

디지털화를 통한 전통예술 보존과 교육적 가치 함양을 위한 돌라난 안악송 학습법 개발

Development of Dolanan Anak's Song Learning Method for the Preservation of Traditional Arts and the Inculcation of Educational Values by Digitalization

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Abstract Arts does not only play role as a medium of entertain but also as a medium of education, as a means of religious rituals, and as a medium of aesthetic presentation. The purposes of this study were to find out 1) how to develop *Dolanan Anak's* (Javanese children's game songs) digitally; 2) the appropriate learning method used to learn *Dolanan Anak's* songs in this digital Era; 3) the typical of educational values that can be taught through *Dolanan Anak's* songs; 4) information how the *Dolanan Anak's* affect the children's attitudes. This study aims to determine the effect of *Dolanan Anak's* digital music on their ability to sing the song and improve their character. The research is quantitative by using experiment methods with pretest posttest control group design. The analysis data is used MANCOVA. The result show that the digitalized of *Dolanan Anak's* song increasing the knowledge, ability of singing, and character of students.

Key words: digitalized music, Dolanan Anak's song, character education

초록 예술은 오락의 매체로서의 역할을 할 뿐만 아니라 교육의 매체로, 종교의식의 수단으로, 그리고 미적 표현의 매체 역할도 수행한다. 이 연구의 목적은 다음의 네 가지를 탐구하는 것이다. 첫째, 자바섬 어린이 게임 노래를 디지털 방식으로 개발하는 방법과 둘째, 디지털 시대에 자바섬 어린이 게임 노래를 배우는 데 적합한 학습 방법, 셋째, 자바섬 어린이 게임 노래를 통해 가르칠 수 있는 교육적 가치의 전형적 특징 그리고 넷째, 자바섬 어린이 게임 노래가 그들의 태도와 행동 발달에 미치는 영향에 관한 정보를 탐색하였다. 이 연구는 자바섬 어린이 디지털 게임 음악이 그들의 가창 능력과 인성 발달에 미치는 영향을 확인하는 것을 목적으로 하였다. 연구방법은 실험연구 방법을 사용한 양적 연구를 실시하였으며, 사전-사후 통제집단 설계를 사용하였다. 자료 분석 방법으로 MANCOVA를 사용하였다. 연구결과, Dolanan Anak Song의 디지털화가 학생들의 지식과 가창 능력, 그리고 학생들의 인성을 향상시킨다는 점을 보여주었다.

주제어: 디지털 음악, 돌라난 안악송, 인성교육

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I . Introduction

Indonesian ancestors were intelligent in terms of inheriting moral values and traditional arts. If Kohbelrg (as cited in Dawson, 2002) argues that the most effective approach to cultivating and developing moral values is through habituation, then Indonesia has been doing it for a long time. This is true according to a review of studies, 50 of which are conducted by postgraduate students of Universitas Negeri Yogyakarta, Indonesia, on traditional arts spread across Indonesia, the inheritance of traditional arts and the nation's noble values is mostly passed down from generation to generation through habituation.

One of the most ingrained traditional arts that has been passed down from generation to generation in Indonesian society is *tembang Dolanan Anak's* (Javanese children's game songs). Wang (2015) revealed that these songs can be found especially in the Special Region of Yogyakarta and Central Java, Indonesia. These songs have been there for a very long time. Hans Overbeck said that there were at least 690 songs identified in 1930.

Ki Hadjar Dewantara, the father of Indonesian education, has developed a method for cultivating moral values through music and *Dolanan Anak's* in his Taman Siswa (Garden of Pupils), a school system he founded in 1922 (Dewantara, 1989). Wang (2021) emphasizes that Ki Hadjar Dewantara had used these songs for shaping students' personalities since the early 20th century. The method developed by Ki Hadjar Dewantara even impressed an educational figure from India named Rabindranath Tagore who eventually adopted it in his schools in Santi Niketan, India (Dewantara, 1989).

Ki Hadjar adopted *Dolanan Anak's* game songs that have been passed down from generation to generation in the learning process. *Dolanan Anak's* game songs are traditional children's songs whose lyrics contain educational values combined with games. With these songs, children can sing, play, and at the same time learn educational values or moral values. Knowledge of values can be developed through the content of song lyrics and attitude formation can be developed through games. In addition, children can improve their singing skills. When associated with the theory of learning outcomes Bloom, Simpson, and Garner, then through children's game songs, achievement of cognitive, psychomotor, and affective learning outcomes can be developed (Astuti, Belly, Maulana & Armini, 2024).

The traditional *Dolanan Anak's* songs were very popular in Java only until the 1980s. Hartiningsih (2015) suggests that children in the 1980s were very familiar with these songs particularly because they had more time and space to sing them together after school.

Unfortunately, current younger generation tends to be less familiar with traditional arts. For example, based on observations conducted by Salomon, a doctoral student in the University of Oxford UK, Indonesians in Hong Kong do not know gamelan music. Another phenomenon is that Indonesian children favor adult songs and popular songs from abroad such as K-Pop over traditional music. It might be due to the perception that traditional *Dolanan Anak's* songs are currently no longer relevant to the present era.

Rosmiati (2014) states that recently, a lot of foreign music has been adopted by Indonesian teenagers. The majority of them believe that learning gamelan, for instance, equals to learning an ancient culture that is no longer relevant in their lives, whereas studying music from abroad is necessary for them to keep up with the current trends. Children today are more familiar with the songs written in English. Langit and Astuti (2019) add that Indonesian children and adolescents currently prefer foreign popular songs, especially K-Pop.

Rosmiati (2014) has reminded that in the development of an increasingly advanced civilization, a person can be culturally overwhelmed by the emergence of two or more cultures at once which exert their own influence. As a consequence, the younger generation begins to feel confused, especially those who do not fully understand their own cultural values.

One of the traditional arts of Javanese society is *Dolanan Anak's* (Javanese children's game songs). Endraswara (Hartiningsih, 2015) explains that these are songs that are used in *Dolanan Anak's*. Rosmiati (2014) suggests that these songs can potentially develop myriad of values such as cooperation, honesty, harmony and respect for others.

Wang (2021) stated that currently there are only 40% of this kind of traditional songs that are still recognizable in terms of their original melodies. Hartiningsih (2015) also points out that the decreasing popularity of these songs indicates that they are currently nearly extinct particularly because of the emergence of modern culture which is more widely accepted by most children. Based on the descriptions above, in addition to efforts to instill the nation's noble values, it is also necessary to introduce *Dolanan Anak's* songs. The combination of these two can solve two problems of the extinction of traditional arts. These efforts can be used as strategies to improve children's character while preserving traditional arts.

The explanation above indicates that today's children are so busy that they do not have the time to play together in a traditional way, i.e. to be present together with their friends and play a physical game. Instead, they play virtual games remotely. Cultivating moral values that was previously carried out using the habituation method through direct interaction between teachers and students can no longer be implemented with sufficient frequency since the online learning

process has become a new culture. The younger generation is already accustomed to learning on online. Therefore, developing innovative methods for instilling the values of character education is necessary.

In this case, learning tools and media must be converted into a digital form. For *Dolanan Anak's* songs, song models that can be used as an example along with their accompaniment, which can guide children in singing the songs, is needed. If the songs were previously sung without any accompaniment or only using gamelan accompaniment, today, digital accompaniment that can be accessed easily by children is desirable. The digitization of these songs can be carried out by combining them with Western musical elements.

Based on the description in the background of the problem, the problems formulated are as follows: 1) How are digitized *Dolanan Anak's* songs developed so that children are interested in them?; 2) What are the methods that need be developed so that children can learn *Dolanan Anak's* song more easily?; 3) What is the character development that can be applied to introduce the values of character education through the *Dolanan Anak's* songs?; 4) How do the *Dolanan Anak's* songs affect the development of children's attitudes and behavior?.

The research purposes were 1) To find out how to develop digitized *Dolanan Anak's* songs; 2) To find out the appropriate learning method used to learn *Dolanan Anak's* songs in this Era.; 3) To find out the typical characteristics of educational values that can be taught through *Dolanan Anak's* songs; 4) To obtain information how the *Dolanan Anak's* songs affect the development of children's attitudes and behavior.

II. Literature Review

1. The System of Arts Education System in Indonesia

Art does not only play role as a medium of entertainment but also as a medium of education, as a means of religious rituals, and as a medium of aesthetic presentation. Ki Hadjar Dewantara (as cited in Astuti, Sudiyono & zuchdi, 2012, p. 1) said that music as a part of arts could train one's listening sensitivity that in turn leads to their mellow feeling and behavior. The rhythm of music could facilitate physical work, support the brain work, give psychic benefits, and bring the spiritual power alive. Furthermore, the aim of music teaching is to develop the students' aesthetics sense. In addition, the school is a perfect place for realizing and developing traditional,

popular and modern arts. Indonesia has numerous traditional arts which are highly admired by other nations. This has been recognized by experts such as Jaap Kunst, Mantel Hood, and Jui-Ching Wang.

Indonesia and Western nations are different in terms of their approaches in teaching and incorporating arts as a medium of education. In the past, Indonesia adopted a holistic learning approach and concept, in which subject matters and life values were taught in an integrated manner. This system was known as *nyantrik* (study) and *pesantren* (Islamic boarding school). This system can be contrasted to Western education which tends to teach specialized skills. However, with the increasing number of Western educational concepts adopted in Indonesia, Indonesia's educational approach is now generally almost the same as the approach used by Western countries. Astuti and Langit (2024) found that In the Netherlands the focus of teaching and learning music is on developing musicality grounded in the potential of each students. In France, music education includes a strong emphasis on acquiring music skills correctly and accurately from an early age. Meanwhile in Indonesia, music education predominantly leaned towards theoretical learning.

2. The Influence of Music on a Person's Feelings and Character

Childhood is usually considered as a happy period during which children start to see the world around them. Having enjoyable and pleasant experiences helps them develop a positive perception of the world, which in turn will motivate them to study and work harder to achieve their dreams. Having a childhood filled with joy and happiness can help them develop their power of imagination and creativity, which will contribute to their future success.

Music is a medium of entertainment. Singing songs and playing music can make people happy. Music also has the capacity to relieve the nerves from any burden and to express emotions. Thus, giving children the experience of singing songs and playing music can potentially help reduce their stress levels and increase their happiness. Music can evoke a variety of emotions such as sadness and happiness. It can also be uplifting. Many experts have observed that music is closely related to the evocation of feelings.

Rudolf Steiner (as cited in Dewantara, 1989), says that music, in this case rhythm, can facilitate physical work, support the brain work, improve morale, and bring the spiritual power alive. Dewantara (1989, p.303) explains that education aims to refine character, develop the brain, and maintain a healthy body. This is in line with the argument of Mursell (2007) which states that

the goal of education is to shape one's personality. The personality is formed through the learning process and the subject matter provided. The function of music is not only as a medium of entertainment, but also as a medium for religious rituals and customs. Almost every religious ritual and traditional ceremony uses music as the medium. In addition, music also functions as a medium of education. Ki Hadjar Dewantara, used music to refine the character of his students long before Indonesia's independence in 1945.

Dewantara (1989) revealed that Rabindrnath Tagore, an education leader in India, imitated what Taman Siswa school (a school that was founded by Ki Hadjar Dewantara) had initiated after visiting the school in 1936 with the establishment of the "Kerti Niketan" school, whose curriculum contained material on *gendhing-gendhing Jawa* (Javanese gamelan music) to refine the character of Indian students. As an educational medium, music consists of elements such as rhythm, tone, and harmony which are believed to have the capacity to control emotions. In addition, the lyrics of songs in general and folk songs as well as traditional songs in particular contain the values of life that are upheld by the local community. Therefore, instilling noble values will be very effective if carried out through traditional songs.

3. Developing Character Education for Children

Character education is the process of teaching values, manners, morals, and personalities which aims to develop children so that they can make decisions about what is good and what is bad, maintain what is good, and create goodness in everyday life. A person's character is closely related to the environment in which the person or group of people lives. Character begins to be formed from the moment a child is born and will develop with age.

The development of a person's character is influenced by many factors which can be grouped into innate factors (nature) and environment (nurture), where the person grows and develops. According to Lickona (2019), character education contains three main elements, namely knowing the good, loving the good, and acting the good. In general, children do not have enough experience and knowledge, so there are still many values of life that they do not know. For this reason, during childhood, it is necessary to provide a lot of knowledge about the values of life which will be useful for achieving goals and living life in the future.

Character education does not just teach children what is right and wrong, but more than that character education instills good habits in students so that they are able to understand, feel, and do the good (Zuchdi et al., 2009, p. 86). Krischenbau (as cited in Zuchdi, Prasetya & Masruri,

2013, p. 2) mentioned 100 methods of moral development that include inculcation, modeling, facilitation, and developing skills needed to make people become easily adaptable to change. Based on the explanation above, it can be inferred that instilling the values of life must be done through habituation.

Dewantara (1989) argues that childhood is a period of play. Thus, educational values must be taught using a game-based method. In Javanese, play means “ethok-ethokan”, which literally means “to pretend”. In this context, this does not mean faking in a negative connotation, but rather imitating a good deed in a simpler form. It can also be interpreted as an imagination of an object that cannot be presented.

4. *Dolanan Anak's* (Children's Game) Songs

Indonesia, which has 18,307 islands and 1,128 ethnic groups, has many traditional arts and regional languages. The wealth of Indonesian folk and traditional arts can reach thousands. The existence of traditional arts, in this case including traditional music which is so numerous in Indonesia shows that the use of music as a medium for character formation has long been a tradition. In Central Java and Daerah Istimewa Yogyakarta alone, there are more than 600 types of traditional *Dolanan Anak's* songs.

Dolanan Anak's songs is basically a folk song. Mireskandari and Sharbatian (2015) say that folklore or popular culture is one of the components of cultures. Folklore is the body of expressive culture related to literary, artistic and cultural issues. Thus, basically *Dolanan Anak's* songs are also an aesthetic expression of language and culture.

Dolanan Anak's songs are songs that are used to accompany children's games even though sometimes according to Wahyu (2013) these *Dolanan Anak's* songs are incorporates in more serious activities to accompany dances, such as Jarog, a new creation dance which is a combination of *Jaranan* dance and *Reog* dance. However, according to the author, *Dolanan Anak's* songs are mostly used for games.

As the name implies, “dolanan”, a Javanese word, these songs originate from the Yogyakarta Special Regions, Central and East Java, where Javanese is used in everyday life. Examples of *Dolanan Anak's* songs are *Jamuran*, *Tak Petik-petik kembang melathi*, and *Cublak-cublak suweng*. These songs can be used by children to accompany guessing games, express aesthetic feelings, and develop an attitude of togetherness. These songs are simple children's songs that contain Javanese educational values. Javanese people instill these educational values through children's songs.

The uniqueness of these children's songs in addition to using the pentatonic scale is that many of them are a game medium. For example, the song *Cublak-cublak Suweng* is used by children to play a game to guess who is hiding the *gaco* (a stone or object used as a tool for children have to hide and to be sought during the game). With these songs, children can also develop psychomotor skills, in addition to aspects of knowledge and attitudes. For example, in the song *Cublak-cublak Suweng*, the children do a repetitive motion of bringing the tips of their right and left index fingers together and clasping their hands, which is done by either the child who is hiding the *gaco* or not. Children who are *dadi* (Javanese), namely those who are punished for losing the hand game, must find the child who is hiding the *gaco*. The activity of the movement to bring the tips of the index fingers together is a psychomotor development exercise movement.

The ability to guess only by looking at children's faces is an exercise in reading minds, and the ability to memorize song lyrics and melodies is an exercise in developing cognitive and musical abilities. Unfortunately, these games are rarely played nowadays because children spend their time playing with smartphones.

Langit and Astuti (2020) found that children and adolescents, including Indonesian children and adolescents, currently prefer foreign popular songs, especially K-Pop. The number of views of K-Pop videos on YouTube until now in Indonesia has reached 81,128,637. The love of Indonesian children for Korean popular songs was also shown by the number of children who chose to perform Korean dance activities when asked to present works of art. The children used Korean songs to accompany the dances they presented on their own initiative by imitating the choreography of dance movements in the songs they made into accompaniment music.

There is no denying that Korean popular music has succeeded in attracting the attention of children and teenagers in Indonesia and even the world. Langit and Astuti (2020) found that the factors that influence the success of K-Pop in attracting the attention of children and adolescents around the world include Korean musicians prepare K-pop in detail so that fans can see the beauty of their performances from various points of view.

Another characteristic of K-Pop is that the songs are sung with a lively and fast tempo. Dance movements also follow fast rhythms. This is in accordance with the character of children who are agile and fast. Langit and Astuti (2020) also found that factors that increase the popularity of K-Pop in Indonesia include the K-pop format. Korean music performances are presented in groups, which are a new form that did not exist before so it is very attractive for the young generation, including Indonesia. Based on this description, it can be said that the songs that

children like today are group songs with fast tempo and cheerful atmosphere.

When compared to K-Pop songs, *Dolanan Anak's* songs are indeed simpler and more classic because they do not use musical instruments. However, forcing children to sing songs with many complex variations is not a wise thing because it can actually frustrate them and discourage singing. The development of *Dolanan Anak's* songs must still follow simple principles. This means that the melodies and song lyrics are fixed.

The development can be done with modulation techniques, dynamic variations, scales (from major to minor or vice versa), and rap variations can be made so that Dolanan Anak's songs become more lively according to the energetic characteristics of children. Astuti, Kristianingsih, Pujiwiayana, Handoyo & Rakasiwi (2023) found that children aged between 5-10 years can sing children's songs by following the accompaniment with both guitar and piano musical instruments well. Another finding is that children aged 7-10 years can sing with modulation and scale changes from major to minor.

Singing in unisono is usually done by children, but singing accompanied by music is very rare for children to get that opportunity, for that the development of *Dolanan Anak's* songs can develop accompaniments that can be used by children to sing *Dolanan Anak's* songs. The accompaniment can be in the form of "live", which is the accompaniment directly to the children or in the form of a minus one(karaoke) which the children can use to sing.

5. Developing Methods of Preservation Educational Values by Inculcation through *Dolanan Anak's* Song Digitalization

In Era 4.0, in which one of the impacts is digitalization in all aspects, inevitably the development of children's songs must also be digitalized. Until now, there have been several *Dolanan Anak's* songs that have been made in digital form and uploaded on Youtube. However, the digitization of *Dolanan Anak's* songs that are focused on being used for learning is not yet common.

As previously described, singing *Dolanan Anak's* songs with accompaniment can be very engaging. Thus, presenting *Dolanan Anak's* songs with their accompaniment will also be appealing and increase children's motivation to sing. In addition to guiding the students in singing, it also enhances the overall presentation of the singing.

Nowadays, the music industry has developed DAW (Digital Audio Workstation), a software to digitalize music. The DAW method or better known as home digital recording is considered to be the right alternative for making *Dolanan Anak's* songs in this digital era. *Dolanan Anak's*

songs generally use the Javanese pentatonic scale with the *pelog* or *slendro* tuning system. Therefore, musical skills are required, particularly in relation to diatonic and pentatonic music theory, along with a broad understanding of various kinds of music.

The process of making music can be done without having to use real musical instruments but simply by having the sound sampling of the musical instruments. In this case, the composer needs to have a particular skill in processing one sampling of these tones so that it becomes a beautiful arrangement and harmony and is in accordance with the desired concept. It is hoped that making digitized *Dolanan Anak's* songs can provide a lot of convenience and hone creative skills for musicians in creating musical works while at the same time catching up with the latest technological innovations.

One of the method of moral cultivation that is the inculcation method, which is moral cultivation in an indirect way (Astuti, Belly, Maulana & Armini, 2024). An example of this method is teaching moral messages through the advice embedded in songs, including *Dolanan Anak's* songs. Parents used to teach values to children through songs and games. It is hoped by knowing the meaning of the songs and games, children will understand and practice life concepts such as honesty, objectivity, and responsibility. In the past, *Dolanan Anak's* songs were sung by children in everyday life without musical accompaniment. This is understandable because the accompaniment of Javanese songs such as the gamelan has to be played by many people using a set of gamelan instruments which are expensive so that it is impossible for the public to play them.

6. Framework of Thinking and Hypothesis

Childhood is the most effective time to instill values, habituation and knowledge. Everything that is obtained in childhood will be more durable and affect their perception of the world which will affect the values they adopt in the future. Therefore, positive behavior habits must be instilled from childhood. Education must provide a conducive environment for the growth of understanding and habituation of educational values which will shape the child's personality. One of these habits can be instilled through the activity *Dolanan Anak's* songs together. It is one of the strategies used to instill educational values in children.

The lyrics of the songs, melodies, and activities that accompany the *Dolanan Anak's* songs contain a lot of educational values. The development of innovation in singing these songs by means DAW can attract children's attention and increase their interest in these songs.

The character education method can be done by persuasion, inculcation, modeling and habituation. The digital has made learning impossible to be carried out through 100% face to face. Therefore, it is impossible to implement the values of character education using the modeling method optimally, and so is the control of habituation. The digitization of *Dolanan Anak's* songs made it possible to teach children's play songs online.

The provision of learning children's songs with variations and musical accompaniment can increase children's joy as well as develop their positive character. Another positive impact of learning the *Dolanan Anak's* songs is the preservation of traditional songs.

Based on the discussion, the hypothesis proposed is “The method of learning traditional Javanese songs *Dolanan Anak's* with digital music learning can develop character, increase knowledge of educational values, and generate joy in children in 4.0 and 5.0 society.

III. Method

1. The Stages of Research

The stages that carried out in this research are as follows: 1) Identify the *Dolanan Anak's* songs; 2) Develop digitized Javanese *Dolanan Anak's* songs; 3) Determining the population and research sample; 4) Conducting a pretest in the experimental group and the control group; 5) Applying treatment 6). Conducting posttest on the experimental and control groups; 7) Analyzing experimental result.

Interviews was given to teacher, the school's principle, parents, and expert of education to identify the *Dolanan Anak's* songs that are still recognized. The object of interview was to gathered the information about *Dolanan Anak's*.

The digitized *Dolanan Anak's* songs with the following procedure: a) Basic Framework Preparation Stage. It started by making a rhythmic instrument using a 4/4 beat with a tempo of NN120 bpm.; b) Intro Making Stage An intro is the beginning of a song that will be made with various traditional instruments such as *calung*, *gambang* (Javanese xylophone), and *suling* (Javanese lute) with the aim of giving a playful, cheerful and funny nuance; c) Melody Making Stage, a melody is created to fill the space in the song before the repetition of the next chorus. Usually, the melody is filled with guitar or piano solo playing. However, because these are *Dolanan Anak's* songs, the melodies are adjusted to creative instruments such as *angklung*, *calung*,

and lute in order to add a unique and varied impression; d) Tracking Stage (Arrangement of Music on Playlist) Playlist is like a container whose function is to facilitate the arrangement of musical compositions, facilitate the creation of tones and edit with a step sequencer or piano roll; e) Recording stage (Vocal Recording) is to record vocals. The vocal recording here is different from the previous system which used tracking techniques; f) Mastering Stage Mastering is the last stage where the finished song is processed again so that the resulting music produces smoother and less noise sounds by compressing coarse frequencies, polishing and leveling, and adjusting the volume. The mastering process uses the Fruity Multiband Compressor and fruity parametric EQ 2.

The population is elementary school students in Sekolah Dasar Negeri 2 Jampiroso Temanggung Regency (Jampiroso Temanggung Regency Public Elementary School 2). The sample consists of fifth-grade students. There are two parallel classes, V-A and V-B. The determination of the experimental group and the control group was done by random class assignment. Based on the drawing, class V-A became the experimental group, and class V-B became the control group.

2. Variabel of the Research

This study aims to determine the effect of *Dolanan Anak's* digital game music on their ability to sing the song and improve their character. The character was seen from the cognitive (knowledge), psychomotor (skills), and affective (attitude) aspects.

Thus, there are four research variables, namely one independent variable, which in this case is the digitalization method of *Dolanan Anak's* songs; and the dependent variables are the cognitive (knowledge), psychomotor (skills), and affective (attitude) aspects.

3. Desain of Research, Data Collection Technique and Instrument of Research

The research method is an experiment with a pre-test - post-test control group design. The data collection techniques used are tests, observation sheets, and questionnaires. Tests are used to measure knowledge about *Dolanan Anak's* songs. Observation sheets are used to measure skills, and questionnaires are used to measure attitudes.

The result of validity is the correlation between rater is 0.01. That means the instrument is valid. Reliability instrument done by asked two teachers to observe students music competency. Each teacher observe the same student ability and fill in the research instrument. Based the analyze of Cronbach's Alfa notice that the realibility of the instrument is 0,709. That means the reliability

of the instrument if high. It can be said that the instrument can be use to meassure the educational values of students.

4. Data Analysis

Regarding statistical analysis, MANOVA would be used when there are multiple dependent variables, while ANCOVA would be employed when there is a pre-test and post-test, with the pre-test score serving as the covariate (Pallant, 2007). Based on this, MANCOVA is used if there is a control group and an experimental group, and there are multiple dependent variables. Thus, the data analysis method used is MANCOVA.

IV. Results

1. Data Collection of *Dolanan anak's Song*

This research was conducted in Temanggung Regency, Central of Java, Indonesia. The data were obtained from observation, interview, discussion, library research, and create media of *Dolanan Anak's* song video as instruments of research. Interviews was given to teacher, the school's principle, parents, and expert of education. The object of interview to gathered the information about *Dolanan Anak's* songs that known by people.

The research shows that many traditional *Dolanan Anak's* songs are still recognized by the older generation. Teachers and parents are familiar with 36 such songs. The values conveyed by these songs include humility, avoiding disappointment, literacy games, learning through guessing, patriotism, hard work and carefulness, appreciation of beauty, happiness, poetry, love for animals, discipline, not being lazy, humor, not disturbing others, word games, being a good learner, and diligence.

Based on the data, researchers discussed selecting songs appropriate for cultivating character in children. The selection is based on lyrics and melodies that represent characteristics, gender, scale, and aesthetics. The researchers chose three *Dolanan Anak's* songs to use as learning media: *Kembang Melati*, *Kupu Kuwi*, and *Gambang Suling*. *Kembang Melati* relates to female character traits, depicting the jasmine flower. *Gambang Suling* and *Kupu Kuwi* share the same scale as *Kembang Melati*.

2. Develop Digitized *Dolanan Anak's* Game Songs

The procedures for developing *Dolanan Anak's* songs are as follows. Researchers selected three children's songs: “*Kembang Melathi*,” the meaning is Jasmine flower; “*Kupu Kuwi*,” the meaning is “The Butterfly”; and “*Gambang Suling*,” named after traditional Indonesian musical instruments *gambang* (xylophone) and *suling* (flute). Firstly, researchers prepared the basic framework by creating a rhythmic instrument with a tempo of 120 bpm and a 4/4 beat. Secondly, they created an intro for the song using traditional instruments like *calung*, xylophone, and lute to create a playful, cheerful, and humorous atmosphere. The third stage involved creating melodies to fill the song before repeating the chorus. These melodies were adapted using creative instruments such as *angklung*, *calung*, and lute to add unique and varied impressions to the *Dolanan Anak's* songs. The fourth stage was the tracking stage (Arrangement of Music on Playlist), where playlists facilitated musical composition arrangements, tone creation, and editing using a step sequencer or piano roll. The next steps included the audio vocal recording stage and creating the video recording scenario. Researchers outlined the video's storyline to best complement the song, capturing footage with both cameras and drones. Given the vast location, drones were used to capture the beauty of *Mount Sumbing*. Two types of videos were produced: one with instruments and vocals as a model for children and teenagers to imitate singing, and another with instruments only for accompaniment during singing.

Here is the link of YouTube of the video:

- 1) Video *Dolanan Anak's* song “*Kembang Melathi*” (Music and Vocal)
https://www.youtube.com/watch?v=ZNZ_2Z_Y5qI
- 2) Video of Karaoke *Dolanan Anak's* song “*Kembang Melathi*” Link Youtube
<https://www.youtube.com/watch?v=kngqCpo4MfY>
- 3) Video of *Dolanan Anak's* song “*Kupu Kuwi*” (Music and Vocal)
<https://www.youtube.com/watch?v=XJexdtIgfBw>
- 4) Video of Karaoke *Dolanan Anak's* song “*Kupu Kuwi*” Link Youtube
<https://www.youtube.com/watch?v=XJiRu2SUBXI>
- 5) Video *Gambang Suling* (Music and Vocal)
<https://www.youtube.com/watch?v=X341uT9lu14>
- 6) Video of Karaoke *Gambang Suling*
<https://www.youtube.com/watch?v=4TMFT6DrD5g>

3. The Effect of *Dolanan Anak's* Song

The analysis was preceded by normality test using One-Sample Kolmogorov-Smirnov Test and homogeneity test using Levene's Test of Equality of Error Variances by SPSS (Statistical Package for the Social Sciences) version 25. The summary of the result of normality and homogeneity test are provided in Table 1.

<Table 1> The summary of the result of normality and homogeneity test

Group of data	N	Normality	Homogeneity	
		Mahalanobis Critical Values 16,27	Levene's Test Score	Sig
Knowledge of <i>Dolanan Anak's</i> song	124	1.058		0.210
Singing of <i>Dolanan Anak's</i> song	124	1.058		0.610
Affective	124	1.058		0.001

Based on Table 1, it is revealed that the data for knowledge and psychomotor variables are normal in both the experimental and control groups, The influence of method *Dolanan Anak's* song by digitalization on lagu dolanan anak ability can be seen in the mean difference between the experimental group and the control group. Meanwhile, the improvement is seen in the difference in musicality between the posttest and the pretest. The summary of MANCOVA results as Follows.

<Table 2> The result of multivariate tests

Effect	Wilk's Lamda	F	Sig.	Partial Eta Squared
Digitalization <i>Dolanan Anak's</i> song	.298	5.258	.000	.348

It's describe that the Wilks' Lambda value is 0,298 (*greater* 0,05) with a significance value of .000. This is less than .05; therefore, there is a statistically significant difference of *Dolanan Anak's* song ability between experiment and control group. The contribution of the digitalization of *Dolanan Anak's* song songs is 34,8% (based on Partial Eta Squared 0.348). Menawhile, The descriptive statistic including mean score of *Dolanan Anak's* song ability of control and experiment group as follows.

<Table 3> Descriptive statistics

Experiment and control	<i>Dolanan Anak's</i> song Ability	Mean	Standard Deviation
Experiment Control	Knowledge	68.8281	18.64417
	Knowledge	51.2000	9.95549
Experiment Control	Singing	67.6250	23.11634
	Singing	64. 0833	18.48159
Experiment Control	Affective	4.1496	.75313
	Affective	3.7000	.68874

The mean of experiment group higher than control group. That means the use of method of digitalization of *Dolanan Anak's* song effectively than conventional method.

The resume of the Tests of Between-Subjects Effects analysis as follows.

<Table 4> Tests of between-subjects effects

Source	Dependent Variable	df	Mean Square	F	Sig.	Partial Eta Squared
group	Knowledge of <i>Dolanan Anak's</i> song	1	9623.250	63.916	.000	.346
	Singing of <i>Dolanan Anak's</i> song	1	388.441	5.258	.024	.042
	Affective	1	6.012	19.440	.000	.138

Based on the table, it is known that all variables, namely: knowledge, ability of singing, and affective of *Dolanan Anak's* song difference between experiment and control group. The knowledge of *Dolanan Anak's* song has a contribution 34,6%; The singing contribution is 4,2%, and affective contribution is 13,8%.

V. Discussion & Conclusion

The research show that there are still many *Dolanan Anak's* song recognize by old generation. The development of innovative technologies has led to the emergence and development of digital music. The innovation in music is increasing so rapidly that digital technology and music are now becoming inseparable. The more musical works develop, the more technological elements will be used, which in turn accelerates the development of the digital music. The introduction of digital music has really been supporting composers and artists in their work. The birth of

digital music has made it possible for them to create unique musical works. In addition, it also makes the work process more efficient because it requires fewer people. Another benefit is that digital music also facilitates the creation of various kinds of desired instruments that are important in creating an interesting and creative musical presentation. Before the rapid development of the digital era, making music for both movie scoring and popular recorded music is unaffordable. For example, composing a song or creating a musical illustration requires at least some real musical instruments and equipment, a number of musicians and a large venue or studio. In addition, there are some limitations of recording process using analog media particularly in terms of overdubbing or the inability of the tape to be erased and re-recorded and the high cost of providing the tape itself. Thus, with the invention of digital music, it is very easy for musicians to express, create and pour their ideas into music. Since a long time ago, a number of Western experts have been interested in and acknowledging the nobility of Indonesian traditional arts. For example, Kunst (2013) from the Netherlands wrote a book on the Javanese gamelan scale in 1934; Mantle Hood from the United States in 1960 wrote a book about gamelan in Indonesia, including Javanese gamelan; and in this 21st century Prof. Jui-Ching Wang, investigated the *Dolanan Anak's* songs as an educational medium for shaping the character of Indonesian children, especially Javanese. Thus, Indonesian traditional arts have become an international issue and a center for global art studies recognized by the international community.

The researchers succeeded in creating songs that can be used to teach children games to children. These songs come in two types: the first type includes complete songs with singers, music accompaniment, and lyrics; the second type consists of instrumental music and lyrics only, suitable for practicing *Dolanan Anak's* songs. Singing *Dolanan Anak's* songs not only enhances children's understanding of Javanese philosophy but also helps them learn to speak Javanese correctly.

The effect of digitalized show that there a significance difference between the experimental and control group. That means the score of the experimental group was higher that the control group. It can be concluded that the digitalized *Dolanan Anak's* song increases the knowledge, ability of singing, and character of students.

The method of teaching *Dolanan Anak's* songs digitally provides an example of singing songs, which means children will imitate. Astuti, Zuchdi, Sayuti, Rusdewanti and Bramantyo (2022) found that this method is highly suitable for amateur musicians, thus it is suitable for children.

The use of digital *Dolanan Anak's* song videos allows students to learn these songs repeatedly anytime and anywhere. Besides being engaging due to its relevance to modern times, it also

provides opportunities for students to practice as often as possible to master the *Dolanan Anak's* songs as well as possible. This aligns with Thorndike's behaviorist theory with the law of effect.

Lickona (2019) stated, "Be careful with our thoughts because they will influence our words; be careful with our words because they will influence our actions; be careful with our actions because they will affect our character; and be careful with our character because it will determine our destiny." Based on this view, knowledge will influence actions and behavior. This explains that by singing *Dolanan Anak's* songs, children will learn the meaning of the lyrics and act according to the content of the songs.

Another research which prove that music has positive effect toward language ability found by Picciotti et al. (2018). This research showed showed a significant correlation between grades in the two foreign languages and in music, both in the traditional courses and in special courses. Meanwhile Bilbao, Corbacho, Machancoses and Mora (2019) found that the implementation of a music-mediated experience also promoted tolerance and enhanced learners' intrinsic motivations for language learning at the same time as acknowledging their diversity. Beside that, Pino, Giancola and D'Amico (2023) , highlighting that music plays a central role in the comprehension of language development from the early stages of life. One of the other research, Degrave (2019) finding arouse that the potential benefits of music-related methodologies for language acquisition and for specific linguistic skills.

Based on Lu and Murao (2023) research proved that working memory storage was significantly related to vocabulary learning in background music conditions but not in the silent condition. Lorenzo, Herrera, Candelas and Badea (2014) also found that music can make a significant difference in children's language development.

Acknowledgement

We would like to express my gratitude to DRTPM DIKTI and DIPA UNY for funding this research. I also extend my thanks to those who have assisted, including, the expert form Northern Illinois University USA, Prof. Jui-Ching Wang. The expert from Hannan University, South Korea, Prof. Jiyoung Choi. The head and teachers of SD Negeri 2 Jampiroso Temanggung, Kusnadi, M.Pd, Nizar Anwar, S.Pd. and all teachers and students.

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