

ESTABLISHING THE IMPACT OF USING ORFF PEDAGOGICAL APPROACH (OPA) ON TEACHER TRAINEES' PERFORMANCE (TTP) IN BASIC MUSIC SKILLS

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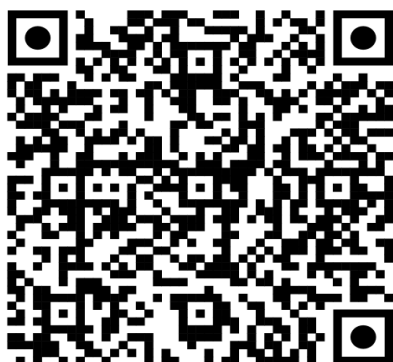
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Abstract

This study aimed to establish the impact of the use of the Orff pedagogical approach (OPA) on teacher trainees' performance in basic music skills. The study was guided by Music Learning Theory by Gordon and complemented by the theory of Multiple Intelligences by Gardner. The study adopted mixed methods quasi-experimental research design. The selected experimental group was exposed to the music-based pedagogical approaches, while the control group continued with the traditional teaching approaches used by music tutors. Purposive sampling was used to draw participating tutors teaching music, while census sampling was used to select teacher trainees studying music in the second year. Questionnaires, an interview schedule, and pre-test and post-test evaluations were used in the collection of data for the study. Frequencies, percentages and means were used to summarise and describe data, whereas Analysis of Variance (ANOVA) and T-test were used to establish the impact. All hypotheses were tested at $\alpha = 0.05$ level of significance. The study concludes that without adequate and functional music teaching and learning resources, it is very difficult to teach music effectively, particularly using OPA. The study recommends widening opportunities for continuous professional development. Continuous professional development facilitated by in-service courses and workshops would give music tutors the incentive and stimulus to explore a lifelong path in their profession.

Key terms: Music education, music pedagogical approaches, primary teacher education.

1.0 INTRODUCTION

In teaching any subject, the teacher employs a very efficient pedagogical approach to make the teaching and learning interesting. Pitts (2017) contends that the pedagogical approaches by which instruction is delivered are varied and the selection of a sound model grounded in music education promotes and increases learning outcomes. Hence, the music teacher should select appropriate pedagogical approaches to heighten the interests and performance of the learners. The music teacher should also emphasise the importance of learners being actively involved in the teaching and learning process because the nature and structure of music lend itself to more learner-centred activities in terms of teaching and learning.

Pedagogy is the science of organising, delivering and managing educational instructional content for learners. Sucic and Benic (2017) aver that pedagogy refers to how teachers and students relate together and the instructional approaches implemented in the classroom. The pedagogy involves content, media, teacher and learner for it to be a complete process (Stott, 2015). Thus, pedagogy is a joint activity in which the learner has an active role leading to greater engagement and a measurable impact on the learners' learning process

A German composer Carl Orff (1895-1982), developed the Orff pedagogical approach to music education. The approach advocates for using speech patterns familiar to the learners as a basis for learning the concept of rhythm. The main components of Orff's approach include imitation, Exploration, improvisation and composition. The effective use of Orff's pedagogical approach assists the teacher trainees in developing the following competencies; creativity and innovation through the development of skills of composing their own original melodies, self-efficacy achieved through playing different musical instruments individually (solo) or with others (ensemble).

The Ministry of Education (MOE) (2012) in Kenya justifies the teaching of music in primary teacher education (PTE) curriculum because of its contribution to the attainment of National Goals of Education, such as promoting national unity, individual development and self-fulfilment. Therefore, the current PTE music curriculum (KIE, 2004) advocates for the use of Orff pedagogical approach to music education. However, several studies report that regular low academic performance by the majority of students is linked to ineffective use of pedagogical approaches. Therefore, the level of use of the music-based pedagogical approaches could cause a decline in teacher trainees' academic performance, resulting in widespread concern over the music performance at the PTE level.

According to Kenya National Examination Council (KNEC, 2018) teacher, trainees' performance in Music as a subject has declined steadily over the past five years in all Kenyan primary teacher training colleges (PTTCs), with an overall mean grade ranging between 4.5 and 6.5. The Nandi County Director of Education (2018) observes that the PTTCs have continually posted unsatisfactory music results for the last five years. The decline in music performance creates a vicious cycle that affects the quality of teaching and learning music in the County TTCs. This may lead to ineffective content delivery of the curriculum, thereby hindering the attainment of National Goals of Education such as national development, individual development and self-fulfilment. In addition, hampering Kenya Vision 2030, which commits to providing globally competitive quality education, training and research for all citizens. Further, hindering Sustainable Development Goal number four (ensuring quality education) and 21st century learning skills and

approaches. It is on this basis that this study sought to establish the impact of the use of Orff pedagogical approach (OPA) on teacher trainees' performance in basic music skills.

2.0 LITERATURE REVIEW

A German composer Carl Orff (1895-1982), developed the Orff approach to music education. The approach advocates for the use of speech patterns familiar to the learners as a basis for learning the concept of rhythm (American Orff Schulwerk Association, 2015). In this approach, speech precedes singing because speech only contains the element of rhythm, whereas Singing contains both rhythm and melody (Campbell & Scott-Kasner, 2014). Furthermore, the approach emphasises that learners should experience music first and then analyse or intellectualise about music afterwards. This is supported by Abril and Gault (2016), who observed that Orff approach emphasises musical imagination and creativity, which can be developed through Singing, moving and playing. Of significance to this study is the indication that students can develop musical skills during learning experiences using Orff approach.

A study by Locke (2016) discovered that Orff approach incorporates singing basic songs advancing from five notes (d, r, m, s, l) at that point, tuning into different modes as indicated by the capacities of the understudies. This finding is comparable with Scott (2018), who found that Orff specialists esteem singing as one of the significant media of the methodology. However, the capacity level of students decided on different methods of joining and organising Singing in the study halls. Orff approach offers simple systemisation of instruction which appeals to music teachers who are sure of their methodology (Frega, 2013). The current study combines the three positions by Locke, Scott and Frega by pointing out that the Orff approach enables students to engage in creative thinking and movement and becomes musically independent.

According to Gault (2013), the Orff approach encourages discovery learning as learners move through activities involving imitation, Exploration, improvisation and composition. Orff's approach is thus characterised by: Rhythm and improvisation and building on what the learners find natural such as rhythms of skipping and running, music evolving from speech and movement, and instructional guidance given by the teachers and musical knowledge that grow from the learner's experiences. Sarrazin (2016) reported that the Orff approach utilises four stages to organise the process of teaching music. They include; imitation, exploration, improvisation and composition.

Imitation

Imitation builds the understudy's collection of pitches, rhythms, meter, beat and elements. Understudies ingest the central music materials for their 'tool compartment' to be utilised later in more intricate exercises (Debrot, 2014). The music teacher is expected to engage students by inviting them to listen to a four-beat rhythm on a drum and then clap in imitation of it. In addition, the students can vocally imitate short melodic patterns of four beats played on a melodic instrument such as piano. Imitation helps students to work on developing skills in rhythmic speech, singing, playing instruments and body percussion by following the teacher's example (Long, 2013).

Exploration

In Exploration, the students begin understanding and even applying the knowledge learned through imitation. They hear the movement of pitches and the content of rhythms and explore the timbre of

whatever instrumental or voice to which they have access. Sing a familiar song in a different meter, such as turning a 2_4 song into 3_4 songs. Sometimes choose a lullaby to sing in expressive ways characteristic of the genre and then, in an opposite manner, sampling soft versus loud and smooth versus jerky qualities. This helps students feel their musicianship rather than copy the teacher's musicianship (Long, 2013).

Improvisation

In improvisation, the students understand and also can apply some of the possible combinations of pitches and rhythms, form and dynamics within a musical framework (Frazee, 2012). For instance, students select a simple rhythm and see what permutations a group of singers can create. Do the same with the melody. The students can also select a story and figure out ways of musically enhancing the story through the provision of musical responses to the story, preludes, interludes and postludes. Long (2013) observed that improvisation fosters musical independence along with teaching valid aspects of music theory.

Composition

Composing is the pinnacle of making music in that the composer must analyse the musical material they are working with so as to create a new piece (Frega, 2013). The students can play a simple song's melody, develop variations of the melody and accompaniment then notate the melody. They can also compose an eight-bar piece that can be notated or compose two phrases of short melodic phrases of four bars, then play them on pitched instruments (Frazee, 2013). The study summarised the four stages of Orff's approach by maintaining that they are like Bloom's scientific classification in that they start by presenting an essential ability and afterwards continuously proceed onward to more mind-boggling exercises, for example, a synthesis which is spoken to in the upper periods of the scientific categorisation.

Mason (2012) notes that Orff's approach to music learning is where learners learn most of the elements of music, such as pitch, rhythm, harmony and texture, in sequential order. Dilek (2012) noted that Orff started with rhythm as the basic component inherent in music, speech and dance, combining and unifying them with one language. The study summarised the basic idea of Orff's approach in music from the foregoing arguments of Mason and Dilek by maintaining that movement and speech can combine Orff's approach. The study used these positions to indicate that Orff's approach is useful for it advocates for the use of speech patterns familiar to the learners as a basis for learning the concept of rhythm. The rhythms learnt evolved from speech patterns already familiar to the teacher trainees.

Long (2013) supports that Orff and Bloom's taxonomy classification are comparative in that they start by presenting an essential aptitude at that point and systematically move to exercises that are more intricate. In teaching rhythm and melody, the guiding principles are that reading and notation be built on known musical materials and sound precede symbols (Locke, 2016). In this regard, the students should be able to learn more complex concepts as a result of their previous learning. This is pertinent to this study since learning in music should be efficiently sequenced with the goal that learning makes later learning significant. Orff experts are relied upon to learn and show the ideas and aptitudes of imaginative development.

Locke (2016) and Sangiorgio (2010) maintain that the utilisation of Orff approach in training music has an effect on students' scholarly accomplishment while assessing how they are getting along in music learning. Vance (2014) noted that Orff based methodology is an extraordinary teaching method which is described

by the accompanying components; abilities, information and voices created from commitment in the melodic exercises. Orff's approach empowers melodic open doors for all students. Eren and Gul (2017) show this in their investigation, 'the use of Orff-based music exercises for instructive purposes', that Orff-based methodology made a beneficial outcome on melodic and non-melodic advancement of the considerable number of understudies at all levels. The study used these positions to indicate that the use of Orff approach requires experience in practical knowledge in teaching music. The experience affects teacher trainees' participation in music making.

Jorgenson (2011) found that the approach moves toward student-centred exploration and learning, where students and teachers at all levels use their imagination in creating and discovering strategies to make meaning of music. This finding is also in support of a study in China by Locke (2016), who found that the Orff approach provides opportunities for collaboration, creativity, composition and improvisation. The study combines the two positions by Jorgenson and Locke, pointing out that Orff's approach involves learner participation, imagination and understanding. In addition, the approach makes an attempt to adapt instruction to the needs of learners.

According to Baker (2014), there is student motivation with engagement in composition using Orff approach. Motivation is an important contributor to academic achievement. Further, Baker (2014) elucidated that student motivation for learning is increased in order to have successful students who value a commitment to long life learning and attainment of skills. Often the reputation of a school is based on student achievement as determined by standardised test scores. Vance (2014) found that music teachers with more advanced Orff training included more playing and creating activities than those with less training. The study deduced from the explanations that students participated in decision-making more often in classrooms where teachers had more advanced Orff training. All Orff-trained teachers, regardless of the amount of training, devoted the same time to singing, reading and listening activities.

While recognising the use of Orff approach in teaching and learning music, Jorgenson (2011) posits that there are challenges music teachers face when attempting to apply Orff approach in their classroom settings. In addition, Jorgenson (2011) observed that music teachers in America do not apply Orff approach because they lack funding for Orff instruments and resources. In Kenya, primary teacher training colleges are still using training manuals and traditional approaches to training. E-learning is yet to be established and utilised effectively (Owino, 2014). Salmon (2012) agrees that finding appropriate musical instruments can be challenging for music teachers using Orff approach but can inspire students' imagination and open up new ways of playing, improvising and creating. The authors put emphasis on the challenges of using Orff's approach. These challenges have created a negative attitude and view of the use of Orff's approach in the music education field. This implied that Orff's approach is used to a minimal level. The study got equally informed that music teaching learning resources are a key component towards the realisation of quality music teacher training. This is because practical music skills need to be reinforced using teaching and learning resources, which will, in turn, be applicable during professional actualisation.

3.0 METHODOLOGY

The study was guided by Music Learning Theory by Gordon and complemented by the theory of Multiple Intelligences by Gardner. The study adopted mixed methods quasi-experimental research design. The selected experimental group was exposed to the music-based pedagogical approaches, while the control

group continued with the traditional teaching approaches used by music tutors. The target population was 344, comprising 341 teacher trainees in their second year and 3 college music tutors. Purposive sampling was used to draw participating tutors teaching music, while census sampling was used to select teacher trainees studying music in the second year. A sample of 3 tutors teaching music and 170 teacher trainees studying music in second year participated in the study. Questionnaires, an interview schedule, and pre-test and post-test evaluations were used in the collection of data for the study. A pilot study was carried out to determine the reliability of the research instruments. The reliability of the instruments was estimated using Cronbach's alpha. A correlation coefficient value of 0.748 was achieved. The research instruments were validated with the help of the supervisors and experts from the School of Education and the School of Music and Media. Frequencies, percentages and means were used to summarise and describe data, whereas Analysis of Variance (ANOVA) and T-test were used to establish the impact. All hypotheses were tested at $\alpha = 0.05$ level of significance.

4.0 RESULTS AND DISCUSSIONS

Impact of the use of OPA on TTP in Basic Music Skills

The hypothesis for this study stated that there is no statistically significant impact of the use of Orff Pedagogical Approach on teacher trainees' performance in basic music skills. The impact of the use of the Orff Pedagogical Approach on teacher trainees' performance in basic music skills was determined using descriptive and inferential analysis.

Descriptive Statistics on the Impact of the use of Orff Pedagogical Approach (OPA)

Locke (2016) and Sangiorgio (2010) contend that the use of Orff's approach to teaching music creates an impact on students' academic achievement when evaluating how they are doing in music learning. The experience of the use of Orff Pedagogical Approach was measured using a set of eight items on a Likert scale ranging from 'no extent' (1) to 'very large extent' (5). The responses that described the extent to which teacher trainees had experienced the use of Orff Pedagogical Approach were analysed by determining the percentages, mean and standard deviation. The analysis results are presented in Table 1.

Table 1: Descriptive Statistics on the Impact of the use of the OPA

Orff Pedagogical Approach (OPA)	To no extent at all (1)	To a small extent (2)	To a moderate extent (3)	To a large extent, (4)	To a very large extent (5)	Mean	Std. Dev
To what extent do you sing melodic phrases using solfa syllables (doh, rah, me, fah, soh, lah, te, doh)		9.5	31.01	17.72	41.77	4.5868	.63289
To what extent do you incorporate playing chords of various scales in class?		66.02	8.97	16.67	8.33	2.2575	.63969

To what extent do you play two intervals harmonically or melodically?	2.6	52.6	34.42	6.49	3.9	2.2934	.6821
To what extent do you listen and sing the intervals before notating them?	4.52	25.16	36.13	8.39	25.81	4.5928	.66907
To what extent do you play pre-recorded music with chords?	10.9	46.15	35.26	3.21	4.49	2.3114	.65771
To what extent do you listen, sing the various melodies, and identify the triads/chords?	11.39	75.95	6.96	5.7		2.3054	.66507
To what extent do you listen and identify the new key in a transposed piece of music?	25.32	60.13	10.13	2.53	1.9	2.3054	.66507
To what extent do you improvise chords played during music lessons to compose/create your own melodies	27.1	45.16	23.23	4.52		2.3114	.65771

Overall 2.8662 .6840

The findings presented in Table 1 show that the overall mean of all the respondents was 2.86 (SD=.68) out of the maximum mean score of 5 points. This suggests that teacher trainees' experienced the use of Orff pedagogical approach to a small extent. Table 1 also revealed that the majority, 75.95 per cent, respondents and the mean of 2.3 (SD=0.66) of the respondents experienced listening, singing various melodies and identifying the triads/chords to a small extent. Playing of chords of various scales was to a small extent, as indicated by 66.02 per cent and the mean of 2.2 (SD=0.63) respondents, while 60.13 per cent responded and the mean of 2.3 (SD=0.66) experienced listening and identification of the new key in a transposed piece of music at a small extent. The respondents who reported that they experienced the playing of harmonic or melodic intervals at a small extent were 52.6 per cent, and the mean of 2.2 (SD=0.68). The playing of pre-recorded music with chords constituted 46.15 per cent and the mean of 2.3 (SD=0.65), while improvising chords played during music lessons to create/compose own melodies 45.16 per cent and the mean of 2.3 (SD=0.65). However, 41.77 per cent of the respondents and the mean of 4.5 (SD= 0.63) of the respondents experienced singing melodic phrases using sol-fa syllables at a very large extent, while 36.13 per cent and the mean of 4.5 (SD=0.66) experienced listening and singing intervals before noting down at a moderate extent. The results reveal that generally, the teacher trainees experienced the use of Orff Pedagogical Approach to a small extent, although a big percentage experienced singing melodic phrases using sol-fa syllables.

This finding agrees with Locke (2016) that a lack of prior knowledge of Orff approach results in a decrease in music skills with a practical orientation. The findings concur with the responses from music tutors' interviews, indicating that their pedagogical knowledge was not adequate. This is in line with the (MOE, 2011) observation that tutors have little knowledge and experience in the professional area of primary teacher education or the reality of primary teacher training. Chokera (2016) observed that pedagogical knowledge (PK) consists of general elements regarding teaching, classroom organisation and management, instructional models and strategies and classroom communication.

From the music tutors' interviews, the issue of teaching and learning resources when using Orff Pedagogical Approach emerged strongly as a factor hindering the use of the approach. This finding corresponds to Owino (2014), who reported that most Learning Resource Centres (LRC) in primary teacher training colleges (PTTCs) in Kenya are no longer functional. They are currently full of outdated books. The PTTCs have insufficient, old worn out and unutilised facilities such as music rooms. This has not been in line with the present needs of training whereby Learning Resource Centres should be Information and Communication Technology (ICT) compliant. This implies that without adequate and functional music teaching and learning resources, it is very difficult to use Orff Pedagogical Approach and teach music effectively. In the same vein, Chapman (2015) is of the opinion that teachers need supporting materials such as textbooks, and listening equipment like compact disc (CD) players and tape recorders, without which learners' exposure to music will be limited. Without classroom instruments, the learners will not be able to develop music literacy in instrument playing (Chapman, 2015).

Subsequently, the findings from the music tutors' interviews indicated that finding appropriate musical instruments and learning resources was a challenge when using Orff Pedagogical Approach. This agrees with Jorgenson (2011) that there are challenges music teachers face when attempting to apply Orff approach in their classroom settings. Further, Jorgenson (2011) observed that music teachers in America do not apply Orff approach because they lack funding for Orff instruments and resources. However, Salmon (2012) observed that finding appropriate instruments could be challenging for music teachers using Orff approach but can inspire students' imagination and open up new ways of playing, improvising and creating.

Music teaching learning resources are a key component towards the realisation of quality music teacher training. This is because music practical skills need to be reinforced using teaching and learning aids, which will, in turn, be applicable during professional actualisation. In Kenya, primary teacher training colleges are still using training manuals and traditional approaches to training. E-learning is yet to be established and utilised effectively (Owino, 2014). According to Apudo (2016), content delivery using digital music technology is fast; music teachers who integrate digital technologies in music teaching and learning to present their teachings have an advantage over those who do not use digital music technology.

The findings in Table 1 further reflected that most teacher trainees 75.95 per cent listened and sang various melodies. This finding corresponds with those of Locke (2016), who found out that Orff approach includes singing simple melodies evolving from five notes (d, r, m, s, l) and then listening to various modes according to the abilities of the students. This finding is similar to Scott (2018), who found that Orff practitioners value singing as one of the important media of the approach but that the ability level of

students determined various ways of incorporating and prioritising Singing in the classrooms. In addition, Vance (2014) noted that Orff based approach is a transformative pedagogy which is characterised by skills, knowledge and voices developing from engagement in musical activities.

From the foregoing discussions, it could be argued that in as much as there are mixed findings regarding the use of OPA, the findings of the current study agree with a few other studies that posit that Orff Pedagogical Approach created a positive effect on some musical skills among the teacher trainees and hence improvement in their academic performance although to a small extent. This is not to say that music tutors should abandon the use of Orff Pedagogical Approach because of the 'small extent' use. On the contrary, music tutors must work efficiently as possible to help facilitate teacher trainees' improvement and success at each stage of their musical development. The music tutors' inability to teach music skills has a negative impact on teacher trainees in that teacher trainees are being denied an opportunity to learn the music concepts. Therefore, music tutors should be well trained by affording them more time to acquire all the required music skills in the use of Orff pedagogical approach.

Music Activities Other than Orff Pedagogical Approach Activities

Concerning the item above, the respondents were asked to indicate other music activities they engage in other than the Orff Pedagogical Approach activities. Table 2 presents the results of the analysis.

Table 2: Music Activities other than Orff Pedagogical Approach Activities

Music activities	Frequency	Per cent
Clapping	49	29.34
Clapping and dancing	11	6.59
Clapping and movement	7	4.19
Clapping and tapping rhythm	29	17.37
Clapping, tapping rhythm and dancing	4	2.40
Dancing	8	4.79
Singing	12	7.19
Singing and clapping	9	5.39
Singing and tapping rhythm	5	2.99
Singing, clapping and movement	6	3.59
Tapping rhythm	9	5.39
Tapping rhythm and dancing	8	4.79
Non-response	10	5.99
Total	167	100.00

As shown in table 2, clapping constituted 49(29.34%) of the respondents, while Clapping and tapping rhythm 29(17.37%). Another 12(7.19%) of the respondents indicated Singing, while 11(6.59%) reported clapping and dancing. Singing, clapping and Tapping rhythm all constituted 9(5.39%) of the respondents, with 8(4.79%) considering Dancing, Tapping rhythm and dancing. Clapping and movement constituted 7(4.19%) of the respondents, while clapping, tapping rhythm, dancing and Singing, and clapping and

movement all constituted 6(3.59%). Further, Singing and tapping rhythm 5(2.99%) with 10(5.99%) constituting nonresponse. The results revealed that, generally, clapping was the most used music activity. The music tutors involved the teacher trainees apart from the Orff activities in a music lesson.

Additional Instructional Approaches Used by Music Tutors

Respondents were asked to indicate additional instructional approaches their music tutors engaged them in. Table 3 presents these findings.

Table 3: Additional Instructional Approaches

Additional Instructional Approaches	Frequency	Per cent
Demonstration	17	10.17
Imitation	17	10.17
Lecture	75	44.91
Dancing and demonstration	4	2.40
Lecture and demonstration	9	5.39
Lecture and participatory	4	2.40
Lecture and recitation	4	2.40
Recitation	15	8.98
Imitations and lecture	12	7.19
Non-response	10	5.99
Total	167	100.00

In relation to the above concern, the respondents were asked to suggest additional instructional approaches their tutors used during music lessons. It is evident that in table 3 above, the majority, 75(44.91%), of the music tutors taught using the lecture method, while 17(10.17%) used demonstration and imitation. Some 15(8.98%) indicated that the tutors used recitation, while 12(7.19%) reported that tutors used imitations and lectures. Another 9(5.39%) of the tutors taught using the Lecture method and demonstration, while 4(2.4%) of the tutors preferred dancing and demonstration, lecture and participatory, and lecture and recitation. In addition, 10(5.99%) constituted nonresponse. As reflected in the results, most of the music tutors taught using the lecture method. This is also an indication that music tutors use teacher-centred methods and thus emphasise content knowledge. These results are a pointer to the reason why there is a decline in the performance of the teacher trainees in the PTE music examination.

Inferential Statistics on the Impact of the Use of Orff Pedagogical Approach

The impact of the use of Orff pedagogical approach (OPA) on teacher trainees' performance (TTP) in basic music skills was determined by the performance of the One-way Analysis of Variance (ANOVA) analysis. Table 4 presents the findings.

Table 4: One-way ANOVA: x2 versus TRt

Source	Df	Ss	Ms	F	P-value
TRr	3	23.92	7.974	0.37	0.778
Error	147	3201.69	21.780		

Total	150	3225.62			
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In regard to Orff Pedagogical Approach and teacher trainees' performance in basic music skills, table 4 indicates that the probability value (p-value) is greater than 0.05 ($p = 0.778$). Consequently, there is no significant difference in the performance of teacher trainees in different groups (each experimental and control group). In addition, there were no further comparisons. That is, the mean performance of experimental pre and post-test mean scores were not different from the mean performance of control pre and post-test mean scores. This finding agrees with the study finding of Long (2013), who found that both the Orff approach and traditional approach contributed slightly to the acquisition of music skills, but neither was superior to the other. Research on the effect of the Orff pedagogical approach notes that there is a positive effect on students' academic performance, but not always a significant or entirely linear one (Long, 2013).

The research findings of Long (2013) are, however, contrary to a study by Vance (2014) found that students who were using the Orff approach made a significant gain in mathematics scores than the group which received no music instruction. Further studies by Womack (2014) reported that there was a significantly greater improvement in students taught based on Orff's philosophies of music education. Ventura (2014) found that participatory students and teachers in the Orff group displayed a better quality of elemental music and a more positive attitude towards music and the development of music skills than in the traditional music education group.

The findings generally indicate that there is a slightly significant use of Orff pedagogical approach by the music tutors. This limits teacher trainees in acquiring necessary music literacy skills. The concern is that music tutors use lecture methods more than Orff pedagogical approach. The fact that music tutors use only lectures shows that they are limited in applying Orff pedagogical approaches that are ideal for teaching various music concepts to develop music literacy. The research findings also hinged on the professional development of the music tutors. Teachers' effectiveness is measured in terms of learner performance on standardised tests, which in Kenya include the PTE examination in Primary Teacher Training Colleges (PTTC).

The results showed that most teacher trainees' experienced the use of OPA to a 'small extent', which had an effect on their learning outcomes. The majority, 75.95 per cent, listened and sang various melodies, and 66.02 per cent played chords of various scales in a class to a small extent. It is noted that there was less experience of OPA in music lessons, which negatively affected the learning outcomes in music examinations. This was attributed to the fact that music tutors had little knowledge and experience in the use of OPA. Lack of pedagogical knowledge in itself is an indicator that music tutors may have lost interest in the use and, thus, unsatisfactory performance by the teacher trainees' (TTs) while the teacher trainees lacked interest.

The one-way ANOVA results showed that the probability value (p-value) ($p = 0.778$) is greater than 0.05. Hence, there is no significant difference in the performance of teacher trainees in different groups (each experimental and control group). In addition, there were no further comparisons. That is, the mean performance of experimental pre and post-test mean scores were not different from the mean

performance of control pre and post-test mean scores. This showed that training of the TTs with OPA had no impact on their academic performance. The Orff pedagogical approach (OPA) incorporates tutors' experience, teaching and learning resources, and this partly explains why the teacher trainees (TTs) did perform to a small level. The tutors' quality depends on the knowledge and experience applied effectively to exhibit knowledge about teaching and learning. The teaching experience, teaching and learning resources in learning institutions significantly count in the determination of teacher trainees' performance in basic music skills.

The research findings also revealed that music tutors had little pedagogical knowledge of the use of OPA. The emerging issue of limited knowledge and deficiency could be attributed to the following; lack of initial training or induction of the music tutors, individual music tutors' negligence and failure to research. It was also established that inadequate musical instruments, both African and Western and improper music rooms are issues music tutors face in teaching music in general and worst when implementing the use of OPA. This implies that without adequate and functional music teaching and learning resources, it is very difficult to teach music effectively. In addition, it was established that finding appropriate musical instruments and learning resources could be challenging when using OPA. Further, it was reported that the current PTE music curriculum does not allow the effective use of Orff Pedagogical Approach because of insufficient time allocated for music lessons. As a result of insufficient time, music tutors result in drilling teacher trainees to pass the examination. In addition, it was established that the current PTE music evaluation does not require the practical aspect of music because there is a lack of formative or summative evaluation of music practical. This has led to music tutors not teaching using the OPA.

5.0 CONCLUSION AND RECOMMENDATIONS

Conclusion: The study concludes that without adequate and functional music teaching and learning resources, it is very difficult to teach music effectively and particularly the use of OPA. Music teaching learning resources are a key component towards the realisation of quality music teacher training. This is because music practical skills need to be reinforced using effective teaching and learning resources which will, in turn, be applicable during professional actualisation. This is in line with Orff's contribution to the need for incorporating varied educational media in the music learning process.

Recommendation: The study recommends widening opportunities for continuous professional development. Continuous professional development facilitated by in-service courses and workshops would give music tutors the incentive and stimulus to explore a lifelong path in their profession. In regard to teaching and learning resources, the study recommends that the Ministry of Education (MOE) review and provide adequate quality teaching and learning resources by allocating more funds to primary teacher training colleges (PTTCs). This action would ensure an appropriate trainee textbook ratio, an adequate library and improved music room facilities. Reviewing the adequacy of teaching and learning resources should be a continuous process since music subject is compulsory for Art subjects (Option B), and college enrolment is purposed to keep improving. The resources require replacement, maintenance and improvement.

6.0 REFERENCES

1. Abril, C. R., & Gault, B. M. (2016). *Teaching General Music: Approaches, Issues and Viewpoints*. Oxford University Press. <https://www.researchgate.net>.

2. American Orff Schulwerk Association. (2015). *What is Orff Schulwerk?* <http://aosa.org/about/what-is-orff-schulwerk/>.
3. Apudo-Achola, M. (2016). *Towards a Pedagogical Framework to Transform Students Music Learning with Technology-Mediated Environments*. The case of higher music education programmes in Kenya. Paper presentation at the BRIDGES International Conference held on August 10th-12th at Jyväskylä University, FINLAND.
4. Baker, D. (2014). *Improving Motivation and Engagement in High School Music Composition through Orff Schulwerk Pedagogy*. Unpublished Master's Thesis. University of Wankato, Hamilton, New Zealand.
5. Campbell, P. S., & Scott-Kassner, C. (2014). Music in childhood: *From Preschool through the Elementary Grades* (4th Ed.). Schirmer Cengage Learning.
6. Chapman, N. (2015). *Exploring Teachers' Perspectives of Cooperative Learning to Create Music in Orff Schulwerk Classrooms*. Unpublished Master of Music thesis. University of Nebraska. <http://digitalcommons.unl.edu/musicstudent>.
7. Chokera, A. K. (2016). *The Effects of a Music Methods Course on Kenyan Pre-Service Generalist Primary School Teachers' Perceived Confidence and Competence to Teach Music*. Unpublished PhD. Dissertation. University of Florida.
8. Debrot, R. (2014). Integrating Orff Schulwerk and 21st century learning. *Orff Echo*, 46(2), 42-46.
9. Dilek, G.C. (2012). Kodaly and Orff: A comparison of two approaches in early music education. *ZKU Journal of Social Sciences*, 8(15).
10. Eren, B., & Gul, G. (2017). The use of Orff-based music activities for educational and therapeutic purposes with disadvantaged groups of Romani children. *Academic Journal*, 12(22), 1062-1073. <http://www.academicjournals.org/ERR>.
11. Frazee, J. (2012). *Artful-Playful-Mindful: A new Orff-Schulwerk Curriculum for Music Making and Music Thinking*. Schott Music.
12. Frazee, J. (2013). From the world to the new: Cultivating Orff-Schulwerk wildflower from Europe to the USA. In Wang, C.C. & Springer, D.G. (Eds.). *Orff-Schulwerk: Reflections and directions. Proceedings of the Symposium*, 29-58. GIA Publications.
13. Frega, A. L. (2013). Orff-Schulwerk in Latin America: Diverse experiences. In Wang, C.C., & Springer, D.G. (Eds.), *Orff-Schulwerk: Reflections and Directions*, 59-64, GIA Publications.
14. Gault, B. M. (2013). Expanding the vision: Pedagogy and teacher education. *Kodály Envoy*, 39(2), 10. <https://www.researchgate.net>.
15. Haston, W., & Russell, J. A. (2012). Turning into teachers: Influences of authentic context learning experiences on the occupational identity development of pre-service music teachers. *Journal of Research in Music Education*, 59(4), 369-392.
16. Henley, D. (2011). *Music education in England*. A review for the Department of Education and Department for Culture, Music and Sport. Department of Education.
17. Jorgenson, M. (2011). *An analysis of the Music Education Philosophy of Carl Orff*. Unpublished Master thesis. College of Liberal Studies.
18. Kenya Institute of Education. (KIE). (2004). *The Creative Arts Syllabus*. Kenya Literature Bureau.
19. Kenya National Examinations Council. (2018). *PTE Examination Performance Report*. KNEC.
20. Locke, L. M. (2016). *The Orff Approach in the Professional Lives and Practices of Teachers in the Aotearoa New Zealand School Context*. Unpublished PhD. Dissertation. The University of Waikato.

21. Long, A. (2013). *Involve me: Using the Orff Approach within the Elementary Classroom*. http://thekeep.eiu.edu/cgi/viewcontent.cgi?article=1003&context=lib_awards_2013_docs.
22. Mason, N. F. (2012). *The effect of Orff Schulwerk Instruction on Rhythmic Achievement in Beginning Band*. (Unpublished doctoral dissertation. DocumentURL<http://search.proquest.com/docview/1506961102>).
23. Ministry of Education. (MOE) (2011). Collective Delivery of the Education Promises: Improving the Education and Training Systems for Quality Learning Outcomes and Quality Life. Presented at the National Education Conference, 27th June–1st July 2011.
24. Ministry of Education. (MOE) (2012). *Towards a Globally Competitive Quality Education for Sustainable Development*.
25. Moore, J. (N.d.). (2019). *Philosophy of the Alliance for Active Music Making*. <http://www.allianceamm.org/philosophy/>.
26. Nandi County Director of Education. (2018). *PTE Examination Performance Report, Nandi, Kenya*.
27. Owino, E. A. (2014). *Quality of Teacher Training in Concurrent Programs in Primary Teacher Colleges, Homabay County, Kenya*. Unpublished M. Ed. thesis. University of Nairobi, Kenya.
28. Pitts, S. E. (2017). What is music education? Understanding and fostering routes into lifelong musical engagement. *Journal of Music Education Research*, 19(2), 160–168. <https://www.researchgate.net>.
29. Salmon, S. (2012). Inclusion of Orff Schulwerk. *Journal of Music Education Research*, 15(1), 27–33. <https://www.researchgate.net>.
30. Sangiorgio, A. (2010). Orff- Schulwerk as Anthropology of music. *Turkish Orff Schulwerk Association, Istanbul*, 6-21.
31. Sarrazin, N. (2016). *Music and the Child*. Open Sunny textbooks, the State University of New York at Genesco. <http://textbooks.opensunny.org>.
32. Scott, E. (2018). *Music Education in England Schools*. House of Lords library briefing.
33. Stott, A. (2015). Learner-centred pedagogy: Towards a post-2015 agenda for teaching and learning. *International Journal of Educational Development*, 40(1), 2559–266.
34. Sucic, B., & Benic, M. (2017). Different teaching methods in music education and achievement motivation. Unpublished manuscript, Faculty of teacher education. University of Zagreb, Croatia. <https://www.researchgate.net>.
35. Vance, J. (2014). Making the connection: Orff Schulwerk, 21st century learning skills and the common core. *The Orff Echo* (Spring 2014), 10-14.
36. Ventura, E. (2014). Critical thinking in the 21st century: Orff Schulwerk as an impetus for reform. *The Orff Echo* (Spring 2014), 6–20.