

## Lagu Nusantara: Android Role Playing Game for Elementary School Music Learning

R. Gita Ardhy Nugraha<sup>1✉</sup>, Totok Sumaryanto Florentinus<sup>2</sup> & Kamsidjo Budi Utomo<sup>2</sup>

<sup>1</sup> Bethany Elementary School, Salatiga, Indonesia

<sup>2</sup> Universitas Negeri Semarang, Indonesia

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### Abstract

The decreasing of student's interest and motivation in Indonesian's traditional music learning caused by less varied of the learning process and the lack of student's knowledge about Indonesian's traditional song. The lack of the utilization of gadget like educational games in the learning process also causes the decreasing of student's interest and motivation. This study aims to verify the effectiveness of "Lagu Nusantara" games through student's interest and motivation in the music art learning, especially about Indonesian's traditional song. The method that used in this study is a quantitative method with the post-test only control group design for an experimental model which supported by the observation of games that used by students. The research subject was 89 elementary students who divided into a control group and experimental group (45 students for the control group and 44 students for experimental group). The result, "Lagu Nusantara" as the game is sufficient to promote student's interest and motivation in the music art learning process, especially about Indonesian's traditional song. As supporting data, this research obtained observation data for student's interest and motivation which are well in the category (Interest score = 89.44%; motivation score = 87.78%).

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✉ Address correspondence:

Kalipengging No.4A RT.01 RW.01, Kutowinangun, Tingkir,  
Blotongan, Sidorejo, Salatiga, Jawa Tengah 50742  
E-mail: [nug.ardhy@students.unnes.ac.id](mailto:nug.ardhy@students.unnes.ac.id)

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## INTRODUCTION

The music art learning in the elementary school aims to promote students to build and develop their characters. Through the music art learning process, the primary teacher can provide good values for students. The existences of music art learning in the elementary school become an effort to establish student behavior, attitude, and character since early stage (Mulyono, 2012). Furthermore, through music art learning process, the aesthetic sensitivity of students was trained to build and nurture the better student's personality (Wicaksono, 2009). The music art learning in for the elementary school also promote students to know and to remind about the wealth of Indonesian's traditional song. Through Indonesian's traditional song, students can learn about the reflection of the character community who lived in the place of origin of that song (Suharto et al., 2017) as well as cultural richness (Alfiantro et al., 2014). Indonesia's traditional songs have moral values which can be taught in the elementary school through the learning process (Indrawan et al., 2016). Moreover, some of them contain have a spiritual value, like a sense of gratitude to God (Septiana et al., 2016).

The music art learning in the elementary school can be an effort to teach Indonesia's traditional song to students. Unfortunately, the music art learning process in the elementary school has not reached maximally. From the observation, there are still many students who did not pay attention to the learning process which provided by the teacher. Some of the students even prefer to joke with friends who are nearby. Students tend to feel bored with music art learning process which performed in the classroom. Based on the previous research (Kusumadewi & Suharto, 2011), students boredom toward music art learning was caused by the learning process which focused on the necessary practice of music such as how to read a music score, not practice by learning certain songs directly. Furthermore, student boredom arises because of the most elementary student did not know much about Indonesian's traditional song. In fact, the music art learning material in

the elementary school is mostly about the songs of Indonesia by The Minister of Education and Culture Decree No. 24 Year 2016. Elementary students are also more memorized and familiar with modern pop or western songs compared to Indonesian's traditional songs that resulted in the tendency of the decreasing of students's interest against Indonesian's traditional songs (Nadir, 2016). In the elementary music art learning, the learning of Indonesian's traditional songs has no specific allocation. This case is due to the distribution of music art song material such as children's songs, compulsory national songs, and Indonesian's traditional songs into one part of the learning process.

Based on the observation results, it is found that elementary music art learning less used technological devices which is already in the classroom. A digital device recently used in the learning process if needed because of the music art material emphasis on basic theory as provision for higher grade music art material (Amriyeni et al., 2013). In fact, today's digital technology is experiencing very rapid development, one of which is an Android-based device in society including elementary school students (Irsyad, 2016). Primary school students are accustomed to use gadget (Furió et al., 2015) and use as an entertainment device (Su & Cheng, 2015). If gadget used to promote the learning process, the motivation of students in engaging learning process could enhance along with the increasing of student's positive behavior (Ciampa, 2014). The use of gadget as learning media also does not provide adverse outcomes to promote the learning process (Haßler et al., 2016).

The use of gadget in the learning process is an alternative method which can apply to respond the rapid development of technology. Based on information that obtained from elementary music art teacher, the use of gadget in the learning process is needed, especially viewed from the student's habit that often use this device. Use gadget in the music art learning process is a useful innovation and also requires the teacher's experience to integrate into their learning process for the achievement of meaningful music art learning (Florentinus & Udi, 2015). Based on an

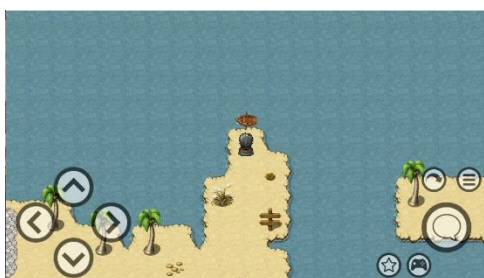
interview with some music art teachers, the use of gadget in music art learning process especially educational games is rarely used. Though there is, the utilization is only limited to search teaching materials, in line with the previous research (Mahmud, 2014 & Wulandari et al., 2012). According to the sources, the use of game gadget in the music art learning is an answer for the challenge of technological development and as supporting music art learning media for elementary students.

One of the games that can be used to support music art learning is a role-playing game. A game with the role-playing game genre is a game which has a storyline and adding some characters to recommend this game (Syaifudin, 2016). The utilization of this game as learning media can be found in previous studies (Hikam et al., 2013; Sari et al., 2014; Asriyatun et al., 2014; Maharani et al., 2016; Ningsih et al., 2016). But unfortunately, especially for music art learning is still not found. Therefore, in this research one game called “Lagu Nusantara” is implemented as alternative media to promote music art learning, especially on Indonesian’s traditional song material. “Lagu Nusantara” is a gadget game based on android device. This game tells about the adventure of children called Kardi to learn

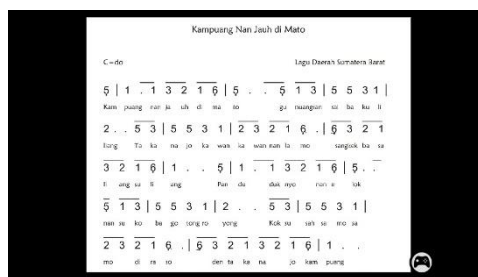
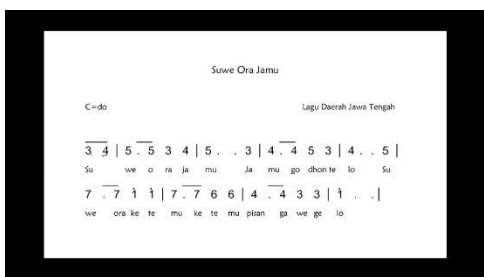
Indonesian’s traditional songs. This game is the result of research design to answer the need for learning media innovation and the challenge of technological development. This research aims to analyze the effectiveness of “Lagu Nusantara” game that designed by researcher through student’s learning interest and motivation in the music art learning process.

**METHODS**

This research is quantitative research with a quasi-experimental model of posttest-only control group design to measure the effectiveness of “Lagu Nusantara” game through student’s interest and motivation in the music art learning process especially Indonesian’s traditional songs. Preview of “Lagu Nusantara” game is presented in Figure 1 and Figure 2 below. The research subject is an elementary student who joins into the school of Sudirman’s Group, the district of Tingkir-Salatiga. From 26 elementary school, there are three schools were chosen to represent research data with 89 grade IV students. They are divided into two groups as a control group (45 students) and experimental group (44 students).



**Figure 1.** Gameplay of “Lagu Nusantara” on The Mobile Device



**Figure 2.** Preview of Indonesian’s Traditional Song in “Lagu Nusantara” Game

Data collection in this study is a simple questionnaire to determine student’s responses through student’s learning interests and motivation. The design of this study can be seen in Figure 3. Data analysis technique is independent sample t-test with the prerequisite test in the form of normality test and homogeneity of data. In addition, observation data during the learning process is also used to support the acquisition of the results of testing the effectiveness of the “Lagu Nusantara” game.

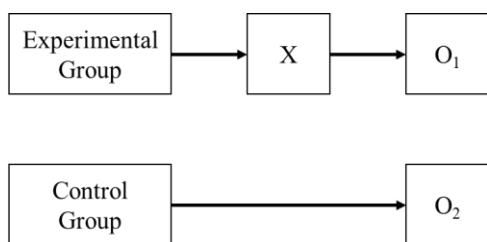


Figure 3. Research Design.

**RESULTS AND DISCUSSION**

**The Normality and Homogeneity of Research Data**

Before the data were analyzed using independent sample t-test, the prerequisite test was performed to determine the normality and homogeneity of the data. The result of normality and homogeneity test data is presented in Table 1, Table 2, Table 3, and Table 4.

Based on Table 1, we got the sig. value in the Kolmogorov-Smirnov test was .200 for the control and experimental group data. In the Shapiro-Wilk test, the sig. value is obtained 0.412 for the control group and 0.059 for the experimental group. Since the sig. value for each group is higher than 0.05, then both data of learning interest included in normal category (Slameto, 2014).

**Table 1.** Normalities Data Test Result for Learning Interest

Group	Kolmogorov-smirnov <sup>a</sup>			Shapiro-wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Interest Control group	.109	45	.200*	.974	45	.412
Experimental group	.111	44	.200*	.951	44	.059

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

**Table 2.** Homogeneity Data Test Result for Learning Interest

Interest	Levene statistic	df <sub>1</sub>	df <sub>2</sub>	Sig.
Based on mean	2.444	1	87	.122
Based on median	2.007	1	87	.160
Based on median and with adjusted df	2.007	1	78.274	.161
Based on trimmed mean	2.392	1	87	.126

Based on Table 2, we got 0.122 of the sig. value at based on mean. Since the sig. value on based on mean greater than 0.05, then both data

of learning interest is a homogeneous data (Slameto, 2014).

**Table 3.** Normalities Data Test Result for Learning Motivation

Group	Kolmogorov-smirnov <sup>a</sup>			Shapiro-wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Motivation Control group	.097	45	.200*	.952	45	.058
Experimental group	.106	44	.200*	.965	44	.204

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

Based on Table 3, we got the sig. value in the Kolmogorov-Smirnov test was .200 for the control and experimental group data. In the Shapiro-Wilk test, the sig. value is obtained 0.058

for the control group and 0.204 for the experimental group. Since the sig. value for each group is higher than 0.05, then both data of

learning interest included in normal category (Slameto, 2014).

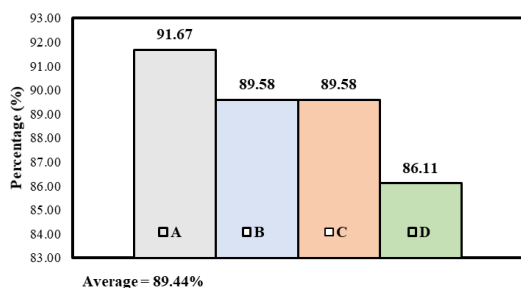
**Table 4.** Homogeneity Data Test Result for Learning Motivation

Motivation	Levene statistic	df <sub>1</sub>	df <sub>2</sub>	Sig.
Based on mean	1.222	1	87	.272
Based on median	1.309	1	87	.256
Based on median and with adjusted df	1.309	1	87	.256
Based on trimmed mean	1.231	1	87	.270

Based on Table 4, we got 0.272 of the sig. value at based on mean. Since the sig. value on based on mean greater than 0.05, then both data of learning interest is a homogeneous data (Slameto, 2014).

**Observation Result of “Lagu Nusantara” Usage in The Music Art Learning Process**

Observation also conducted by researchers to support data, obtained from questionnaire responses during the implementation process of the game “Lagu Nusantara” in the music art learning process. General observations were done to see student’s responses through the use of the game. Observation data is presented in Figure 4a and Figure 4b.



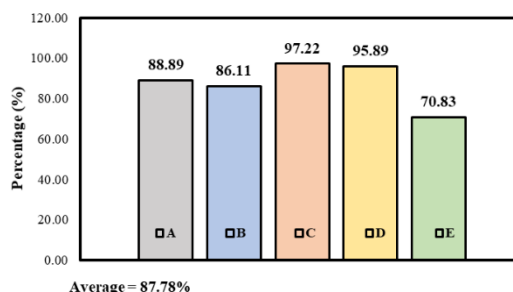
**Figure 4a.** Observation Score Through Student’s Learning Interest

**Information:**

- A. Feelings of fun in the music art learning
- B. Interest in the music art learning
- C. Attention to the music art learning
- D. Student involvement in following to the music art learning

Based on Figure 4a and Figure 4b, the average percentage score for student’s interest and are 89.44% and 87.78% respectively. From the percentages listed in Figure 4a and Figure 4b, the game media of "Lagu Nusantara" is excellent (Purwanto, 2013) in supporting the music art learning of fourth graders, especially on the Indonesian’s traditional songs material. Excellent

category acquisition supports previous studies stating that the use of gadget in learning has a positive outcome to foster student’s interest and motivation in the music art learning (Fokides et al., 2016; Chung et al., 2017; Ng et al., 2013; Ng et al., 2015).



**Figure 4b.** Observation Score Through Student’s Learning Motivation

**Information:**

- A. The motivation to be succeed
- B. Encouragement and need in learning
- C. An appreciation in learning
- D. The existence of interesting activities in learning
- E. The existence of a conducive learning environment that allows students to learn well

Unfortunately, in the fifth indicator of learning motivation, low score was obtained (2.83 with a percentage of 70.83%). This score included in quite a proper category. Low score for conducive learning environment indicator caused by some students who snatch to play “Lagu Nusantara” and make the learning situation rowdy in the implementation process. Rowdy situations make students who are playing “Lagu Nusantara” disturbed so that students feel uncomfortable to learn Indonesia’s traditional songs. Observation findings are rowdy situations that can make students uncomfortable to learn are support the findings of Wulandari et al. (2013) and Akhlis & Dewi (2014) who stated the same thing.

**The Effectiveness of “Lagu Nusantara” Game Through Student’s Learning Interest and Motivation**

Testing the effectiveness of the game “Lagu Nusantara” in the music art learning for elementary students is based on the questionnaire of student’s learning interest and motivation.

Questionnaires filled by students in two groups, namely the control group and the experimental group. The results of testing the effectiveness of game media “Lagu Nusantara” through student’s learning interest and motivation in the music art learning process is presented in Table 5 and Table 6.

**Table 5.** Test Result Through Student’s Learning Interest

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% Confidence interval of the difference		
										Lower	Upper
Interest	Equal variances assumed	2.444	.122	-4.601	87	.000	-3.193	.694	-4.573	-1.814	
	Equal variances not assumed			-4.615	82.267	.000	-3.193	.692	-4.570	-1.817	

Based on Table 5, we got  $t_{values}$  of -4.601 and Sig. (2-tailed) by 0.000. By statistical data processing independent sample t-test, Sig. value (2-tailed) < 0.05. The acquisition of this score means that there is a significant difference in learning interest among the control and

experimental group in the research. Differences in the student’s learning interest between the control and experimental groups proved that the game media "Lagu Nusantara" was effective to support student’s learning interest.

**Table 6.** Test Result Through Student’s Learning Motivation

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% Confidence interval of the difference		
										Lower	Upper
Motivation	Equal variances assumed	1.222	.272	-3.514	87	.001	-4.256	1.211	-6.663	-1.848	
	Equal variances not assumed			-3.518	86.315	.001	-4.256	1.210	-6.660	-1.851	

Based on Table 6, we got  $t_{values}$  of -3.514 and Sig. (2-tailed) by 0.001. By statistical data processing independent sample t-test, Sig. value (2-tailed) < 0.05. The acquisition of this score means that there is a significant difference in learning motivation among the control and experimental group in the research. Differences in the student’s learning motivation between the control and experimental groups proved that the game media "Lagu Nusantara" was effective to support student’s learning motivation.

The effectiveness of the "Lagu Nusantara" game which included in the media or digital games on the gadget against student interest in support of Gower & McDowall (2012) and the others findings (Baratè et al., 2013; Rachmawati

et al., 2013; Ciampa, 2014 & Fokides et al., 2016). The findings state that the use of technology tools such as gadget in the learning process can provide positive outcomes for students, such as increase student’s learning interest. In addition, to provide positive outcomes for student’s learning interests, the “Lagu Nusantara” game which packed in digital games also supports student’s learning motivation. The effectiveness of digital game media “Lagu Nusantara” through the student’s learning motivation supports similar findings stating that the utilization of digital media in the learning process can effectively support student’s learning motivation (Dewi et al., 2015; Yoon, 2016;

Chung et al., 2017; Gaspar, 2017; Pratama et al., 2017; Wagner, 2017).

Seen from the game genre, "Lagu Nusantara" game also supports other findings which stated that the learning materials packed in the Role-Playing Game (RPG) game could enhance student's learning interest (Hikam et al., 2013; Sari et al., 2014; Maharani et al., 2016). RPG games which applied in the delivery of learning materials also effectively support student's learning motivation. The effectiveness of RPG games in supporting student's motivation based on the findings of researchers promote the other findings that stated similar result (Ningsih, 2016; Nendya et al., 2016). In addition, viewed from the student's learning interest and motivation in the music art learning, the "Lagu Nusantara" game which presented in the gadget supports the student's learning interest and motivation effectively. These results support the previous findings of gadget support in the music art learning process (Ng et al., 2013; Gomes et al., 2016; Wagner, 2017; Chung & Wu, 2017).

## CONCLUSION

The "Lagu Nusantara" game can be used to promote the learning process of music art, especially in supporting the elementary student's learning interest and motivation. The effectiveness of the "Lagu Nusantara" game based on the observation resulted score of 3.58 (89.44%) for learning interest and 3.51 (87.78%) for learning motivation. Both of these scores indicate excellent categories to support student's learning interest and motivation. In addition, the acquisition of the independent sample t-test results also shows a similarity in which the value of Sig. (2-tailed) for interest and learning motivation less than 0.05 (Sig.<sub>interest</sub> = 0,000; Sig.<sub>motivation</sub> = 0,001). Based on the observation and the test of independent sample t-test, it can be concluded that the game of "Lagu Nusantara" effectively supports the student's learning interest and motivation in the music art learning process, especially the material of Indonesian's traditional songs.

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