

**MULTIPLE INTELEGENGE THEORY TEST IN STATE
ELEMENTARY SCHOOLS BY STUDENTS OF
ELEMENTARY SCHOOL TEACHER TRAINING,
FACULTY OF EDUCATION AND TEACHER TRAINING,
NUSA CENDANA UNIVERSITY IN KUPANG**

Yosephina Katharina Sogen

Faculty of Education and Teacher Training, Nusa Cendana University

Email: INkatharina78@gmail.com

ABSTRACT

The students of Elementary School Teacher Education, Faculty of Education and Teacher Training, University of Nusa Cendana Kupang who take the subject of music learning do the experiment about multiple intelligence theory for some state elementary schools in Kupang. This experiment is done for solving the problems about the lack of teacher's attention in music learning. The subject of art and culture in the school do not be studied well by the students. Multiple Intelligence theory consists of nine intelligence and every child has all the intelligence. Musical and kinesthetic intelligence are two kinds of intelligence that measured in this experiment. The students of elementary schools in experiment groups are 28 students. The measurement of musical and kinesthetic intelligence use the song and movement. The results show Students and teacher, students and students have the good relationship, students can learn English through music, the good therapy for a student who suffer nerve, and learn music with the multimethods. Song and movement are one of the method in learning music. The results show that 93% students in experiment groups have musical and kinesthetic intelligence. And the control groups consist of 33 students show that 85% have the musical and kinesthetic intelligence.

Keywords: Multiple Intelligence, Musical, Kinesthetic, Song, Movement.

INTRODUCTION

The education of art in elementary schools is a subject in the curriculum. The students have not any interest enough to learn it. They study it halfway. They mostly do not do the task seriously. The subject is considered as a fact of having fallen behind. The students have not interest in learning it. They do not do their task seriously. The teacher is a desesive factor for the solution of the problem above. The teachers of the right subject, right profession, the right men or women are needed so much. They are hoped to teach those students above easily. There are some schools that have minor idea or negative thinking about the solution above. The teachers of those schools teach only the theory. For example the teacher ask the question about what is music?, what is notation? and the essay questions. The other problems are about the mark. The mark is not obtained because the students are tested. It is given and written in the student report because the teachers give subjectively.

They do not teach students. They will give students good mark. The mindset above is so dangerous. It has been really in bed condition. There will be only a kind of the right solution namely through the Elementary School Teacher Training (PGSD). The students of the Elementary School Teacher Training (PGSD) right now have founded the real fact above as a minor mind set. Most of those elementary school in Kupang have the same bad condition. They wrote so many solution for it. For example they wrote ways and methods that are so good for the solution. It has been a list of some reports about facts, they got when they investigated the elementary school in Kupang as the following: students report that their teachers do not teach them about the subject, the teachers give them high mark without teaching and test. Those problems are, but they have no solution. The students as the learning subject must be listened to. They must be cared personally not classically. They must become the teacher partners in learning, they must be the main subject in class.

The students of PGSD or Elementary School have responsibility to make a change for the solution of the problem in those schools in the province of NTT in 5 ten years. They need actions. Learning art education must be an obligation or a duty. The teaching material must be an important thing, Method must be a very important thing. Method must be a very important thing too in learning art education. They are then taught to deepen both teaching material and method in learning art education in elementary schools. The change in the learning and obtaining the education quality in the province of NTT becomes the responsibility of the Higher Education. It is hoped to change the mindset of students teachers well. They are hoped to make an experiment in their learning process. The education of the province of NTT is hope to develop. Base on the above phenomena, some problems arise as in the following. : (1) How about the relationship between musical intelligence and khinestic intelligence? (2) What is the right method of learning art education? (3) What is the effective and creative learning method for the Elementary School students?

Musical and Khynestic Intelligences

Howard Gardner, cognitive psychologist from Harvard University who invented Multiple Intelegenes Theory in his book *Frames of Mind: The Theory of Multiple Inteligences* (Djohan:158). There are nine intelligence: (1).linguistic inteligence (2).logic mathematic inteligence (3).Spatial Inteligence (4) Khinestic Inteligence (5) Musical Inteligence (6). Interpersonal inteligence (7) Intrapersonal Inteligence (8).Naturalistic Inteligence (9) Spiritualistic Inteligence. Gardner argue that musical inteligence has many aspects of emotion, culture and spiritual. All human have nine intelegences with different levels. Musical intelegence helps children to organize the way of thinking so the children will be being good in studying another subject including math, language and spatial intelegence. Through aesthetic experience, children can play music and sing songs. A Child who looks so intelligent considering its age character. The children respond to the sound of music with song and movement. The activity of responding the music is a beginning of musical inteligence. The activities of playing the rhythm, melody and harmony are the other kinds of musical intelegence. The respond of music is in a few of time after listening the music with the elements of

music(Greeberg:1979)³⁴⁸. Musical intelligence in the age around 7 to 12 of Elementary School level can respond to music with the song and movement as the same as sing the lyrics.

Some indicators of musical intelligence and kinesthetic intelligence

The indicators of Musical Intelligence

- a. Clap hands when listening to music.
- b. Clap hands when singing.
- c. Sing rhythmically.
- d. Sing and move the body.
- e. Memorize the lyrics.
- f. Learn and remember the song well.
- g. Sing and tap the foot rhythmically.
- h. Imitate and read the music well.
- i. Feel sensitive to the everyday sound.

The indicators of kinesthetic intelligence

- a. Move the body rhythmically
- b. Respond the music spontaneously
- c. Create the movement well
- d. Identify the movement
- e. Strong and creative in soft motoric
- f. Learn by hands well
- g. Hard motoric and maintenance in movement.
- h. Make the aesthetic movement.
- i. Perform in mimic and certain form.
- j. Use the body language well.
- k. Jump, run, and shake the body well.

There are any correlation between musical intelligence and kinesthetic intelligence with the elements of music in rhythm, melody and harmony. The student teacher give the practice in the sensitivity of music in song and movement to the children who are in the 1st, 2nd, 3rd, 4th, 5th, 6th grade. The methods that the student use in this theory test are demonstration, simulation, and role play. The students feel confidence with singing and dancing activities. In learning music, Children are singing the song by memorizing and imitating their teacher. This process is the beginning for the children in grade 1st and 2nd as beginners in learning music at elementary school. Learning music in elementary school by reading the notation is not the best way for students in the 1st, 2nd, and 3rd grade. For example, in the song A B C D, the children sing the lyrics before they sing the tones. The children sing the song by imitating the teacher and memorizing the tones. I argue that reading notes is not good enough for the children. Because some of the children in this grade can not read well.

Imitating, memorizing, recognizing and performing are the process that advancing the children's sense of duration, while listening and responding to music, the changes of duration help the children to develop a sense of tempo. The most effective means of developing a sense of pitch for the children are

1. Greenberg in Marwati Mansyur's Research (the title of Journal: Developing the musical intelligence through song and movement play for the students of Elementary Education Teacher Training Department of Faculty of Education, University of Jakarta, 2010).

through imitating simple songs. This also helps the children to develop a sense of pulse, duration and tempo, while selecting the appropriate levels of loudness and softness when performing songs will enable the children to develop a sense of dynamics. A sense of structure may be developed through identifying a contrasting or repeated section in a simple song, for example verses and a chorus. Developing a sense of timbre for the children means being able to recognise sounds with a marked difference, such as a recorder and a pianica, and using them singly or combined will achieve a particular effect. Children create their own movement or dancing by listening the music and hearing the lyrics. Sometimes after the teacher gives the instruction to the children and they move spontaneously. While listening and responding the music with the movement, the children advance the sense of rhythm, tempo, duration, and the beat. The children learn the sense of dynamic and timbre by moving or shaking the body. The children at high grade level in the 4th, 5th, and 6th grade are learning the music by reading the notation and the lyrics, singing in a group with chorus, singing and dancing in the group.

The student teachers of the Elementary School Teacher Training are using the variative methods in the classroom. They are teaching with some methods, the children can learn English by singing an English song and making a dancing through the lyric, changing the song's lyrics with the other lyrics, and playing games in learning process. Children of all ages and abilities having potentials in music, and music education support children's intelligence. The children's musical expression and response to music are good experience. And their creation in musical creativity are valueable. The ability to explore the movement through song is an essential aspect of musical growth. Music education unites similarities among children and the joy of sharing experiences which demand collaboration, concentration and discipline. Musical activity, alone or with others, contribute to the children's developing creativity and self-esteem.

Music and Intelligence

In this theory test/experiment, the student teacher do the treatment to the students in some state elementary schools. This theory test is a research about the song & movement in music learning for musical intelligence & kinesthetic intelligence. The method of this theory experiment is randomized two groups design, Posttest only. In the fourth, fifth and sixth grade of class, There are two groups in this test, experiment groups and control (non experiment) groups. Experiment groups are the groups in the 1st at Sekolah Dasar Inpres Bertingkat Oebobo 2 and the control groups are students in the 3rd grade at the same school. In high grade of class, Experiment groups are the groups in the 4th at Sekolah Dasar Negeri Nasipanaf and the control groups are the students in the 5th at the same school. The experiment groups are in the 4th grade. The control groups are in the 5th and the subject who are in the same level. The experiment groups are 28 students and the control groups are 30 students. The measurement in this experiment with the song and movement intensively in 6 days/one week, in the duration of 1 hour and a half a day. Each day of this theory experiment, the student teachers are teaching the materials including song and movement. In the last theory experiment, the score of experiment groups who get the treatment is higher than the control groups, each groups got 52% and 42%. The groups that get the treatment are better than the control

groups. the students get the same learning from the same teacher. This result indicates that song and movement learning give the effects to musical intelligence and kinesthetic intelligence, creative learning and effective learning process.

Creative method and affective learning

Kinesthetic and musical activities give the aesthetic experiences. Aesthetic experiences are children's experiences in song and movement. The children can explore song, dance or movement as a founder in knowledge. Learning the subject mathematic, linguistic (bahasa Indonesia, English and folklor) can use song and movement. The movements that the children create are inspired through lyrics and music. Children in the classroom have physical and emotional sense to explore themselves. The children explore their sense or their knowledge in song and movement. Education in elementary school is focused on a holistic approach, learn the cultures, and history have shown the part of the human and society condition (Vesna: 2012). Therefore, children in the elementary schools have the capacity or possibility to learn in different ways, holistic and they have access to multivariate approaches. Learning by playing the games, physical activity, singing, moving, and body contact create interpersonal tolerance, communication, and happiness. Those are the holistic approach in music education. Song and movement as one kind of creative method and the method can support the art education and learning process. Children in the classroom can learn well and happily with song and movement. They are not bored, they are not stress, they have many activities namely sing and move their body. The teacher can teach easily and effectively.

Song and Movement as a method in Learning music

The student teachers of Elementary School Teacher Training, Faculty of Education and Teacher Training, University of Nusa Cendana, Kupang are doing the observation, and experiment to the students of state elementary schools in Kupang region. This experiment is a part of the experience to dedicate themselves as teachers. This is a good participation of the university to the society especially to the problems in learning music in the classroom. Learning music in the state elementary school is one of a problem in the school because the teacher of elementary schools are not good at this lesson well. The approach of integrated learning through song and movement is the integration of singing and dancing because the rhythm of the song influence and lead children's nerve center. One of the best way for children in learning music is singing and movement integrated. Song and movement learning can help the children expanding their intelligence in art, linguistic, physical, emotional and cognitive.

The characteristic of art education is unique and different from another lessons, it is a long life education. The aim of art education is a process of education that will bear fruit after a long time. Therefore, planning, model approach, learning method are very important things. Method is the activity of arranging and developing an effective learning that involves the all kinds of interactions of teachers, students and learning recourses (Sukarya:2008). Learning method is a knowledge or systematic technique of learning that the teacher uses for reaching the aim of learning. Song and movement as a method in learning music are a different way to learn music in the elementary school.

The children can learn the music through song and movement. For example the children in the 1st, 2nd, 3rd grade can read the lyrics well, through memorize the song and create the movement well. It means that song and movement as an approach to learn numerals and language. The creative movement is movement that created through song and music. The children can learn rhythm through movement and they can count the beat.

Review of some researches and findings in the field of creative learning in Elementary Schools.

Some researches about song and movement have been conducted both in Indonesia and in another countries. Nana (2011) have carried out an experiment on some pre-school students of a group “kelompok bermain mandiri” in Surabaya. The target is focused on “the influence of the song and movement teaching in order to increase the musical and kinesthetic intelligence. The result shows that the pupils of that group got the musical and kinesthetic intelligence. They can really attain the target. They are able to hum some nursery rhymes; they are able to sing songs both personal performance and in group of two or more especially in the choir. They can memorize the lyrics and songs. They become accustomed to know the musical notes; they become able to memorize lyrics and songs; they can play how to play musical instruments. They will become sensitive to musical feeling. Because of the kinesthetic intelligence some signs that will appear are as the following: Pupils show an agile and flexible body movement; they look strong and have balanced performance. They have balancing coordination both on eyes and feet. There are other some relevant research undertaken by a Slovenian. His name is Vesna Gersak (2012). He is so talented expert on education and art.

He undertook the experiment on a group pupils in Pre-school/Kindergarten. The experiment is then continued to Primary School. The target of the experiment is to make know the effect and the approach influence of the creative movement, the holistic learnings and the compounding intelligence. On to the child characteristic development. Its percentage can be seen on the result: child social emotion 60 %, cognition 27 %, psychomotoric 13 %. The above method used by teachers in Slovenian is an influence for good in the character development. It gives also positive effect to Pre-school pupils in Slovenia. The above positive effect covers good interpersonal relations, a positive attitude, to work relaxation, positive self image, self esteem, good will, belong in the socio emotional field of a child’s development, followed by the psychomotor field calmless, and the cognitive development field (motivation, concentration, creativity). **The first** research findings are students and teachers are close each other. It restore the harmonious relations among them. The pupils will learn eagerly. It will create a joyful and conducive learning process. The harmonious relation between teachers and students, between students and students. The relax and pleasant situation in the classroom will be very helpful to make progress to support learning process. **The second** research findings, the pleasant and comprehensive p..... by involving the language ability the pupils including (Bahasa Indonesia, English, and local language) can increase the pupils language ability through East Nusa Tenggara, vocal traditional songs, through the lyric, meaning, the pupils can know the traditional wisdom through the traditional songs. **The Third** research findings, art and culture learning using move and song that will be reactivating

the pupils nerve can result in planned to reinspire the sick and listless pupils. They are hope to be involved actively during the learning process. They are hoped to be recovered from their intereference. **The fourth** research findings, the teachers can use “multimethod” way in teaching art and culture. They are hoped to be explorated in their teaching and innovation in the learning process.

Result and Discussion

Song and movement is used as a measurement to determine the musical intelligence and the khinestic in students of Elementary School. The result in the distribution frequency show that the measurement of musical intelligence and khinestic intelligence support the effectiveness of the learning process in art education. The results are valid and complete in experiment class, and for the control group is in low value. The measurement are using song and movement to measure musical intelligence and the khinestic. The experiment class was given treatment by learning music and using multiple methods. There is a post test at end of the experiment and the participants are listening to the song and create the movement. Here are the results of data analysis using frequency distribution.

Statistics (experiment group)

musikal (kelas IV)

| | | |
|--------|---------|---------|
| N | Valid | 28 |
| | Missing | 0 |
| Mean | | 18.6786 |
| Median | | 18.0000 |
| Mode | | 18.00 |

musikal

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid 17.00 | 1 | 3.6 | 3.6 | 3.6 |
| 18.00 | 14 | 50.0 | 50.0 | 53.6 |
| 19.00 | 9 | 32.1 | 32.1 | 85.7 |
| 20.00 | 1 | 3.6 | 3.6 | 89.3 |
| 21.00 | 3 | 10.7 | 10.7 | 100.0 |
| Total | 28 | 100.0 | 100.0 | |

Statistics

khinestic

| | | |
|--------|---------|---------|
| N | Valid | 28 |
| | Missing | 0 |
| Mean | | 22.7143 |
| Median | | 23.0000 |
| Mode | | 23.00 |

khinestic

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid 20.00 | 2 | 7.1 | 7.1 | 7.1 |
| 21.00 | 4 | 14.3 | 14.3 | 21.4 |
| 22.00 | 6 | 21.4 | 21.4 | 42.9 |
| 23.00 | 8 | 28.6 | 28.6 | 71.4 |
| 24.00 | 5 | 17.9 | 17.9 | 89.3 |
| 25.00 | 2 | 7.1 | 7.1 | 96.4 |
| 26.00 | 1 | 3.6 | 3.6 | 100.0 |
| Total | 28 | 100.0 | 100.0 | |

Statistics (control group)

musical (kelas V)

| | | |
|--------|---------|---------|
| N | Valid | 30 |
| | Missing | 0 |
| Mean | | 20.9667 |
| Median | | 21.0000 |
| Mode | | 22.00 |

musical

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid 19.00 | 7 | 23.3 | 23.3 | 23.3 |
| 20.00 | 5 | 16.7 | 16.7 | 40.0 |
| 21.00 | 5 | 16.7 | 16.7 | 56.7 |
| 22.00 | 8 | 26.7 | 26.7 | 83.3 |
| 23.00 | 5 | 16.7 | 16.7 | 100.0 |
| Total | 30 | 100.0 | 100.0 | |

Statistics

khinesthetic (kelas V)

| | | |
|--------|---------|----------|
| N | Valid | 30 |
| | Missing | 0 |
| Mean | | 21.0000 |
| Median | | 21.0000 |
| Mode | | 14.00(a) |

a Multiple modes exist. The smallest value is shown

khinesthetic

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid 14.00 | 10 | 33.3 | 33.3 | 33.3 |
| 21.00 | 10 | 33.3 | 33.3 | 66.7 |
| 28.00 | 10 | 33.3 | 33.3 | 100.0 |
| Total | 30 | 100.0 | 100.0 | |

The result in the table is the result of each student in the classroom during the test either the test in the experiment group or in the control grup. This frequency distribution is a data analysis to determine the result of students ability in musical intelligence and the khinesthetic intelligence. Results of the frequency distribution to determine that quasi-experiment in students of elementary school. The theory of this test is multiple intelligences. The test is experiment class is higher than in control grup

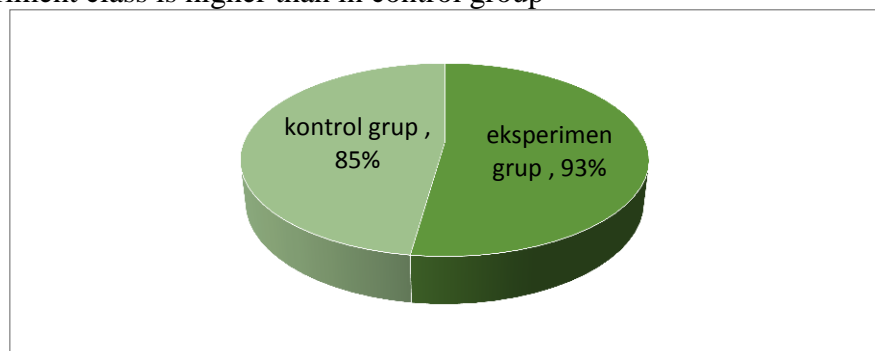


Figure 1. The results of the quasi experiment on two groups

Elementary school teachers must be creative in the teaching and learning process. Theory of multiple intelligences and methods of song and movement are tested for students of elementary school. Elementary students in state schools in the city of Kupang are students who generally do not pass through a phase or never attend early childhood learning method that uses a standard learning process. The learning process for students of early childhood education in Kupang is not good, it is because of various problems such as the lack of professional teachers, there is no place to learn, there are not good facilities, the place is not good for learning and a variety of other issues have become a problem in the learning process. Song and movement method is very important for students or children from pre-school. It gives many benefits and has been proven by many studies in Indonesia and other countries. I argue that the most important thing is the teachers develop students' creativity by giving a stimulus to the elementary students freely, the students can create, move, sing and good relationship between teachers and students, students and pupils, reduce the poor behavior of students and the situation became more relaxed in class to learn music and dance. Good relationships among all students and teachers give good impact to the effectiveness of learning the art education. Teachers must be creative, teachers can choose the good method as well as in the students' learning process. During this time, the teacher does not understand about song and movement art education. They think that art and culture is not important because it was hoped by learning that uses motion and songs to support the effectiveness of learning art and culture.

This is a challenge of the music learning process. It combines song and movement so that children can be excited by the new method. Teachers are required to develop quality by using song and movement in the learning process of art and culture. The development of the characters can be attended by using song and movement for example, love the culture, tolerance, cooperation, listen to each other, unity and friendship, and cultural values or local wisdom can be given through song and movement (dance). Other characters are invested according to the Minister of Education and Culture, for example it challenges the students, it is not easily discouraged, The students can respect each other, they have good friendship, they respect to each other There is a good relationship between teachers and students, students and students. Additionally elementary students are not considered as children who do not have a sense of responsibility towards their future. They can have the knowledge and intelligences that can be seen through song and movement. In the music field, the teaching-learning process is affected by several elements, which refer both to the teacher's and to the student's cognitive, motivational and psychological characteristics. More specifically, music lessons can support the relationship between teacher and pupil, a particular condition in which students has to relate with the teacher without the support of the classmates.

CONCLUSIONS

We can conclude that song and movement learning is important for the children and teachers in the classroom. Every child has musical intelligence and kinesthetic intelligence. The teachers know their student personally in learning song and movement. The teachers know the ability and skill of the students through song and movement method. The learning process can be effective, creative and satisfied because of the song and movement. This

method is so helpful for singing and playing instruments. It highlights the influence of song and movement a method in learning process. It is so effective to create social emotion, creative learning and motoric skills for the children. The learning process shows also its benefits in building children's character. It is so effective to create social emotion, creative learning and strengthen the skills. It is mostly the coordination of movement with the effective orientation in space, balance, speed, stamina, and precision. It is therefore is so important in giving positive effects for children and teachers. Teachers can teach easily and effectively. As a method of teaching in education. It is hoped to contribute to the development of childrens capacity which is useful to support an element of todays education.

The second aim of this article is to point out the importance of implementing multimethod in learning in the elementary school. This method is also one of the new kinesthetic and musical intelligence through art and culture. This method has some positive effects in all fields of the development for children such as both socio emotional, cognitive, and psycho motor fields as well as the children with special needs (especially children who did not go to an early primary school). Therefore these findings are so important for developing teaching methods both in elementary schools and the other school in the higher grades. This method is so powerfull in supporting art and culture, in order to make the students more tolerant, cooperate and discipline, more lively during the class. Teachers will be more successful in the teaching and learning process.

REFERENCES

- Djohan, (2009), *Psikologi musik*, Yogyakarta: Best Publisher.
- Hargreaves,(2003),*The Social Psychology of Music*,New York:Oxford University Press.
- Hasan, Iqbal (2011), *Pokok Materi Statistik 1*, Jakarta: Bumi Aksara.
- Sukarya, Zakarias (2008), *Pendidikan Seni*, Jakarta: Direktorat Jenderal Pendidikan Tinggi, Departemen Pendidikan Nasional.
- Sheppard, Philip (2007), *Peran Musik dalam Perkembangan Anak*, Jakarta: PT Gramedia Pustaka Umum.

Journals:

- Concina, Eleonora, *Music Education and Effective Teaching: Perspectives From A Critical Review*, Literacy Information and Computer Education Journal (LICEJ), Volume 6 Issue 2 June 2015.
- Gersak, Vesna, *Creative Movement-An Oppurtunity for Affective Education*,2012, University of Ljubljana, Faculty of Education, Slovenia.
- Widhianawati, Nana, *Pengaruh Pembelajaran Gerak dan Lagu dalam Meningkatkan Kecerdasan Musikal dan Kecerdasan Kinestik Anak Usia Dini*, UPI Bandung Edisi Khusus No. 2, Agustus 2011.
- Wicaksono, Herwin Yogo. *Kreativitas Dalam Pembelajaran Musik*, FBS Universitas Negeri Yogyakarta, Cakrawala Pendidikan Jurnal Ilmiah Pendidikan, Februari 2009, Tahun XXVIII, No.1.