The Effectiveness of Integration Model of Disaster Risk Reduction with the *Living Values Education* Approach in Thematic Learning in Primary School

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ABSTRACT

Bantul Regency is the area that has a high disaster potential. This regency ranked 22, which was potentially catastrophic districts In Indonesia. Therefore, Disaster Risk Reduction efforts in this area need to be conducted systematically and sustainably by involving all stakeholders. This research aimed to develop the integration model of Disaster Risk Reduction by using a Living Values Education approach in thematic learning in primary school. The developed model has been tested in two elementary schools in Bantul Regency by using the pre-experimental design of one group Pretest-Postest. The population in this study was school principals and teachers from the Aisyiyah top primary schools of Bantul, and Muhammadiyah primary school of Bantul City. Sampling used the *purposive sampling* approach with the sample selection process that was gained by 20 teachers and two school principals as research samples. The data collection technique was through a questionnaire sheet using *Likert's* Scale guidelines scales from 1 to 5. Data analysis techniques used non-parametric tests with the Wilcoxon Signed Rank Test technique because the data used was not a normal distribution. The results of the test showed the value of Sig. 0.000 < 0.05, furthermore, it can be concluded that the integration model of Disaster Risk Reduction by the Living Values Education approach was effective in developing the knowledge, attitudes, and skills of the principal and teachers. These research findings could be considered for policy stakeholders to plan and develop teacher competencies in integrating Disaster Risk Reduction programs in primary school learning.

Keywords: Integration, Disaster, Risk reduction, Living values education, Thematic learning, Primary school.

Highlights of this paper

- This research aimed to develop the integration model of Disaster Risk Reduction by using a Living Values Education approach in thematic learning in primary school.
- The developed model has been tested in two elementary schools in Bantul Regency by using the pre-experimental design of one group Pretest-Postest.
- This model was effective in developing the knowledge, attitudes, and skills of the principal and teachers.

1. INTRODUCTION

Since the earthquake and Tsunami of Aceh happened in 2006, almost all parts of Indonesia become a disaster subscription, such as earthquakes with a tsunami, flash floods, landslides, eruptions, and forest fires. The increasing world population is likely to increase the frequency of major disasters (Tillman, 2004). The condition is worsened by the lack of public awareness about Disaster Risk Reduction so that there are always many victims, both wealth and soul (Mechler et al., 2014). In addition, the fall of victims, both treasure and life are caused by many things, such as Institutional failures (Ahrens & Rudolph, 2006) the absence of a functioning partnership among stakeholders (Khan & Rahman, 2007) disaster laws have not significantly shifted from danger to vulnerability and durability focus (Manyena, Mavhura, Muzenda, & Mabaso, 2013) and failure to assign the person to handle disasters efficiently and effectively (Rolland, Patterson, Ward, & Dodin, 2010). Although many natural disasters are out of human's control and power, the human being has a role in conducting Disaster Risk Reduction (Jennings-Sanders, 2004). Therefore, Disaster Risk Reduction management is a challenging domain because of the varied dynamic characteristics inherent in that domain (Tingsanchali, 2012).

Disaster Risk Reduction exists during this time, mainly responding in a reactive to existing disaster situations (emergency response and recovery). Reactive responses should be transformed into proactive responses to improve the effectiveness of management and reduce the victim's fall. Proactive disaster management requires more participation from various institutions like government, non-government and private institutions, and public participation (Comfort, 2005). Unfortunately, so far, the programs that have been developed are not much integrated into the school programs. Therefore, the program is needed to build a network that has a continuous commitment (Tsai & Chen, 2010). Predecessors have also held some programs. O'sullivan, Kuziemsky, Toal-Sullivan, and Corneil (2013) for instance, strives to provide practical mechanisms for assessment and disaster risk management with a focus on insurance and prevention. It is related to the importance of hardware and software (Tseng & Chen, 2012). The participation of the local community is also crucial to the success the disaster mitigation (Kunz, Reiner, & Gold, 2014). Educational institutions are the most enabling rides as a place to develop a systematic and sustainable, structured Disaster Risk Reduction program. The school data in Indonesia shows that 75% of school location is in disaster-prone areas (https://bnpb.go.id/bnpb-kenalkan-integrasi-data-sekolah-dan kebencanaan- melalui- inarisk-di-ASEAN).

Bantul regency is an area that has high disaster potential. This regency ranked 22, which was potentially catastrophic districts In Indonesia. Out of 15 disaster threats scattered throughout Indonesia, there are nine threats in Bantul (https://bpbd.bantulkab.go.id/peta-bencana/peta-gis/). The number shows that Bantul is one of the disaster-prone districts in Indonesia. With a huge threat level, Bantul Regency needs to conduct disaster mitigation continuously. Disaster Risk Reduction needs to be done to give the awareness of disaster preparedness in every citizen at an early age. The integration of Disaster Risk Reduction is precisely applied to primary school level students. Bantul District has hundreds of primary schools that need to conduct training and assistance of disaster risk reduction. Below is Table 1 of both state and private primary school data in the Bantul Regency.

Table-1. Lists of primary school in bantul regency.

No.	Area	State	Private	Total
1	Sub-district Bantul	17	10	27
2	Sub-district Kasihan	25	9	34
3	Sub-district Banguntapan	21	11	32
4	Sub-district Sewon	22	5	27
5	Sub-district Sedayu	20	4	24
6	Sub-district Dlingo	22	0	22
7	Sub-district Imogiri	21	1	22
8	Sub-district Pandak	18	5	23
9	Sub-district Piyungan	19	2	21
10	Sub-district Jetis	16	5	21
11	Sub-district Bambanglipuro	10	7	17
12	Sub-district Pleret	14	4	18
13	Sub-district Pundong	10	8	10
14	Sub-district Sanden	13	3	16
15	Sub-district Kretek	13	2	15
16	Sub-district Srandakan	9	5	14
17	Sub-district Pajangan	11	1	12
	Total	281	82	363

According to the interview of Regional Disaster Management Agency (BPBD) of Bantul (August 27, 2019), from the number of the entire schools in Bantul regency, there were only seven primary schools that become Disaster Alert School (*Sekolah Siaga Bencana/* SSB) which are state primary school of Kretek, top primary school of Aisyiyah, state primary school of Trirenggo, integrated Islamic primary school of Ar-Rayhan, Muhammadiyah primary school of Bodon, Muhammadiyah primary school of Blawong, Muhammadiyah primary school of Bantul City. Furthermore, the schools that have received training and socialization from the BPBD of Bantul were Muhammadiyah primary school of Bodon, Insan Kreatif Muhammadiyah primary school of Kembaran, Muhamamdiyah primary school of Poncosari, Muhamamdiyah primary school of Blawong, Muhammadiyah primary school of Dahromo, Muhamamdiyah primary school of Bantul City, top primary school of Aisyiyah. During this time, BPBD of Bantul Regency has conducted training and assistance of Disaster Alert School (*Sekolah Siaga Bencana/* SSB) since 2017, however, in its implementation, it still faces various constraints that is the lack of budget from local government, in where the budget only funded two schools in a year. For all of the primary schools to have been touched by the training and assistance of Disaster Alert School (SSB), it is needed to cooperate with other institutions related to funding and resources.

Aisyiyah primary top schools of Bantul (SDU Aisyiyah Bantul) and Muhammadiyah primary school of Bantul City (SD Mubata) are two schools located in Bantul Regency, which become a pioneering school of Disaster Alert School (SSB). Both schools were chosen as a partner due to top and favorite school in Bantul Regency, also become a pioneer and *"school model"* of Disaster Alert School (Sekolah Siaga Bencana/ SSB) for other primary schools. In addition, both schools also got mentoring from Muhammadiyah Disaster Management Center (MDMC) of Muhammadiyah Central Board, but still meet some problems. The most fundamental obstacle is the implementation of the third Pillar of *Satuan Pendidikan Aman Bencana* (Disaster Safe Education Unit/ SPAB). The third Pillar is related to preventive education and Disaster Risk Reduction, especially in integrating thematic learning of curriculum 2013 in primary education level.

According to interview results with SD Mubata on August 27, 2019, based on the results of an interview with the head of Muhammadiyah primary school of Bantul City on August 27, 2019, it was obtained that the teachers who have received SPAB training are still struggling to integrate the values of Disaster Risk Reduction into the curriculum 2013. The teachers are also less skilled in developing learning administration and learning media that

support Disaster Risk Reduction. In addition, it has not yet found the appropriate approach to integrate Disaster Risk Reduction in elementary school students who are still at a concrete operational thinking stage.

A training program of Disaster Risk Reduction developed in training uses the *Living Values Education* approach. *Living Values Education* approach is appropriate to use because it will be formed a network and participation of the entire school residents in conducting Disaster Risk Reduction. In addition, the *Living Values Education* approach will grow the awareness of the teachers about the importance of the integration program of Disaster Risk Reduction (Suyatno, Jumintono, Pambudi, & Mardati, 2017). Therefore, it can change the teacher's mindset on the importance of responsive learning toward Disaster Risk Reduction (Pambudi & Ashari, 2019). However, in reality, the teachers are still lack of understanding of the *Living Values Education* approach.

1.1. Research Hypothesis

1. There is a difference between pretest and posttest results in knowledge aspects, which means that there is the effectiveness of the integration model of Disaster Risk Reduction with the *Living Values Education* approach in the knowledge aspects.
2. There is a difference between pretest and posttest results in attitude aspects, which means that there is the effectiveness of the integration model of Disaster Risk Reduction with the *Living Values Education* approach in the attitude aspects.
3. There is a difference between pretest and posttest results in skill aspects, which means that there is the effectiveness of the integration model of Disaster Risk Reduction with the *Living Values Education* approach in the skill aspects.
4. There is a difference between pretest and posttest results in all of the aspects, which means that there is the effectiveness of the integration model of Disaster Risk Reduction with the *Living Values Education* approach in learning.

2. RESEARCH METHOD

2.1. Research Type

This research method is Quantitative with a pre-experimental type using one group, pretest-postest design. Data collection techniques using questionnaires consist of pretests and posttests with three aspects consisting of knowledge, attitudes, and skills in each of the pretest and posttest questionnaires. The questionnaire uses *Likert's* scale guidelines with a scale of 1 to 5. Data analysis techniques use a parametric test with a *t*-test paired sample technique or *t*-test pairs with normal distribution data requirements. However, if the distribution data is not normal, there will be a non-parametric test. A non-parametric test in this study used the *Wilcoxon Signed Rank Test* to measure the significance of the differences between the two groups' in normal distribution data.

The developed model was the integration of Disaster Risk Reduction with *Living Value Education*. The syntax of the learning model can be seen in Table 2.

2.2. Research Sample

The sampling was a *purposive sampling* approach using the selection process sample. Sample in this research were 20 teachers and two school principals of Aisyiyah primary top school of Bantul and Muhammadiyah primary school of Bantul City. The research sample consisted of 10 men and 12 females with learning experience 1-15 years.

144

No	Stages	Description
1	Introduction of Disaster Risk Reduction	
2	Implementation of Disaster Risk Reduction and *Living Values Education* approach	The essence of Disaster Risk Reduction Urgency Disaster Risk Reduction integrated into learning at schools
3	Curriculum analysis in primary school and learning administration development based Disaster Risk Reduction	The principles of *Living Values Education* in learning Implementation of Disaster Risk Reduction based *Living Values Education*
4	The development of interactive learning media based Disaster Risk Reduction using Microsoft Sway	Analysis KI-KD of Disaster Risk Reduction Learning Implementation Plan based Disaster Risk Reduction
5	The development of learning media based Disaster Risk Reduction	The development of interactive learning multimedia based Disaster Risk Reduction using Microsoft Sway
6	The online assistance of learning administration development	The development of learning media based Disaster Risk Reduction

2.3. Data Collection Procedure and Measure

The consideration in data collection procedures is to collect objective and primary quantitative data, then used a structured questionnaire. The questionnaire used consists of pretests and posttests by referring three aspects consisting of knowledge, attitude, and skill aspects in each of the pretests and posttest questionnaires. The questionnaire uses *Likert* scale guidelines with a scale of 1 to 5.

2.4. Data Analisys Technique

The research method was Quantitative with a pre-experimental type using one group pretest-postest design. This study did not use comparative classes but already used preliminary tests. In this research, the research subjects first gave a pretest to know how far the teacher readiness in integrating Disaster Risk Reduction in learning that further gave posttest after implementing the integration model of Disaster Risk Reduction with *Living Values Education* approach in learning. The collected data further analyzed using a *t*-test paired sample or *t*-test paired sample of the parametric test. The technique of testing was done by SPSS 24.0. The effect of the integration model of Disaster Risk Reduction using *Living Values Education* in learning would be tested by different tests of two averages by Sig. $\alpha = 5\%$. If the result of Sig. $> 0,05$, then H_0 rejected and H_a accepted. If the result of Sig. $< 0,05$, then H_0 accepted and H_a rejected. If the model in the research had normal distribution data, then the test would be conducted using a non-parametric test. If the data was not normal, then the test used a non-parametric test. Non-parametric test in this research used the Wilcoxon Signed Rank Test to measure the significance of the difference between the two groups paired data, but it was not a normal distribution. Wilcoxon Signed Rank Test is the alternative of the *t*-test paired sample.

3. FINDINGS

3.1. The results of the Descriptive Statistical Test

The results of this study obtained the data of pretest and posttest, with each result consisted of knowledge, attitude, and skill aspects. The results of the pretest and posttest served by descriptive statistics in Table 3.

Table 3 shows the results of range, minimum, maximum, total, and averages in every aspect from pretest and posttest results. The results of knowledge, attitude, and skill aspects show that the posttest produces higher results than pretest in the number of results.

Table-3. Descriptive statistical test results.

Descriptive Statistics						
	N	Minimum	Maximum	Sum	Mean	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Pretest of Knowledge Aspect	22	17	25	455	20.68	.548
Pretest of Affection Aspect	22	22	35	631	28.68	.804
Pretest of skill aspect	22	23	38	646	29.36	.896
Posttest of Knowledge Aspect	22	19	25	526	23.91	.405
Posttest of Affection Aspect	22	27	35	734	33.36	.524
Posttest of skill aspect	22	30	45	883	40.14	.900
Valid N (listwise)	22					

3.2. The Results of Normality Test

Through a descriptive statistics test, it continued to test the normal data distribution. The results of the normality test shown in Table 4.

Table-4. The normality test results

	Type of test	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Results	Pretest of Knowledge Aspect	.150	22	.200[*]	.932	22	.135
	Posttest of Knowledge Aspect	.353	22	.000	.638	22	.000
	Pretest of Affection Aspect	.309	22	.000	.849	22	.003
	Posttest of Affection Aspect	.353	22	.000	.638	22	.000
	Pretest of skill aspect	.292	22	.000	.718	22	.000
	Posttest of skill aspect	.172	22	.090	.903	22	.034

Note: *.This is a lower bound of the true significance.
a. Lilliefors Significance Correction.

Table 4 is the normality test result of the pretest and posttest included the technique of *Kolmogorov-Smirnov* dan *Shapiro-Wilk* test. Based on the sample results used in less than 30 samples or only 22 samples, the test technique used is *Shapiro-Wilk*. The result of Sig. *Shapiro-Wilk* is only two results that fulfill the normality with the results is > 0,05, i.e., pretests in aspects of knowledge and posttest in aspects of the skills. Therefore, out of 6 aspects tested the normality, based on pretest and posttest, only two aspects did it fulfill normal distribution. A parametric test can not continue the results of the normal distribution with a t-test paired sample due to unfulfilled normal data distribution conditions. Moreover, the data of this finding results tested using non-parametric tests with the technique of the *Wilcoxon Signed Rank* Test.

3.3. Hypothesis Test 1 (Knowledge Aspect)

Hypothesis filed in the knowledge aspects is that there were differences between the pretest result and posttest result. It means that there is the effectiveness of the integration model of Disaster Risk Reduction using the *Living Values Education* approach in the knowledge aspects. The results of non-parametric tests with the *Wilcoxon Signed Rank* Test technique with a significance rating of 0.05 for knowledge aspects shown in Table 5.

Table-5. the results of the wilcoxon signed rank test in knowledge aspects.

Test Statistics [a]	
	Posttest Aspek Pengetahuan - Pretest Aspek Pengetahuan
Z	-4.117[b]
Asymp. Sig. (2-tailed)	.000

Note: a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

Table 5 shows the result of the statistic test. It is known that asymp.Sig. (2-tailed) has an outcome of 0.000. Those results are smaller than < 0.05, it can be concluded that the hypothesis is accepted. It means that there are differences in pretests and posttest results so that it can be concluded that there is the effectiveness of the integration model of Disaster Risk Reduction with the *Living Values Education* approach in knowledge aspects. To know the results of the pretest-posttest aspects of more complex knowledge are presented in Table 6.

Table-6. Output ranks of knowledge aspects.

Ranks		N	Mean Rank	Sum of Ranks
Posttest of knowledge aspect - Pretest of knowledge aspect	Negative Ranks	0[a]	.00	.00
	Positive Ranks	22[b]	11.50	253.00
	Ties	0[c]		
	Total	22		

Note: a. Posttest of knowledge aspect < Pretest of knowledge aspect.
b. Posttest of knowledge aspect > Pretest of knowledge aspect.
c. Posttest of knowledge aspect = Pretest of knowledge aspect.

Table 6 shows the output Ranks of knowledge aspects. The results of negative ranks obtained 0 at N result, Mean Rank, and Sum of Rank, it means that 0 indicates no decrease (reduction) from pretest result to Posttest result. Meanwhile, from the positive ranks in the pretests and posttests in knowledge aspects, there are 22 positive data (N), which means that there is an increase from pretests results to Posttest results of 22 respondents. The average increase was 11.50, while the number of positive rankings was 253.00. The Ties result is a similarity of pretests and posttest results, the results of Ties test Table 5 of 0 so that it is indicated that there is no similar result between Pretests and Posttest.

3.4. Hypothesis Test 2 (Attitude Aspects)

Hypothesis filed in the attitude aspects is that there were differences between the pretest result and posttest result. It means that there is the effectiveness of the integration model of Disaster Risk Reduction using the *Living Values Education* approach in the attitude aspects. The results of the non-parametric test with the Wilcoxon Signed Rank Test technique with a significance rating of 0.05 for knowledge aspects shown in Table 7.

Table-7. The result of Wilcoxon Signed Rank Test in attitude aspect.

Test Statistics [a]	Posttest Aspek Sikap - Pretest Aspek Sikap
Z	-4.025[b]
Asymp. Sig. (2-tailed)	.000

Note: a. Wilcoxon Signed Ranks Test.
b. Based on negative ranks.

Table 7 shows the result of the statistic test. It is known that asymp.Sig. (2-tailed) has an outcome of 0.000. Those results are smaller than < 0.05, it can be concluded that the hypothesis is accepted.

Table-8. Output ranks of attitude aspects.

Ranks		N	Mean Rank	Sum of Ranks
Posttest of Affection Aspect - Pretest of Affection Aspect	Negative Ranks	0[a]	.00	.00
	Positive Ranks	21[b]	11.00	231.00
	Ties	1[c]		
	Total	22		

Note: a. Posttest of Affection Aspect < Pretest of Affection Aspect.
b. Posttest of Affection Aspect > Pretest of Affection Aspect.
c. Posttest of Affection Aspect = Pretest of Affection Aspect.

It means that there are differences in pretests and posttest results so that it can be concluded that there is the effectiveness of the integration model of Disaster Risk Reduction with the *Living Values Education* approach in attitude aspects. To know the results of the pretest-posttest in attitude aspects are presented in Table 8.

Table 8 shows the output Ranks of attitude aspects more complex. The results of negative ranks obtained 0 at N result, Mean Rank, and Sum of Rank. It means that 0 indicates no decrease (reduction) from pretest result to Posttest result in attitude aspects. Meanwhile, from the positive ranks in the pretests and posttests in knowledge aspects, there are 21 positive data (N), which means that there is an increase from pretests results to Posttest results of 21 respondents. The average increase was 11.00, while the number of positive rankings was 231.00. The Ties result is a similarity of pretests and posttest results, the results of Ties test Table 8 of 1 so that it is indicated that there is an equal result between Pretests and Posttest of a respondent.

3.5. Hypothesis Test 3 (Skill Aspects)

Hypothesis filed in the skill aspects is that there were differences between the pretest result and posttest result. It means that there is the effectiveness of the integration model of Disaster Risk Reduction using the *Living Values Education* approach in the attitude aspects. The results of the non-parametric test with the *Wilcoxon Signed Rank* Test technique with a significance rating of 0.05 for knowledge aspects shown in Table 9.

Table-9. The result of wilcoxon signed rank test in skill aspect.

Test Statistics [a]	
	Posttest Aspek Keterampilan – Pretest Aspek Keterampilan
Z	–4.023[b]
Asymp. Sig. (2-tailed)	.000

Note: a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

Table 9 shows the result of the statistic test. It is known that asymp.Sig. (2-tailed) has an outcome of 0.000. Those results are smaller than < 0.05, it can be concluded that the hypothesis is accepted. It means that there are differences in pretests and posttest results so that it can be concluded that there is the effectiveness of the integration model of Disaster Risk Reduction with the *Living Values Education* approach in attitude aspects. To know the results of the pretest-posttest in skill aspects is presented in Table 10.

Table-10. Output ranks of skill aspects.

Ranks		N	Mean Rank	Sum of Ranks
Posttest of skill aspect – Pretest of skill aspect	Negative Ranks	0[a]	.00	.00
	Positive Ranks	21[b]	11.00	231.00
	Ties	1[c]		
	Total	22		

Note: a. Posttest of skill aspect < Pretest of skill aspect.
b. Posttest of skill aspect > Pretest of skill aspect.
c. Posttest of skill aspect = Pretest of skill aspect.

The result of Table 10 shows the output Ranks of skill aspects more complex. The results of negative ranks obtained 0 at N result, Mean Rank, and Sum of Rank. It means that 0 indicates no decrease (reduction) from pretest result to Posttest result in attitude aspects. Meanwhile, from the positive ranks in the pretests and posttests in skill aspects, there are 21 positive data (N), which means that there is an increase from pretests results to Posttest results of 21 respondents. The average increase was 11.00, while the number of positive rankings was 231.00. The

Ties result is a similarity of pretests and posttest results, the results of Ties test Table 10 of 1 so that it is indicated that there is an equal result between Pretests and Posttest of a respondent.

3.6. Hypothesis Test 4 (Overal Pretest and Postest Results)

Hypothesis filed in the attitude aspects is that there were differences between the pretest result and posttest result. It means that there is the effectiveness of the integration model of Disaster Risk Reduction using the *Living Values Education* approach in the attitude aspects. The results of the non-parametric test with the Wilcoxon Signed Rank Test technique with a significance rating of 0.05 for knowledge aspects shown in Table 11.

Table-11. The results of wilcoxon signed rank test of overal pretest and postest.

Test Statistics [a]	
	Posttest Keseluruhan – Pretest Keseluruhan
Z	–4.108[b]
Asymp. Sig. (2-tailed)	.000

Note: a. Wilcoxon Signed Ranks Test.
b. Based on negative ranks.

Table 11 shows the result of the statistic test that is known of asymp.Sig. (2-tailed) that has an outcome of 0.000. Those results are smaller than < 0.05, it can be concluded that the hypothesis is accepted. It means that there are differences in pretests and posttest results so that it can be concluded that there is the effectiveness of the integration model of Disaster Risk Reduction with the *Living Values Education* approach in learning. To know the results of the overall pretest-posttest is presented in Table 12.

Table-12. Output ranks of overal pretest-postest.

Ranks		N	Mean Rank	Sum of Ranks
Results of Totally Posttest – Results of Totally Pretest	Negative Ranks	0[a]	.00	.00
	Positive Ranks	22[b]	11.50	253.00
	Ties	0[c]		
	Total	22		

Note: a. Results of Totally Posttest < Results of Totally Pretest.
b. Results of Totally Posttest > Results of Totally Pretest.
c. Results of Totally Posttest = Results of Totally Pretest.

The result of Table 12 shows the output Ranks of knowledge aspects. The results of negative ranks obtained 0 at N result, Mean Rank, and Sum of Rank, it means that 0 indicates no decrease (reduction) from pretest result to Posttest result in overall. Meanwhile, from the positive ranks in the pretests and posttests in skill aspects, there are 22 positive data (N), which means that there is an increase from pretests results to Posttest results of 22 respondents. The average increase was 11.50, while the number of positive rankings was 253.00. The Ties result is a similarity of pretests and posttest results, the results of Ties test Table 12 of 0 so that it is indicated that there is no similar result between overall Pretests and Posttest.

4. DISCUSSION

Data analysis results show that the applied training model is effective in improving teachers' readiness in integrating Disaster Risk Reduction in the learning of knowledge, attitudes, and skills aspects. It is showed from statistic test's result in the aspects of knowledge, attitude, and skill in which asymp.Sig. (2-tailed) has an outcome of 0.000. The result is < 0.05 so that it concludes that all of the hypotheses are accepted. By this model, the teacher's knowledge, attitude, and skill are increasingly effective. The integration model of Disaster Risk Reduction with the

Living Values Education approach in thematic learning is a model that is developed in the effort of increasing teacher competence to conduct the learning of disaster consciousness.

Living Values Education develops this model. *Living Values Education* is an approach used to live the values of human beings that are first initiated by the teachers under the auspices of UNESCO. *Living Values Education* approach aimed to avoid overly verbal approaches. By *Living Values Education* approach, the learning begins with creating a value-based environment so that every child in the schools feel loved, understood, considered valuable, valued, and felt safe both physically and psychologically (Arifin, 2016; Suyatno., Mardati, & Wantini, 2019; Trim, 2004). These results also strengthen the results of previous findings that Living Values Education in learning is successful in supporting the habitual program in the schools (Komalasari & Saripudin, 2017).

The main objective of this model development is to enhance the consciousness of the teachers in the aspects of knowledge, attitude, and skill to implement disaster-conscious learning. By increasing teacher's competence in implementing disaster-conscious learning, the students in the schools have a sense of disaster. The chance of self-rescue potential and helping others when the disaster happened, moreover, is getting bigger. The model of *Living Values Education* on Disaster Risk Reduction is crucial to offer solutions in various gaps, even though there are no functional partnerships among stakeholders (Khan & Rahman, 2007). Also, the failure to assign the individual to handle the disaster effectively and efficiently (Rolland et al., 2010) also Disaster Risk Reduction is that merely responds reactively toward the situation in existing disaster (emergency response and recovery). By involving the schools, particularly in increasing the knowledge, attitude, and teacher's competencies, the reactive responses change into the pro-active responses. Therefore, it can increase the effectiveness of the management and decrease the fall of victims. The pro-active disaster management needs more participation from various institutions, i.e., government, non-government and private institutions, and public participation as well (Comfort, 2005).

5. CONCLUSION

This finding aims to measure the effectiveness of the integration model of Disaster Risk Reduction with *Living Values Education* approach in increasing knowledge, attitudes, and teacher's competencies in implementing disaster-conscious learning. Data analysis results showed that the developed model is effective in increasing the aspects of knowledge, attitude, and skill that asymp. Sig (2-tailed) is < 0,05 (Significance). Thus, the Disaster Risk Reduction with *Living Values Education* is highly recommended to be implemented in the schools to increase the knowledge, attitude, and teacher's competencies in implementing disaster-conscious learning. The results of this research insist that schools are likely to be a place to develop the Disaster Risk Reduction program which are structured, systematic, and sustainable.

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