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Developing Music for Unesa's Aerobic Dance

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ABSTRACT

Developing music is basically focused on melody and tempos, but there are many variations in the melody to maximize the sound produced. This research aims to design Unesa aerobic dance music accompaniment, analyze the process of developing music that is adapted to step, and develop and measure the quality and effectiveness of Unesa aerobic dance accompaniment music. The development research has several stages until the creation of music in accordance with the step made according to the Borg and Gall plot. The instruments used in this study are essay sheets used for evaluation results from the team of dance experts and questionnaires given to small samples and large samples during music trials. The results showed that the musical accompaniment of Unesa aerobic dance had 6 Genres, namely the warm up and cooling phases using reggae. The development of the accompanying music's quality and effectiveness showed very good results from the results of the questionnaire related to the participants' feelings during aerobics and input from the validator team. So it can be concluded that the music accompanying Unesa dance has its uniqueness in terms of genre variation, melody, and tempos. The quality of the accompanying music shows very good results seen from the neatness of the music arrangement by the message of each dance step made. The effectiveness of accompaniment music has a very good value based on the impact of the participants who do aerobic dance on their feelings in terms of comfort, motivation to move, and energy.

Keywords: Music, Dance, Coreo, Melody, Tempo

1. INTRODUCTION

In aerobics, there are many genres and musical tempo used according to the purpose of each step. According to Popular Music, it is explained that the character of reggae music genre has drum beats in 3 categories one drop, rockers and steppers with slower tempo so that it fits perfectly with the warm-up and cool-down steps [1]. Cha-cha music genre is included in the tried music family. The characters of this genre only count 1 to 4, so the rhythm is short and fixed. The dangdut genre character has an advantage in the sound of bass or drums which vary slowly, medium, and fast. The trance music character has a fast beat of around 130-150 per min. This trance music is a genre of electronic dance music. Trance refers to emotional stress, high feelings, feelings of detachment, feelings of "shivering" or "emptiness," and trying to evoke a "buzzing" experience from the listener. According to Kertopati, L in the CNN Indonesia website explained that the electronic dance music (EDM) stream has a fast rhythmic beat so it can easily arouse enthusiasm

[2]. Unconsciously, the body does respond to music by releasing serotonin which affects feelings of happiness. In addition, the body also produces dopamine, a hormone that makes humans feel excited. At the same time, the brain releases norepinephrine, which increases concentration and a sense of euphoria. Apart from the genre in music, we also need to understand the tempo, considering this is an important factor in determining steps during practice.

According to Ying Liu, et al. tempo is an important musical element that affects human emotional processes during listening to music [3]. Tempo can be defined as the beat or speed in the music being played. Tempos, or tempi, helps the composer convey a feeling of intensity or relaxation. We can think of tempo as the speedometer of music. Typically, music speed is measured in beats per min, or BPM. Added [2] Tempo is showing the perceived frequency of the music rhythm. The tempo reflects the frequency of the beat, the articulation that repeats regularly in the flow of music. The making of music in aerobic dance has 2 types of tempo, namely fast and slow

tempo. Birnbaum et al described in their research the use of fast music, slow music and no-music protocols during good dance conditions and showed that fast music increased several indexes related to heart and lung function [4]. We understand this because the tempo of the music is fast so that the steps carried out follow those that are in danger of a continuous beat. This continuous increase in pulse has an impact on improving respiratory performance and the heart and blood vessels. Researchers have shown that music can be effective when it is played at a point when the sportsman reaches his highest level of activity. From the research results of Terry, P.C., and Karageorghis, C. I explain that music captures attention, adds various emotions, changes and regulates moods, improves work performance, increases arousal, and encourages rhythmic steps [5]. So it can be realized that, when composing music to be made for dance, it is necessary to pay attention to the feelings to be achieved from the steps carried out.

Regarding the positive impact of music during sports activities, it provides an insight regarding the selection of Unesa's aerobic dance music to be made. Unesa's aerobic dance is a research product that previously created its step in 2019, so further research is needed regarding the development of music that is in accordance with the step. In addition, the music that is created has an energetic value that can give a dance participant an uplifting message with a new nuance by incorporating a variety of music genres.

This new nuance that is novelty in Unesa's aerobic dance music is the type of music using electronic dance music (EDM) and each phase of the aerobic dance has a different genre. It is hoped that more and more musical genres are appropriate in designing this music, it can increase the enthusiasm of the participants to do dance enthusiastically until the end. This does not escape the goal of maintaining and improving the fitness of the entire Unesa academic community.

2. METHOD

This research is a development research with 9 stages in the product manufacturing process. The adoption stage [8] consists of problem and potential, data collection, product design, design validation, design revision and product development, product testing, product revision, implementation, product revision. The following is an explanation of the stages of the research below.

- (1) Determining the genres at each phase.
- (2) Making music assisted by a music composer.
- (3) Music product.

The instrument in this study used essay sheets during the implementation (Focus Group Discussion) with a team of creative aerobic dance experts as validators. It consists of a comment column regarding the warm up, main, transitional and cooling phases. In addition, the use

of open and closed type questionnaires was carried out during the trial of music products by practicing aerobic dance in front of the validator. Closed questionnaire uses a 4-point Likert scale to measure the suitability, quality, and effectiveness of music with previously created aerobic dance coreo. The closed questionnaire questions consisted of 29 materials and the open questionnaire consisted of 3 questions in outline.

The number of validators in this study were 3 people who are competent in their respective fields. then there are other experts who are additional as supporters to provide input related to music, namely music composers with academic and professional backgrounds. It is hoped that the expertise possessed by the 2 groups will give good results for the quality of the music made based on the concept of the researcher. The making of this music has different characters with the aim of having a sense of comfort in all academic circles aged 18-60 years from students, staff to lecturers and Unesa leaders.

3. RESULTS AND DISCUSSION

Based on the stages research on the development of Unesa aerobic dance music with 9 stages, the results are as follows.

3.1. Determining the genres at each phase (Initial Stage and Data Collection)

At the initial stage, make observations followed by mapping the problems and potentials of Unesa. The problem that arises based on the results of observations is the genre and type of music that will be used in the development of unesa aerobic dance music. The potential is that Unesa has the Mars Unesa song as the identity of the campus and has music experts who can develop Unesa's aerobic dance music.

The second part of the stage collects a variety of literature to create a design for Unesa's aerobic dance music by promoting campus identity and unique character. This unique character can be created by mapping the genre types at each phase of the step.

3.2. Making music (Music Design, Product Validation, Revision and Product Development)

This design process determination genre and tempo. Music genre in the warm up and cooling step phase, namely the type of reggae. slightly different from the cooling phase there is a mixture with dangdut so it is called reggaedut. the music genre in the main coreo phase, there are five types of genres, namely the main step phase 1 of the mars Unesa genre, the main step phase 2 the cha-cha genre, the main step phase 3 genre high impact trances, 4 main step phases of the taibo trance genre, and 5 main step phases of the dangdut genre. In addition, related to the tempo in the warm-up step phase

is designed with a tempo of 110 bpm, in contrast to the main coreo phase which has 2 tempo categories, namely the main coreo phases 1, 2, 4, and 5 which are set with a size of 130 bpm. per minute and tempo in main mobile phase 3 is determined at a speed of 145 bpm. In contrast to the tempo in the cooling phase which is far enough, the tempo decreases to 84 bpm.

The next stage was the making of music by the composer in accordance with the researcher's concept. It should be noted that music made in one phase has

different variations in music, especially in the transition step as a sign to enter the next step. validation is carried out by practicing the coreo of dance and music.

- (1) Warm up and cool down phase, Music Making and Transitional coreo: In the warm up phase, the instrument used is more of the bass. The use of bass aims to increase the listening heart rate so that it is very appropriate to give it in the warm-up phase as a way to raise the body's condition to enter the main step stage.

Table 1. Mapping step, tempo and instrument of the warm up and cool down phase

Phase	Step	Count	Tempo	Instrumen	Genre
Warm Up	1, 2, 3, 4, 5, 6, 7	2x8	110	Drum, Bass, Gitar	Reggae
Cool Down	1, 2, 3, 4, 5	2x8	84	Piano, Guitar, Gendang	Reggae-Dangdut

It should be noted that in the warm up phase, there are many variations in the design of the instruments made for each step. For example, the right step has different melodic variations when performing a left move in the same type of step. This gives a new nuance to each step so that participants do not feel monotonous in the music and steps being performed.

Making music in the cooling phase predominantly uses instruments such as piano, guitar and drums. The use of pianos, guitars and drums aims to provide a different feel with a warm up and fun. In addition, the tempo used in this phase is 84 bpm lower than warm-up with the aim of lowering the pulse and providing a calming effect on the mind of the dance participants so that they will easily return their body to its original position.

- (2) Main Phase Music Making: In the main phase 1, which uses the character of the Unesa Mars genre, it aims to provide a new spirit in entering the main step with the basic instruments using bass, drums, piano

and orchestras. These instruments are combined into a single musical unit that has good sound dynamics to provide enthusiasm at the beginning of the main step without losing the character of Unesa's Mars music.

Table 2. Mapping step, tempo and instrument of the main 1 phase

Phase	Step	Count	Tempo	Instrumen	Genre
Main 1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1x8	130	Orchestrai, Piano, Drum	Mars Unesa

In the main phase 2, the character of the cha-cha genre is styled with fluctuating tones that give the sensation of rocking the beach style. This character is given with the aim of giving a new sensation by shaking faster and more

relaxed than dangdut. The instruments used were orchestras, pianos, and drums. of the three kinds of instruments, it will be designed with a cha-cha tone character with a richer variation in sound.

Table 3. Mapping step, tempo and instrument of the main 2 phase

Phase	Step	Count	Tempo	Instrumen	Genre
Main 2	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	1-4	130	Orchestrai, Piano, Gendang	Cha-Cha

In main 3, it uses the trance high impact genre character which is made dominant with the speed of playing musical instruments that increases by using electronic music playing which can bring out variations in

the sound of one musical beat and the character of the music over and over again. This aims to increase the peak point of the step to achieve a sub maximal pulse. In the main phase, especially the main 3 has quite a lot of steps

and the tempo is 145. This is a differentiator from the previous phase as well as a tool to give new nuances in

the step by making the participants stay focused on the step and enjoy it.

Table 4. Mapping step, tempo and instrument of the main 3 phase

Phase	Step	Count	Tempo	Instrumen	Genre
Main 3	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	1-4	145	Music Electronic	Trance

In main 4 uses the character of the taibo genre who dominantly uses drums in the musical instrument with the same speed beating sound so that it provides a difference in motivation from before to move more enthusiastically but the step does not use jumping, only on hard steps and

punches. At this stage, the pulse rate is expected not to increase beyond that in stage 3 which is adjusted to the chart between the intensity and tempo of the music. Hopefully, at this stage the pulse starts to decrease, although slightly.

Table 5. Mapping step, tempo and instrument of the main 4 phase

Phase	Step	Count	Tempo	Instrumen	Genre
Main 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	1-4	140	Music Electronic, Drum	Trance Taibo

In main 5, the dangdut character is used, which is dominant between drums and guitars. The drum functions to provide a nuance of a swinging motion, so that

participants who do dance will enjoy the step with fun shaking. The effect of slow and pleasant steps will slowly lower the pulse.

Table 6. Mapping step, tempo and instrument of the main 5 phase

Phase	Step	Count	Tempo	Instrumen	Genre
Main 5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	1-4	130	Gendang, Guitar, Drum	Dangdut Koplo

- (3) **Music Validation:** Validation carried out included the counting of music with step, the music code in each of the following steps, the tempo of the music at each phase of the step, the suitability of the music rhythm with the step, and the variation of instruments at each phase of the step so that it has a significant effect on the participants in the sense of being more enthusiastic, energetic, and more enjoyable during this dance.

Then revised the music assisted by the composer to make music adjustments to the steps based on the simulation results at the music validation stage. The revisions include too little music count in the warm-up phase, which should count the music count up to 24x8 count. The second revision relates to the "gong" sound that is too loud in the transition step in the warm-up phase as a preparation code for entering the next step. The third revision, related to the music tempo in the warm-up phase. The fourth revision of the intermediate step rhythm between the main phase 5 and the cooling feels less precise with an unattractive rhythm and the tempo immediately drops to the level of 84 bpm. The fifth

revision, namely the variation of instruments in the warm-up and main phases was added to improve the quality of the music which can provide a more energetic feel for the dance participants.

3.3. Music Product (Testing, Revision, Implementation and the Last Revision)

The results of research related to the suitability of the dance with the musical accompaniment design, the quality and effectiveness of the music at each phase of the coreo showed very good results. Related to music quality in the warm-up phase provides values that provide a new atmosphere in exercising, especially in the world of aerobic dance. The new atmosphere here is that it has a unique, passionate value so that you can be more enthusiastic while doing dance. Point regarding the effectiveness of music in increasing the pulse rate through the activities of the dance participants. Music quality on cool down phase has a unique, uplifting, interesting value to listen to with a melody that gives a calm impact during the cooling phase. Music quality on main phase has unique, uplifting, interesting values to listen to with a

melody that has an impact on passion and enthusiasm during the main phase.

Besides quality, related to the effectiveness of music on improving fitness, especially the impact of the training zone at each age. the warm up phase and the main phase showed an increase in pulse according to the limits of the training zone at each age. so that this can contribute to participants to improve fitness if done at least 3 times a week. The more there is an increase in the pulse, the music is said to be effective. In addition, it is supported by the results of the RPE analysis filled in by the dance participants after doing aerobics with a high average intensity result. Thus, it shows a relation between the two between the increased tempo of the music, the character of the music with a faster beat due to the strains of the drums with an increase in the pulse of the participants.

In the cooling phase the pulse has decreased, although the initial decline is fast and slow recovery. The overall last minute drop in pulse rate entered the training zone for each participant's age. The more there is a decrease in pulse rate and the positive value of the participants' feelings during dance in the cooling phase, the music is said to be effective. This positive value was obtained from the RPE analysis filled by the dance participants after doing aerobic dance with a low average intensity result.

Usually the use of reggae music in a dance step is called the reggaeton step. This reggaeton step has a function to tighten the thigh and hand muscles [9], so it is very appropriate in preparing the muscles to enter the core step phase. In addition, Barret [10] explains that Reggae is a music for dancing, but the lyrics invite emotional responses, such as crying, anger, and joy. So that in the current era, there are many changes in views, which initially referred to negative things, turned into positive lyrics. The variations of the musical instruments are also more colorful with a sense of enthusiasm for activities. In Sugita's research, B. [11] The most important reggae instrument is the bass that is "broken" and shows a unique song rhythm with a combination of drum beats called "one drop" and also the guitar strum that starts from the bottom up, so that it reads "nyet-nyet" or "Ceket-Ceket".

The music genre in the main coreo phase has different characters or types of genres with the aim of providing new nuances to all participants during the dance. In the main phase of the genre used, trance, which has its own advantages over other genres, namely the original sound of the music at each step with a loud tone character and many variations of the instrument used, because this trance music is also called mix music which combines all the instruments into 1 without losing the harmonization of the music. The fifth phase uses the koplo music genre,

which combines drumming with other musical instruments, such as bass, guitar, piano, and drums.

The dominant influence of the drums forms the character of the music to dance more relaxed even though the velocity of the music is fast. Based on the results of research by Setiadi, D. [12] explained that the elements that build the characteristics of Koplo Dangdut are (1) special playing patterns on drums, (2) fast tempo tendencies, (3) performances with elements of eroticism, (4) Mixing various arrangements. genre, and (5) variation trend in the form of jem-jeman followed by senggakan. This is the advantage of this genre that it is easy to make participants enjoy its highly varied music. According to Setiadi, D. [12], the previous era of dangdut even carried moral values

4. CONCLUSION

The research produces several conclusions is first, the compatibility of music with the Unesa aerobic step has very good value. Second, the process of developing the music that accompanies Unesa's aerobic dance that is adapted to Unesa's aerobic dance has several stages including determining the key signature, tempo, time signature, entering instruments, determining the genre, making music in which there is a velocity setting to play the dynamics of the tone, setting the instrument, then create a loop from the instrument that has been made. Third, the quality of the music that accompanies Unesa's aerobics which is adapted to the concept of Unesa's aerobic dance has a very good value. Fourth, the effectiveness of the music that accompanies Unesa's aerobic dance with Unesa's aerobic dance has a very good value.

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