Local Culture-Based Music Game Model for Early Childhood Education

Suwono
SMA N 14 Bandar Lampung, Lampung
suwono20@gmail.com

Abstract
Many music experts and educators have researched to see the positive effects of several types of music. Music turns out to be able to affect the intellectual development of children as well as make children wise to socialize. Many facts were revealed from this research. Among them, there is an exciting relationship between music and human intelligence. This study uses a qualitative methodology, with the research object being students of PIAUD IAIMNU Metro Lampung. The results of this study indicate that playing music can increase a child's intelligence level because it includes sensitivity to mastery of rhythm, tone patterns, rhythms, tempos, instruments, and musical expressions to be able to sing a song or play it. Learning or playing in early childhood has several advantages, including being able to hone memory because children will recognize and try to memorize the tones of the music.

Keywords: Local Culture, Game Music, Music for Early Childhood

INTRODUCTION
Music has three important parts, namely bit, rhythm, and harmony. The combination of the three will produce good music. Good music is music that harmonizes all three. In the human brain there are receptors (signal receivers) that can recognize music. If since the children are accustomed to hearing beautiful music, the child will experience many benefits. Not only improve their cognition optimally, but music also builds emotional intelligence (Rasyid, 2010). A child who has been accustomed to listening to music since childhood will develop more emotional intelligence than a child who rarely listens to music (Suratno, 2005). The music heard is in the form of rhythms and regular tones from a balanced mix of beats, rhythms and harmony. In addition to the cognitive and emotional benefits, there are many other uses of music for children. For example, music can improve...
motor development, improve language skills, mathematics, as well as social skills, and build self-confidence (Don Campbell, 2002).

Every child has the right to get musical sensitivity training, not only to make them musicians, but because music can train their sensitivity to art in general and increase confidence in their environment. Music, especially music with a regular tone, greatly influences the development of a child’s IQ (Intelligent Quotient) and EQ (Emotional Quotient). A child who since childhood is accustomed to listening to music tends to develop more emotional intelligence and intelligence compared to a child who rarely listens to music. Not only that, the level of discipline of children who often listen to music is also better than children who rarely listen to music. As for the music here is music that has a regular rhythm and regular tones, not "slanted" tones. Whatever the type of music, as long as it can give a positive reaction to the child, it is good to be introduced to the child. What is clear, the intelligence obtained by children does not mean that there must be a musical instrument. But it can be stimulated in the form of reciting or humming the Qur'an.

Playing while getting to know musical instruments is one way that can be done so that children can get to know music. Another example can be listening to music while inviting children to clap, dance and sing together, and introduce various musical instruments (Suratno, 2005). The introduction of music to children should be given long before the child begins to learn to play a musical instrument. It can even start in the womb (Bolduc & Evrard, 2017). However, it is never too late in terms of introducing and teaching music to these children (Swaminathan & Schellenberg, 2020). However, teaching music to children as early as possible has far greater benefits than introducing music when children are over the age of 10.

Children who have been familiar with music from an early age have a much greater sensitivity than children who are familiar with music over the age of 10 (Djamarah Bahri, 2000). Not only that, knowing early music in children can also help children become independent individuals, improve motor control, improve language and speaking skills, as well as control children's emotional and social development. Music can be used as therapy for children. Music means expression. With music a child can be helped in controlling his emotions. So that when the child is angry, he can channel his emotions with music.

Psychologists Fran Rauscher and Gordon Shaw from the University of California-Irvine, United States in 1994 conducted a study that proved that there was a close relationship between musical proficiency and mastery of high levels of mathematics, and science skills. After eight months, the research of these two experts showed that children who received music education programs increased their spatial intelligence (spatial intelligence) by 46% compared to children who were not exposed to music (Safrina Rien, 2002).

Harvard University neuroscientist Mark Tramo, MD says, “In our brains, millions of neurons of circuits are uniquely activated when we hear music. These neurons spread to various regions of the brain, including the auditory centers in the left and right hemispheres.” Apparently this is where the connection between music and intelligence begins (Hodijah & Kurniawati, 2021). Through play activities, children benefit from music. Dr. Dee Joy Coulter, a Neuroscience educator and author of Early Childhood Connections: The Journal of Music and Moment-Based Learning, classifies children's songs, movements and games as brilliant brain exercises. Introduces children to important speech patterns, sensory motor skills,
and movement strategies. Through games that contain music, not only the development of language and vocabulary is increased, but also news and rhythmic skills (Marinšek & Denac, 2020). Logic enables children to organize ideas and solve problems. Preschool education also uses music as part of the educational process, due to the various benefits obtained from music.

In the context of Early Childhood Education, the development mentioned above is more effective and efficient with the play method and this is in accordance with the principles of children's education playing while learning (Hanson-Smith, 2016). However, many various games that have emerged along with the advancement of science and technology, are generally more oriented to individual games. Children do not play with other children, children play with individual game products, does not mean there is no benefit. It is different with games that contain local culture or traditional games that prioritize partnership games, where children play and interact with each other. This can build on the development of children's intelligence both musical intelligence, emotional intelligence, interpersonal intelligence, kinesthetic intelligence and cognitive intelligence.

It seems that the reality of the game media that is served to children is more dominant in individual games and is more familiar with various modern games. Of course, it is very unfortunate if no one cares about and preserves the nation's cultural heritage which is actually loaded with educational content. With all the advantages it has, local (traditional) culture-based games are an alternative that deserves to be more innovatively reused. Children not only get joy and excitement, but also develop their intelligence, both cognitively, affectively and psychomotorically. To better utilize it, especially in the school environment, educators need to pay attention to the types of games that are suitable for developing certain competencies.

Basically all kinds of games, whether they contain local or modern culture, aim to bring children to fun and joy or recreation. Thus, it is worth considering its enormous educative potential, so it would be unwise to ignore and forget the local (traditional) cultural game media. With all the innovative efforts to develop our great cultural heritage as a game medium and in all its varieties, it should be preserved. Something traditional doesn't mean talc is relevant anymore with current conditions. Something that is economical does not mean that it does not have a high educational value (Anggani Sudono, 1995).

Playing is an important activity for children, because playing will increase knowledge and experience. So far, various types of educational games have been adequate, but among the existing games, especially musical aids as playing media that can be used to stimulate children in developing their intelligence, there are very few. Therefore, there is a need for a local culture-based musical game model for early childhood education.

**METHODOLOGY**

This study uses a qualitative methodology with a phenomenological approach. In this study because they experience, understand, and do (Sugiyono, 2010). So the object of this research was done to the students of PIAUD IAIMNU Metro Lampung. Most of them have worked as kindergarten or RA teachers in their respective regions. Therefore, the music given is tested on each student. The data
collection method is through observation, interviews, and documentation (Arikunio Suharsimi, 2010).

**Early Childhood**

Education Education is an important asset for the progress of a nation. Therefore, every citizen must and must follow the level of education (Depdiknas, 2003). Most Indonesian children, in starting the process of entering educational institutions, ignore early childhood education. In fact, to get used to and develop a child's mindset, early education is absolutely necessary. Currently, there is already awareness in that direction. However, with the area and large population of Indonesia, early childhood education institutions are still minimal and many do not meet the criteria for early childhood education.

Early childhood is a golden period for children's development to obtain the educational process. This period is valuable years for a child to recognize various facts in his environment as a stimulant for his personality, psychomotor, cognitive and social development (Ach. Saifullah and Nine Adien Maulana, 2005). Based on the results of the study, about 50% of adult intelligence capabilities have occurred when children are 4 years old, 80% have occurred when they are 8 years old, and reach their culmination point when children are around 18 years old.

This means that the developments that occur in the first 4 years are as great as the developments that occur in the next 14 years. So this golden period is a critical period for children, where the developments obtained in this period greatly affect the development of the next period until adulthood. While this golden period only comes once, so if it is missed, it means the opportunity is over. For this reason, early childhood education in the form of providing stimulation from the immediate environment is needed to optimize children's abilities (Tedjasaputra, 2001).

The success of early childhood is the foundation for the success of education at the next level. Early age is a "golden age" for a person, meaning that if someone at that time got the right education, then he got good learning readiness which is one of the main keys for successful learning at the next level. This shows that Early Childhood Education is necessary. Even IQ and EQ expert Eileen Rahman in Bella said that children's intelligence reaches 50 percent at the age of 0-4 years. Until the age of 8 years his intelligence increased to 80 percent and peaked (reached 100 percent) at the age of 18 years. Therefore, the implementation of Early Childhood Education is necessary.

In carrying out early childhood education should use the following principles (Anggani Sudono, 1995):

a. Oriented to Children's Needs

Learning activities for children must always be oriented to children's needs. Early childhood is a child who is in need of educational efforts to achieve the optimization of all aspects of development, both physical and psychological development, namely intellectual, language, motor, and socio-emotional.

b. Learning through play

Play is an early childhood learning advice. Through play, children are invited to explore, find, utilize, and draw conclusions about the objects around them.
Local Culture-Based Music Game Model for Early Childhood Education

c. Conducive environment
The environment must be created in such a way that it is interesting and fun with attention to safety and comfort that can support learning activities through play.
d. Using integrated learning
Learning in early childhood must use the concept of integrated learning carried out through themes. The theme that is built must be interesting and can arouse children's interest and is contextual in nature. This is intended so that children are able to recognize various concepts easily and clearly so that learning becomes easy and meaningful for children.
e. Developing various life skills
Developing life skills can be done through various habituation processes. It is intended that children learn to help themselves, be independent and responsible and have self-discipline.
f. Using various educational media and learning resources
Media and learning resources can come from the surrounding natural environment or materials that are deliberately prepared by educators/teachers.
g. It is carried out gradually and repeatedly.
Learning for early childhood should be carried out in stages, starting with simple concepts and being close to children. So that the concept can be mastered well, the teacher should present activities that are free.

Local Culture-Based Music Game Model for Early Childhood Education
Basically, early childhood children still really like playing or any kind of game. This strong need for play is the dominant basic capital, if it can be used as a medium of formation in the process of playing while learning. Unconsciously, in carrying out various play activities, the child will actually absorb various reinforcements to form himself. Forming solidarity strengthening, creative strengthening, independence, courage, challenge, and even developing creativity, from existing games children can also be creative to create new games that are considered more interesting.

Psychologically, a child who has a thick experience in various games, his psyche will be more easily formed or formed towards his identity. Because the game is the most popular part, learning something that is included through game patterns is also easy. Optimal game tools are game tools that are able to stimulate and attract children's interest, as well as being able to develop various types of children's abilities and not limiting it to only one particular activity as well as game tools designed specifically for educational purposes. According to Isenberg and Jacobe in Suratno, it is called "open-ended plaything". This game tool is not only produced in the factory but can be anything as long as it meets the criteria.

a. Games through music
Fathur Rasyid in his book says that playing music can increase a child's level of intelligence because it includes sensitivity to mastery of rhythm, tone patterns, rhythms, tempos, instruments, and musical expressions to be able to sing a song or play it. Learning or playing for early childhood has several advantages, including being able to hone memory because children will recognize and try to memorize the
Local Culture-Based Music Game Model for Early Childhood Education

tones of the music. In addition, music can also develop imagination so that it makes it creative, and music has an influence on increasing intelligence.

The period between the ages of four and six is a very exciting time of maturation, and a child's ability to move, sing, follow rhythm and express himself grows rapidly. Recent research supports the longstanding assumption that in children as young as this, learning can be successful when the body is involved in the process. As said Dr. Frank Wood, that music is the brain's first language. So, to use it again as in childhood, it is necessary to bring back the serene atmosphere that has been felt by children's brains and minds. Thus, music as a medium of play in children's learning must be exciting to make children feel that learning is something fun. Learning music must be given through the sound of the music itself so that children can hear the sound and live it. While rhythm is the most basic element of music that can affect the entire nervous muscle tissue and even the entire organ itself.

Curwen emphasized that in learning music, what children imagine is the sound. Meanwhile, Leonhard and House (1972) said that the music learning methods used must always be connected with music itself as an art of expression. So learning music should be given through sound, music for children to listen to so that it can stimulate children's intelligence.

Games through music can stimulate children's intelligence and music provides an entertaining feel. This entertaining nature fosters an uplifting and joyful atmosphere for a child. Moreover, the songs that are played are in accordance with the atmosphere. For example, the mother's hum is heard when the child is playing. The mother's hum when combined gives a sense of security, comfort and peace to the child. Happy songs provide stimulation of psychophysical activity in children so that children can dissolve in the rhythm and tempo of the music when they are playing.

b. local culture-based music game model

Playing music can increase a child's intelligence level because it includes sensitivity to mastery of rhythm, tone patterns, rhythms, tempos, instruments, and musical expressions to be able to sing a song or play it. Musical games have an element of balance, therefore the model of music games that can be enjoyed for children is music that has elements of balance. The musical elements are as follows:

1) Sound

Music theory explains how sound is notated or written or how it is captured in the form of the listener. In music the wave and the period, but in the frequency. The basic aspects of sound in music are usually described in terms of tuning (English: Pitch, i.e. pitch). Spontaneous recognition of the elements of a child's voice will know the high and low of the tone they play through the musical instrument they play.

2) Tone

Sounds can be divided into tones that have a certain height according to their frequency or according to the relative pitch of the pitch relative to the standard pitch. The difference in tuning between two notes is called an interval. Tones can be set in different scales. The most common scales are the major scale, minor scale, and pentatonic scale. The basic tone of a piece of music determines the frequency of each note in the piece. To introduce tones in a musical playing model based on local
(traditional/regional) culture by using percussion instruments with symbolic notes that children can understand, namely notations which are interpreted according to agreements or conventions. So there is no clearly legible relationship between the material and the sign used.

Notation is a written description of music. In block or number notation, pitch is depicted vertically while time (rhythm) is described horizontally. These two elements make up the notes, besides that, the basic tone instructions, tempo, dynamics and so on.

3) Rhythm

Rhythm is the setting of sound in time. Bars is a group division of beats in time. The time signature indicates the number of beats in the bar and which notes count and count as one beat. Certain notes can be accentuated by applying stress (and varying duration). Rhythm is more directed at playing music to cultivate a sense of regular beats for children. How do children try to cooperate in playing music with each other to fill the balance of beats according to the sounding notation (instrumental song notation).

4) Melody

Melody is a series of notes in time. The sequence can be played alone, i.e. without accompaniment, or it can be a series of chords in time. The involvement of children in playing the melody of the song (tone) aims to stimulate children to recognize musical tones, either the color of the voice or the high and low tone.

5) Harmony

Harmony can generally be said to be the occurrence of two or more notes of different heights sounded together, although harmony can also occur when the notes are sounded sequentially (as in aroergio). Harmonies that consist of three or more notes played together are usually called chords.

c. traditional music game model bentuk

The form of the music game model basically adjusts to the psychological condition of the child, both physical and non-physical, the child's relative ability to play the notation presented. As for what needs to be considered in planning a local culture-based musical game model (the Cetik Lampung music game model):

1) The resulting ensemble is in the form of a cetik ensemble with the size, theme song, melody, beat technique, and design tailored to the development of the child's soul and needs.
2) Presenting songs or gending are also selected and adapted to the needs of children in a simple form and easy to play.
3) The design of the ensemble uses several instruments, sized according to the physique of preschool-aged children,
4) The design is themed with toys with special characteristics for children combined with instruments painted in striking colors.
5) The ensemble is used for children to play with instrumental song notation that is simple and easy to understand.
6) It is expected to improve children's social skills and emotional stability during music games.
7) The design of a music game model based on lakol culture produces a way of teaching teachers in introducing and learning music art centers to students.
Examples of percussion music game models:

Name: cetik/ kolintang pring music adoption

Game: instrumentalia
Function: -Develops children's musical, intrapersonal, interpersonal, kinesthetic and spatial intelligence
Materials for playing instruments: bamboo, and wood which are designed to be musical instruments manufacturing technique: bamboo is cut into slats and then tuned into pentatonic or diatonic tones and arranged according to the high and low notes (1 octave).

How to play it: - by being hit by using cuttings (small round bamboo rods with a diameter of 1 cm and a length of 10 cm).

Form of notation : Using rainbow color symbols and blocks

Tones: 1 = red color, 2 = orange color re, 3 = yellow color me, 4 = green color fa, 5 = blue color sol, 6 = indigo color la and 7 = the purple one.

CONCLUSION

In the context of Early Childhood Education, the development mentioned above is more effective and efficient with the play method and this is in accordance with the educational principle of children playing while learning. The world of children is playing, because playing is a fun activity for children. Play is also a demand and need for kindergarten children, by playing children can satisfy the demands and needs of children's development in the dimensions: cognitive motor, creativity, language, emotions, social values and attitudes to life.

Basically, early childhood still really likes playing or any kind of game. This strong need for play is the dominant basic capital, if it can be used as a medium of formation in the process of playing while learning. Unconsciously, in carrying out various play activities, the child will actually absorb various reinforcements to form himself. Forming solidarity strengthening, creative strengthening, independence, courage, challenge, and even developing creativity, from existing games children can also be creative to create new games that are considered more interesting.

Playing music can increase a child's level of intelligence because it includes sensitivity to mastery of rhythm, tone patterns, rhythms, tempos, instruments, and musical expressions to be able to sing a song or play music. Learning or playing for early childhood has several advantages, including being able to hone memory because children will recognize and try to memorize the tones of the music. In addition, music can also develop imagination so that it makes it creative, and music has an influence on increasing intelligence.
ACKNOWLEDGEMENT

With the completion of this research, the authors would like to thank several parties who support. Among them are thanks to all PIAUD IAIMNU Metro Lampung students who have helped so much for research data needs. Also to LP3M who has helped to publish the results of my research that I wrote so well. Hopefully the results of this research can add to the scientific treasures in the field of music for early childhood education.

REFERENCES
Ach. Saifullah dan Nine Adien Maulana. (2005). Melejitan Potensi Kecerdasan Anak, Mewujudkan Dambaan Memiliki Anak Berakal Brilian Berhati Gemilang. yogyakarta: Katahati.
Anggani Sudono. (1995). Alat Permainan dan Sumber Belajar di TK. Jakarta: Departemen Pendidikan dan Kebudayaan.
Arikunio Suharsimi. (2010). Prosedur Penelitian Suatu Pendekatan Praktik. Jakarta: Rineka Cipta.
Bolduc, J., & Evrard, M. (2017). Music Education from Birth to Five: An Examination of Early Childhood Educators’ Music Teaching Practices. *Research and Issues in Music Education*, 13(1). Retrieved from http://ir.stthomas.edu/rimehttp://ir.stthomas.edu/rime/vol13/iss1/3
Depdiknas. (2003). Undang-Undang Sistem Pendidikan Nasional Nomor 20 Tahun 2003. Jakarta.
Djamarah Bahri. (2000). *Guru dan Anak Didik dalam Interaksi Edukatif*. Jakarta: Rineka Cipta.
Don Campbell. (2002). Efek Mozart Bagi Anak-Anak, Meningkatkan Daya Pikir, Kesehatan, Dan Kreatifitas Anak Melalui Musik. Jakarta: Gramedia.
Hanson-Smith, E. (2016). Games, Gaming, and Gamification: Some Aspects of Motivation. *TESOL Journal*, 7(1), 227–232. https://doi.org/10.1002/tesj.233
Hodijah, S., & Kurniawati, L. (2021). Teachers’ Understanding on Music for Early Childhood. *Proceedings of the 5th International Conference on Early Childhood Education (ICECE 2020)*, 538, 159–162. https://doi.org/10.2991/ASSEHR.K.210322.034
Marinšek, M., & Denac, O. (2020). The Effects of an Integrated Programme on Developing Fundamental Movement Skills and Rhythmic Abilities in Early Childhood. *Early Childhood Education Journal* 2020 48:6, 48(6), 751–758. https://doi.org/10.1007/S10643-020-01042-8
Rasyid, F. (2010). *Cerdaskan Anakmu Dengan Musik*. yogyakarta: Diva Press.
Safirina Rien. (2002). *Pendidikan Seni Musik*. Bandung: Maulana.
Sugiyono. (2010). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
Suratno. (2005). *Pengembangan Kreativitas Anak Usia Dini*. Jakarta: Departemen Pendidikan Nasional Direktorat Jenderal Pendidikan Tinggi Direktorat Pembinaan Pendidikan Tenaga Kependidikan dan Ketenagaan Perguruan Tinggi.
Swaminathan, S., & Schellenberg, E. G. (2020). Musical ability, music training, and language ability in childhood. *Journal of Experimental Psychology: Learning Memory and Cognition, 46*(12), 2340–2348. https://doi.org/10.1037/XLM0000798

Tedjasaputra, M. S. (2001). *Bermain, Mainan, dan Permainan untuk Pendidikan Usia Dini*. Jakarta: Raja Grafindo Persada.