Classroom Musical Activities to Improve Rhythmic Perception of Children with Deafness

Panita Kiewkam
Student
College of Music, Mahidol University
Phutthamonthon Sai 4 Road,
Salaya, Phutthamonthon, Thailand
redapple19@gmail.com

ABSTRACT

This study aimed to: 1) develop classroom musical activities to improve rhythmic perception in the terms of downbeat rhythm, rhythmic patterns, and rhythmic notation of children with deafness, and 2) evaluate the effectiveness of classroom musical activities to improve rhythmic perception of children with deafness. The participants in this study were 19 children with deafness in grade 3 of academic year 2014 from Nakhon Pathom School for the Deaf. The participants attended classroom musical activities for four weeks, once a week, and 45 minutes a time.

The results of this study showed that the classroom musical activities were able to improve rhythmic perception of children with deafness because of the increased test results of the practical skills after attending the classroom from the first to the last session. The children with deafness could understand downbeat rhythm, rhythmic patterns, and rhythmic notation in different levels. According to the behavior observation and preference interviews of classroom musical activities, it was found that the children with deafness learned enjoyably, had a willingness to cooperate in the class and they would like to attend these classroom musical activities in the future. The results of this study revealed that the children with deafness had a good rhythmic perception through a process of learning and teaching with materials that were appropriate and consistent with the nature of children with deafness.

Keywords: Musical Activities, Rhythmic Perception, Children with Deafness
1. INTRODUCTION

Human life is related to rhythm in daily life activities e.g. heartbeat, walking step. That is why rhythm is very important for daily life in their environments (Bunjongsilp, 2008). Rhythm in music could cultivate and develop skills from the conclusion about the benefits of music to children from the book *Psychology of Music Teaching* (Sutthajit, 1998).

However, the deaf have difficulty to access music. Also, they rarely have a chance to learn music and rhythm which effects the way in which they perform their sign language. Their sign language may not perform well as it loses rhythm and cohesion (Sri-on, 2014). Brown (2000) recommends that a music teaching class for deaf students demonstrates the equality of music study for both students with and without disabilities.

According to Punwilai (2014), who teaches music to deaf students, some of deaf students have music experience such as sign-language song, rhythm or dancing. However, their loss of the hearing led to different ways of social interaction compared to students without disability (e.g. language, education, social learning). Music or other education for students with deafness should be different from students without disability as well.

Thus, this research study aims to achieve three outcomes as follows:

1) Students with deafness are able to understand downbeat.
2) Students with deafness are able to understand rhythmic patterns.
3) Students with deafness are able to understand and follow rhythmic notation.

The research design created effective music teaching and learning activities for deaf students to develop better perception of music and rhythm to determine if it improves sign language performance and their steps of moving as well.

2. RESEARCH OBJECTIVES

The purposes of this research are as follows:

1) Develop classroom musical activities to improve rhythmic perception in terms of downbeat rhythm, rhythmic patterns, and rhythmic notation of deaf students.

2) Evaluate the effectiveness of classroom musical activities to improve rhythmic perception of deaf students.

3. RESEARCH QUESTION

1) What kind of musical activities are suitable for deaf students in grade 3 in order to develop their rhythmic learning?

2) Do musical classroom’s activities improve the learning and understanding of downbeat, rhythmic pattern and rhythmic notation of deaf students in grade3?

3) After the class, do deaf students in grade 3 enjoy musical classroom’s activities?
4. SCOPE OF THE STUDY

Musical activities developed for 19 children with deafness in grade 3 classroom in the 2014 academic year from Nakhon Pathom School for the Deaf with a hearing level 82 dB – 120 dB. The musical classroom’s activities are including the lesson about downbeat and rhythmic pattern. The pre-test and post-test of rhythmic perception ability have been set up in order to evaluate an effectiveness of the musical classroom activities as well as the deafness’s student outcome.

5. BENEFITS OF THIS STUDY

1) Deaf students have opportunity to participate in musical classroom in order to develop their rhythmic perception which their daily activities such as their sign language, walking and moving.

2) Teachers for the deafness student are able to adapt suitable musical activities to other subject lesson in order to promote their student learning.

3) Parents are able to select suitable rhythmic activities and other musical activities for their deafness children in order to promote children’s development.

4) Schools for the deaf are able to set up musical lesson for deafness students.

5) Special education researchers are able to study and research the related topic about deaf student’s learning and development.

6. RESEARCH PARTICIPANTS

The participants in this study were 19 children with deafness in grade 3 of academic year 2014 from Nakhon Pathom School for the Deaf. The participants included as 13 male students and 6 female students. Their hearing levels were between 82 dB – 120 dB which were investigated by Samut Sakhon Hospital and INTIMAX company.

7. MUSICAL ACTIVITIES CONSTRUCTION

1) Review the literature about musical classroom activities for deafness student.

2) Create musical activities which include objectives, topics and the lessons related to musical activities. Structure of music activities, materials and music evaluate.

3) Develop musical activities and plan classroom towards its objective and structure
4) Set up the pilot study with children with deafness in grade 3 of academic year 2013 from Nakhon Pathom School for the Deaf

5) Develop musical activities for a process of learning that is appropriate and consistent with the nature of deafness students.

8. RESEARCH INSTRUMENTS

1) The practical skills assessment form was designed to evaluate rhythmic perception of deaf students with five likert scales to evaluate 3 criteria: downbeat, rhythmic pattern and rhythmic notation.

2) The behavior observation form was created to describe student behavior in classroom when they participated in of classroom musical activities. Video recorder was used as one of research tool on this part as well.

3) The interview form was designed to collect data from deaf students about their preference of classroom musical activities by using focus group technic.

9. THE DATA COLLECTION

Data collection was divided into three steps:

1) Research data was collected from the experiment in classroom musical activities and assessment of the practical skills using Pre-test and Post-test form to evaluate student’s perception. The Pre-test took 30 minutes and was divided into 4 musical activities related to 3 main lessons: downbeat, rhythmic pattern and rhythmic notation. These activities occurred once a week for 4 weeks. It takes 45 minutes for each lesson. After that the Post-test will be spent 15 minutes each time. Thus, it will take an hour for whole activity each time.

2) Data was collected from behavior observation of deaf students in the classroom musical activities. There were 3 main criteria to evaluate this task which were 1) downbeat, 2) rhythmic pattern and 3) rhythmic notation. Student interaction was recorded using a video recorder.

3) To collect data from group interviews for studying the preference of classroom musical activities. The focus group had been employed in this stage. The 19 deafness students in grade 3 had been divided into 4 groups. The focus group took 15 minute for each group.

10. DATA ANALYSIS

Data analyses was divided into two sections:

1) Quantitative analysis consisted of two main parts as follows;
   -The analysis of sampling’s basic information has been used descriptive statistics such as frequency and percentage.
The analysis of sampling’s rhythmic perception assessment has been used descriptive statistics such as mean, frequency and percentile. The analysis has been presented in form of graphs and tables.

2) Analysis of behavior observation of rhythmic perception of children with deafness and the interviews for the preference of classroom musical activities by using content analysis.

11. THE RESULT OF MUSICAL ACTIVITIES

The classroom musical activities are designed to improve rhythmic perception in the terms of downbeat rhythm, rhythmic patterns, and rhythmic notation of children with deafness. Each of 4 musical activities aimed to promote deaf students' understanding and enjoying of rhythmic related to seeing, moving and beating which are parts of their learning in daily activities.

12. RESULT OF EVALUATE THE EFFECTIVENESS OF CLASSROOM MUSICAL ACTIVITIES

1) The basic information of participants. There were 19 participants, 13 males (63.16%) and 7 females (36.84%). The participants were aged between 8 - 13 years old. There were 10 participants who aged 10 years old. According to classroom teacher’s evaluation, found that there was one student who had intellectual disability which will have different ability of learning process.

2) The analysis of deaf students rhythmic perception found that the students have a higher score on the post-test compared to their pre-test.

According to the downbeat assessment, it was observed that the mean score in pre-test ranked between 1 – 4.6, intra-test ranked between 1.3 - 4.8 and post-test ranked between 4.3 - 5 which was the highest level as shown in the figure 1

![Figure 1. Downbeat assessment score result of 19 deaf students.](Image)
According to the rhythmic pattern assessment, it could be seen that the deaf students had a higher score of post-test compared to pre-test. The mean score in pre-test ranked between 1 - 3, intra-test ranked between 1.3 - 4 and post-test ranked between 3 – 4.6 which was the highest level as shown in the figure 2.

![Figure 2. Rhythmic pattern assessment score result of 19 deaf students.](image)

According to the rhythmic notation assessment, it could be found that the deaf students had a higher score of post-test compared to pre-test. The mean score in pre-test ranked between 1 - 3, intra-test ranked between 3 - 4.6 and post-test ranked between 3 – 5 which was the highest level as shown in the figure 3.

![Figure 3. Rhythmic notation assessment score result of 19 deaf students.](image)
3) The analysis of behavior observation found that deaf students are able to perceive music rhythm. They could focus on the lesson and perform all activities with happiness.

4) The analysis of student's music preference found that most participants enjoy musical activities. They prefer doing group activities with beating and moving lesson. Some student said they enjoy with recorder after the rhythmic lesson. Moreover, every deaf students hope to study music as one subject of their core module. Some of them have talked with their parents about their improvements and positive outcomes of musical activities they have learned such as sign language songs, playing recorder, and rhythmic patterns as well.

13. DISCUSSION

In order to learn and understand downbeat rhythm, rhythm patterns and rhythm notation, deaf students need to start from clapping their hands, beating or shaking any musical instruments. These kind of musical activities are suitable for deaf students because they only need to use their eyes to enjoy the activities. Schleper (1995) concludes that the learning methods of deaf students need to start from their own eyes to perceive the world then link to their brain to generate their idea. If the student could learn from the well-managed rhythm notation, they will be able to understand down beat rhythm and rhythmic patterns as well. Moreover, to link the rhythm notation with the picture or the sign of sound will help deaf students gain more understanding and remembering in the rhythm notation as well as developing their sign language abilities. Also, the method of moving the body and shaking musical instruments will help students to perceive the feeling of rhythm as well (Schaberg, 1988). Furthermore, Sri-on (2014) suggested that the well-managed and suitable classroom activities related to student nature of learning could motivate the development of rhythmic learning by deaf students.
14. RESEARCH RECOMMENDATIONS

1) Recommendations for deaf students

In order to set up rhythmic activities for deaf students, it is better if students could wear comfortable attire for better movements and group activities. Moreover, teachers should take caution in group activities with students who might spread infections or illness.
2) Recommendations for special education teachers

Teachers need to have knowledge about rhythm which could be learned and practiced by listening to a song, beating downbeat rhythm, beating rhythmic patterns and learning about rhythmic notation.

3) Recommendation for Parents

Parents should look after their deafness children by singing a song while lightly beating at the same time when carrying their children. Also, it is better to choose any toy which could be shaken or beat for children. This will make deaf children familiar with rhythm.

4) Recommendation for Special education school

Special education committee should provide deaf students with a musical classroom, musical teachers and music instruments for learning effectiveness.

5) Recommendation for future research

For future research, it is better to do a research with bigger size of sample or different class of students. This is because in special education deaf students are ranked between primary school to university level. Then, the musical activities should be varied depending on the level of education in terms of topic, the level of difficulty and assessment methods. Moreover, other research about deafness should be fruitful such as the high sound – low sound and dynamic which could improve the music appreciation for deaf students.

15. CONCLUSIONS

According to the assessment results evaluating beating musical instruments, downbeat rhythmic patterns and reading rhythm notation, that the deaf students at this age level have different level of understanding downbeat rhythm, rhythm patterns and rhythm notation. However, the deaf student gain higher score in their post-test compare to their pre-test which is normally noticed in student without disabilities as well. It could be concluded that deaf students have abilities to learn music from well-managed classroom activities related to their nature of learning. However, it should be noted that this rhythmic classroom activities and this kind of assessment method cannot applied to the student with intellectual disabilities.

This research study found that rhythmic classroom activities are a great benefit to deaf students development. Special education teachers should apply musical activities to regular classroom in order to motivate students’ learning and understanding of rhythm.

Special education teachers could start from using a song familiar to their student, using a suitable musical instrument such as shaking or beating instrument, using picture of sign of sound to grow-up students’ basic knowledge of music. This good music background might further their knowledge and understanding of advance music in the future such as learning musical instrument, reading and writing note and composing song which would not be limited by their disability in the future.
Acknowledgements: This paper is partial fulfillment of the Master of Arts (Music), College of Music, Mahidol University. I would like to express my sincere thanks to my thesis advisor, Dr. Karnyupha Jittivatdhana for her invaluable help and constant encouragement. I am really grateful for her advice. In addition, I am thankful for Dr. Jitprapa Sri-on and Dr. Natee Chiengchana for their valuable recommendations.

REFERENCES