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LEARNING MUSIC THROUGH RHYTHMIC MOVEMENTS IN MALAYSIA

¹Md Jais Ismail, ²Loo Fung Chiat & ³Azu Farhana Anuar

¹Faculty of Music, Universiti Teknologi MARA
Shah Alam, Selangor, Malaysia

²Department of Music, Faculty of Human Ecology
Universiti Putra Malaysia

³Student Development and Campus Lifestyle (SDCL)
Universiti Kuala Lumpur

²Corresponding author: lfc@upm.edu.my

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ABSTRACT

Purpose - Music class should function as a class that triggers joy and a platform for students to express their feelings. Based on observation, there are music teachers who teach singing and the playing of musical instruments based traditionally on a teacher-centered approach. This has caused music classes to become passive and dull, with unexcited students that would cause them to lose focus in the class. The purpose of this research is to investigate the application of rhythmic movements, using one of the components from Dalcroze's Eurhythmics as an activity to develop active and fun music classes, hence to improve students' music performance skills.

Methodology - The study was carried out within the framework of a ten-week action-research design involving 35 primary school students at Putrajaya, Malaysia. Data collection was through group observation on students' musical behaviours. Researchers also conducted an in-depth interview with rhythmic movement experts.

Findings - Result shows that there is a significant change of musical behaviours among primary students from week 8 to week 10. Experts agree that rhythmic movement can create a meaningful music class with the active participation of students. Three rhythmic procedures have been recommended by the experts to strengthen a music class pedagogy.

Significance - Learning music through movements has turned music classes into active and fun places. Rhythmic movement activity has made music lessons to become more meaningful. This study has helped students to explore music through movements, creating an environment in which they have the chance to play, communicate with each other, learn through observation and express their creativity in their own way. This intervention helps students to grasp almost all the music concepts while doing activities. This study has also provided ideas for teachers to integrate rhythmic movements into the music instructional process.

Keywords: Dalcroze Eurhythmics, rhythmic movement, music education, qualitative, primary students, singing, playing percussion.

INTRODUCTION

Music classes with fun and exciting activities should be a subject anticipated eagerly by students. Music provides space and opportunity for students to express feelings, nurture creativity and unravel their talents. Van Weelden, Davis and Singletary (2019) stated that music class could empower students with musical concepts, equip them with the history of music, as well as develop literacy skills. Jin (2019) introduced musical learning through playing and embedding methods of Kodaly, Dalcroze and Orff (Ismail et al., 2018) This approach helps to create fun while students learn music, besides strengthening their physical and mental development. A music class is not supposed to be necessarily a static and boring learning environment. Such a traditional music class will shape students' perception towards music by perpetuating the belief that music is a difficult and burdening subject. Although the importance to create an exciting classroom setting is always emphasized, this difficult but common issue in the teaching and learning of music is still unresolved in our education system. It has been through our own personal experiences and observations as music educators in primary schools, that we often face the reality that music classes are conducted in an environment that do not promote fun and meaningful learning. Students were merely exposed to question and answer (Q&A) routines such as 'What is dynamic?', 'What is the meaning of tempo?' and 'Explain rhythmic pattern'. In addition, a lot of homework

is assigned to them and they are not given any opportunity to engage with movements, play musical instruments and sing in the class. Such observations clearly show that theoretical learning has been emphasized more than the practical aspects of a music lesson. Figure 1 captures how the traditional music class has been physically configured for students.



Figure 1. *Traditional music class configuration.*

It is a common practice for most music teachers to use the conventional teacher-centred approach of ‘*chalk and talk*’. Students are not allowed to move around and feel musical elements through their senses. There are teachers who teach students to use the recorder by applying merely the coordination of recorder fingering of song notes that has led to their students feeling intense pressure and also in the long run, create a sense of frustration and boredom. Tawangasasi, Milyartini, and Virgan (2019) have also found that there were still many teachers who were using a teacher-centred approach while teaching music. This certainly has gone against the whole idea of a music education, which is to provide the opportunity for students to express feelings, appreciate aesthetics, generate creativity, reduce learning stress and bring positive influences to social progress (Ji, 2016; Swanwick, 2002; Alperson, 1991). Concepts introduced as early as Dalcroze (1945) suggested that music educators should allow opportunities for students to explore musical elements on their bodies, move around and then only is music theory introduced. This means that practical learning must come before the theoretical aspects of music.

Given the scenario of traditional music teaching and learning we have described earlier, we feel very strongly that the music class should instead

be more meaningful and fun. Music teachers should use every skill and capacity available to them to make music education appealing to students so that the students can benefit in terms of a more meaningful and active learning approach in musical activities. This is in line with the study by Mohd Sham et al. (2018), who urged that teachers should maximise their teaching skills and experience to create effective teaching and learning in class. One promising approach in generating active learning activities is the rhythmic movement strategy. It is similar to a game-base activity that fits children's physical and mental development (Jin, 2019). Vygotsky, Froebel and Dewey proposed theories which emphasized that learning is based on playing and as this involves various movements, it is claimed to be the most effective teaching approach for students (Bajovic, 2018). Rhythmic movement is one of the most salient characteristics of music and it will enhance brain functions by connecting sensory, motor and cognitive skills (Alcock, 2019; Gleim, 2019). Hence, using an action-research design, the purpose of the research reported here is to identify the effectiveness of rhythmic movement activities in music classes. The use an action-research approach in this study is due to the fact that it 'concerns the improvement of educational practices, understandings, and situations' (Carr & Kemmis, 1986). The approach of this study also corresponds with the point made in Conway and Borst (2001) that action research could benefit practicing teachers and it was designed for teachers to make changes and affect teaching. The results of this research will be able to offer guidance to music teachers to conduct rhythmic movement activities as one of the methods to create a fun and meaningful music learning environment.

The importance of Rhythmic Movement

The concept of the rhythmic movement derives from one of the components in Dalcroze Eurhythmics approach (Smith, 2014; Dalcroze, 2013; Dalcroze, 1917). Coleman (1922) and Zaharah (2003) stated that singing, dancing, and playing musical instruments were ideal activities in musical learning. This is related to Dalcroze's philosophy which emphasized that students should be exposed to movement activities for them to feel musical elements such as rhythm and melody (Juntunen, 2016). Furthermore, Dalcroze's idea on using movements in music activities can stimulate the mental strength of students to learn a skill (Juntunen, 2016). When playing, students perform several movements and these movements must be explored to produce meaningful learning. Dalcroze (1917) outlined two basic elements to illustrate the relationship between sound and motion, and they are tone and movement. Rhythmic movement is naturally embedded within oneself which makes it as the strongest and closest musical elements in a human's life (Linkins, 2015). This is not only true in music education, the importance of rhythmic

movements is also reflected in many other fields, including its association and level of congruence with other human body movements (Loo & Loo, 2012; Loo & Loo, 2015; Loo & Loo, 2017; Loo, Loo & Chua, 2019) such as in sports routine and dance (Hodgin, 1992; Mason, 2012), and as an indirect learning of heritage education with popular music beats (Loo et al., 2016).

Although a variety of teaching methods in the Malaysian school setting are discussed and studied (Abdullah, 1990; Ghazali & McPherson, 2009, Lee, Loo & Chua, 2018), there is still a lack of studies which apply the Dalcroze or rhythmic movement approach in schools in Malaysia so as to enhance the effectiveness of teaching and learning in music classrooms. Existing research that uses concepts which involved to a certain extent the concept of rhythm in a Malaysian classroom setting includes Kodaly (Luen & Ayob, 2019) and Orff (Sham, 2016). Tan (2008) touched on the use of folk music. Intervention using the Dalcroze method and its importance in increasing the students' ability in singing and playing instruments simultaneously was only highlighted in recent research (Md Jais, Loo, & Mohd Sham, 2019). These researches revealed that activities involving rhythmic movement were able to assist students to have more focus and helped strengthen coordination skills (Miller, 2008; Md Jais & Loo, 2018; Md Jais, 2017; Md Jais et al., 2020). Through rhythmic movements, the interaction between functions of the brain and body can be optimally enhanced. This is because the brain functions will begin to accept and analyse a stimulation which it then passes instructions to the body parts to move. Students tend to repeat the same movements as they become comfortable with the motion (Findlay, 1995). A study by Amelia (2019) also revealed that rhythmic movement activities recommended by Dalcroze was effective in increasing students' ability in playing music instruments and varies the students' learning style. It is also claimed that the Dalcroze method which used gesture activities might improve students' singing skills (Pangalila, 2019).

Rhythm has two basic elements which are time and energy (Dalcroze, 2013; Dalcroze, 1945; Dalcroze, 1920). An individual must be given the opportunity to experience and feel the rhythm (*conscience du rythme*). This will enhance the capacity of an individual to feel time in between movements which in turn, can relate to his ability to control time, space and energy in movement. Hence, in rhythmic movement activity, body movement brings time and energy elements towards space dimensions. Choksy, Abramson, Gillespie and Woods (1986) suggested two categories of movements which are, namely moving in place and moving in space. These movements can be varied and have low, medium and high-level applications. All these movements are said to be able to help learners explore various music qualities and enable students to understand how all the elements of time, energy and space are closely related (Juntunen, 2004).

Rhythmic movements should be understood as being closely related to our body movements so that music could be fully appreciated and loved by students. This is because the rhythmic movement is an element that is often performed in life consciously or otherwise. The body is aware of these elements because the strength of musical feeling depends on body sensory strength. The Dalcroze approach provides a musical experience and opportunity to help students develop observational strength, analytical skills, memory enhancement and become more meticulous (Dalcroze, 1917). Research by Mead (1996) found that teachers were teaching eurhythmic activities using rhythmic movement as a teaching foundation. Solfege and improvisation are embedded in rhythmic movement activities that can provide the experience of feeling the eurhythmic activities as intended by Dalcroze.

Through rhythmic activities, students can develop the awareness of how motion is naturally related to their attitude. Studies have shown that rhythmic activities can increase students' performance, support curriculum, and foster a positive learning environment (Palatnik & Abrahamson 2018; Grogg, Culpan, & Fox, 2018; Zachopoulou, Derri, Chatzopoulos, & Ellinoudis, 2003). While doing rhythmic activities, students ought to be encouraged to think on their own on the development of their appearance. For that, students must be able to creatively use their thinking ability through motion problem-solving. This will also indirectly assist in developing the students' mental ability. Rhythmic activities can contribute significantly to an increase in self-concept or self-trust (Md Jais, 2017; Ismail & Anuar, 2020). This is because many rhythmic activities can provide a range of experiences whereby students can control their body confidently until it helps them to form a positive learning concept (Febrianta, 2019). This research was also corroborated in Hall (2019), who conducted an eight-week research on students' learning in the classroom using music with motion intervention. The research discovered that music with motion activities could enhance student participation and provide valuable learning experience.

METHODOLOGY

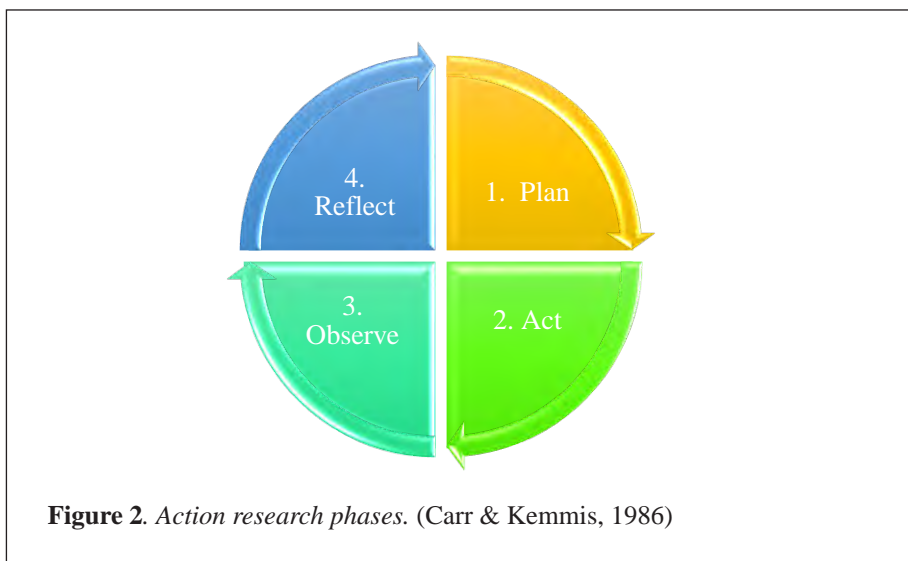
Participants

This research involved 35 students from a primary school in an urban area in Malaysia. All these children were standard Three pupils with an average age of nine. Eighteen of them were male students (51%) and 17 were female students (49%). Students at this age were chosen as they were more suitable

with the the requirements of this study, which looked at the use of games and movements (Piaget, 2013). There is a need to develop student motor skills at this level before they proceed to standard Four. This study was conducted with permission obtained from the parents and school authorities. The participants did not have any formal training in Western music and the only music background they had was gained from the school curriculum. This included a 30-minute weekly class which provided very basic music theory, singing lessons and the playing of percussion instruments.

Procedure

The procedure of this study is accordance with the action research approach by Carr and Kemmis (1986) in which it is “to plan, act, observe and reflect more carefully, more systematically, and more rigorously than one usually does in everyday life” (Kemmis & McTaggart, 1988, p. 10). We adopted the four phases of action research recommended by Carr and Kemmis (1986) as shown in Figure 2.



After obtaining the consent and permission from the school authorities, including parents and teachers; a ten-week class program, with 30 minutes a class per week, were conducted using the intervention of rhythmic movement. These classes were arranged during the usual class time to avoid any complication in the schedule of the parents and pupils. Activities in the intervention were designed based on the characteristics of the Dalcroze

Eurhythmics approach which included the concepts of time, space, and energy (Van der Merwe & Habron, 2019). In the weekly classes, students learnt to sing and play percussion instruments according to the intervention (please refer to Table 1, on p.9). A radio and speaker were used to accompany students' singing as well as their movements. These classes were all video recorded for analytical purposes.

Data collection

Data was collected through weekly observation throughout the 30-minute learning session. Data was collected in the form of written notes and video recordings. Observations included noting changes of musical behaviour presented by the pupils and their ability in musical aspects such as tempo, pitch, tonality, rhythm, dynamic, shape, melody, and performance. Other than that, research data was also collected through in-depth interviews with two experienced Malaysian educators who had more than 10 years of experience in the field. The interviews were conducted using a semi-structured format and the interviewees were required to answer the questions through virtual communication. The opportunity given to the interviewees to answer open-ended questions also was to encourage the respondents to provide more specific and elaborated feedback and comments (Hudak, Kile, Grodziak, & Keptner, 2019).

Material

In this intervention, two songs were selected which were '*Maju dan Sejahtera*' composed by Suhaimi Md. Zin and '*Azam Baru*' composed by Susie Khor and Ridzlina Riduan. Both songs were available on YouTube as they were uploaded by Malaysianspec (2011) and Moni (2014). These songs were selected due to the familiarity of students with the lyrics in Bahasa Melayu. Considerations were also given to the criteria that the tempo and pitch were appropriate for the level in this group of children. Taking into account the students familiarity with the songs, the researchers chose a song much more familiar to the students and another song which the students were unfamiliar with and which they were not exposed to. This approach will enable the researchers to determine whether student familiarity with the song would affect the effectiveness of the intervention. Students practically sang '*Maju and Sejahtera*' every Monday during their official assembly, while '*Azam Baru*' has yet to be learnt. Music scores were arranged as in Figure 3 and Figure 4. In both songs, the rhythmic pattern arranged in the intervention were indicated in both figures, representing the rhythmic pattern played by the percussion instrument.

Maju dan Sejahtera

$\text{♩} = 100$

The musical score is presented in two systems. The first system includes a vocal line (Suara) and a kompong line (Kompang). The vocal line is in a treble clef with a key signature of two flats and a 4/4 time signature. The kompong line is in a bass clef with a 4/4 time signature. The lyrics are written below the vocal line. The second system continues the vocal and kompong parts, with a first and second ending bracketed over measures 7 and 8. The lyrics continue below the vocal line. The third system continues the vocal and kompong parts, with lyrics below the vocal line. The fourth system continues the vocal and kompong parts, with lyrics below the vocal line. The fifth system continues the vocal and kompong parts, with lyrics below the vocal line.

Suara

I ni lah wi la yah bu miyang ber tu ah Ma jumembangundi ju langnegah A
Memba ra se mangat se ti ap warga nya Cerdasmin da nya se ma ngatwa ja Pa

Kompang

Pak
Bum

5

1. 2.

marento sa di serpanjangna sa Hamo ni sema sen ti a sa homathorma ti penuh
da wi la yah di tumpahse ti a

10

mes ra Ber sa tu lah ber bak ti lah Se mu a war ga wi la yah

15

Sa ya ngi lah lin dungi lah Se penuh ji wa ra ga Ki ta ja ga ke har

20

mo ni an se mu a Ma ju Se jah te ra Wi la yah Per se ku tu an.

Figure 3. Song 1.

Azam Baru
(Lagu 2) Komposer: Susie Chor & Ridzlina Riduan
Susunan semula: Md Jais Ismail

$\text{♩} = 100$

Suara
Ki ni de tik yang ku tung gu Ber pa kai an ser ba ba ru

Kompang
Pak
Bum

5
Suara
In gin ber jum pa ra kan ku Ri ang nya ha ti

Kompang

8
Suara
ku Be la jar ber sa ma ba ca dan me ngi ra Pa tuh pa da ka

Kompang

12
Suara
ta gu ru Ma ri ki ta se mua ting kat kan u sa ha

Kompang

15
Suara
De mi ma sa de pan ki ta.

Kompang

Figure 4. Song 2.

The Procedure of a Ten-week Class Using an Action-research Approach

The rhythmic movements were planned and designed according to the songs. The implementation of musical learning activities integrated with rhythmic movement activities was as listed in Table 1.

Table 1

Rhythmic Learning Activities

Week	Learning Activities
1.	<p>Students walk while clapping to the song beat when music is played and stop when music is halted.</p> <p>Students walk while clapping to the pattern of the song rhythm from the percussion instruments.</p> <p>Several students voluntarily or were randomly picked to play the <i>kompang</i> a Malay percussion instrument. Other students sing a song.</p>
2.	<p>Students walk four steps forward and four steps backwards while counting 1, 2, 3, 4 in a group.</p> <p>Students sing while clapping to the rhythmic pattern.</p> <p>Students sing while clapping to the rhythmic pattern using the percussion instrument.</p>
3.	<p>Students sing while walking and jumping according to the rhythmic pattern in a circular formation.</p> <p>Students sing while clapping to the rhythmic pattern using percussion instruments and accompanied by music.</p>
4.	<p>Students clap friend's shoulder according to the rhythmic pattern and accompanied by music. The students at the front of each group clap in step with the percussion.</p> <p>Students sing while playing the percussion instrument and accompanied by music.</p>
5.	<p>In pairs, students play the percussion instrument according to the rhythmic pattern played.</p> <p>Students sing while clapping to two rhythmic patterns learned using the percussion instrument and accompanied by music.</p>
6.	<p>Students listen to songs while doing motion gestures towards multiple directions.</p> <p>Students clap to rhythmic patterns learned when the song is played while walking to multiple directions.</p> <p>Students sing while clapping two rhythmic patterns learned using the percussion instrument and accompanied by music.</p>
7.	<p>Students clap to the rhythmic pattern produced by the percussion instruments held by friends in a group. The activity is done while singing a song.</p> <p>Students perform.</p> <p>Students sing while clapping to two rhythmic patterns learned using the percussion a instrument and accompanied by music.</p>
8.	<p>Students lightly tiptoe while singing with soft dynamic and heavily tiptoe while singing with strong dynamic.</p> <p>In pairs, students perform singing practices while playing with percussion instruments according to the dynamic signals showed.</p> <p>Students sing together while playing the percussion instruments.</p>

(continued)

Week	Learning Activities
9.	Students walk and jump in their own styles and according to the rhythmic patterns played, while singing songs dynamically. They can also do motion gestures in multiple directions and apply dynamic according to group creativity. Students do group performance.
10.	Students choose rhythmic patterns and plan suitable motion gestures while singing songs according to the dynamic in respective groups. Students do group performance. Students sing songs that they have learned while playing the percussion instruments.

RESULTS

Observation Analysis

Preliminary data observation (week 1-3) It was found that most students were able to walk according to the music tempo played, especially at beat 1 and 3. Only two students were walking with an inconsistent tempo which was sometimes a little faster and sometimes with the accurate tempo. The class environment was active and lively with activities of walking based on the music played. The classroom was filled with the sounds of students laughing with joy. All students were also able to display sensitivity towards the music by stopping to walk when music was halted. Within the 10-20 minutes, students were asked to play with the percussion instrument. It was found that not all students were able to play the percussion instrument with the correct tempo. Ten (10) students beat the *kompang* with the wrong tempo, faster than that in the original music. When the rhythmic pattern of ♪♪♪ was introduced, the students' started counting, but the motion and counting were not synchronous. It can be seen from their facial expressions that they were trying to focus and master the skill. By the end of Week 3, most students were still not able to sing and play the percussion instrument correctly. Unsynchronized singing and the percussion tempo had caused the class to be noisy. Despite trying three times, the students were still not able to perform it. Only five students stated that they were able to perform the skill of singing while playing the percussion. We concluded that the students' achievement on the second and third week did not show any improvement; it had even declined. However, it could be seen that students were enjoying themselves and actively participated in all the activities conducted.

Mid-point data observation (week 4-6) It was found that the activity conducted for these weeks had certainly garnered the students' interest. Students were

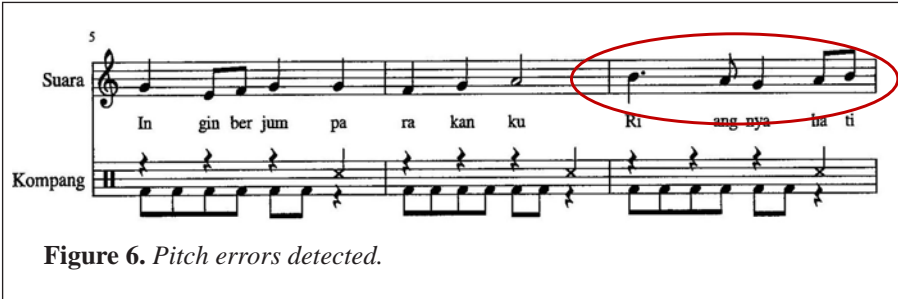
active in the classes and this caused a lot of noise, arising from the laughing and talking among the students. This time, the sounds of the percussion instruments and the students singing could be heard clearly and in sync. The students were able to do the task with a minimal of errors, only a few phrases of the song were unsynchronized to the percussion rhythm. When all students were allowed to play the percussion instruments, they were able to perform the task very well, even while they were singing the song. Students were able to play the major percussions smoothly while listening to the rhythmic pattern ♪♪♪♪ played by the teacher. It was found that the tempo of the song was consistent, despite being slower than the actual tempo. We could see that the students were very focused from their facial expression. The students kept their focus and tried to master the skill. It was observed that the most significant improvement was the technique of playing the percussion instruments. The students clearly showed a powerful grip technique and the correct percussion beat. However, when singing and playing body percussions, their tempo was not in sync and 12 students were seen to be doing nothing. From the aspect of the quality of percussion beats and singing voice produced, the pitch accuracy and confidence among them were still problematic. We found that the students were still not able to sing while playing the rhythmic pattern on the percussion instruments correctly. Most of them produced unsynchronized tempo and sang only verses from the song chorus (bar 8 until 14) as is shown in Figure 5.

The image shows a musical score for two verses of a song. Each verse consists of a vocal line (Suara) and a percussion line (Kompang). The first verse starts at bar 8 and ends at bar 14. The lyrics for the first verse are: "ku Be la jar ber sa ma ba ca dan me ngi ra Pa tuh pa da ka". The second verse starts at bar 12 and ends at bar 14. The lyrics for the second verse are: "ta gu ru Ma ri ki ta se mua ting kat kan u sa ha". The percussion line (Kompang) is written on a staff with a double bar line and a 'K' symbol, indicating the rhythm of the percussion instrument.

Figure 5. Song 2 chorus verse.

Final phase data observation (week 7-10). It was found that when a song was first played the students claps were not in sync with the song, but after being repeated for the second time, students were able to clap in sync with the song. The students then were able to sing the song smoothly and with

the correct pitch. When percussion instruments were used in the activity, the students were able to beat the percussion instruments with a consistent tempo, especially for the first verse which is bar 1 until 7. The melody was sung smoothly yet there were pitch errors, especially for the words 'Riangnya hatiku' in the following phrase:



The image shows a musical score for two parts: 'Suara' (Vocal) and 'Kompang' (Percussion). The vocal line is written on a treble clef staff with a key signature of one flat (B-flat) and a 4/4 time signature. The lyrics are: 'In gin ber jum pa ra kan ku Ki ang nya ha ti'. A red circle highlights the final three notes of the vocal line: a quarter note G4, an eighth note F4, and a quarter note E4. The percussion line is written on a bass clef staff with a key signature of one flat and a 4/4 time signature, featuring a consistent rhythmic pattern of eighth notes.

Figure 6. Pitch errors detected.

The researchers were also drawn to several other matters which deserve mention. It was found that students were able to play a combination of rhythmic patterns while singing the song. They appeared to be enjoying themselves in performing the activity. All students were able to provide the correct dynamic responses, which were walking lightly (tiptoeing) when listening to soft dynamic and walking heavily (squatting) when listening to strong dynamic. The sounds of synchronised singing and percussions according to the strong and soft dynamics were heard. The students walked more than they jumped when listening to the rhythmic pattern played. The group activity showed that most of the groups were committed to practising hard and tried to display their respective strengths. By the end of week 10, percussion rhythm was played in sync, with consistent tempo, smooth singing, and correct melody. As observed, all students were able to do their performances smoothly and more confidently compared to previously. They applied the dynamic concept, did styles and locomotor as well as non-locomotor motions in the performance. Some students were able to play the percussion instruments by combining two different rhythmic patterns when singing the song. Overall, both songs had been sung and played well.

Interview Analysis. Feedback from the interviews with the two experts of rhythmic movements found that this activity was suitable and good fun for students. The experts defined rhythmic movements as locomotor or non-locomotor movements, including creative movements performed according to the song or beats heard while self-expressing. This activity enables students to be more expressive, creative, as well as appreciative of music through movements. Students also became aware of their music mood and hence express

the mood with actions. The benefit obtained by students included enhanced coordination of hands, legs, and other body parts. It also aids to connect brain instructions and motor-sensory to produce motions as well as enhancing social skills in groups and nurture high music awareness. Students were able to work in groups or in pairs which help to develop their social and communication skills. Rhythmic movements also function as a solution through creative body movements. Rhythmic movement teaching method can be employed through Guided Discovery, Problem Solving and Speaking Rhythmically. The field experts also suggested several ways of teaching rhythmic movements in a more creative approach, such as asking student to create new body movements according to the various rhythm or using imitation and imagination to act according to the song characters. with rhythmic movements.

DISCUSSION

Based on the results, the present research was able through its proposed intervention, to determine the development of the students' musical behaviour in the music class. Rhythmic movement has been found to be effective in influencing the elements of tempo, smoothness of singing and the playing of percussions (Phillips-Silver, Aktipis, & Bryant, 2010; Zentner & Eerola, 2010; Shiobara, 1994). The students did not feel awkward singing while moving according to the song beats. However, on the second and third week, students were finding it difficult to coordinate their singing while playing the percussion instruments. Unsynchronized singing and percussion beats caused the class to become noisy and out of control. We realized this had occurred because different rhythmic patterns with applied song rhythm in the skills of singing and playing the percussions were performed which is in line with Md Jais et al. (2020). The errors identified were in the tempo, pitch, singing, rhythm and percussion tone when these skills were combined. The errors were observed to have occurred consecutively for five weeks. However, from the aspect of the learning environment, it appeared to be clearly lively and fun. Students moved around and communicated with each other while doing the activity as is shown in Figure 7.

The improvement in the students' music performance could be detected starting from the fourth week until the eighth week. It was found that student singing and percussion playing became clearer with a smooth tempo. Despite some errors occurring, students were able to sing the overall song. Students were observed to easily remember and sing the unfamiliar second song that was newly introduced to them. They focused on motion stunts while listening to songs which indirectly offered them the opportunity to feel the singing

elements such as song pitch, tempo and melody. This was also similar with the results of Hallam, Cross and Thaut (2011) who found that students at a young age are much more capable at identifying and singing songs compared to those who were 13 years old and above. In short, the errors of tempo, pitch and rhythm decreased from week to week. The percussion grip technique was found to be more stable and stronger and they were able to play it with the right hitting technique. This produced the correct percussion tone that sounded pleasant to the ears. The number of students who discovered their ability to sing and play the percussion instruments increased from week to week especially on the fifth and ninth week, which showed a sudden increment.



Figure 7. *Communication between students.*

During the final phase of this research which was in week 9 and 10, it was found that the sounds from the singing and percussion playing activities were produced more distinctly. Musical elements taught by the teacher further strengthened students' comprehension and their mastering of the skills of singing and percussion playing. The tempo, tone, rhythm, pitch and expression were performed with minimal errors and songs were performed smoothly. Students were also able to combine two different rhythmic patterns and played them using the percussion instruments. This skill developed when we combined the concepts of movement in singing and percussion playing activities. Students imagined the motions applied to the percussions. It was then discovered that the majority of the students had acquired the skills of singing and playing the percussion instruments. This discovery is in line with the findings in Md Jais, Loo and Mohd Sham (2019) who found that the Dalcroze Eurhythmics was effective in coordinating singing and the playing of musical instruments.

We believed that the Dalcroze approach triggered kinaesthetic senses within the students as they were always aware of the music being played (Dutton, 2017). The musical elements were translated in the form of motion that made the students aware of whether to move within their own space or friend's space, as was reported in the interview analysis. Through this, students were able to control the elements of time, space and energy to produce quality movement and feel the musical elements as mentioned by Dalcroze (2013) and Dalcroze (1921).

This approach also enables teacher and students to be well-bonded as the teacher often guides and corrects motions performed by the students. This is in line with Wentink, and Van der Merwe (2020) who found that the Dalcroze Eurhythmics approach strengthened relationships, improved musicianship, and heightened social skills. Teachers can do the activity with students, such as singing and moving together so that the togetherness exists and further builds a better relationship between teachers and students. Musical learning based on the rhythmic movement approach can also prepare students to face the 21st century challenges from the aspect of meaningful and fun learning skill mastery. One current music challenge that often occurs in schools is students are required to perform within a short period of time. Therefore, a rhythmic movement approach can make it easier and quicker for students to master music skills compared to the usual conventional methods. This could be clearly seen through the implementation of the present action research, which found that students showed a positive response after performing the rhythmic movement activity for 10 weeks.

It was found that rhythmic movement activity is a very convenient activity to be employed in classrooms (Md Jais, 2017). Rhythmic activities can be performed anywhere either in the music room or outside the classroom. It can also be conducted in small or large spaces. Teachers can utilize any kind of traditional or modern teaching materials in the activities conducted. This certainly assists teachers in schools lacking teaching facilities and this could further lessen the burden on the school's limited budget (Tremblay-Beaton, 2019). We found that students were able to display their respective creativity through the exploration of motion activity. This is in line with one of Dalcroze's objectives, which is improvisation to increase an individual's creativity (Van der Merwe, Tempelhoff, & Joubert, 2019; Dalcroze, 1945). Students were able to conduct discussions and create suitable locomotor and non-locomotor motions to produce movements according to music. They practiced the movements created based on the group members' ideas and then performed it in groups. This produced a creative and attractive motion performance because the students were able to move in sync following the rhythm, tempo and

dynamics of the song. They were also able to play various rhythmic patterns on the percussion instruments while doing motions according to the song. This finding is closely similar to the research by Nainggolan (2015), who found that the eurhythmics approach played an important role in increasing students' (aged from eight to 10 years old) creativity. Students' creativity is identified through the smoothness of activity done, ability to create something, maturity in thinking and ability to collaborate. After completing our research, it was found that there were no more complaints by the students. They displayed happy faces, laughing and enjoying the rhythmic activities in the music class. The music class was conducted in a more lively manner and the students participated actively.

CONCLUSION

The study reported here has underscored the importance of embracing the perspective that music is a fun and active learning subject. Active learning is one of the central features of 21st century learning which in turn, emphasises a student-centred approach. Therefore, schools must play an essential role in ensuring that students learn in an active environment. Schools must allow the students the opportunity to interact with each other, think in a high order level, solve problem independently and engage in self-reflection (Abdul Said & Shanti, 2019). An active class with elements of motion will help the students to experience fun while learning, hence will enhance the students' achievement (Shoval, Sharir, Arnon, & Tenenbaum, 2018). Our research has clearly shown that active learning through rhythmic movements can help to strengthen music education in the 21st century. It is also applicable in various other educational fields, such as gifted education and special education as students love to participate in active music classes. Students enjoy walking, dancing and communicating in a group while doing rhythmic movements activity. They are also, implicitly, solving problem by creating new movements to complete the task. The results have shown that through this active learning method, there is a significant effective intervention to transform the 'chalk and talk' approach to the student-centred approach. There should no longer be any more rigid question-answer sessions in the class and the students should be free to work in groups or in pairs. Students must have opportunities to master the relevant music skills through observation and communication with friends. This also relates to Norniza's study (2018) that active learning with the combination of creativity, communication, and collaboration do sharpen the students' focus and metacognitive skills. Such research findings have clearly strengthened the claim that the rhythmic movement approach is a more effective teaching and learning strategy for classroom music lessons. Therefore, we would like to suggest that schools and music educators embed

rhythmic movement activities in the music syllabus for all students, including for gifted and special individuals. It is hoped that this research will be able to help enrich the approach of music teaching and learning as a fun and meaningful subject very much anticipated by students.

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