exacerbated the teaching and learning process after COVID-19 outbreak.

Due to the high number of COVID-19 cases, the government has implemented strict social restrictions to prevent the spread of COVID-19. This barrier has changed people's activities, including the world of education. Learning that was previously carried out in schools has turned into online learning (in the network). The flood disaster that damaged learning facilities, including online learning facilities in schools and sports facilities, further complicated the situation of school administrators, especially teachers. Postflood handling needs to involve all stakeholders. Government and nongovernmental institutions have generally been quick to provide assistance for the recovery process. In addition, these institutions provide skills development training in broad aspects for livelihood diversification, disaster awareness programs, counseling services on changing cropping patterns, weather information and new technology after the flood disaster (Abid et al., 2017; Arai, 2012). Handling efforts are also carried out in the educational process so that schools continue to make their best efforts to provide learning services to their students.

Several previous studies have described postflood management (Jamshed et al., 2017; McEwen et al., 2018; Munawar et al., 2021). However, there are few studies on postflood management for learning system recovery (i.e., (Chaudhary & Timsina, 2017). Most studies focused on flood disaster education (Azmi et al., 2019; Khalid & Shafiai, 2015; Nifa et al., 2017). One of the postdisaster management efforts in Indonesia is to improve public service functions (Indonesia Disaster Management Reference Handbook., 2015). In the context of education, one form of public service that must be addressed is primary education. This role is carried out by the Education Office at the city or district level. One of the functional officials responsible for dealing with this task is the school supervisor.

In the Indonesian education system, the school supervisor is an administrator with duties including academic supervision, managerial supervision, and professional guidance and training of teachers or principals (Daryanto, 2018). In postdisaster conditions, they are expected to make appropriate contributions to teachers and other school members. A supervisor has the role of creating a more conducive atmosphere enabling teachers and school members to feel safe and free in developing their potential and creativity in dealing with postflood recovery actions. Several studies have reported the role of school supervisors in improving the quality of primary and secondary education, especially in developing countries (Alam et al., 2021; Chudzaifah, 2019; Kotirde & Yunos, 2014; Mensah & Ahadzie, 2020; Wiryanti, 2017). In developed countries, research on the role of supervisors focuses more on human-capital reform and the development of institutional capacities as well as parent engagement and community organizing that enable districts to respond to policy demands (Bush-Mecenas et al., 2020; Galey-Horn et al., 2020; Rodela & Bertrand, 2018). Research on human-capital reform shows that principals receiving high-quality coaching from supervisors provide stronger support for and implementation of human capital. Coaching strategies and approaches vary between high-ranking coaches consistently emphasizing the importance of engaging in, working collaboratively with actors, and emphasizing the use of tools to guide key improvement (Bush-Mecenas et al., 2020). The supervisor's role is very important in encouraging teacher motivation and creativity. However, all research on the role of supervisors is carried out under normal conditions, whereas there are few studies in postdisaster conditions. The study aims to reveal the supervisors' role in motivating and encouraging teacher creativity and learning innovation in elementary and junior high schools in South Kalimantan after the flood.

2. Literature Review

2.1 Supervisor Role

Supervision is a process specifically designed to assist teachers and supervisors in learning everyday tasks at school, and it is hoped that teachers and supervisors may utilize their knowledge and abilities to provide better services to parents of students and schools. Such an atmosphere can only occur if the leadership of the supervisor supports the democratic teaching learning process. Conversely, without proper supervision methods, most teachers may lose their creativity. The supervision process ensures that the policies, principles, rules, regulations and methods specified for the purpose of implementing and achieving educational goals are effectively carried out. Therefore, the knowledge and experience of supervisors to supervise, evaluate and coordinate the process of improving teaching and learning is pivotal for the supervising process (Igwe, 2001).

The role of educational supervision is stated in the supervisor's performance, which in carrying out the duties of the school supervisor also has a more specific role/function. There are 8 supervisor functions (Gunawan, 1996): a) coordinating all school efforts; b) equating school leadership; c) expanding teacher experience; d) stimulating creative efforts; e) providing continuous facilities and assessment; f) analyzing learning and teaching situations; g) providing knowledge and skills to each staff member; and h) integrating educational goals and helping improve the teaching abilities of teachers.

The task of a school supervisor is to help, encourage, and provide confidence to the teacher to improve the teaching and learning process. Oversight activities are carried out through various educational problem-solving processes and are aimed at increasing the effectiveness and efficiency of the teaching and learning process. Supervision is a tool that teachers use to improve teaching and learning conditions. Educational supervision involves the supervision of teaching and its supporting elements. Supervision is an activity directly related to teaching but not directly related to students. Supervision activities take place through various classroom problem-solving processes (Maralih, 2017). One important aspect of supervision is to facilitate the administrative or operational aspects of school operations rather than focusing on assisting school leaders in their work to improve teaching (Saltzman, 2016).

2.2 Motivation

Motivation is a theoretical concept related to human behavior. Motivation determines the motives for persons to react, act to achieve goals or fulfill their needs. Motivation is defined as the process of initiating, directing, and sustaining goal-oriented behavior et al., 2017). Woolfolk's definition of motivation is an internal condition that generates, directs, and maintains behavior (Woolfolk Hoy et al., 2013). More specifically, it directs individuals to take actions to achieve goals or meet needs and expectations. It is the factor that leads to behavior and determines its direction, force and driving force (Sevinc et al., 2011). Motivation is therefore considered to be the underlying reason for human behavior (Guay et al., 2010). Brophy defines motivation as a theoretical concept used to describe the initiation, direction, intensity and impulse of goal-directed behavior (Brophy, 2004). According to Ainley & Ainley (2011), motivation is the attribute that drives movement, energy, direction, and reason for action, the "what" and "why" we do something. Motivation is what creates enthusiasm and motivation for work (Anoraga, 2005). The strength and weakness of a person's work motivation is very influential on the success of work performance. According to the existing definition, motivation is related to the urge to take an action. In the world of education, motivation is a persuasive impulse that always gives positivism to learning actors to achieve learning goals regardless of how hard and difficult it is. The Shepherd-Jones research shows that teacher motivation is influenced by the principal's leadership style. Several dependent variables combined with teacher autonomy, relatedness, competence, and social isolation have a significant influence. Generally, teachers

perceive higher levels of autonomy, relatedness, and competence under principals who are perceived to exhibit a democratic leadership style (Shepherd-Jones & Salisbury-Glennon, 2018). Principal leadership influences teacher performance and work motivation (Ulfathmi et al., 2021). Thus, learning motivation is a feeling that revives the energy of positivism and applies it in carrying out tasks (Cook & Artino Jr, 2016). Therefore, work motivation in psychology is a driving force for work morale.

2.3 Creativity

Creativity becomes the focus of the curriculum and is reflected in its content. This curriculum encourages students to think creatively and critically, solve problems and make things better. It should give students the opportunity to be creative, innovative and entrepreneurial (QCDA, 2009). Creativity is a behavior that is difficult to define. In the world of education, this topic generates much interest and debate, but it is still difficult to find the most precise definition. Many educators believed that creativity remains the ultimate goal of elusive education and the center of human well-being. Creativity in education is considered to exist on one of two sides. First, it can be defined as an elite trait, that is, an innately superior level of intelligence that is considered unteachable. Second, creativity can be learned, so students' creativity must be facilitated and fostered as an important life skill. The curriculum in schools is therefore designed to enable all children to develop the capacity to restructure their own world and develop themselves (Spendlove, 2008). Creativity is the ability to create a new idea, output, and product, either new as well as a modification or change, by developing an existing thing. In regard to creativity in teachers, the teacher in question may create a teaching strategy that is completely new and original, or it can be a modification of the various existing strategies that produce a new shape or perspective (Pentury, 2017).

Munandar (2009) states creativity as the ability to provide new ideas that can be created in problem solving. Fromm (1959) stated that creativity is producing something new that can be seen or heard by others. Everyone basically has creative talents and the ability to express themselves creatively, although each in a different field. In connection with the development of work creativity, there are 4 aspects of creativity (Lukman and Alim, 2020): a) Private creativity is the expression of an individual's uniqueness in interaction with the environment. Creative expression is a reflection of individual originality. Expect innovative ideas from this unique personal expression. b) Pusher, creative genius, is realized when there is encouragement and support from the environment or when there is a strong urge within oneself to create something new (inner motivation). c) The process of developing creativity requires the freedom to express ideas. d) Products, meaningful conditions that enable a person to create meaningful and creative products, are personal and environmental conditions. That is, they both encourage people to engage in creative processes. Creativity is a personal property that is embodied in attitude or character such as flexible, open, autonomous, airy, curiosity, firm, ability to describe ideas, self-assessment realistically, all of which are necessary to bring up creativity. Creative development in the classroom produces creative education for participants. The ability to think creatively as a creative component produces effective learning or, farther from developing high reasoning power, can be used to solve problem learning. Creative potential development students may produce superior learning (Pentury, 2017).

2.4 Learning Innovation

An innovation is an idea, object, event, or method that is perceived or observed as new to an individual or group of people (society), whether it is the result of an invention or discovery. Innovation is done to achieve a specific goal or to solve a specific problem (Udin, 2008). Educational innovation can be easily interpreted as innovation in education. Educational innovations are in the form of inventions or discoveries used to achieve educational goals or to solve educational problems, perceived or observed as new to a person or group of people's ideas, objects and methods (Dörnyei et al., 2014). Therefore, innovation is expected to improve the quality of education and learning.

Fundamentally, learning is a process of interaction between students and their environment, leading to changes in behavior for the better. During the learning process, the teacher's most important task is to adjust the learning environment to support behavioral changes in students (Hiralall & Martens, 1998). Learning is a two-way communication process; teaching is done by teachers as educators, and learning is done by pupils or students.

Learning innovation is closely related to technological and cultural developments. A learning culture as a complex system involves macrolevel properties and microlevel features (e.g., technology, classroom activities). Technology is frequently considered as a part of microlevel feature (Zhang, 2010). One of the learning innovation models that can be implemented is the configuration model, a model with a comprehensive approach to developing innovation strategies (educational change) in different situations. According to the configuration model, the possibility of innovation diffusion depends on four factors, namely, a) Configuration, namely, showing the relationship between the innovator and the recipient in a social context or in a social and political situation. There are four configurations, namely, individuals, groups, institutions, and culture. Each part of the four configurations acts as an innovator and can act as an innovation recipient (adopter); b) Relationship (linkage), namely, the relationship between the actors in the process of spreading the innovation. The innovator and adopter must be in a relationship that allows him to hear and pay attention to the diffused innovation. c) Environment, namely, the way in which the surrounding environment becomes a place for the spread of innovation. The environment in this sense includes all things, whether physical, social, or intellectual, which in general can be neutral, influence or inhibit certain behavior; d) Resources, namely, the resources available to innovators and recipients in the process of transitioning to acceptance of innovation. Available resources are very important, both for innovators and adopters, because both require innovation resources to carry out transactions (Zhang & Vorobeychik, 2019).

3. Methodology

This study adopted a sequential mixed method approach. The sequential mixed methods model approach combines quantitative research and qualitative research conducted sequentially and at different times. In the first stage, supervision was carried out on all school supervisors in 3 districts/cities in South Kalimantan, which were flooded, with a total of 53 respondents. The variables in this quantitative study are the role of supervisors as independent variables (X) and motivation (Y1), creativity (Y2) and learning innovation (Y3) as driving variables. A total of 19 questions were asked, consisting of eight questions about the role of supervisors, three questions about motivation and one question each for innovation and learning innovation.

The next stage is in-depth interviews with selected respondents that are conducted face-to-face or by telephone. Interviews were conducted for one to two hours. Ten out of 53 respondents were selected as informants in the interviews. Data analysis is the process of simplifying and presenting data by grouping them into a form that is easy to read and interpret. Quantitative data were compiled and averaged, and then each question was subjected to options from 1 (very low) to 5 (very high). The average values were then converted into five levels of interpretation as follows:

1. 00–1.80 = Very low
2. 81–2.60 = Low
3. 61–3.40 = Moderate
4. 41–4.20 = High
5. 21–5.00 = Very high

The results of the X variable score are then correlated with the Y variable using SPSS 20th edition software. The results of the interviews were analyzed and presented descriptively.

4. Result

The results showed that the variable X (supervisor role) had a mean of 3.83 for all indicators. Among the eight indicators on the X variable (supervisor role), all have scores with high criteria. The highest score on this variable is indicated by the "Participate in school management" indicator of 4.06, while the lowest score is indicated by the "Perform teaching and learning situation analysis" indicator of 3.56. Variable Y_1 (Motivation) has a mean of all indicators of 3.72. The indicator "Teachers feel that they receive the trust from their students" has the highest score (3.93), while the "Teachers feel that they can achieve more" indicators has the lowest score (3.37). Variable Y_2 (Creativity) has a mean of all indicators of 3.43. The indicator "Teachers get support from the environment to propose new ideas for the teaching process" has the highest score (3.66), while the indicator "Teacher proposes a new idea for the teaching process" has the lowest score (3.30). Variable Y_3 (Innovation) has a mean of all indicators of 3.50. The indicator "Teachers receive support from students and schools in developing learning models" has the highest score (3.65), while the indicator "Teachers collaborate with various parties in developing learning models" has the lowest score (3.30) (Table 1).

Table 1: Score and criteria of respondent's responses to the questions

	Variables and indicators	Score	Criteria
	Supervisor role (X)		
1	Perform coordination with school	3.98	High
2	Participate in helping teachers	4	High
3	Deliver a special task for teachers	3.64	High
4	Facilitate teacher creativity	3.73	High
5	Assess teacher performance	3.73	High
6	Perform teaching and learning situation analysis	3.56	High
7	Participate in school management	4.06	High
8	Encourage teachers to cooperate with others to overcome the problem	3.98	High
	Mean	3.83	High
	Motivation (Y1)		
1	Teachers feel that they can achieve more	3.37	Moderate
2	Teachers get support from their environment	3.84	High
3	Teachers feel that they receive trust from their students	3.94	High
	Mean	3.72	High
	Creativity (Y2)		
1	Teacher proposes a new idea for the teaching process	3.30	Moderate
2	Teachers get support from the environment to propose new ideas in teaching process	3.66	High
3	Teachers are active in developing new ideas for teaching process	3.36	Moderate
4	Teachers have a new way for the teaching process	3.38	Moderate
	Mean	3.43	High
	Innovation (Y3)		
1	Teachers collaborate with various parties in developing learning models	3.30	Moderate
2	Teachers receive support from students and schools in developing learning models	3.65	High
3	Teachers consider school conditions in developing postflood learning models	3.60	High
4	Teachers have sufficient resources to develop postflood learning models	3.45	High
	Mean	3.50	High

The supervisor role has a positive relationship with the value of R^2 ranging from 0.90 to 0.94. The results of the analysis show that the correlation is significant ($P < 0.001$) (Table 2).

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Table 2: Correlations between supervisor role and motivation, teacher creativity and learning innovation

Correlation	R^2	Adjusted R^2	Sig.
Supervisor Role (X) on Motivation (Y_1)	0.94	0.93	$P < 0.001$
Supervisor Role (X) on Teacher Creativity (Y_2)	0.90	0.90	$P < 0.001$
Supervisor Role (Y_3) in Learning Innovation	0.90	0.89	$P < 0.001$

Most respondents stated that the flood had a significant impact on learning facilities. Respondent 1 stated that:

"According to reports from teachers and principals, the flood has damaged their school facilities. The learning process was hampered, textbooks were damaged, and classrooms, media, and computers were damaged. I also encountered this when I visited the affected school location."

This is supported by another respondent (R4)

"I saw for myself how badly damaged the school was. The teaching and learning process was hampered, some classrooms were partially destroyed, and many other school facilities were totally destroyed. I saw the sadness in the eyes of the teachers and principals, they lost a lot of things. The flood also had an impact on students because many of their houses were damaged. In addition, many roads, bridges and other public facilities were damaged. However, I have to motivate them, so they do not lose their enthusiasm and motivation in continuing the education process."

However, a different opinion was conveyed by the other respondent (R3).

"In my target school, flood had less impact on school facilities because the water level is quite shallow."

The impact of the flood was also felt by physical education teachers because many facilities were damaged. This was conveyed by Respondent 1.

"Several teachers said that after the flood, many administrative files disappeared, and many teaching aids were damaged, including sport places and facilities. This had an impact on educational services. Therefore, I suggest teachers schedule flood management so that the educational process is not hampered."

Other Respondent (R4) supported the statement.

"The teacher I met lamented about the damage to his school. They cannot teach, many sports equipment are missing."

The same thing was expressed by another supervisor (R2).

"The school yard which was usually used for sports was covering in thick mud, most of the sports equipment were destroyed, many books supporting physical education and health services were also destroyed."

For this reason, supervisors provide assistance to teachers by providing assistance, motivating, and coordinating assistance to schools. This was stated by Respondent 1.

"Because they are experiencing an emergency situation, I always motivate schools to recreate damaged files, clean and repair teaching facilities."

Another respondent (R2) stated that:

"The most priority actions are to clean the school yard, budget for the purchase of sports equipment from the School Operational Assistance fund, budget for the purchase of physical education textbooks from the fund."

Regarding the coordination of assistance to schools, Respondent 6 stated:

"I accompany the school and coordinate cooperation with the Regional Drinking Water Office and bring in volunteers to assist the teachers and principals."

Generally, supervisors provide directions and assignments to teachers. Especially in the field of health education, supervisors provide directions, assign all teachers to jointly clean up the dirty school environment due to flooding, and assign teachers to continue teaching. This was expressed by a respondent (R1).

"As a supervisor, I provide direction and motivate teachers so that the online learning process can be implemented immediately. If there are difficulties in terms of facilities, together with stakeholders we will find solutions to these problems."

This statement is also supported by another respondent (R11).

"Due to this flood during the pandemic where direct teaching and learning activities are not carried out, the focus for physical teachers is to help clean and renovate schools."

In addition, another respondent (R2) urges teachers to modify and repair current facilities.

"I suggest that teachers carry out online learning, make modified sports equipment, repair damaged sports equipment."

A different opinion was conveyed by Respondent 3. He said:

"I did not give special instructions, because the tasks given were the same as classroom teachers because of the school's pandemic atmosphere, no teacher carried in class learning process; all teachings were conducted online or semionline."

The same thing was conveyed by a respondent (R5)

"I did not supervise the teacher because learning continues as usual. The teacher used to perform on-line teaching learning process in this pandemic era."

Postflood learning situations are generally hampered, stopped, or fixed by implementing online education. This was conveyed by Respondent 1.

"The learning process is temporarily hampered after the flood, the children's parents are not ready to accept temporary teaching learning process after the flood, the teacher is not ready to give temporary lessons after the flood".

The same thing was conveyed by Respondent 7:

"Learning in a few days could not be carried out because almost all teachers and students were affected by the flood."

Schools that can still carry out online learning will continue the learning process. This is stated by a supervisor, Respondent 2:

"It was carried out online, the results of nonwritten student assignments are collected through social media, the results of written assignments were collected every Saturday."

To support the success of the learning process, the supervisor stated that the physical education teachers collaborated with homeroom teachers and school principals to overcome postflood learning problems. This collaboration was also made with the school committee and parents of students. Respondent 8 stated as follows.

"Teachers take the initiative to clean tools, school facilities including teaching aids/aids in sports."

Facing a difficult situation, physical education teachers receive support from various parties. This was expressed by Respondent 1.

"The PE stated that they received support from the principal (motivation) and homeroom teacher (reminding the schedule for the physical education subject and getting materials)."

The other supervisors supported this opinion by stating as follows.

"The principal urges the provision of sports facilities, class teachers help motivate students to be active in learning physical and physical education, and Islamic religious education teachers motivate students to always be active in learning." (Respondent 2)

"In addition to internal school matters, school committee support is also provided in the form of providing garbage trucks, while students' parents are in the form of providing support in learning." (Respondent 6)

Contrary to the atmosphere of the disaster, most of the students felt excited and enthusiastic. This situation was perceived to ease the teacher's burden in overcoming limited facilities. A supervisor expresses his feelings as follows.

"Contrast to feelings of adults, children took it easy the situation. Most of the students remained excited and enthusiastic. Teachers can continue to evaluate student attitudes that can be observed, namely, they continue to carry out the assigned tasks."

A different opinion was expressed by another respondent (R10).

"The teacher gives lessons about health theoretically due to the lack of tools and the pandemic situation."

According to the supervisor, most of the teachers submitted proposals for the procurement of new facilities. This was conveyed by Respondent 9.

"The teacher proposed to keep allocating school funds in the planned repairs. Some teachers proposed a program for heightening school back yards, improving sports facilities, cleaning and dredging gutters and developing green spaces."

However, there are other opinions, as stated by Respondent 6.

"The teacher suggested making a special place to store the facilities."

Regarding creativity and innovation, several supervisors explained that the learning system was still carried out online so that creativity and innovation were realized in the form of making videos of exercise activities at home. This was revealed by respondent 1, who stated:

"Since the condition remains affected by the disaster, teachers and students continue to do sports/movement activities while working together to clean the school. Sports were still carried out in combination with student service activity. After that, students returned to learn online. The teacher taught and asked students to create a short video of the exercise at home and then send it to the teacher."

Some of the other respondents also explained the forms of innovation and creativity if face-to-face learning was possible. One respondent (R8) stated:

"Indoor learning methods such as gymnastic exercise, indoor learning simulations with safe tools, developing role play learning, and developing learning methods outside of school such as riding bicycle."

5. Discussion

A natural hazard is an event that cannot be prevented from occurring but whose impact can be reduced if effective action is taken to reduce its severity, frequency and probable size. Floods are disasters that have a negative impact on the education process, including physical education. The results of this study highlight three things, namely, the importance of the role of supervisors in motivating and encouraging creativity and teacher innovation, especially in the field of physical education. The field of physical education is one of the fields most affected by the pandemic situation and is worsened by floods. Damage to several school facilities, including sports facilities, made it difficult for physical education teachers to innovate. In the pandemic era, some learning is carried out through online practical classes. In its implementation, physical education (PE) is not easy to teach to students. The pandemic-initiated shift to online instruction provided several challenges to PE teachers (Richards et al., 2018). Teachers are struggling to track and evaluate student participation in a virtual environment. Many studies have reported that online courses decrease the intensity of interaction between students and educators, in particular, subjects that move the body, improve physical skills, reduce stress, and overcome mental limitations (Biddle et al., 2004; Yu & Jee, 2021). Research on postdisaster impacts and actions is generally related to earthquake disasters (Mutch, 2015; O'Connor & Takahashi, 2014), and some research is related to tornadoes (Ray & Hocutt, 2016). A study conducted in New Zealand and Japan showed the importance of the principal's role in transforming into critical managers (Mutch, 2015). As an important first response to disasters at the classroom level, it is the teacher's role to weigh the evidence, make firm decisions and prioritize needs.

Furthermore, after the conditions are more conducive, the children, teachers and principals return to school, where they will clean, rearrange the rooms and make everything look as normal as possible. School leaders in this study leveraged community and institutional resources to provide extra support to children and their families. Strengthening school-community relations is a commonly cited outcome of disaster experiences. Part of the new relationship includes improvements to communication systems, collaborative review of emergency procedures and considerations for capturing and maintaining the culture of care forged from general experience (O'Connor & Takahashi, 2014). Supervisors in South Kalimantan have carried out their roles according to the postflood situation and conditions. The role demanded by these circumstances should, of course, adapt to the main tasks and functions of the education supervisor in the school. One of the important findings in this research is participation in school management. Some forms of participation that are important for school supervisors include coordination in reporting damage to the education office, coordination with relevant stakeholders such as regional drinking water companies, and school committees. The role of postdisaster stakeholders is very important to support the acceleration of condition recovery. This has also been reported in previous studies (Pahl-Wostl et al., 2013; van Herk et al., 2014). In the case of flood events, both formal and informal institutions manage emergencies and recovery by carrying out evacuation operations, providing relief items, providing compensation in the form of financial assistance, building materials, seeds, fertilizers, and rebuilding rural

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infrastructure in Brazil and South Asian countries (de Andrade & Szlafsztein, 2018; Jamshed et al., 2017; Sam et al., 2017; Younus, 2017). In addition, these institutions provide skills development training for livelihood diversification, disaster awareness programs, counseling services on changing cropping patterns postflood, weather information and new technologies (Abid et al., 2017; Arai, 2012). For research on Flood Risk Management to take effect, Morrison et al. (2018) recommend that a policy agenda is needed rather than what is currently the case to better address research and policy needs. This means that researchers must not only continue to improve the tools of the physical sciences for flood forecasting and modeling but also advance social science tools that assist collaborative flood risk management policy development processes. While the role of the community is significant because of its spontaneous actions, the role of government support is equally important for control over rescue and rehabilitation resources. However, the role of community support for temporary engagement was found to be more important during critical flood times. On the other hand, government support, although very important, was invaluable in later years.

The research findings on the influence of the supervisor's role on the increase in motivation of physical education teachers in South Kalimantan by 94%, show how important the supervisor's role is in encouraging the motivation of teachers. These results are also similar to the findings of Wiryanti (2017), who conducted research on the effect of supervision and intrinsic motivation on the creativity of private Catholic elementary school teachers in East Jakarta. One conclusion is that there is a direct positive effect of supervision on intrinsic motivation. The findings of this study are consistent with the study conducted by Chudzaifah (2019) regarding the role of supervision in madrasas in Sorong City. The results of his research suggest that the role of supervisors is very important in improving and encouraging educators and education staff. The role of school supervisors at madrasas in Sorong City is in accordance with existing regulations, although it is very limited in terms of adjusting the place of supervised madrasas, but the performance of madrasa supervisors is very useful and influential in improving and encouraging educators and education staff in Sorong City. This study inicated the influence of the supervisor's role on the creativity of physical education teachers is 90%. This effect was considered as a very strong influence. The findings of this study simultaneously strengthen the findings of research conducted by Wiryanti (2017). The low creativity of the teacher is due to the low support from the principal because the teacher needs many opportunities to show his creativity, and this truly needs the support of the principal who is involved in these activities both physically and psychologically. Finally, the findings of this study support the hypothesis that the supervisor's role influences the learning innovation of postflood PE teachers in South Kalimantan by 90%, which shows a very strong influence. A study by Handayani & Sukirman (2020) on school principals who also have a role in encouraging learning innovation in schools, also shows a very strong influence. These results further strengthen that both principals and school supervisors have a role in encouraging learning innovation in schools.

6. Conclusion

The results showed that there was a significant positive relationship between the Supervisor Role and Teacher Motivation on Teacher Creativity and Learning Innovation. Several supervisors disclosed the damaged condition of the school based on reports from teachers. Supervisors carry out the role of motivating teachers to propose proposals for school improvements, especially sports facilities. The supervisor also revealed the process of learning sports after the flood disaster, including taught and asked students to create a short video of the exercise at home and then sends it to the teacher as well as Indoor learning methods such as gymnastic exercise, indoor learning simulations with safe tools, developing role play learning, and developing learning methods outside of school such as riding bicycle. However, the creativity of teachers in creating alternative sports equipment and repairing damaged equipment has not been widely disclosed.

7. Implication

This study highlights the important role of supervisors in advising school management and coordinating of engagement of other stakeholders for flood mitigation actions as well as encouraging teachers to keep the spirit of carrying out teaching and learning activities.

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