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Importance of music learning and musicality in rhythmic gymnastics

Loo Fung Chiat\textsuperscript{a} * and Loo Fung Ying\textsuperscript{b}

\textsuperscript{a}Universiti Putra Malaysia, Department of Music, Faculty of Ecology, 43400, Serdang, Selangor, Malaysia
\textsuperscript{b}University of Malaya, Department of Music, Cultural Centre, 50603, Kuala Lumpur, Malaysia.

Abstract

Music plays an important role for sports events such as rhythmic gymnastics, synchronized swimming, skating and so forth. From a musical perspective, it is found that the lack of congruence between music and movement is observed through videos such as the Olympics and the Commonwealth Games. Interviews were conducted with coaches and the study reveals the limitations faced by coaches including the musical background of gymnasts and the editing of music for a routine. Since the correlation between movement and music is important, this paper suggests that fundamental music learning should be implemented in the training of gymnasts.

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1. Introduction

In general, music can be regarded as an audio embellishment which enhances the ambience of an event, or it can be used to produce an ergogenic effect to enhance the performance of sportsmen (Karageorghis, 2010). Another important role of music is to accompany sports routines which comprise choreographic elements, such as rhythmic gymnastics, synchronized swimming, figure skating, martial arts and so forth. For this category of sports, music is indispensable in any form of competition event and has a great influence on an individual routine. Acrobatic skills or certain movements of the sportsmen no doubt contribute the major winning factor, but the correlation between choreography and music indirectly affects the entire performance. Spectators of various fields and backgrounds may or may not focus on this issue, but from a musicological perspective we posit that the correlation between the music selected and choreography deserves attention in scholarship. This includes issues such as the selection of music, editing of music, genre of music, correlation between movement and musical aspects, and so forth. Notwithstanding, the approach of music applied to choreographic sports depends greatly on the individual coach and gymnast, and their understanding of musical elements becomes a prime concern.

* Loo Fung Chiat. Tel.: +6-012-3635814
E-mail address: lfc@putra.upm.edu.my/fungchiat@hotmail.com

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Much research has been done on the psychological aspects of how music affects stamina and emotion in sportsmen (Karageorghis et al. 1999, Hayakawa et al. 2000, Matesic and Comartie, 2002, Elliot & Orme, 2005). Interest amongst scholars in research on music type and preference in sports activities is equally evident (Gfeller, 1988; Tenenbaum et al. 2004, Mcguinness, 2009). Most of this research concerns scientific aspects of the effects of music applied to a particular sport and how music contributes to enhance or affect the sportsperson. Sports that consist of music and choreography are more concerned with synchronization and congruency, as in the field of dance. Synchronous music is explained as the ‘rhythmic and temporal aspects of music used as a type of metronome that regulates movement patterns’ (Karageorghis et al. 2010), while asynchronous music is used to provide a ‘background simulation without conscious synchronization between movement patterns and musical tempo’ (Terry et al. 2011). In comparison to sports with a choreographic component, extensive research has been done by sports scholars to show how synchronized music enhances non-choreographed sports with repetitive movement, such as running and circuit-type exercise. The contribution of music to sports in providing ergogenic, psychological, psychophysical, and psychophysiological effects have also been shown in much research (Atkinson et al. 2004, Karageorghis et al. 2010, Szmedra & Bacharach, 1998, taken in Terry et al. 2011).

When choreography is concerned, we need to look at a few related concepts since it is associated with creativity, resulting in a unique routine for each gymnast. The idea of congruence in music and dance is known through the research of Krumhansl & Schenck in 1997 and Mitchel & Gallaher in 2001. This research revealed that congruence is evidently perceived by participants in correlating movement and sound. On the other hand, the growing trend for the function of music used merely as a sonic background in the 20th century draws another theoretical input (Fogelsanger and Adanador, 2006). In the same paper, it is stated that the theory of the independence of music and movement can be traceable to John Cage and Merce Cunningham in American modern dance in the 1950s. Their idea came from the composer Henry Cowell, who developed an elastic form of accompaniment in response to American dance choreographers’ opposition to dance being a slave to music (Miller, 2002, from Fogelsanger & Adanador, 2006). In the same study, however, the authors provide another concept of ‘capture’ derived from the McGurk & McDonald Effect (1976), where a visual stimulus is perceived differently when combined with an auditory stimulus.

In this study, we reviewed videos from medallists of the competition such as Olympic Games, Commonwealth Games, Goodwill Games and Rhythmic Gymnastics World Championships from the 1980s to 2000s. From our observation we found that the interpretation of music through the routines clearly shows a variety of musical understanding amongst gymnasts. This paper addresses the issue of musical understanding and the importance of musicality in gymnasts. Interviews were held with three coaches to gather information such as views on musical interpretation, procedure of delivering music to their gymnasts, and selection of music for routines. For selected medalists, discussion on the music and rhythmic gymnastics will be addressed from a musical perspective in terms of the effectiveness of a particular music accompanying the choreography, with a focus on musical phrasing correlating to movements. The issue of congruence or synchronization becomes the main concern. For instance, musical phrases that do not comply with the commencement or finishing of a movement; the handling of apparatus according to the musical phrases. Since correlation between music and movement can be interpreted in many ways, the article discusses issues from a musicological perspective. Apart from the information gathered from the videos of past competition, observation at the gymnasion was carried out with the aim of understanding the procedure of the coach passing on the selected music to gymnast. Before discussion of the above issues, the history of rhythmic gymnastics will be briefly explained, due to its important association with music.

2. History of Rhythmic Gymnastics

Amotst the rhythmic gymnastics will be briefly explained, to the earhythmic developed by the Swiss composer and music educator Emil Jacques-Dalcroze during the 1880s. Dalcroze’s eurhythms or Dalcroze method, emphasized rhythm with physical movement, in which he believed that bodily processes, rhythm and physical motion were the basis of musical expressivity and music pedagogy (Seitz, 2010). Harvey relates Plato’s statement ‘the whole man’s life stands in need of a right rhythm’ to
that of Dalcroze’s method, in which ‘it is not a refinement of dancing nor an improved method of music making, but a principle that must have effect upon every part of life’ (Harvey, 2007). This directly stresses the importance of rhythm in our everyday life, consciously or unconsciously, when we are sometimes not even aware of it.

Before Dalcroze, the idea of rhythmic gymnastics came from the ideas of I.G Noverre (1722-1810), Francois Delsarte (1811-1871) and R. Bode (1881) who believed in using dance to express oneself (Surhone, Timpledon & Marseken ed. 2010). This was followed by Peter Henry Ling who promoted ‘aesthetic gymnastics’ with his 19th century Swedish system of free exercise. Catherine Beecher’s programme of ‘grace-without dancing’ continued to develop and she founded the Western Female Institute in Ohio, United States in 1837. Rhythmic gymnastics started as a sport in the Soviet Union during the 1940s and was recognized by the International Gymnastic Federation (FIG) in 1961. The rhythmic sportive gymnastics (RSG) world championship has been held since 1963 and the Olympic Games has included RSG since 1984 (Jastrjembskaia & Titov, 1999).

3. Music in the Code of Points

The code of points is one of the important sources to justify why music is an important aspect in contributing to the overall quality of rhythmic gymnastics. To the general spectators, perhaps it is the acrobatic skills and perfection of a gymnast that plays a major factor in the entire quality of her performance. It is sometimes speculated whether the absence of music might even be realized by spectators. For a sports activity, there is no doubt that the routines, difficulty and performance are the main criteria in evaluating the skills of the gymnasts. However, in analysing the origins of this sport from Dalcroze’s eurhythmics, and in keeping with the term ‘rhythmic’, the correlation of music and movement is equally important.

According to the code of points (2009-2012), three categories decide the performance quality, namely ‘Difficulty’ (D), ‘Artistry’ (A) and ‘Execution’ (E). Music accompaniment and choreography are evaluated under ‘Artistry’ (A) which accounts for ten points (each category is given ten points, with a total of thirty points). With a portion of 1/3, this means that aesthetic value, including music accompaniment and choreography, is of equal importance with ‘Difficulty’ and ‘Execution’. In the code of points, it is gathered that some interesting details are worth highlighting in order to understand fully the requirements of the musical accompaniment. The main purpose stated in the artistic component is ‘to project an emotional message to the spectators and to display the choreographic idea with an expressive interpretation guided by the following three aspects: music accompaniment, artistic image and expressivity (choreography)’ (Code of Points Rhythmic Gymnastic, 2009-2012, 61). In terms of instrumentation, it is stated that one or several instruments can be used, the voice could be used as an instrument (without lyrics); and the music can be performed by one musician or by a musical recording on CD (ibid., 61).

A general guide to how penalties are apportioned in relation to the music is listed as well. This includes details such as ‘absence of harmony in the character of each movement sequence and the music, as well as in the rhythm of each movement sequence and the music; abrupt interruption of the music at the end of the exercise; absence of unity between different musical themes’ (ibid., 63). Absence of harmony between music and movement at the end of the exercise is also penalized in the Execution section (E) (ibid., 64). Faults occurring at the end of the routine in competition events are common error, where the music ends before the routine or vice versa.

By looking at the justification in the code of points, concern about of the correlation between music and movement in a routine is thus important. However, opinions about whether or not a routine of gymnast or coach conforms to the chosen music or is performed with an appropriate interpretation are nevertheless subjective.

4. The Practice of Delivering Music to Gymnasts

All coaches in the interview (Thye, Mesheryakova and Vereshchagina, 2011) are former rhythmic gymnasts who have taken part in countless international competitions. The procedure of selecting music was described in a similar way by all coaches. The chosen music or musical phrases are edited into a 1:30 minute track according to the standard duration of the entire routine. This is done with any computer software available and without much editing in terms of the quality of the sound. It is gathered that motifs or phrase from different music can be edited in the
1:30 track as long as the music sounds smooth and logical. After the selected music is edited, the choreography is delivered to the gymnast in sections. Eventually, the choreography of the routine is adjusted slightly from time to time and from competition to competition, although the skeleton of the movements will usually remain. According to Mesheryakova, her selection of music is also based on the gymnast’s character; for example, classical music will be used for more mature gymnasts or gymnasts with a serious personality. According to these coaches, in general, there are no restrictions on any genre or style used for the music in gymnastic routines.

An observation of the training of a 15 year old gymnast who has participated and won numerous medals in the junior category of competitions in many countries was undertaken. For competition preparation, the given routine is demonstrated by the coach in sections and the gymnast imitates the particular movement. Due to the acrobatics and accuracy in these movements, each movement takes countless repetitions before the gymnast captures the exact movement. The music is played on a normal radio at full volume due to the size of the gymnasium; the coach repeatedly plays the particular section of music for a particular movement until the gymnast successfully achieves accuracy. However, from time to time, the coach may leave the gymnast to practise the designated movement without music until it is properly executed. According to the coach Mesheryakova, such training takes months for a gymnast to capture fully the accuracy and to smooth out the movement. The music, however, is played with a rather poor quality of sound together with the noise of the environment. The melody and rhythm are clearly projected and these act as a guide for the gymnast.

However, as the question of this study would like to investigate, not all gymnasts are responsive to the music accompaniment. When a Malaysian former medallist in the 90s Commonwealth games was asked regarding the responsiveness towards music amongst her gymnasts, she explained that it is quite common to find that, although some achieved excellent performance in the delivery of movements, not all are able to react to musical details or the rhythm; some will not bother and only concentrate on the difficult movements (Thye, 2011). In such instance, to justify the potential of these gymnasts is nevertheless subjective. The struggle of the movement itself is a challenge for the gymnast without having to comply with the music.

While incongruence between music and movement exists in some of these observations, the question of whether the music was sometimes use asynchronously as background sound for the routine or within several movements made us curious how coaches and gymnasts deal with this matter. The intention of the coaches was the main factor, as the coach choreographs routines for her gymnasts. In reference to the coaches, all agreed that choreographed movements should correlate to the music elements as closely as possible in matters such as tempo, style and expression, but the limitation falls on the musical understanding of the individual as mentioned above. Together with the code of points, this indirectly affirms that the function of music as a background accompaniment is not encouraged. However, it can be noted that the 1:30 minutes music track indirectly assists in providing a general sonic guide to direct the gymnasts regardless of their understanding of the more specific musical details. As predicted, it was also gathered from coaches that music learning or musicality is not a requirement. Although the musicianship of gymnasts is never a criterion in the code of points, it somehow leads us to rethink the importance of why music is used in this sport, if we recall the origin of this exercise in Dalcroze’s eurhythmics.

Another question is the perception of the spectators, be it the panel of judges, coaches, the public (including musicians or non-musicians), or those who are sensitive or insensitive toward musical aspects. The subjectivity could fall even amongst musicians per se. For example, a spectator may feel there is congruence or harmony in a routine which demonstrates quick movements together with fast tempo music, although each movement (including jumps, turns, steps or hand movements) does not correspond with a musical phrase, articulation, motifs, dynamic, rhythm and so forth.

5. Issues of Music Interpretation

Through the observation of videos of various competitions and interviews with coaches, a few issues have been found regarding the interpretation of music in the many rhythmic gymnastic routines. One significant observation came from the collected videos such as those of the Olympic and Commonwealth Games. The fundamental issue that attracted our attention as musicians is the subjectivity in music approach among gymnasts. It is gathered that
even among medallists, there are routines with music employed as a sonic backdrop rather than correlating specific movements to musical aspects. What is stressed in this paper is not a high level of artistry between the music and movement but the fundamental aspects. For example, jumps, throwing and catching of apparatus were not highlighted by any musical indication, steps were not congruent with rhythm, the momentum of a movement did not correlate with intensity in the music, and so forth. However, subjectivity in these observations definitely exists given the fact that preferences in terms of musical ideas, concepts of listening and interpretation vary amongst spectators. The background of a spectator, whether a musician or non-musician, gymnast or non-gymnasts, or gymnasts with or without musical training, also contributes greatly to the evaluation of interpretation of music and movement.

In regards to the issue raised above, another concern is that the two coaches in their interviews revealed that the artistry of music interpretation lies not only in the coach and gymnasts but also the panel of judges. In that, the wide range of perceptions towards music is unavoidable. These coaches realized the issue of incongruence and asynchronous music with the routine for many gymnasts and one of the concerns is the high expectation of acrobatic movements in recent years rather than the aesthetics of the performance. In other words, the importance of how music correlates with the movements is marginalized in this event. It was explained by one of the coaches that in her view, the gymnasts in the 80’s delivered their movements with more expression, communicating with the music rather than focusing merely on acrobatic movements.

From the many videos collected, one good example could be analysed through Galina Beloglazova’s 1986 ball routine in the Goodwill Games, in which the congruence of movement and musical aspects is clearly evident. Using the second movement of Beethoven’s Piano Sonata Op. 2 No. 2, this presentation shows clearly the understanding of the gymnast towards the musical phrasing, the start and ending of a fragment, the change of the harmony and so forth. The distinction of this interpretation could be simply viewed from two aspects. Firstly, each movement (particularly of the arms) is synchronized with the phrasing and motifs, this applies to all her movements in the entire routine. Secondly, the handling of the apparatus, where the control of the ball flows along with the musical phrases; for example, the ball rolled from one hand to another exactly congruent with the starting and ending of a phrase. The understanding of the duration of phrases and motifs is also shown in the throwing and catching of the ball. In addition, the increased intensity constructed from the harmonic change into a minor key was also shown in the expansiveness of hand movement. Apart from the choreography of the coach, Begloglazova’s interpretation was renowned for her musical background and musicality that contributed to the understanding of the musical detail.

Some good examples can also be found in the Olympic routines of medallists Lori Fung’s and Staiculescu Doinas’ in 1984, the year when rhythmic gymnastics was first included in the Olympic Event. In contrast, the approach of music with movement seems quite drastically different in some examples taken in the 2000’s. This obvious example can be noticed in Yulia Barsokova’s 2000 and Alina Kabaeva’s 2004 ball routines in which the synchronicity between movement and musical phrases is absent in the performance, although the mood of the routine may correlate with the style of music. For example, jumps occur in between phrases, without any musical significance, and pauses appear in the middle of a phrase. For many examples, the background music approach was much employed. However, to generalize that the interpretation of music and movement in the 2000s is less effective than in the 1980s and 1990s is not entirely justifiable. Among the videos collected, Anna Bessonova’s routines in the 2004 and 2008 Olympic Games show an excellent correlation between movement and musical details in reference to the issues mentioned above.

Certainly, synchronizing tempo with movement, or congruence between movement and music, may not be the only criterion in evaluating artistic aspects in rhythmic gymnastics, since creativity in choreography should not be limited so as to avoid the issue of ‘dance being slave to music’. However, unlike many dance forms, rhythmic gymnastics is a sport event that includes the challenge of exhibiting difficulties in acrobatic movements — for example, jumps, turns, pivots, balance and the execution of apparatus supported by rhythm and music. Therefore, regardless of whether the music functions synchronously or asynchronously as background music, basic musical understanding in a gymnast and coach is undoubtedly important to ensure that the movement correlates with the music. The importance of musical understanding also lies as early as the development of the choreography and in how the choreographed routine is delivered to the gymnasts.
Another reason why this paper stresses the importance of musical understanding in rhythmic gymnastics is that, being a sports event, the vitality, momentum, intensity and drive of movements may be enhanced by the optimal combination of audio and visual effects presented simultaneously. Fogelsanger & Afanador’s paper (2006) gives a good example of the bouncing-inducing using McGurk and MacDonald (1976) model. It was described that two identical discs that move towards each other will be perceived as having a bounce-off effect if a sound is heard at the time the discs meet. However, if a sound is not provided, the two discs are normally seen to pass through each without any bouncing effect. This may similarly apply to rhythmic gymnastics; musical details could enhance the momentum and vitality of the gymnasts visually in the minds of the spectators. For example, jumps are enhanced by accents or percussive sounds, turns are viewed as faster or smoother with reiteration of arpeggios or other sound effects, more rhythmic steps with appropriate tempo and so forth. From the gymnasts’ perspective, this is also in line with the realm of sports research where many studies have been consistently conducted to encourage the use of synchronous music to enhance the motivation, endurance, mood and so forth in sports activities such as running, cycling, triathlon (Karageorghis, 2010; Priest & Karageorghis, 2008). Karageorghis’s finding also indicates that strongly accented rhythm may heighten activation and the dynamic of a piece may prove to be a stimulating quality (Priest & Karageorghis, 2008:358).

6. Conclusion

The use of music for sports with choreography or routines can be viewed from many aspects. Since music has become one of the requirements in these competitions, the function of music together with the movement and the overall visual and audio aspects are important. While coaches and the marking code similarly emphasize the need to harmonize movement with the music, how the music is interpreted could raise much discussion since music stands as a secondary entity in this event. From observation and interview, basic musical understanding amongst gymnasts and coaches is important since music plays an important role in accompanying and highlighting the routines. This issue of musicality also affects the entire practice of the delivery of choreography from the coaches to the gymnasts, from mastery of the routine to the competition arena. From the observation, musicality with sensitivity in rhythm and musical structure indirectly give much control for a gymnast to perform according to the designated musical details. Nonetheless, the limitations and the challenges of acrobatic movements performed by the gymnasts that involve an immense risk should be taken into consideration; a perfect match with musical details is sometimes impossible. Limitation due to the lack of musical understanding could also have a great effect, particularly in music editing and music selection for certain routines. However, this study analysed the issue from the perspective of a musician and the perceptions of non-musicians, sportspeople and general spectators should be investigated in future research. Fundamentally, in the role of musicians, the research aimed to alleviate the existing limitations in the process of using music in rhythmic gymnastics, in hope that the music could achieved its function not only in terms of artistic aspects but also to contribute effectively to the performance of gymnasts.

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