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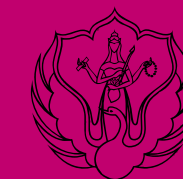


The 2nd International Conference  
on Performing Arts

Indonesia Institute of Art Yogyakarta, 9-10 December 2014  
[www.icpa.isi.ac.id](http://www.icpa.isi.ac.id)

*Critical Reflection of Performing Arts  
on Nation Politics*

FAKULTAS SENI PERTUNJUKAN  
*The Faculty of Performing Arts*



ISI  
Indonesia Institute of Arts  
Yogyakarta

Resital  
*Journal of Performing Arts*



### **RECTOR ISI YOGYAKARTA SPEECH**

Dear Speakers, Presenters, and Participants of the 2<sup>nd</sup> International Conference on Performing Arts 2014, welcome to Yogyakarta.

It is my honored to have all of you in this academic forum that is indeed being indispensable for all art scholars, professionals, and academicians.

The conference is provided for academicians and professionals from various areas of performing arts and humanities of related field/ with cross – disciplinary interests related to performing arts to come and learn from each other. They have opportunities to share interdisciplinary/trans – disciplinary perspectives all together from the academic of arts. They are going to discuss Performing Arts as Political Propaganda, Hegemony in Performing Arts, and Performing Arts as Liberation.

There is no doubt that arts, especially performing arts has an important role in our lives. Its existence is one of the essential means of communication in human life. It is widely studied and discussed in academic forums with respect to its development.

On behalf of Institut Seni Indonesia Yogyakarta, I would like to convey my sincere gratitude and deepest appreciation to all experts and invited speakers for

supporting and contributing the program. I also would like to thank to the invited speakers, presenters, participants, and all participating people who give great contribution to make this program successfully.

Yogyakarta, December 7<sup>th</sup>, 2014

**Rector of Institut Seni Indonesia Yogyakarta**

**Prof. Dr. A.M. Hermien Kusmayati**

## **DEAN OF FACULTY OF PERFORMING ARTS OF ISI YOGYAKARTA SPEECH**

### **Welcoming speech of the 2<sup>nd</sup> International Conference on Performing Arts 2014, Faculty of Performing Arts, Institut Seni Indonesia Yogyakarta**

Bissmilahirrahmanirrahim

Assalamualalikum Warahmatullah Wabarakatuh

Salam Sejahtera,

Om Swasti Astu

The honorable Sri Sultan Hamengkubuwono X,

Rector of ISI Yogyakarta,

Vices Rector of ISI Yogyakarta,

Deans and Vice Deans of Faculty of Visual Arts, of Faculty of Performing Arts,  
and of Faculty of Recording Media Arts,

Heads of Department in Faculty of Performing Arts,

All invited speakers, presenters, and participants,

And all distinguished guests of the 2<sup>nd</sup> International Conference on Performing Arts.

First of all, I would like to welcome all of you in Gedung Kuliah Umum, Faculty of Performing Arts, ISI Yogyakarta, having the 2<sup>nd</sup> International Conference on Performing Arts. It is the second International academic conference on performing arts hosted by Faculty of Performing Arts ISI Yogyakarta on December 9 and 10<sup>th</sup>, 2014.

Through this event, we are honored to this second International Conference on Performing Arts in which we can expect this conference is as the media for all academicians to explore their incredible ideas and brilliant thoughts as well. Therefore, personally I do hope the International Conference on Performing Arts would be continuously carried out in the coming years. Nowadays, Performing Arts are not able to stand alone. The condition of the nation is strongly encouraging the Performing Arts to become a part of the critical reflection on the nation condition. The 2<sup>nd</sup> ICPA is trying to contribute to the important phenomena for the critical reflection of the Performing Arts and nation politics. The main topic of this conference is "Critical Reflection of Performing Arts on Nation Politics" in which it is intended as a means of every active ideas regarding to contributing the performing arts on nation politics.

I absolutely understand that this event is said to be successful event when all parties give their valuable contributions. On behalf of Faculty of Performing Arts, ISI Yogyakarta, I would like to express my sincere gratitude to Rector of ISI Yogyakarta, invited speakers, presenters, and all participants who give good contribution and participation in making this international conference works successfully. My gratitude also goes to Dr.Kardi Laksono, M.Phil. and all organizing committee for their dedication, loyalty, and strong efforts in making

this programs run well and successfully. Finally, I do hope we can get valuable benefits from this conference.

Thank for your attention and congratulation on the seminar.

Wassalammualaikum Warahmatullah Wabarakatuh  
Om Shanti, Shanti, Shanti Om

## **Speech from the Chairman of ICPA Committee**

Assalamu' alaikum warahmatulahi wabarakatuh  
Salam Sejahtera ,  
Om Swastiastu

The honorable Sri Sultan Hamengkubuwono X, Rector of ISI Yogyakarta, Dean of the Faculty of Performing Arts ISI Yogyakarta, the keynote speakers: Prof. Dr. Yudiaryani, Aubrey Mellor, Ph.D, Bruin Otten, Eموke Suplisz, presenters, invited guests , and all participants.

We need to be grateful because we successfully held an annual international conference in the field of performing arts. And we are honored to have this second conference.

The conference is attended by researchers , artists , and scholars from Singapore, the Netherlands, Hungary, and Indonesia . It is expected that in the coming years this international conference will be joined by many other countries, so that we will understand more of the problems and phenomena of performing arts in various countries .

This event would not have taken place without the helps of many people .

Therefore I would like to thank to ISI Rector, Dean of the Faculty of Performing Arts , the keynote speakers , presenters, and all participants that have contributed to its success .

This is the second conference hosted by the Faculty of Performing Arts, should there be lack of anything, we profusely apologize.

Thank you for your attention  
Congratulation on the seminar

Dr. Kardi Laksono, M.Phil

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## 5

**PLAYING JAVANES GAMELAN FOR AUTISM LIBERATION****By****Budi Raharja**Arts Education Department, Faculty of Performing Arts, Yogyakarta Indonesia Arts  
Institutee-mail: [budi\\_raharja@hotmail.com](mailto:budi_raharja@hotmail.com)

Music, including Javanese gamelan music, has their own power. This power can be use to improve the quality of human life; balancing brain waves, covering an unpleasant sound, affectingpulse and blood pressure, reducing muscle tension, improving movement and coordination (Campbell, 2001), and increasngtheduration of autistic children concentration (Sussman, 2009). The power of the music isn't use optimally, for example Javanese music gamelan for liberation autism. This study aims to measure the optimalization Javanese gamelan liberate autism disorder.

The research was done at BinaAnggita Autism School. Nine students were trained playing instruments for arrangement the Javanese children's songs and the Javanese popular song. *Kendang*'s player controlling tempo, *demung* and *saronbarung* use as melody, *saronpenerus* decorate the melody, and *ketuk*, *kempul*, *gong* playing in *kolotomik* beat.It sound influenced listener brain waves (move into a comfortable position) and is affect to the mental state and eventually liberates the autism disorder. The training was done twice a week and after six months their musical skill, listen accuracy, and behavior outcomewere analyzed.

Musicalinteraction analysis was categorizing children musical skills in to playing independently and playing with their assistance, analysis of listening accuracy used electroencephalography (EEG) program to detect their brain wave when they listened *gending* and they didn't, andanalysis of behavior outcome was done by comparing their daily behavior before and after training.The result was compared in the final analysisand that suitability and differences was explained in teaching learning context, especially parenting care and teacher attitude.

As a result, playing gamelan can liberate the autism disorder.The liberation was done by developing the variation of interaction capabilities(behavior outcome)and the results of each child is different. Thechild who musical skill,parenting care, and listeningaccuracywas good gained some behaviors outcome;child whomusical skill and listeningaccuracywas good but the parenting carewas not good gained lessbehaviors outcome, whereas child whomusical skill,listeningaccuracy, and parenting carewere not good didn't gained any behaviors outcome.

## **A. Introduction**

Autism, at this time, has become a serious problem. The number of patients is increasing, their presence are not acceptable by society, and the treatment takes a long time and high cost. The number of patients with autism now is reaching to the prevalence of 4 to 5 per 10,000 or 10 to 11 per 10,000 if we use the wider scope (Dawson & Castelleo, 1985 in Safaria, 2005); some of autism children's parents have no confidence when he/she meet his/her friend; few of child autism parents cannot accept his/her presence even though she or he is biological children; autism therapy takes long time and need hard work, a lot of energy, great cost, full concentration, tolerance, and patience both from autism children and their parents.

Autism is social interaction disorder. It is the effect of neurological disorder which affects the brain work, perception, attention, and interfering signals from eyes, ears, and other sensory organs and result in delays in responding to others. Moreover their way of thinking is controlled by a personal need and their respond to the world is only on their own vision and expectations, preoccupation on his/her own thought, and reject the reality (Sutadi, 1997). Autism is a social disorder which is cause of impairments sensory, as a result delay in responding to interactions with other.

The autism disorder can be reduced by music. Sussman (2009) has conducted research about integration of children games with music and concluded that the game made duration of autistic children do it longer. The research was supported by Ortiz (2002: 149) who reported that music can motivate children to finish a job, improve his/her academic achievement, overcome boredom, boost-resurrected emotion, evoke a sense of confidence, eliminate anger, reduce stress, reduce pain, and control the atmosphere.

Unfortunately the information has not been used optimally, especially in Indonesia, for autism therapy. The Javanese gamelan which need good cooperation between players are predicted can be used to reduce autistic behaviors, is not use optimally yet. For that reason, donated by the Indonesia Directorate General Higher Education (contract Nomor: 344/SP2H/PP/DP2M/VI/2009, date June, 16 2009) I had done a researched about music entitled "Terapi Autis Melalui Permainan Musik" or Autism Therapy with Playing Music. The research has been reported on the same year and the data is used to compose this article.

## **B. The Autism Liberation Concept**

Before discussing the main topic, I would like to explain the liberation concept. Liberation is liberating or being liberated (Cayne, 1993: 570), an effort is done in order someone or something free. In context of the autism therapy it means an effort is done in order children with autism disorder become normal. In autistic discussion, the liberation term is not familiar, the therapy term is used; therefore in the next discussion the two terms (liberation and therapy) are used interchangeably and when it combine with autism it mean an effort or an activities which is done in order someone to be free from autism disorder or to eliminate the autism disorder gradually.

## 1. Autism Therapy

There are eleven kinds of autism therapies; which are Applied Behavioral Analysis (ABA) Therapy, Speech Therapy, Occupational Therapy, Physical Therapy, Social Therapy, Game Therapy, Behavior Therapy, Therapeutic Development Therapy, Visual Therapy, Biomedical Therapy, and Musical Therapy. ABA therapy (Handojo 2008) is a training for autism focus on giving them reward when they do instruction well; speech therapy is a therapy focus on speech and language training; occupational therapy is a training for motor developmental delay, physical therapy is physiotherapy and sensory integration therapy to strengthen muscles and balance; social therapy is an exercise for communication; game therapy is a speaking training; behavior therapy is training for eliminate negative behavior; development therapy is a training for increasing social interaction, emotional, and intellectual; visual therapy is a training based on visual aspect; biomedical therapy is cleaning abnormal brain by treatment of the outer and inner body; and music therapy is utilizes music for therapy (DayakisnidanHudaniah, 2006: 176). This discussion give us an information that autism disorder therapy is a method to liberation someone from autism disorder by optimizing organs functions (mouth, limbs, brain, eyes, legs, hands, and others) which are use in interaction.

## 2. Music Therapy

The function of organs can be maximized by music that has specifications of tempo, frequency of sound, rhythm, amplitude, and so on. There are at least three indicator of music which have positive effect of human mental, which are sound loudness, rhythm, and tempo. The sound loudness is lower than 90 decibel, the rhythm is steady and regular (Tame, 1984: 136-141); the tempo about 60-70 beats per minute (Compbell, 2001b: 80). The music can improve human interaction skills, control children emotion or to be preferred to overcome bad feelings when they perform in front of the class with a large number of students, and improve academic achievement by creating a pleasant learning atmosphere (Compbell, 2001: 187-196).

The criteria are used to choose the therapy songs. In this research, I had chosen the Javanese children song and Javanese popular song. The two songs characters were similar with the song which has positive effect to our mental, it have short and simple melody, the tones is in middle range, and the tempo is about 60-70 beat per minute. The songs, characteristically, are adjusted to the songs characters; which are sound loudness is about 80 decibel, it mean the sound is not noise or deafening sound (100 decibel above); the rhythm is on the weak-strong-weak-strongest it mean that rhythm is adjust to our bodies rhythm (steady and regular rhythm); the tempo is about 70 beats per minute is adjust to a normal tempo of our heart.

There are two reason of choosing the two kinds of songs which iuse in this research. Firtsly although the trainees ages is about 9 years to 16 years old, because their mental development is delay, so the gendingdolan or children songs are suitable for them; secondly the gending was choosen is gending in which theoretically have positive effect to our body predicted can liberate the children from autism disorder effectively too.

### 3. Therapy Model

The music therapy we are talking is the passive therapy model. There is another model, the active one. The passive therapy is a therapy which patient just listen to the music, however, the active therapy is patient play musical instrument while listen into it. The active therapy is more effective than the passive therapy, because of the powerful influence on muscular activity, for example the sad music or slow rhythm and in minor key is decreasing work of muscular and isolated tones, scales, motifs, and simple tonal have an energizing effect on the muscle (Tame, 1984: 137).

The passive therapy model in Javanese gamelan research is on the topic effectiveness of Javanese children song, Indonesian children song, and Western Classical music for improving kindergarten student learning achievement research. The research presented three songs as kindergarten class illustration when they did test and concluded that the Javanese children song was more significant influence on children's achievement than the other two songs. The using comfortable music for illustration children doing test affected to the increasing the children academic achievement (Budi Raharja, 2009).

The active therapy model also find in my research. The research was modifying the Javanese gamelan to the kindergarten children gamelan (smaller size, instrument shape are vehicles and animals) and used to arrange the Javanese children song that the poem is adjusted to the reading and math learning materials (*ABC*, *Ngeja*, *Cara Maca*, and the like). The research result are playing gamelan can encourage children interaction with her/his friends (imitating theatrical dialogue), and encourage their reading learning motivation (take the magazine and to be read together) (Budi Raharja, 2012).

The therapy model was used in this study is an active therapy model. The model is a training that is give children skill playing gamelan and singing a song. They play gamelan to arrangement the songs in according to its function, as a control the rhythm/tempo, playing a melody, decorate the melody, and giving confirmation melody in kolotomis beat; and when sing a song they are must adjust their sound to the gamelan sound.

### 4. Autism Liberation

Autism liberation use music is a process of musical sound entered into the outer ear canal, channeled to the ossicle and delivered to the thalamus to activate the memory stored in the limbic and autonomic influence neurotransmitter systems that affect the hypothalamus and delivered to pituitary. Pituitary gland respond and give negative feedback to the adrenal glands to suppress the hormone epinephrine, norepinephrine, and dopamine (stress hormone) and make our life calm and relaxed. The effects show when the listener can listen the music, not only hear the music. Hearing music is the skill to receive auditory information through the ear, skin, and bones; while listen music is the skill to filter, selectively concentrating, remembering, and respond to sound. Listening is an active activity, while the hearing is a passive activity (Tomatis in Compbell, 2001b: 53-54 and 83-84).

The success of liberation from autistic disorder not only determined by their music skill, but also the parenting care. For example the Medical Interaction Therapy conducted by cooperating of mother and musician. The program that conduct at home is mother was involving her child in shaking and patting body, vocal training, and singing a song. She was treated as they can communicate and they was imitate each other when playing lap-lap while singing a song spontaneously. The piano player accompaniment

their actions according to his feelings; when a child go away from his mother he played soft music, when the child close to his mother's he played music in increasing intensity, and than the music and the interactions were gradually come to the dramatic interactions. The exercises are held twice a week (each for twenty minutes) can increase children's awareness of the presence of his mother from once every six minutes to nine seconds once and increasing eye contact from once every 3 minutes to six times every minute. At the end of the training the child was able tease her mother and when he heard the music that is already know he clap hand while eye contact with her mother, smiled, and patted her stomach. He also can play a role, for example insert the bread into his doll mouth and washing doll cloths. The activities is she had never done before (Compbell,2001: 286-287).

The success of liberation children from autism diorder is determined by the seriousness of parents in child care and the precision of music that is used. The parents must be sincere and affectionate to strive for liberation their children free from autism disorder while musician compose or choose a song that is appropriate to the circumstances which occur in therapy. This therapy model was applied in this study with the division of tasksare researcher find the songs that fit the children mental development while the parents explore their children needs so that child feel comfortable when doing therapy.

##### 5. Evaluation of Autism Therapy

Handojo (2008: 73-75) provides us a guidance of how to assess or analyze autistic therapy outcomes. That guidance is an activity that record everyday progress of child behavior development at school and at home.This guidanceis used to record the progress of the children musical interaction,the children listening accuration, and children social interaction. Musical interaction in Javanese gamelan is an alternation of wasps all parts steadily and clearly articulated by *kolotomik*instrument (Brinner, 1995: 209-211). In this research the interaction is between the *kolotomik*instruments sound (ketuk, kenong, kempul, gong), melodical instruments sound (demung and saronbarung), and control tempoinstrument sound (kendang). The analysis of musical interaction use musical skill indicators, the analysis of listening accuracy use independently and assisted playing indicators, and the analysis of behavior outcome use the social interaction development indicator.

The listenig accuracy evaluation is categorizing listeningskill into hearing skill and listening skill. Hearing music is a respond to music by receive auditory information through the ear, skin, and bones; while listening music is the respond to music by filtering, selective concentrating, remembering, and respond to the sound(Compbell, 2001b: 53-54). Indicator of listening accuracy use the brain waves change indicator; when brain wavemoved to theta it is indicatorthat listening is accurate, while the children brain wave is not moving is not accurate listen accuracy.

The indicator of behavior outcome consist of initiation or the ability to begin achieve a goal and attempt to initiate interactions with other individuals or the wider social environment; initiative or an attempt to find information and actively researching on the environment; assertion or the ability to express feelings clearly and defend their personal rights, ideas and emotions appropriately; self-disclosure or the ability to open

up, tell personal things to other people; emotional support or the ability to give emotional support to others as an expression of concern, security and comfort, as well as sympathy; and conflict management or the ability to resolve conflicts between individuals in an attempt to overcome the conflicts that arise in an interpersonal relationship was not to worse (Dayakisni and Hudaniah, 2006: 176).

There are three evaluation aspects of liberation autism disorder, such as musical interaction, listening accuracy, and behavior outcome. The musical interaction is children interaction of using gamelan instrument sound, the listening accuracy is the skill of receiving musical sound, and behavior outcome is the student interaction at school and at home. The analysis of musical interaction use independently and assisted playing indicators, the analysis of listening accuracy use the brain wave moving, while the analysis of behavior outcome use social interaction development indicator.

## 6. Framework

The liberation of autism disorder is a training of playing Javanese gamelan music for children autism disorder. The training consists of designing program, applying program, evaluating program, and interpreting and reporting. The designing program included choosing gending and choosing teaching strategy; applying program included the trainee selection, time and place of the training; evaluating program is an evaluation of training result and its follow up; and interpreting and reporting is interpretation result and its report.

Nine students were trained playing gamelan instruments for arrangement the Javanese children song and Javanese popular song or gending. The gendings were chosen in adjustment to the children skill and children Psychology; a short and simple melody is an adjustment of the song difficulty level with the children musical skill, while the steady rhythm and the middle tempo and sound volume is an adjustment of the music to musical criteria that has positive effects on the organs function. The whole effort was done hoped it will maximize the liberation autism disorder from the children autism.

Gendings which the characters have been adjusted to the children's psychology, if played properly, will produce the good sound and it is interested to the children. The gamelan sound will affect the children brain waves when they were listening into it properly. The brain wave will generate the child's psychology become calm and it will make children can control their behavior or replace their bad habits with good habits. If this training conducted continuously for a period time, the good habit will become the children habit.

There are three aspects which can be indicators of effectiveness the liberating autism disorder program, musical skills, receiving process, and behavior outcome. The musical skill is the skill of student playing gamelan, listening accuracy is skill which student received gamelan sound, and behavior outcome is the student behavior as result of playing gamelan. The ideal condition is if the three aspects are in good condition. This condition can be interpreted in the teaching learning contexts or the description which is explain the suitability and unsuitability between that aspects, for example why it could happen.

## C. Autism Therapy Design

### 1. Designing Autism Children Gamelan

Children autism gamelan is a Javanese gamelan which modified to the children autism gamelan. The modifications included number of instrument, size, shape, and its ornament. The ensemble consists of eight instruments (*kendang*, *demung*, *saronbarung*, *saronbarung*, *ketuk*, *kenong*, *kempul*, and *gong*); the size is smaller than the Javanese gamelan; the instrument shape is toys (war vehicles, ambulances, aircraft, tanks or car wars) and painted with bright colors.

This ensemble is a small one, the ensemble which is all instrument can be played by autism children. The designing ensemble criteria were based on the minimum of musical function, which are *kolotomik* function, melodic function, and the tempo function. *Kolotomik* function instruments are the *ketuk*, *kenong*, *kempul*, and *gong*; melodic function instruments are *demung*, *saronbarung*, and *saronbarung*, and the tempo function instruments is *kendang*. The ensemble is completed by vocal.

The levels of playing musical instruments are varying. The first level is playing instrument by just hitting one note in one hand (*ketuk*, *kempul*, and *gong*), hitting some notes using one hand (*kenong*), play a melody with one hand (*demung* and *saronbarung*), apply the melodic patterns with one hand to decorate the *balungan* melody (*saronpenerus*), and apply the rhythm patterns to control the tempo (*kendang*).



Children Autism Gamelan

The designing of gamelan ensemble was based on the consideration as follow (a) before playing instrument the children must be interested, so the instrument form make similar with her/his toys, (b) student playing gamelan must comfortably, so the size is made smaller, (c) student should be able to feel the song they played, therefore I choose the dolanan children.

## 2. Therapy Time and Place

The research of the Javanese gamelan as autism liberation is done in BinaAnggitaAutism Special Schools in Jl. Garuda 143 WonocaturBanguntapan, Bantul, Daerah Istimewa Yogyakarta 55198. Tel/Fax: 0274-444717, 0274-6993542. The training of playing gamelan was held at 13:00 until 14:30, twice a week and conducted on March 2009 to September 2009.

## 3. Therapy Subject

The selection of children who participated in this research was done by researcher and BinaAnggita teachers. The criteria of that selection were the children who able to concentrate for at least 5 minutes and can do instruction well, the child who have those criteria plus familiar with letter and number, and the child who have all of criteria plus can enjoy gamelan music correctly. Child who werenot familiar with numbers and letters are playing *ketuk*, *kenong*, *kempul*, and *gong*; child who were familiar with

numbers and letters were playing demung, saron barung, and saron penerus; and the who has all of criteria plus can enjoy gamelan music correctly were playing kendang.

List of Training Participants

No	Name	Age	Instrument
1	Cindy Widhoretno (Sindi)	13 years	Kendang
2	Vicaris Arkha H (Arka)	12 years	Demung
3	R Leonardo Ruchky Henrico (Iko)	16 years	Saron Barung
4	Andreas Siny Cahya AP (Andre)	14 years	Kempul
5	Riva Kurniawan (Riva)	12 years	Kenong
6	Raihan Tsany Arhab (Raihan)	9 years	Ketuk
7	Nanda Setiarini (Nanda)	9 years	Saron Penerus
8	Aksa Mutiandaru Pramesti (Ndaru)	12 years	Gong

All of children who participated in this training, except Vicaris Arkha H who is study in Bina Anggita School only, are study in two places, in the morning at inclusion school and in the afternoon at "Bina Anggita". The Bina Anggita school hour are start at 07:00 until 12:00 in the morning and the start at 13.00 p.m. until at 15.00 p.m. in afternoon school hour

#### 4. Gamelan Teaching Strategy

Gamelan teaching learning strategies applied in this study is easiest one. That strategy used counting sa - tu , du - a , ti - ga , em - pat , li - ma , e - nam , tu - juh, and la - pan to count gamelan beat and to facilitate *kolotomik* instruments players. The application of that strategy is the ketuk beat is on the first syllable of each count (sa, du, ti, em, li, e, tu, and la), the kempul beat is on the count of ga, ma, and juh; the kenong beat is on the count of a, pat, nam, and pan; whereas the gong beat is on the count of pan. For the drum beat, the dhahsoun beat is on the count ma, ga, and juh and the thung sound is another counts.

The children were playing the gamelan, guided by a teacher, one child accompanied by one teacher. Their teachers guided them in various way; to the child who already can play independently, their teacher only corrected when there was a mistake; to the children who cannot play independently the teacher guided them by counting all beat for guide his/her beat; while to children who have not been able to hold a proper mold, teacher hold his/her hand and hit it to the instrument. It called individual training.

After they mastered on individual playing, the training continued to the group playing. In this training, they taught how to start or open the song, slow down the tempo, speed up the tempo, and finish the ending. The serious problem in this section is the teaching of speed up or slow down tempo. The autism children who social interaction skill is bad, they cannot hear the command of the slowdown and speed up the tempo



well. For that condition, we must sound the command loudly and ask them to follow it. After they taught for four weeks, they can master this technique and after that they can play independently. At the fifth month of the training, the student was saturated play gamelan in sitting position. For that reason the performance style was change in the *karaoke* style. In this style each child received an opportunity to sing a song in standing position.

## 5. Data Type

Data of this research consisted of the musical interactions data, listening accuracy data, and behavior outcome data. Musical interaction data is data of children ability to play gamelan in group for arranging the gending, listening accuracy data is data of children brain wave when they hear and not gending, while behavior outcome data is the data of children ability to interact with other children when they didn't play gamelan.

## 6. Collecting Data Technique

The data collection techniques in this study were observation, interview, and Test.

### a. Observation

Observation is defined as the systematic observation and recording of the elements that appear in the symptom or symptoms of the research object (Nawawi and Hadari, 2006: 74). The observation techniques is used to collect the children behavior data, the children interaction when play gamelan or not. This technique was used by observer, team or four students of GadjahMada University in major of Psychology, Bina Anggita teachers, and researcher.

### b. Interview

Interview is a technique of collecting data of interviewer asking direct questions to respondent, and respondent's answers are recorded (Hasan, 2002: 85). The interview is used by researcher and teacher to interview the children parent who are participated in this program on the topic is child's behavior at home; the behavior that comes after they participated in the gamelan training.

### c. Test

Anastasi (Sudijono, 2011: 66) said that test is the measuring device which is having an objective standard that can be used widely, and can actually be used to measure and compare the psychological state or behavior of individuals. In this research, the test is used to measure the children brain wave when they listen and not listening children song or gending. The collecting this data using electroencephalograph or EGG program, conducted in the Pramita Utama Diagnostic Center clinic in Jalan Dr. Sutomo No. 39-41 Yogyakarta 55211, and operated by nurses who work in that institutions.



Brain Wave Test

## 7. Data Analysis

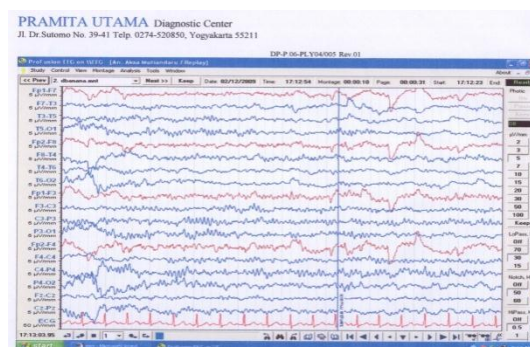
8.

### a. Musical Interaction

Analysis of musical interaction data used an analysis of children playing gamelan skill. The analysis was divide the skill into the independently playing skill and asisted playing skill, however, the assisted playing skill can be divided in to the threelevel.

### b. Listening Accuracy

Analysis of listening accuracy data is an analysis of determination the person's psychological position based on brain wave data. The analysis is to classify the brain waves into the gamma, beta, alpha, theta, or delta brain wave. Gamma wave is the very high mental awareness (when a person in the arena, the race for the championship, appeared in public, it is panic, fear); beta brain wave is experiencing mental activity wakefulness (daily activities and interact with other people around); Alpha waves is a relaxation going to sleep or the transition from the conscious and unconscious; theta waves is a very sleepy brain wave; delta wave is asleep brain wave (resting phase for the body and mind) (Kalat, 2009: 146).Data analysis was done by a neurologist from Sarjito District General Hospital in Yogyakarta, dr. Abdul Ghofir, Sp. S.



Brainwave Data

c. Behavior Outcome

Analysis behavior outcome data is an analysis of the children behavior in focus on the children social interaction development. This analysis was identifying the children interaction in to the step of social or interpersonal interaction development.

**D. Results and Discussion**

1. Result.

a. Musical Interaction

The analysis of musical interaction data was concluded that the children playing gamelan was in various skill. That skill can be classifyy in playing gamelan independently and playing gamelan while assisted. Cindy (*kendang* player), Iko (*saronbarung* player), Arka (*demung* player), and Ndaru (*gong* player) are the children who are playing the gamelan independently;while Rifa(*kenong*players), Andre (*kempul* player), Nanda (*gong* player), and Raihan (*saronpenerus* player) are playing gamelan with assistance.

The children was liberate autism disorder by increasedthe concentration duration, stimulated to express her/his opinion, increasedthe confidence, and made children relationshipmore friendly.Increasing of the students concentration duration felt by teachers when the children playedthe gamelan for about 1 hour and 30 minute; for example they were playing gamelan in Yogyakarta arts festival, Talk Show on Jogja TV broadcast.They are sitting comfortably from beginninguntil the end.The teacher'snervousnessthat the children would throw tantrums when they performed in Jogja TV broadcasts was not proven and it was repeated when performing other places.

The playing gamelan stimulated children express their opinion can be seen in *karaoke* style performance. *Karaoke* style is the gamelan performance when instrument player are sitting while vocalist is standing. In the *karaoke* styleall children is vocalist, they canask instrument player to accompany her/his singing a song in standing position. They use Javanese language " *Kanca-kancaayonembangBarisRampak*"and instrumentalist answer " *Yooo* ".When that opportunity is given they are scramble took the opportunity.

Gamelan training stimulated children relationship were more friendlyand it condition was find outin the rest session. In that time, the children interactedin different way; Cindy organized her friends to sit neatly when they do not immediately sit down in their places, Ndarutold to teacher that she felt very happy if she can beat gong properly, Arkha told to me (researcher) that he had gamelan (*saronbarung*), Rifagave attention to every one give him instruction, and the others werestanding in line for waiting the training to begins.

b. Listening Accuracy

The result of brain wave analysis divided in the two groups. Firstsignificantly change and it is divided in two group two (a) potential effects of relaxation and (b) stimulate the activity of thinking/analysis. The results of Iko, Arka, and Ndaru brain wave data changed, from alpha brain waves into the delta; the brain waves often found in the position of total relaxation and the analysis of Cindy data was on stimulate stadium for activity of thinking/analysis, moved from alpha waves into theta. This condition was an illustrationof analysis process by brain of the information in this music that played gamelan music.

Second no changed significantly. In the examination of brain waves Andre, Rifa, Nanda, and Raihan weren't change significantly when listening to musical and not.

c. Behavior Outcome

The gamelan training stimulated the children behavior change. That change weren't of the kinds of the skill interaction, but the skills variation, that are concentration duration is longer, dare to express her/his opinion and more confidence are the variation of initiation skill; listen gending for relax and listen gending for vent anger are kinds of management conflict skill. The increasing of the children concentration also showed in the classroom. Anis, a teacher, felt the difference atmosphere in the class when she taught them, the class was quieter. One reason of that condition is the children can eliminate his/her bad habits, for example Cindy able to eliminate her mutter/sputter during learning and it result in the duration concentration was longer.

The other effect was children were able to express their opinion. For example Iko, Arkha, Ndaru and Nanda are always asked someone to send her/his to the Bina Anggitawhen the schedule playing gamelan was arrived. Their parent are surprised, for example Iko's father was surprise when his son requested him to send his to the gamelan training place because he had never received any request from Iko before. So do is the Arkha parent, they were surprised when Arkha ask them to bought saron barung for playing gending, because for about 12 years her son had never request something to their.

At rest time Arkha also invited his friends to see the new gamelan from widows. He said there was tank, race cars, and airplanes" in there room. Cars, aircraft, and others are the children's gamelan which is the shape is resembles to the toys. Arkha also extended it to his teacher, for example to Bu Anis she said "there are tanks, race cars, and airplanes".

The other effect is now Arka has two new habits, listened gending to relax and listened gending to vent frustration. Arkha new habit drank tea while listening the radio klenengan was done while he relax and the habit entered the room and listened gending to vent his frustration is done when he was angry to someone. This last habit is the replacement of Arkha habit grumbling in front of people who scolded.

## 2. Discussion.

Before we discuss the data research I will resume that data and tabulate it as follow.

Research Data Compilation

No	Name	Social Interaction		Musical Inter-action Level	Listening Accu-ration Level	Sum New Behavior
		Before	After			
1	Arkha	5	5	2	2	6
2	Cindy	5	5	2	2	3
3	Iko	0	0	2	2	2
4	Ndaru	4	4	2	2	3
5	Rifa	2	2	1	1	1
6	Raihan	5	5	1	1	1
7	Andre	2	2	1	1	1
8	Nanda	5	5	1	1	1

Based on the data there was no changed the children social interaction before and after training. The children social interaction before and after training was same, however, variation of children social interaction was raising. The new habits, if is correlated to others aspects, can be describe as follow. The Arkha data give use information that all of aspects of therapy are good, the ability to interact in musical is good, and his skill listening gending also good and there are a lot of the new habits that arised after he participated in playing gamelan activity. This condition, if it is analysis to the teaching learning context, Arka is one of seven children who is study in BinaAnggita. He studied start from at 07.00 in the morning until 15.00 in the afternoon. His parent care also gave a good effect, they choose the school for their son based on their son desire, and so he can study in comfortable condition. These conditions resulted in Arkha can respond the Javanese gamelan training freely and result in some new behaviors was gained.

For the data of Cindy, compare with the Arkha data, there is less of the new habits as result in the gamelan training. When it analyzed in learning contexts, even though her parents are very concerned with their children's education but they always want to look for the best education for their children so they send her in two schools. It can be the negative effect for Cindy new habit which was not showing as much as the new Arkha habits. The problems that always arise in inclusive schools were most student inclusive school could not accept the children with special need study in their school. Second, children who were study in two places cannot study in comfortable condition; they have not close friends at any school.

The Iko data was quite different with the both data have been discussed. Iko social interaction was bad; however, he was good in playing skill and listen accuracy. When it was analyzing in the teaching learning context, his parent (his single parent father) is less concern to his son education. Since childhood Iko didn't study, and didn't have any school lessons. Every day he is always watching television or videos. At the age of 15 years he studied in Bina Anggita schools and inclusive schools. He also gave less support to his son, for example, when the teacher told the progress of Iko academic achievement, he replied with answer "is Iko could be cured". Iko's father also didn't have enough time to take care Iko, Iko cannot attend to the gamelan activity because nobody can drop him. That's problems causes social interaction Iko wasn't as good as the other student, even though he liked the gamelan activity very much he cannot attend it, and because he went to school in two places, so he didn't enjoy it fully as Arkha did.

Ndaru data compare with the Cindy data, there was less social interaction, and however, her new habit was the same as the Cindy. When it analyzed in teaching learning contexts, even though Ndaru parents are very concerned with their daughter's education but she always try to look for which is the best school for Ndaru. This hard for Ndaru, so his new habit didn't show as much as the new Arkha habits, even though Ndaru liked playing gamelan very much. The other aspect was predicted influence to the less new habits Ndaru was the teacher attitude made him trauma. The attitude was when Ndaru turn to singing one of her teacher often ask Ndaru friends leave him alone, so he cannot nembang or expressing her opinion. Ndaru very hated to this teacher, so she reluctantly if her mother ordered her to study at Bina Anggita. Data of Andre, Rifa, Nanda, and Raihan all were on bad condition. Their musical interaction were not good, they couldn't listening the gamelan sound but only hear gamelan, and their social interaction were not significantly change than before. They study in two places, less cognition ability, and less parent commitment to their son therapy suspected to be the reason of failure for this program.

## **E. Conclusion**

Based on the discussion above the effect of playing gamelan to the children behavior can be concluded as follows.

1. The liberating the autism disorder can be done by using the effect of playing gamelan and it sound of gending to replace the autism behavior with a normal behaviors.
2. The effectiveness of the program is determinate by the quality of program (adjustment of training material and it teaching strategy), children intelligency (student skill playing gamelan and response of it sound), and the quality of teaching learning (parenting care and teacher attitude).
3. The effect of that program can be divided in to the children who is gained all behavior outcome; the children who is gained the increasing duration concen-tration and less of behavioroutcome;and the children who is gained the increasing concentrations duration only.
4. The main causes of the failure this program is less precise of parenting care (especially the student comfortably in learning)and the teachers attitude that make a child traumatized.

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