

**A MODEL FOR AN IMPACT-DIRECTED MUSIC-BASED PEDAGOGICAL
APPROACH FOR ENHANCING TEACHER TRAINEES ' PERFORMANCE IN
BASIC MUSIC SKILLS**

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**A Thesis Submitted to the Institute of Postgraduate Studies of Kabarak University
in Partial Fulfillment of the Requirements for the Award of Doctor of Philosophy in
Music Education**

KABARAK UNIVERSITY

NOVEMBER 2022

DECLARATION

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The research thesis entitled “**A Model for an Impact-directed Music-based Pedagogical Approach for Enhancing Teacher Trainees’ Performance in Basic Music Skills**” written by **Dorothy Atieno Okeyo** is presented to the Institute of Postgraduate Studies of Kabarak University. We have reviewed the thesis and recommend it be accepted in partial fulfillment of the requirements for the award of the degree of Doctor of Philosophy in Music Education.

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DEDICATION

I humbly dedicate this work to my late father Narkiso Okeyo who would have been delighted to see me obtain a doctorate degree; to my mother Margaret Adoyo Okeyo for her love, support and encouragement; to my siblings Francis, Kennedy, Everlyn, Kepha and Lencer; to my loving husband John, and my children Eve, Elsie and Adam who I believe will immensely be inspired by my academic achievement.

ABSTRACT

Music education is a field of study associated with the teaching and learning of music. Music teachers should apply appropriate pedagogical approaches that best suit specific level outcomes. Over the years, practitioners and educationists have noted a decline in teacher trainees' performance in music at primary teacher education (PTE) level. There is little indication on whether the use of music-based pedagogical approaches impact on the teacher trainees' performance in PTE music examination in teacher training colleges. The current study was prompted by the need for pedagogical approaches that would help in raising efficiency in teaching music and by extension yielding better results. The purpose of this study therefore was to develop a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills. The objectives of the study include: to determine the impact of the use of Kodály pedagogical approach (KPA) on teacher trainees' performance in music basic skills, to establish the impact of the use of Orff pedagogical approach (OPA) on teacher trainees' performance in basic music skills, to analyse the impact of the use of Dalcroze pedagogical approach (DPA) on teacher trainees' performance in basic music skills and to propose a model for an impact-directed music-based pedagogical approach. 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. Selected experimental group was exposed to the music-based pedagogical approaches while control group continued with the traditional teaching approaches used by music tutors. The target population was 344 comprising of 341 teacher trainees in 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 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, pre-test and post-test evaluation were used in collection of data for the study. A pilot study was conducted to determine the reliability of the research instruments. Cronbach's alpha was used to estimate the reliability of the instruments. A correlation co-efficient value of 0.748 was achieved. The research instruments were validated by the help of the supervisors and experts from the School of Education and School of Music and Media. Frequencies, percentages and means were used to summarize 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 revealed that there was statistically significant difference in the use of KPA on teacher trainees' performance in basic music skills. The study also revealed that sequential instruction has great potential for improvement of music basic skills (rhythm, melody, intervals, triads, transposition, and translation) at PTE music examination. Further, the study has proposed a model for an impact-directed music-based pedagogical approach, which it is hoped when adapted will improve the overall performance of PTE music curriculum in Kenya, particularly equipping the teacher trainees with musicianship skills while also helping the music tutors develop content knowledge, practical experiences and effective pedagogical approaches. To this end, the study recommends that Kenya Institute of Curriculum Development (KICD) should consider inclusion of the principles of all music-based pedagogical approaches in the current curriculum reform.

Key Words: *Music education, music pedagogical approaches, primary teacher education*

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ABBREVIATIONS AND ACRONYMS

APME:	Academic Performance in Music Examination
CDE:	County Director of Education
CSO:	Curriculum Support Officers
DPA:	Dalcroze Pedagogical Approach
KICD:	Kenya Institute of Curriculum Development
KNEC:	Kenya National Examination Council
KPA:	Kodály Pedagogical Approach
MI:	Multiple Intelligences
MLT:	Music Learning Theory
MOE:	Ministry of Education
OPA:	Orff Pedagogical Approach
P1:	Primary One
PTE:	Primary Teacher Education
PTTC:	Primary Teachers Training College
QASO:	Quality Assurance and Standards Officer
TSC:	Teachers Service Commission
TTs:	Teacher Trainees
TTP:	Teacher Trainees' Performance

OPERATIONAL DEFINITION OF TERMS

The following is the meaning of key terms and the operational meaning of variables of the study;

Academic Performance: refers to achievement in standardized tests of examination shown by a student. In this study, it refers to the level of academic success of teacher trainees' as measured in Primary teacher education music examination (grades 1-8).

Impact: refers to the changes associated with a particular intervention that occur over a period of time. In this study, it will refer to the change that comes from the result of the use of music-based pedagogical approaches on teacher trainees' music performance.

Music Education: is a process in which students learn through music making and engaging in their own music as well as that of other people's cultures. In this study, it will refer to teaching and learning for acquisition of knowledge, skills and attitude for the practice of music.

Music-based Pedagogical Approaches: will refer to regular pattern of processes through which the tutors of music take the teacher trainees in order to develop a conceptual understanding of musical elements. In this study, the music-based pedagogical approaches will be limited to three approaches; Kodály, Orff and Dalcroze.

Pedagogy: is the science of organizing, delivering and managing educational content to learners. In this study, pedagogy will be used to refer to the art of teaching specific music concepts outlined in primary teacher education music syllabus with the aim of achieving the learning outcomes of the music curriculum

Primary Teacher Education: refers to the policies, procedures and practices aimed at equipping and training persons for professional work as instructors in Kenyan primary schools.

Primary Teacher Education Music Examination: refers to national exam that is undertaken by teacher trainees during the second year of the P1 course. The outcome determines the trainees' admission to higher education and a teaching job in primary school level

Teacher Trainees: refers to college student teachers who are taught or instructed by the educators called college tutors.

Conventional Approaches: In this study, conventional approach is an approach to learning characterized by classroom memorization, recitation, teacher-centred and use of conventional procedures and resources

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents background of the study, the statement of the problem and the purpose of the study. It also covers objectives of the study, hypotheses of the study, significance of the study, scope, limitations and assumptions of the study.

1.2 Background of the Study

Music education is a uniquely important field of study in which teaching and learning for acquisition of knowledge, skills and attitude for the practice of music takes place. Gojmerac (2017) refers to music education as the process of equipping students with music knowledge and skills to enable them understand, respond to, create and operate successfully in an environment of music. The teaching process requires deep knowledge and understanding in a wide range of areas and the ability to synthesize and apply the knowledge in different situations under varying conditions (Alexander, 2017). The expectations in music teaching and learning are no less.

In the teaching of 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 the 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 emphasize on the importance of learners being actively involved in the teaching and learning process because the nature and structure of music lends itself to more learner-centered activities in terms of teaching and learning.

Pedagogy is the science of organizing, delivering and managing educational instructional content to learners. Sucic and Benic (2017) aver that pedagogy refers to how teachers and students relate together; and the instructional approaches implemented in the classroom. 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.

According to Singh and Savita (2016), many scholars today widely adopt various pedagogical approaches to bring about desirable changes in learners. In teacher education, lectures and theoretical pedagogy have been dominant in music education and evidenced when students complete only lower order tasks (Lopez et al., 2014). In Kenyan primary teacher education, suggested pedagogical approaches for teaching music include Kodály, Dalcroze, Orff, lecture, demonstration and participatory approach (KIE, 2004). However, Maina (2015) established that lecture is the most commonly used in all subjects. Despite many music teachers preferring these pedagogical approaches, Shehan (2016) cautions against the lecture since it contributes little to the development of skills, nurturing of inquiry attitudes and conceptual understanding of music. It is therefore important to use music-based pedagogical approaches that maximize learner's active participation in musical activities and meet the whole range of their learning needs in the classroom

Substantial research reveals that academic performance is dependent on teacher factors like pedagogical approaches (Isa et al., 2020; Campbell & Scott-Kassner, 2014). These factors work hand in hand to contribute to the learners' musical growth. Westbrook et al., (2013) report that regular poor academic performance by majority of students in music is

linked to ineffective use of pedagogical approaches by teachers to impart knowledge to learners. The use of appropriate pedagogical approaches is therefore central to the reconstruction of the education system. This current study focused on the impact of the use of pedagogical approaches in particular, music-based pedagogical approaches and specifically Kodály, Orff and Dalcroze pedagogical approaches.

Pedagogical approaches in music education should be experiential learning approaches that require careful planning at the teacher education level because the teaching and learning process in teacher education is a problem-solving activity. Conventional approaches in music education that emphasize methodologies such as rote learning, lecture, recitation, memorization and theory pedagogy do not advance the musical development of learners (Benson, 2016). This implies that the learners are more disadvantaged with the use of these approaches. Thus, music educators should support pedagogical approaches intended to advance the experiential learning and musical development of learners.

Research shows a paradigm shift in the twenty-first century towards the pedagogical approaches that support music learning to impact and transform students learning outcomes. According to Debrot (2014) a 21st century learner should be a communicator, problem solver, critical thinker, collaborator, an innovator and self-directed. Hence, the 21st century skills that teacher trainees would acquire after experiencing the use of Kodály, Orff and Dalcroze pedagogical approaches are problem solving, critical thinking, creativity, imagination, communication and collaboration.

The Kodály pedagogical approach to music grew from the ideas of a Hungarian composer Zoltan Kodály (1882-1967). The approach advocates for the use of folksongs to teaching music in the schools for all levels of education. The components of Kodály

approach are tonic sol-fa, hand signs and rhythm duration symbols. The competencies developed if Kodály pedagogical approach is effectively used include: critical thinking and problem solving developed through selection of appropriate songs and folk songs for use in facilitating learning in primary education; communication and collaboration achieved through group work activities such as use of hand signs to perform sol-fa ladder while creativity and innovation achieved through creating rhythms using French rhythm names.

A German composer Carl Orff (1895-1982) developed the Orff pedagogical 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. The main components of Orff's approach include imitation, exploration, improvisation and composition. The effective use of Orff pedagogical approach assist the teacher trainees to develop the following competencies; creativity and innovation through development of skills of composing own original melodies, self-efficacy achieved through playing different musical instruments individually (solo) or with others (ensemble).

Emile Jaques-Dalcroze (1865-1950), a Swiss musician, founded the Dalcroze eurhythmics pedagogical approach. The approach advocates for eurhythmics which incorporates rhythms, structure and musical expression with movement. Dalcroze proposed a kinesthetic approach to music instruction. Eurhythmics, Solfege and improvisation are the main components of Dalcroze eurhythmics pedagogical approach which incorporate movement, kinesthesia and high-order imaginative thinking. This pedagogical approach if effectively used, the teacher trainees shall develop the competencies of critical thinking and problem solving achieved during selection and collection of songs to improvise movement and kinaesthetic awareness of the body; and

learning to learn developed in the use of acquired knowledge to interpret pitch in new situations.

Studies across the world link the impact of the use of Kodály, Orff and Dalcroze pedagogical approaches on the academic performance of students. For instance, studies in United States of America, Sucic and Benic (2017) found out that Orff and Kodály pedagogical approaches have a positive impact on students' academic performance and motivation if effectively used. Subsequently, Walker (2015) found out that instruction to Kindergarten first grade using Dalcroze eurhythmic lessons increased pupils performance in the melodic aspects of register and contour discrimination.

In the United Kingdom, music education scholar Bidner (2016), reports that Kodály music teaching approach uses the folk music repertoire in the classroom for students to learn what music is. The use of folk songs as classroom activities in a music class enhance students overall academic achievement. In Philippines, a research study by Moralista (2016) found that the use of Kodály approach has a positive impact on students' academic performance. Korarit et. al., (2012), report that Conservatories in Philippines apply Kodály and Orff approaches to teaching music education for the development and knowledge improvement in higher education.

In Africa, Omodara (2012) reports that music-based pedagogical approaches and activities of the learners in a given music lesson may be used to measure students' academic performance. Hence, pedagogical approaches have impact on the quality of music teaching and learning which by extension influence the quality of education. In East Africa, Uganda, Tiija (2018) reports that students join teacher education program with limited background and experience because of the use of teacher-centred approaches. This limits their levels of confidence and the ability to teach music. The

study by Tiija (2018) supports that, students background knowledge is affected by the use of teacher-centred approach. Therefore, the study gives a closer insight over the issues that underlie use of teacher-centred approach in primary teacher education. A study by Akuno (2012) established that the training received by Kenyan primary school teachers is characterized by a theoretical approach.

In Kenya, Primary teacher education (PTE) music curriculum fall under Basic skills, methodology and general music knowledge. The Basic skills comprises of rhythm, melody, intervals, triads, transposition, translation and analysis of music elements which are the building blocks of music. Suggested pedagogical approaches to various topics are outlined and music tutors are encouraged to use the approaches. As much as the curriculum developers have tried to provide pedagogical approaches in the teaching of basic skills, there is still a tendency to lean more on the conventional approaches of teaching (Owino, 2014). The PTE music curriculum as set out by the current Kenya Institute of curriculum Development (KICD) was designed to equip the teacher trainees with adequate basic music knowledge, practical skills and methodology to enable them cope with music activities in primary education (KIE, 2004). This is especially true for teacher trainees who have to write rhythmic patterns in simple and compound time, create and perform own rhythms, sing simple songs and folk songs, compose melodies for use in primary education, use sol-fa syllables and hand signs to perform simple melodies in a classroom environment. Basic skills are very useful to the life of every music educator. However, from a personal experience music tutors have been using the conventional approaches in teaching the basic skills which unfortunately do not help build up teacher trainees musicality.

Academic performance refers to achievement in standardized tests of examination shown by a student. According to Simmons and Alexander (2016), academic performance of students is typically assessed by the use of teachers' ratings, tests and examinations. In this study, teacher trainees' academic performance referred to the outcomes of the teaching and learning process in terms of knowledge and skills trainees acquire from teacher training college as measured by both formative and summative evaluation scores in music.

Academic performance is apparent phenomena in many countries. In United Kingdom, performance in examinations provide objective yardstick for judging educational standards (Eze & Henry, 2015). Academic achievement is measured by how well the students have met the standards set by the examination council. In South Africa, scholastic accomplishment of studies is estimated by the evaluations at whatever level. The evaluations are markers of a person's scholastic capacity and educators, guardians and the general population everywhere hold the individuals who do well in high regard (Schreiber & Yu, 2016). Hasnoor et. al., (2013) reports that sstudents' performance in teacher education is significantly correlated with academic environment and teachers' instructional approaches. A study by Watson (2013) observes that at high school level of education, appropriate instructional approaches facilitate effective learning.

A study by Maganga (2016) reports that in Tanzania academic achievement is measured in final examination at all the levels of education. Further, Maganga's (2016) found that the teacher factors that significantly contribute to low academic performance was the use of inappropriate pedagogical approaches. In this sense music tutors' pedagogical approaches will determine the achievement of music curriculum objectives.

In Kenya, academic performance is measured by both formative and summative evaluations. For instance, Primary Teacher Education (PTE) examination is a summative evaluation whose success is measured by how well teacher trainees meet standards set by the Kenya National Examination Council (KNEC). Teacher trainees (TTs) are evaluated through the two-year cycle using continuous assessment tests, mid-course examination, and mock examination to determine the progress of each teacher trainee. At the end of the second year, TTs sit for a national examination testing music administered by Kenya National Examination Council (KNEC) that leads to award of Primary one (P1) certificate. However, the current state of the country's primary teacher education sector and teacher trainees' performance in music examination points to decline in performance between 2014 and 2018 as shown in Table 1

Table 1

PTE Music Performance of PTTCs in Kenya in the Last Five Years

Subject	Mean 2018	Mean 2017	Mean 2016	Mean 2015	Mean 2014
Music	6.03	6.52	6.23	6.16	4.59

Source: Adapted from KNEC 2018)

The information from Table 1 indicates primary teacher education (PTE) music subject performance by the primary teacher training colleges (PTTCs) in Kenya. In PTE, the grades are assigned as a score range (1 to 8). The interpretation is that the smaller the figure in mean score the better the results and the bigger the figure the poor the results. According to Kenya National Examination Council (KNEC) evaluation standards in PTE, a mean score of 1 is an excellent performance while a mean score of 8 is a fail. The score ranges are assigned to standardized descriptions as follows; 1 and 2 are described as pass with distinction, 3, 4 and 5 as pass with credit, 6 and 7 as pass and 8 as fail.

Table 1 also provides a summary by Kenya National Examination Council (KNEC) of the overall general performance in PTE music (3015) examination for the past five years. The mean score of 4.59 in 2014, indicates a better performance (pass with credit) compared to the following year 2015 where the mean score was 6.16 (pass) which is a negative deviation (-1.57) in the mean score. Although the general performance in music posted in 2014 was better, KNEC yearly reports generally reveal that teacher trainees studying music performed below average in content areas like rhythm, melody, intervals, triads, transposition and translation which are the topics in the section Basic Skills (KNEC, 2018). A close analysis of the reports reveal that the challenges could be attributed to the pedagogical approaches undertaken by music tutors in music instruction.

Of more concern is that, the decline in music performance has also been evidenced in PTTC1 in Nandi County. The trend has been observed for some years and now is quite disturbing. A five-year period 2014-2018 shows that the performance at PTTC1 in Nandi County has been oscillating at a mean of 5. The PTE music performance of PTTC1 in Nandi County in the last five years is summarized in Table 2.

Table 2

PTE Music Performance of PTTC 1 in Nandi County in the Last Five Years

College	Mean 2014	Mean 2015	Mean 2016	Mean 2017	Mean 2018
PTTC1	4.25	5.57	5.63	6.32	5.56

Source: Adapted from KNEC 2018

The information from Table 2 indicates PTE music subject performance by the PTTC1 in Nandi County, Kenya from 2014-2018. The mean score of 4.25 in 2014, shows a better performance (pass with credit) compared to the following year 2015 where the mean

score was 5.57 (pass) which is a negative deviation (-1.32) in the mean score. The Nandi County Director of Education (CDE) yearly reports that teacher trainees exhibit diverse inadequacies in most aspects of musicianship at the end of the two-year program as reflected in PTE exams. The reports reveal that the decline in music performance could be attributed to the theoretical instructional approaches faced by music tutors in PTTC1 (Nandi CDE Report, 2018). It is in view of this that this study sought to develop a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills. This endeavour will make it possible to probe deeper into the quality of music instruction which is reflected in the effective use of music-based pedagogical approaches.

1.3 Statement of the Problem

The Ministry of Education (MOE) 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. The current PTE music curriculum (KIE, 2004), advocates for the use of Kodály, Orff, Dalcroze pedagogical approaches to music education. Several studies report that regular low academic performance by majority of students is linked to ineffective use of pedagogical approaches. The level of use of the music-based pedagogical approaches could be the cause of the decline of academic performance of teacher trainees 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 steadily declined over the last 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 of music in the TTCs in the County. 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 the Kenya Vision 2030 which commits to provide a globally competitive quality education, training and research for all citizens. Further, hindering the Sustainable Development Goal number four (ensuring quality education) and the 21st century learning skills and approaches. It is on this premise that the current study sought to develop a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills.

1.4 Purpose of the Study

The purpose of this study was to develop a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills.

1.5 Objectives of the Study

The specific objectives of the study were:

- i. To determine the impact of the use of Kodály pedagogical approach (KPA) on teacher trainees' performance (TTP) in basic music skills
- ii. To establish the impact of the use of Orff pedagogical approach (OPA) on teacher trainees' performance (TTP) in basic music skills
- iii. To analyze the impact of the use of Dalcroze pedagogical approach (DPA) on teacher trainees' performance (TTP) in basic music skills
- iv. To propose a model for an impact-directed music based-pedagogical approach that could enhance teacher trainees' performance in basic music skills.

1.6 Hypotheses of the Study

Based on the objectives of the study, the following null hypotheses were tested:

H₀₁: There is no statistically significant impact of the use of KPA on TTP in basic music skills

H₀₂: There is no statistically significant impact of the use of OPA on TTP in basic music skills

H₀₃: There is no statistically significant impact of the use of DPA on TTP in basic music skills

1.7 Significance of the Study

The Kenya National Examination Council reports (KNEC, 2018), have indicated pedagogical approaches as one of the possible inhibition to the performance of music in PTE. This study is based on the understanding that pedagogical approaches are key in all educational programs. Hence, this study was undertaken to provide direction for the improvement of teaching and learning music which none of the earlier studies developed. Subsequently, this study was necessary in order to find a way towards developing a complete musician.

This current research and the ultimate findings provide knowledge regarding the developed model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills. This enables the Ministry of Education (MOE) to equip teacher training colleges (TTCs) with appropriate equipment and provide for re-training of music tutors through allocating more funds that would help colleges cope with educational challenges. It is hoped that Kenya Institute of Curriculum Development (KICD) will use the findings in the enhancement of curriculum development and instruction in PTE music curriculum in this era of curriculum reform.

It is hoped that college music tutors will get insight on the proposed model that would improve the teaching and learning of music in the future. The findings of the study will be useful to the teacher trainees studying music because it will shed light on pedagogical approaches that will lead to inculcation of musicianship skills necessary for self-reliance and self-employment after their studies and the Country's economic development. Further, the study has proposed a model for an impact-directed music-based pedagogical approach, which it is hoped when adapted will improve the overall performance of PTE music curriculum in Kenya. The study adds to the existing knowledge in music education. It also provides a basis for the generation of further research on pedagogical approaches in music education.

1.8 Scope of the Study

The study was intended to develop a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills. The researcher conducted the study to give an understanding of the music-based pedagogical approaches as it is assumed that pedagogical approaches are key in all educational programs. The study focused on primary teacher training colleges (PTTCs) for they provided a rich source of information for the study. The choice of the PTTCs environment for this study provided a good case because the PTE curriculum at the teacher training colleges (TTCs) in Kenya is centralized. Due to assumed similarities in provision for teaching and learning nationally, it was hoped that results would be replicated in other PTTCs in Kenya.

The study targeted college tutors teaching music and teacher trainees in their second year at PTTC1 in Nandi County, Kenya. The PTTC1 was considered because of physical facilities, higher enrolment, teacher trainees' music performance, music taught for a long time and being the oldest compared to other PTTCs. The college tutors teaching music

utilize the music-based pedagogical approaches while the teacher trainees studying music in year two have gone through more music instruction and possess more content knowledge foundation than the first-year counterparts. The current study focused on the three music-based pedagogical approaches; Kodály, Orff and Dalcroze. The reason for selection of the pedagogical approaches is that the three approaches are music-based pedagogical which breakdown the learning of music into a series of concepts then applies a sequential learning process raising efficiency in teaching and learning music and by extension yielding better academic results.

1.9 Limitations of the Study

In this study, sampling criterion limited the study to participation of college tutors teaching music and teacher trainees studying music in year two. Due to assumed similarities in provision for learning nationally, it was hoped that results would be replicated in other PTTCs in Kenya. Despite the inter-relatedness of all areas of music, the study focused on the basic skills, because basic skills component of the music curriculum requires teacher trainees to chant, clap, sing, read and write rhythms and melodies in both staff and sol-fa notation.

Another limitation to the study was scarcity of Kenyan-based research in music education in Primary teacher education (PTE) level. Therefore, the study relied to a greater extent on information from researches and studies conducted in developed countries. Comparisons may pose a challenge since teacher education in the developed world operates in different environment and this may not depict the typical situation in a developing country. However, the tools were exhaustively used to ensure the items addressed the objectives of the study. In order to cover an in-depth understanding of the current phenomena, data was collected through different techniques such as interviews,

questionnaires, pre-test and post-test which were triangulated to build coherent justification for the study.

1.10 Assumptions of the Study

The study was guided by the following assumptions:

- i. Respondents were willing to participate freely and without fear or bias.
- ii. That music-based pedagogical approaches influence teacher trainees' performance in primary teacher education music examination.
- iii. That the extent to which music-based pedagogical approaches impact on teacher trainees' performance in primary teacher education music examination is not known.
- iv. That there are no clear guidelines or principles for an impact-directed music-based pedagogical approach in teacher training colleges in Kenya

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Chapter presents a review of literature and findings of other studies that provided a rationale for the current study. In this study, the researcher adopted integrated literature review for reconceptualising the topic, bringing together individual pieces of literature and analysing them to identify the insights and perspectives they offer in music education as well as the deficiencies and inaccuracies. Integrative review is a comprehensive review that enable the students to explore a wide variety of literature on the area of study aiding him or her to meet the primary goal of the study (Christmals & Gross, 2017). This implies that integrated literature reviews are summaries of past empirical literature on a particular topic to provide a more comprehensive understanding of a particular phenomenon. The review covered: music education as a concept; the concept of academic performance; music education in Kenya; pedagogical approaches used in teaching music in Kenyan primary teacher education. Finally, the theoretical framework and conceptual framework is also presented in this section.

2.2 Music Education as a Concept

Elliott (2005) elucidates that music education involves music making and listening, acquisition of music knowledge and preparation of learners' expression and careers as performers, composers, historians, critics, researchers and teachers. The author gives detailed clarification of music education by illustrating the examples of the significance of music education. The study concludes that music education is the equipping of individuals with music knowledge and skills to enable them operate successfully in a musical environment. Therefore, the current study applied Elliott's thoughts in

examining the definition of music education and its interpretations in justifying the significance of music education.

Hallam (2015) is another author who examines the significance of music education. Hallam argues that students who receive music instruction and training, experience academic achievement as well as improved spatial reasoning. The author says that in music education there is a wide-ranging benefits for an individual. According to this source, the benefits are both cognitive academic achievement and skills such as effective self-esteem, creativity and motivation. The study used the position taken by Hallam in showing that music education encourage development of creativity and imagination as well as the emotion.

Music instruction has been conceptualized in different manners and its qualities explained by various scholars. Reimer (2012; 2003) opines that the meaning of music training is dependent upon the nature and estimation of the subject. According to Reimer, it is essential to see music training as a way of thinking. Through this, music training animates and supports the improvement of creative mind in a similar manner. This point of view underpins the examination's transition to outfit students with music information and aptitudes to enable them create to skill in music instruction. The current study paid significant attention to the fact that music education is a profession guided with instruction and aimed at helping learners to understand, create and engage meaningfully in music.

Mbeche (2010) includes the element of guidance and characterizes music training as the way toward helping students to comprehend, react to, make and connect genuinely in music. The author explains that melodic guidance comprises of procedures and techniques for creating perspectives like musicianship, education and music appreciation.

The study adopted and employed Mbeche's explanations of music training and used them as a case study in examining the element of music guidance and techniques for upgrading the instructing and learning of music to improve teacher trainees' presentation in music.

Elliot (1995) expounds on the meanings of music training by having four fundamental definitions in particular: Education in music, including the instructing and learning of music making and music tuning in; Education about music, including the educating and learning of formal information about music making, music tuning in, music history, music hypothesis and others; Education for music, including educating and learning two different ways; either as arrangement reading music or groundwork for a vocation as an entertainer, writer, music student of history, music pundit, music specialist or music educator; and Education by methods for music, including the instructing and learning of music in direct concentration to objectives, for example, quickened learning, improvement of wellbeing, upgrading mental health, creating muscle co-appointment. The definitions by Elliot (1995) were pertinent to the investigation in that the music-based instructive methodologies, for example, Kodály, Orff and Dalcroze involve music making that would help learners get important exercises from taking part in classroom music and inevitably be musically educated and improve their scholastic execution.

According to Pitts (2017), music education needs to be concerned with the contribution music can make to the development of the individual irrespective of cultural background. However, Gojmerac (2017) advocates for an approach to music education that emphasizes among other things, the development of skills, information and musical understanding through performance and listening. These highlights were of great relevance to this study especially when assessing the effectiveness of music education which should be to highly develop musical awareness and the potential to become a

musician. The current study investigated the development of aspects like musicianship, literacy and appreciation deviating from the work of Pitts (2017) which discusses the contribution music can make to the development of the individual irrespective of cultural background.

There is an agreement by various authors about the need for embracing music education in its cultural context. A study by Schippers (2010) indicates that there is a relationship of culture to musical learning and understanding cultural practices through musical performance. To this end, Schippers shows that music education serves to support culture. Schippers contentions were applied by the current study whose aim is to use music-based pedagogical approach, which would make use of African folk songs in imparting music knowledge and skills in teacher trainees.

2.3 The Concept of Academic Performance

Simmons and Alexander (2016) indicate that academic performance of students is normally evaluated by the utilization of educators' appraisals, tests and assessments. This study summarized the concept of academic performance as the accomplishment in state administered trial of assessment acquired by students. In this investigation, teacher trainees' academic performance referred to the results of the teaching and learning process in terms of knowledge and skills trainees acquire from teacher training college as estimated by scores obtained in developmental assessment scores in music assessment. Simmons and Alexander explanation on the meaning of scholarly execution was used by the current study in examining the concept of academic performance as a music education phenomenon in general.

The idea of academic performance alludes to "achievement of a particular arrangement of objectives, for example, effectively finishing a program or course as controlled by the

results of a developmental or summative assessment" (Simiyu, 2015, p. 27). Students' scholarly accomplishment reflects how well or inadequately one has procured or accomplished the destinations of a program (Mushtaq, 2012). The work of Simiyu and Mushtaq critically resonated with the study especially in reference to assessment. These arguments were relevant to the current study in examining how pre-test and post-test assessment is a developmental assessment that reflects trainees' level of accomplishment.

Scholarly execution in this investigation is shown through the aftereffects of developmental assessment scores in music assessment during the multi-year P1course. The definition by Simiyu (2015) was also utilized in this examination to concoct a far-reaching investigation of whether academic performance is an advantageous subject of examination in essential to teacher trainees. It will also determine the effectiveness of academic performance in primary teacher education level.

Eze and Henry (2015) show that assessments assume a significant role in defining and monitoring instructive principles in light of the fact that the outcomes are regularly utilized for accountability purposes. Significant function of assessments in an education system is the determination and placement in different institutions and stations in the society. In addition, assessments measure the output of the educational system in which it operates (Simmons & Alexander, 2016). The insights gained from these authors' discussions were applied in the current study in showing that assessment gauges the yield of the instructive framework in Kenyan primary teacher education level.

The social and financial advancement of the nation is legitimately connected with students' presentation (Maganga, 2016). The students' exhibition assumes a significant role in creating the best quality alumni who will become incredible labor for the nation

who in this way would be liable for the nation's financial and social turn of events. The nature of education system is decided by how well its information plays out their employments and the nature of public activity they lead. Maganga's piece of work resonated with the current study in investigating the role and the significance of academic performance in Kenya.

Various researches (Hao et al., 2018; Mosha, 2014; Hasnoor et al., 2013; Otati, 2013; Watson, 2013) on academic performance note that there are variables that influence academic performance of learners in different subjects and institutions. Hasnoor et. al., (2013) reported that students' performance in teacher education is significantly correlated with academic environment, teachers' instructional approaches and students learning style. Hao et. al., (2018) observe that students' performance is affected by learning preferences and teachers' pedagogical approaches. For instance, teachers engaged learners through theoretical knowledge and skills without any time to assimilate and apply what they learnt. These authors' highlights were of great relevance to the current study, which applied them in understanding that if practical instructions received insufficient emphasis then students had little opportunity to develop technical competencies and problem solving experience.

Watson (2013) indicates that at high school level of education, appropriate instructional approaches facilitate effective learning. The choice is based on teacher's beliefs and preferences in relation to excelling in national examination. The study of Watson (2013) provides a good insight for the effect of the pedagogical approaches on academic performance in high school level of education. The current study however sets to investigate the impact of the use of music-based pedagogical approaches on primary teacher education level in the Kenyan context.

Simiyu (2015) and Owino (2014) identified variables that influence academic performance of learners in various subjects in school. Owino (2014), in his study ‘Quality of teacher training in concurrent programs in teacher colleges, Homabay County’, found that the challenges of availability, adequacy and utilization of learning resources negatively affect teacher effectiveness in the use of appropriate teaching approaches, hence hindering attainment of good academic results of the pre-service teachers. The findings of Owino (2014) was relevant to this study in that, teaching approaches are also affected by other factors, which further influence academic performance of the teacher trainees.

Otati (2013) indicates that teacher characteristics such as qualification, experience, professional development and teaching approaches have a strong co-relation to students’ performance. This is in line with Ingosi (2011) who agrees that teacher factors have an influence on how they grasp content in their subject area and how they teach, hence student’s performance posted in examination. Such factors include teacher academic level, teaching approaches and knowledge in the subject (Otati, 2013, P.39). The study of Otati (2013) explored the relationship between teaching methods and academic performance in Kenyan primary school level. However, the current study is set to develop a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees’ performance in basic music skills.

Orji and Abolarin (2012) in their study regarding strategies for enhancing teacher competence and quality classroom instruction generated data supporting that teachers’ approaches in a given lesson can be used to measure students’ academic performance. Tety (2016) also observed that provision of quality education depends on the various teaching approaches employed by the teacher. The current study applied the insights in

showing that academic performance levels can therefore be attributed to pedagogical approaches.

Westbrook et. al., (2013) report that regular poor academic performance by majority of students is linked to ineffective use of pedagogical approaches by teachers to impart knowledge to learners. The use of appropriate pedagogical approaches is therefore central to the reconstruction of the education system. The current study focused on pedagogical approaches in particular music-based pedagogical approaches specifically Kodály, Orff and Dalcroze approaches. The selection of the pedagogical approaches is informed by the fact that they advance the learning of music concepts in a music lesson.

Kisirikoi et. al., (2008) observe that there are two kinds of assessments utilized in learning foundations to be specific: - developmental (during the way toward instructing and learning) and summative assessment (toward the finish of a course or pattern of learning). This examination tends to be developmental assessment embraced by the instructor learners during the multi-year course. Assessment is the principle proportion of educator students' scholastic execution at the essential instructor training level.

In Kenya, academic performance is estimated by the last assessment (summative assessment) such as, Primary Teacher Education (PTE) assessment whereby achievement is estimated by how well instructor learners fulfill guidelines set by the Kenya National Examination Council (KNEC). In teacher training colleges (TTCs), the developmental assessment is one of the course prerequisites considered by KNEC for effectively completing the course. KNEC is a state organization under the state division of instruction. Under area 10 (1) of the KNEC Act (GOK, 2012), the elements of gathering incorporate; setting and keeping up assessment guidelines, leading open scholarly, specialized and other national assessments inside Kenya at essential and

tertiary levels and granting testaments or certificates to competitors in such assessments. It is consequently the duty of KNEC to control tests at essential, auxiliary and specialized degrees of instruction (Mackatiani, 2017).

In addition, assessment and grading of a teacher trainee in a maximum of eight examinable subjects is delineated in formative and summative evaluations (PTE examination) in which a teacher trainee is awarded a grade. The nine subjects comprise of five compulsory subjects (English, Kiswahili, Physical education, Teaching practice and Professional studies) and four option subjects in group A or B. Option A subjects include Mathematics, Science, Agriculture and Home science while Option B subjects are Social studies, Religious Education, Music, Art and Craft.

The Kenya National Examination Council (KNEC) grading system shows that a teacher trainee is awarded a grade according to the percentage schedule as follows: Distinction, Credit, Pass, Fail where the Distinction is the highest and Fail is the lowest. Table 3 presents the Primary Teacher Education (PTE) performance-grading format

Table 3

Primary Teacher Education Performance Grading Format

Grade	Description
1 and 2	Pass with Distinction
3,4 and 5	Pass with Credit
6 and 7	Pass
8	Referral

Source: KNEC, 2018

This study categorized the PTE grades allocation to reflect four levels of performance as given in Table 3. Generally, all teacher trainees who score a grade of Distinction, Credit and Pass automatically qualify for employment at the primary school level and further education. Teacher trainees, who score 8 are referred to retake the learning area before being employed at the primary school level.

The teacher trainees' academic performance in primary teacher training colleges (PTTCs) is something which everyone expects to be of high quality because of the roles the sector plays in providing service to the community. On the other hand, those who fail to perform better cannot contribute well to the human resources because they do not have adequate skill needed. Despite its importance, PTTCs still experience dismal performance in music examination. The decline in performance in music examination among the teacher trainees in Kenya reflects superficial and temporary knowledge.

2.4 Music Education in Kenya

The history of education provision in Kenya dates back to 1963 when the country gained independence from the British and took over the running of the country. Three waves of education policy reforms have been implemented since Kenya's independence that presents a paradigm shift and change of strategy to address challenges in the education sector. For example, in 1964 the government set up a commission to make policy changes in the formal education system (Kafu, 2011). The Ominde Commission report of 1964 (The Republic of Kenya, 1964) turned into the primary instruction board in the free Kenya to investigate training issues that influenced the nation and made proposals for what was viewed as suitable changes.

King and McGrath (2002) observe that among the changes was the adoption of the 7-4-2-3 education structure modelled after the British education system between 1964 and

1984. The system was designed to provide seven years of primary education, four of lower secondary education (O-level), two years of upper secondary (A-level) and three years of university. The system led to unemployment and lack of vocational skills for the youth. Owing to the partial adoption of the 7-4-2-3 structure without proper scrutiny, vocational skills subjects such as music, arts and crafts, home science, woodwork, metal-work and business studies were left out of the curriculum. As a result, a gap emerged in the quality of education in these career areas.

To address the high unemployment rates and lack of vocational skills in the country that resulted from the 7-4-2-3 system during this period, a presidential working party (PWP) was commissioned: the Gachathi Report (The Republic of Kenya, 1976), the Mackay Report (The Republic of Kenya, 1981), and the Kamunge Report (The Republic of Kenya, 1985) to examine curriculum reform generally (The Republic of Kenya, 1983). The commissions submitted a recommendation to change the 7-4-2-3 education system to the current 8-4-4 system of education, similar to the American system of education.

The 8-4-4 system was launched in January 1985 and was designed to provide eight years of primary education, four years of secondary, and a four-year bachelor's degree program (Kafu, 2011). Haans (2011) observed that the 8-4-4 system strongly emphasized vocational skills that prepare youth for the job market and especially self-employment. The 8-4-4 system of education saw the introduction of professional skill subjects such as music, arts and craft, business studies, home science and woodwork. This marked the introduction of music as an academic and examinable subject in the education system curriculum from primary schools to the university level (Odwar, 2005).

A national curriculum review, the Koech report (KICD, 2002), led to the removal of music from the primary and secondary school syllabi in 2001. After much complaint

from music educators and music graduates, it was restored in primary schools as part of a non-examinable subject entitled creative arts and as an elective subject at the secondary level under the revised 8-4-4 music education curriculum (Akuno, 2009). Music became a compulsory subject for the first years and optional for second years in primary teacher training colleges (Akuno, 2005; Odwar, 2005). Akuno (2005) reported that there was no systematic syllabus for music education in Kenyan TTCs. However, few bursaries from British Council were given and some teachers were able to attend short term music courses in the United Kingdom. Given the historical nature of the current study, it also used the works of various authors mentioned above in directing its sight back to the past and through the present in assessing the music education in Kenya since colonialism up to post independence.

2.4.1 Music Education in Kenyan Primary Teacher Education

In Kenya, the entry requirement for primary teacher education (PTE) is a minimum of C (Plain) (MOE, 2004). The teacher trainee is required to complete the two-year course and intended to award them a Primary one (P1) certificate for their studies. The P1 certificate is viewed as a stepping stone to further education and employment at the primary school level. For further education, the P1 certificate is used by diploma colleges and universities for admissions.

The primary teacher education (PTE) curriculum provides for the following:

1. Five compulsory subjects (English, Kiswahili, Physical education, Information and Communication Technology and Professional studies)
2. Two options each with four subjects to choose one of the options. Option A subjects include Mathematics, Science, Agriculture and Home science while Option B subjects are Social studies, Religious Education, Music, Art and Craft. In the first

year, teacher trainees study ten subjects; English, Kiswahili, Mathematics, Science, Social studies, Religious education, Physical education, Professional studies, Creative Arts and ICT. In second year, teacher trainees take the five core and the four subjects in either Option A or B.

3. Three teaching practice sessions-the first in the second term of the six terms, the second in the fourth term and the third in the sixth term (Centre for International Education, 2014).

The PTE curriculum is clear in its articulation of the subject matter in the training of the teacher trainees. The teacher trainees in Kenyan PTTCs interact with music as a curriculum subject for two years and are expected to have grasped both fundamentals of the subject and how to go about music instruction as generalist teacher (Chokera, 2016; Akuno, 2005).

According to Chokera (2016), the two-year interaction with music for the teacher trainees at the college greatly compromises the quality of music instruction in Kenyan primary schools. He also observed that the music syllabus in primary teacher training college (PTTC) in Kenya is 'too theoretical'. Akuno (2012) in a study titled 'Perceptions and reflections of music teacher education in Kenya' established that primary school head teachers viewed the training received by in-service primary school teachers as being 'too theoretical'. This finding is similar to Muchira (2010) who found that 8-4-4 system is characterized by a theoretical approach to teaching music. These positions called for an investigation so as to assess the use of music-based pedagogical approaches at the primary teacher training colleges.

The music curriculum in Kenya is overloaded and unmanageable. Therefore, an approach taken to teach music is fundamentally hypothetical rather than reasonable

(Akuno, 2005). Further, Akuno states that "in schools today, Kenyan educators have received a hypothetical teaching method bringing about various music students who can't carry on musically, be it in the territory of performing, tuning in or forming" (Akuno, 1997, p. 22). It appears that music education offered in primary school teacher preparation is worsened by the theoretical nature of music instruction (Akuno, 2012, 2005, 1997). This informed the current study in developing a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills.

2.4.2 The Current Status of Music Education in Kenyan PTE

In Kenyan primary teacher training colleges, teacher trainees' in the first year take Creative Arts (integrated Art, Craft and Music) in which most concepts are introduced before specialization in the various areas of Art, Craft and Music in the second year (KIE, 2004). At the end of the second year, there is a final national examination testing Art, Craft and music separately. Kenya National Examination Council (KNEC) administers the PTE examination. KNEC allocates a maximum of grade of distinction based on teacher trainees' performance in various subjects in the PTE examinations.

A general observation of the situation today indicates that Kodály, Orff and Dalcroze pedagogical approaches documented in the PTE music curriculum are being used but the extent of the use can be ineffective. Despite the provision put in place, teacher trainees continue to perform poorly (KNEC, 2018; Nandi County Education, 2018). For example, Nandi County Director of Education (2018) observes that the PTTCs in the County have continually posted unsatisfactory results for the last five years. The low performance among the teacher trainees is a worrying trend for music educators in Kenya. According to Gojmerac (2017), the quality of instruction is one of the most critical determinants of the level of learning achievements. This is in line with Ingosi's finding that pedagogical

approaches used effectively can distinguish good teaching from poor teaching (Ingosi, 2011). According to these authors, pedagogical approaches relates with the quality of teaching. The current study deduced from the argument of Gojmerac and Ingosi that pedagogical approaches can shape and influence the teaching of music at all levels of learning.

According to Akuno (2012), the struggles facing music education is the ‘didactic’ teaching learning approaches applied in the teaching and delivery of music. The 8-4-4 system of education is exam oriented and likened to formalized education that tends to take short cuts in order to arrive at knowledge, which can be assessed in examination (Akuno, 2012). Unfortunately, music being naturally performance oriented can only make sense in a stream of action and experiences. Akuno reports “music education is characterized by content focused instruction that leaves little room for reflection and engagement with knowledge gained. This is compounded by examination-based assessment that demands recall at the end of every learning stage right from primary through to the university level” (Akuno, 2009, p. 87).

From Akuno’s (2009) statement, teacher trainees only acquire theoretical knowledge but lacks practical skills to perform what they have learned. This may result in a mismatch between the outcomes of the use of music-based pedagogical approaches and academic performance of the teacher trainees. Further, music education is based on a philosophy of practice and expressive learning which will enable the teacher trainee to accumulate knowledge and skills in music. The author expansively concludes that music teaching requires the ability to communicate these attributes to facilitate learning. The current study used the explanations in examining the understanding of how music-based pedagogical approaches impact on the teacher trainees’ performance in music.

2.5 The Concept of Pedagogy

The term “pedagogy” has been defined and conceptualized in various ways and its functions articulated by a number of authors. Bhowmik et. al., (2013) define pedagogy as “the art and science of teaching” (Bhowmik et al. 2013, p.1). It is what enables the learner to develop and move towards becoming an independent, fully-functioning, contributing member of the society. Boundless (2017) further expounded on what may define pedagogy by describing a pedagogical setting as the practice that a teacher together with a particular group of learners creates, enacts and experiences. These authors provide an overview of pedagogy by suggesting that pedagogy is a joint activity in which the learner has an active role. The authors’ discussions on pedagogy were applied by the current study in advocating for learner centred approach where the students are active participants in the learning process.

Klopper and Power (2017) are also authors who report that music teachers should encourage learner-centred approach for they are interactive in nature and are more likely to impact on student learning outcomes. The authors’ show that learner-centred approach encourage and motivate learners towards attaining their desired career goals. The current study found the argument of Klopper and Power instrumental in establishing the learner-centred approaches used in music instruction in Kenya.

Susic and Benic (2017) affirm that pedagogy is the interactions between teachers, students, learning environment and the learning tasks. Alexander (2017) states that pedagogy is the collaboration between educators, students, learning condition and the learning undertakings. Scott (2015) notes that pedagogy is the means by which educators and students relate together just as the instructional methodologies executed in the study hall. The current study concurred with the perspectives of the various researchers and

construed that pedagogy alludes to the specialty of training explicit music ideas sketched out in essential music instruction schedule with the point of accomplishing the learning results of the music educational plan. However, the current study maintains that pedagogy is not about simply showing the subject substance yet the whole extent of connections, procedures and methodologies that are intended to improve learning.

2.6 Pedagogical Approaches Used in Teaching Music

There are many popular pedagogical approaches available for music educators from all levels of education (Ganyaupfu, 2013; Abril & Gault, 2016). Of the numerous approaches used in music classes, some are teacher-centred others learner-centred (Ganyaupfu, 2013). Emaliana (2017) define teacher-centred approach as a teaching method where the teacher is actively involved in teaching while learners are in passive and receptive mode listening as the teacher teaches. The teacher-centred methods include lectures, memorization, recitation and discussions where the problem solving is presented by the instructor (Ahmed & Ahmad, 2017).

In teacher education, teacher-centred approach such as lectures and theoretical pedagogy have been dominant in music education and are often criticized especially when students complete only lower order tasks (Lopez et al., 2014). According to Abril and Gault (2016), the teaching of music has been done by the teacher-centred methods where the transmission of knowledge and information has been realized with the usual form of lectures requiring physical presence of both student and the teacher. Ahmed and Ahmad (2017) in the article “Comparative analysis of Rote learning”, note that teacher-centred methods and minimal use of learner-centred methods are some of the key factors contributing towards low quality of education in Pakistan.

In Kenya, commonly used pedagogical approaches in primary teacher education class were lecture, demonstration and participatory approach (KIE, 2004). However, Maina (2015) established that on average lecture is commonly used in almost all subjects. Despite many teachers preferring these teaching approaches, Shehan (2016) cautions against the lecture method since it contributes little to the development of skills, nurturing of inquiry attitudes and conceptual understanding of music. This concurs with Gojmerac (2018) who avers that teacher-centred approach prevents the growth of musicianship among students. These contentions and thoughts informed the study in examining the strengths and flaws of using teacher-centred approach on teaching musical concepts in teacher training colleges. Some of the pedagogical approaches include:

2.6.1 Lecture

A lecture is an oral presentation of information by the instructor. According to Raja and Najmonnisa (2018) lecture is an approach of transferring authentic data which incorporates standards, ideas, thoughts and all hypothetical information about a given point. In address, the educator tells, clarifies, depicts or relates whatever data the instructor students are required to learn through tuning in and understanding. It is subsequently educator focused (Raja and Najmonnisa, 2018). The educator is exceptionally dynamic doing all the talking. Learners then again are exceptionally dormant, doing all the tuning in. In spite of the prevalence of talks, the absence of dynamic inclusion of students constrains its helpfulness as a technique for guidance.

Abril and Gault (2016) established that music teachers utilizing experiential methodology advance dynamic support of students in the learning procedure. Subsequently, it creates relational, cooperation and compromise that are pivotal components of music instruction.

Raja and Najmonnisa (2018) report that lecture is suggested for students with next to no information or restricted foundation information on the point. It is likewise helpful for introducing a sorted out assortment of new data to the student. To be viable in advancing learning, the lecture must include a few conversations, question, and answer period to permit students to be included. Further, the utilization of visual media during talks can bolster and advance dynamic learning (Emaliana, 2017). The authors deeply and expansively delves in the utilization of lecture method. The explanations by the above named authors were relevant to this study in finding out how lecture method is utilized in Primary teacher education level in Kenya.

2.6.2 Rote Learning

Rote learning alludes to a style of learning wherein students seek to hold and later to recall some data, result or procedure without fundamentally making intellectual associations between the new learning and their current system of comprehension (Kwan & Mafe, 2013). Repetition learning is likewise characterized as the remembrance of data dependent on redundancy. The best models incorporate retaining the letters in order, numbers and duplication tables (Safdan, 2013). Some consider repetition figuring out how to be a vital advance in learning certain subjects (Veloo et al., 2015).

At the point when Rote learning is applied as the primary focal point of learning, it is not viewed as more elevated level idea or basic reasoning. Ahmed and Ahmad (2017) contend that in repetition learning, innovativeness in understudies is hindered and stifled; understudies do not figure out how to think, investigate or take care of issues. In this way when the job of repetition learning is an end in itself rather than an unfortunate chore, repetition learning falls flat as a structure square to basic reasoning

While rote learning can get a student good marks, the cost of knowledge is vast. The meaning of education is to understand the concepts and the ability to relate them to what is happening. For example, in music, the identification of rhythmic and melodic patterns in a familiar tune will contribute to the meaning of music education. However, rote learning takes away the essence of the topic turning it absolutely redundant. For one may remember each and every detail word by word but it will be all on the exterior with nothing going inside the head.

Derek (2017) reported that rote learning is necessary if you want to engage in higher level. For example, in music, students must first learn basic concepts such as scales, circle of fifths, quality of intervals, triads and memorize the materials so they can refer to them later when dealing with more advanced lessons and learning. Students are encouraged to memorize song lyrics while developing listening skills. By listening to the material, the student internalizes the music and will be able to produce similar sounds at a later date. Opponents for rote learning argue that rote learning do not equal higher learning especially in today's advanced technological world. These teachers accept rather a more useful learning ought to be applied in the homeroom (Ahmed & Ahmad, 2017). The current study used their explanations to ascertain the use of rote learning in primary teacher education level in Kenya.

2.6.3 Demonstration

Demonstration is a visual approach to examining information, ideas and processes. It allows students to see the teacher actively engaged as a learner and a model rather than merely telling them what they need to know (Gindharan & Raju, 2016). The act of demonstrating readily helps to kindle more natural interactions between the students and

the teacher. Demonstration provides a multi-sensory means to describe a concept, idea or product that may otherwise be difficult to grasp by verbal description alone.

Gindharan and Raju (2016) observed that demonstration in teacher education programs is used to develop skills in the student teacher. The teacher applies it in teaching science, nature study arts, craft and music. Demonstration has emerged to become an instructional approach that is used in music education. Greene (n.d) affirms that demonstration is the most widely used approach for acquisition of practical skills as it includes the verbal and practical illustration of a given procedure. The author has added that the approach is highly effective in music because it contains active participation of the student. Music teachers should demonstrate singing technique that will restructure the voice and teach the student a new way to handle the instrument (Greene, n.d).

Yawe (2017) in the study “Impact of demonstration and discussion methods instruction on secondary schools achievement in Business studies”, reports that there is significant difference in academic performance of students exposed to demonstration, which implies that demonstration is an effective approach. Further, Yawe (2017) notes that student’s academic performance could be attributed to the immediate appreciation of concepts from the practical examples that the students experienced from the demonstrations. The authors’ discussions on demonstration were relevant to the current study which applied them in finding out whether demonstration is utilized during the teaching of music in Kenyan primary teacher education.

2.6.4 Participatory Approach

Participatory approach is an active approach that encourages students to think for themselves. Participants actively contribute to teaching and learning rather than passively receiving information from outside experts (Cloete & Delpont, 2014). Participatory

approaches engage learners in activities that are authentic to the goal of the team's inquiry. Engaging in activities that are authentic to community of practice is an essential ingredient to learning (Sarnowska et al., 2017). Participation in musical activities serves as a means of educating the emotions, the mind and the intellect.

One of the basic principles of music education based on a participatory approach is to create a learning environment encouraging and supporting a comprehensive development of the participants (Cloete & Delpont, 2014). One part of this process is the development of individual skills (for instance, skills in playing a particular instrument) and artistic sensibility (by pointing out the need for self-expression and experiencing art). Participation is not only meant for classrooms but also extend to out of school experiences which encourage a fusion of different aspects of learning.

Sarnowska et. al., (2017) report that participatory approach is able to impact students in new ways since they gain skills to better their practice of learning. By taking part in music and movement activities, students have the benefit of experiencing music. Participation helps the students to interact with the real music activities thereby gaining practical knowledge required for one to be competent musically. Participatory approach can further improve students' academic performance (Sarnowska et al., 2017). The various authors provided an overview of the use of participatory approach and how it relates to the academic performance of the students.

Teacher training colleges, universities as well as private groups in Kenya have different participatory music programs in their annual calendars. A forum such as the Kenya Music Festival (KMF) is a fertile ground from which students participate, artistic talents are identified and developed. KMF is open to educational institutions including primary and secondary schools, Teachers' Training Colleges (Diploma and Primary Teachers'

Colleges), Technical Institutes, Youth Polytechnics, Institutes of Technology and Universities. This wide spectrum of participation undoubtedly justifies KMF as a suitable forum for determining various traits of musicianship as well as levels of excellence among musicians in Kenya. The current study used the discussions to articulate the use of participatory approach in primary teacher education in Kenya.

2.6.5 The Kodály Pedagogical Approach

The Kodály approach to music grew from the ideas of a Hungarian composer Zoltan Kodály (1882-1967). The approach advocates for the use of folksongs to teaching music in the schools for all levels of education. This is in line with Gault (2013) who observes that the use of folk music leads to learners reconnecting and associating with the music learned within their environment. The choice of folk songs as proposed by Kodály encourages the learner to identify with the music of his/her people (Gault, 2013). Smuta (2017) emphasizes that Kodály approach encapsulates a successive procedure by which a culture's society tunes and dynamic, bona fide singing games are executed to mood, song, amicability notwithstanding the abilities of singing, tuning in, moving, perusing and composing documentation. The authors' discussions on the choice and use of folk songs as found in Kodály approach was relevant to the current study in two ways; first how Kodály approach places singing at the center of music guidance, second how singing is utilized as the essential method for building up every melodic expertise. This study used these positions in finding out the various uses of singing specifically folk songs in the Kenyan context.

The components of Kodály method are: tonic sol-fa approach, where the movable '*doh*' system is applied. The '*doh*' is the home tone in major scales while '*lah*' is the home tone in minor scales; a series of hand signs showing different pitches in the scale. This

helps the listener hear patterns, intervals, phrases and form; and a system of rhythm duration symbols.

Tonic Sol-fa System

Sol-fa syllables have long been used in music education. Tonic sol-fa is a system of notation that uses sol-fa syllables (Dilek, 2012). It is a holistic approach to music education through singing. It builds a comparative relationship between the tonic and other degrees of the scales which assists in pitch discrimination in music (Sarrazin, 2016). The sol-fa syllables represent seven different pitches of the diatonic scale. They are written using the first letter of the syllable:

d=doh is the key note of the tonic

r=ray the supertonic which is a major second above the tonic

m=me the mediant, a major third above the tonic

f=fah the subdominant, a perfect fourth above the tonic

s=soh the dominant, perfect fifth above the tonic

l=lah the submediant, a major sixth above the tonic

t=te the leading note, a major seventh above the tonic.

The movable '*doh*' system in which '*doh*' is the home tone in major scales, and '*lah*' in minor scales is to be used. Movable '*doh*' is a system where every note of a scale is given its own unique syllable, which is used to sing that note every time it appears (Dilek, 2012). For example, C is '*doh*' in C major; D is '*doh*' for D major. In F major scale, the seven notes include F G A B^b C D and E (often continuing on to F an octave above the first '*doh*'). If we sing the scale of F major on sol-fa, the F would always be sung as '*doh*', G would be sung as *ray* and so on. The whole scale looks like this on sol-fa

Example 1: Movable ‘*doh*’ for F major

F G A B^b C D E
doh ray me fa soh lah te

Example 2: Movable ‘*doh*’ for E minor

In minor scales, ‘*lah*’ is considered as the tonal centre. For example in E minor, the notes are E F[#] G A B C and D (often continuing on to E an octave above the first ‘*lah*’).

Example 2: Movable ‘*doh*’ for E minor

E F[#] G A B C D
lah, te, doh ray me fah soh

Hand signs

Hand signs are physical gestures that represent sol-fa. Hand signs were introduced by John Curwen in 1870. They are useful for reinforcing intervallic feeling (Dilek, 2012). It is a method where each syllable is represented with a particular hand sign (Benson, 2016). The use of hand signs presents visualization in space of the high-low relationship among the notes being sung (Lihan, 2018). Each hand sign represents a particular sol-fa syllable. The signs are made in front of the body and the distance between the hand signs to some extent reflects the size of the interval to be sung. Octaves are shown by the same sign with the lower ‘*doh*’ sign occurring at the waist level and the higher ‘*doh*’ above the eye level. The sign for the half steps fah points down to me while ‘*te*’ points up to ‘*doh*’ thus emphasizing the smallness of these half steps. Refer to Appendix IX

Hand signs were created by John Curwen as a way of showing the tones. Kodaly borrowed the hand signs and emphasized their use in music education. Benson (2016) affirms that Kodály also used Curwen hand signs to represent each pitch in the scale. In the use of Hand signs, music teachers can use only one hand for pitch or both hands to

show two different pitches. The music teacher can also present chord changes by use of hand signs. This study used these positions in finding out the various ways of how it helps the teacher trainees to visualize the distance between the pitches and match pitches given the right sound in Kenya.

Rhythm Duration Symbols

A rhythm duration syllable is a system where each rhythmic pattern is represented with different syllables and counted verbally using mnemonic sounds (Dilek, 2012). The rhythm names have been used in Kodály approach to make students understand the concept of time in music. The students clap/tap rhythmic patterns while saying the names representing individual beats in the pattern. The counting of rhythm is done using French rhythm names.

In this method, Kodály trained teachers to begin by teaching one beat which is the quarter note and later notes of longer and shorter duration are incorporated. All quarter notes are counted as ‘*taa*’, all eighth notes counted as ‘*ta*’ while two eighth notes would be counted as ‘*ta-te*’. Half notes counted as ‘*taa-aa*’ and whole notes as ‘*taa-aa-aa-aa*’. However, grouping of four sixteenth notes is counted as ‘*ta-fa-te-fe*’. For example;

<u>Duration</u>	<u>French rhythm names</u>
One beat (quarter- note)	<i>taa</i>
Two half beats (eighth- notes)	<i>ta-te</i>
Four-quarter beats (sixteenth- notes)	<i>ta-fa-te-fe</i>

Kodály also uses rhythmic and melodic patterns that are encountered in songs and later in visual form. The rhythmic names are used to represent the length or duration of a note or rhythmic pattern. The rhythmic system of mnemonic syllables is considered an efficient means in learning rhythmic values and their relationships in a pattern. The

chanting of ta-fa-te-fe are used by students of every level for mastering difficult rhythms. The study found the discussions and explanations of the components of Kodály approach relevant and utilized them to highlight the key features and uses of Kodály approach.

The Kodály approach is described by the utilization of singing as the essential vehicle for music support, society music as the underlying collection and musicianship as the objective for all kids (Benson, 2016). West and Clauhs (2015) state that music exercises, for example, singing, creating rhythmic patterns, making cadenced examples, playing instruments dramatically affect perusing and education. For example, Sheridan (2015) found that in Kodály approach, students understanding in musical and melodic components and singing improved amazingly.

The Kodály way to deal with learning music improves further learning and more prominent commitment in music components, for example, beat, tune and agreement. This agrees with Smuta (2017) who saw that Kodály approach of training music could invigorate students' information on cadenced and melodic components through perusing and composing exercises. Students construct a superior comprehension of music ideas while encountering Kodály approach all the more adequately when they draw in to take care of issues during class exercises (Smuta, 2017). These arguments were relevant to the current study in finding how the learning activities used in Kodály can be adopted as variety of songs and musical activities.

Lowe (2011) highlights that learning activities such as singing folk songs are described by students as being more relevant to them when they have the opportunity to engage practically with topics. Lowe (2011) further observes that the value students attach to any subject is enhanced through active participation in a classroom setting hence improvement in the academic performance. The study used this position in emphasizing

that learning activities especially music activities are designed to follow creative learning process that suit the students.

According to Gault (2013), Kodály - based approach to teaching music utilizes a clear sequence of musical concepts that are presented based on when they appear in the repertoire used during instruction. This is consistent with Gordon's theory of Music Learning as reported by Valerio (n.d) that the key component to Gordon's approach to music learning is the idea and the role of instructional sequencing. Luhan (2015) remarked that Kodály approach uses a sequential building of concepts that enable each student of whatever age to become so musically literate that she/he understands the music without a score as well as understand the score without music. Lori (2012) affirms that the structure and content of music theory are beautifully arranged for a spiral learning, which compliments hierarchy of overlapping, and recurring theoretical concepts embedded in Kodály's pedagogical principles. The study deduced from the argument of the above mentioned authors that Kodály is organized in a progressive fashion while the current study investigated how Kodály is an analytical creative learning process.

According to Smuta (2017), sequence accounts systematically for the readiness needed to learn each new musical skill. For instance, the pre-requisite for educating music experts is the acquisition of music skills and application of the skills to learning to read and write notations in music. This sequential process teaches the music educator to introduce more abstract concepts and skills gradually, through sequential learning (Carlton, 2016).

Abril and Gault (2016) note that educators using Kodály approach provide music instruction that is learner centred and in a logical and sequential process. Hence, the

approach is experiential. This implies that students participate in musical experiences and then use the experiences to develop a conceptual understanding. Kodály approach was useful to the current study when it came to the aspect of the use of folk music in teaching music in primary teacher training colleges. This is because the songs used were familiar to trainees and enabled them to experience the melodic and rhythmic concepts that are taught.

Onyuike (2016) observes that instructional materials for teaching and learning music should be presented in sequences that are integrated and well-structured to allow learners to build upon previously acquired knowledge and skills. The study concurred with perspectives of the various researchers and construed that music curriculum should be organized in order to present the fundamental structure of music that may lead learners to more discoveries for themselves. However, the study maintained that music teachers should select, organize and present materials in a developmental sequence appropriate to their learners' level of performance. In addition, music teachers should use variety of pedagogical approaches to address different learning preferences.

2.6.6 The Orff Approach

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 the approach, speech precedes singing because speech only contains the element of rhythm whereas singing contains both rhythm and melody (Campbell & Scott-Kasner, 2014). The approach emphasizes that learners should experience music first and then analyzes or intellectualize about music afterwards. This is supported by Abril and Gault (2016) who observed that Orff approach emphasizes on 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.

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 in to 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 different methods of joining and organizing singing in the study halls. Orff approach offer simple systemization 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 Orff approach enables students to engage in creative thinking, movement and become musically independent.

According to Gault (2013), Orff approach encourages discovery learning as learners move through activities involving imitation, exploration, improvisation and composition. Orff's approach is thus characterized 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 Orff approach utilizes four stages to organize 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 utilized in more intricate exercises later on (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 to understand and even apply the knowledge learned through imitation. They hear the movement of pitches, the content of rhythms and explore the timbre of whatever instrumental or voice with which they have access. Sing a familiar song in a different meter such as turning a $\frac{2}{4}$ song into $\frac{3}{4}$ song. 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 own musicianship rather than copy teacher's musicianship (Long, 2013).

Improvisation

In improvisation, the students not only understand but also can apply some of the possible combinations of rhythms and pitches, 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 melody. The students can also select a story and figure 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 a pinnacle of music making in that the composer must analyse the musical material she/he is working with in order 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 summarized the four stages of Orff's approach by maintaining that they are like Bloom's scientific classification in that they start by presenting an extremely essential ability and afterward continuously proceed onward to more mind boggling exercises, for example, synthesis which is spoken to in the upper periods of the scientific categorization.

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 a sequential order. Dilek (2012) noted that Orff began with rhythm as the basic element inherent in music, dance and speech, combining and unifying them with one language. The study summarized the basic idea of Orff 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 in indicating that Orff 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 the Orff and Bloom's taxonomy classification are comparative in that they start by presenting an extremely essential aptitude at that point and systematically move to exercises that are more intricate. In teaching melody and rhythm,

the guiding principles are that, notation and reading be built on known musical materials and sound precede symbol (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 utilization 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 creating from commitment in the melodic exercises. Orff approach empowers melodic open door 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 Orff approach provides opportunities for collaboration, creativity, composition and improvisation. The study combines the two positions by Jorgenson and Locke pointing out that Orff approach involves learner

participation, imagination and understanding. In addition, the approach makes 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 be 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 standardized 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 recognizing 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 the music teachers in America do not apply Orff approach for they lack funding for Orff instruments and resources. In Kenya, primary teacher training colleges are still using training manual and traditional approaches of training. E-learning is yet to be established and utilized 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 is a key component towards realization of quality music teacher training. This is because music practical skills need to be reinforced using teaching and learning resources, which will in turn be applicable during professional actualization.

2.6.7 Dalcroze Eurhythmics Approach

The Dalcroze eurhythmics approach was founded by Emile Jaques-Dalcroze (1865-1950), a Swiss musician. The approach advocates for eurhythmics that incorporates rhythms, structure and musical expression with movement. He believed that every musician should strive to express music through purposeful movement, sound, thought, feeling and creativity. The goal is to develop total cognitive and kinesthetic awareness through sound. Thus, Dalcroze proposed a kinesthetic approach to music instruction.

Dalcroze eurhythmics approach is an all-encompassing music education approach because it demands and develops good listening habits and powers of concentration patterns (Abril & Gault, 2016). It also aims to promote abilities such as sense of rhythm, finesse of hearing and spontaneous expression that is vital to a competent musician. Abril and Gault (2016) further note that Dalcroze knew that beginning music student has to be taught not only the necessary musical skills but also how to learn them. In this, Dalcroze was in support with his contemporaries like Jean Piaget, John Dewey.

According to Dalcroze (2013), the Dalcroze eurhythmics approach teaches learners concepts of rhythm, structure and musical expression through movement. The aim is to enable learners to develop a physical awareness and experience of music using their kinesthetic sense. Hence, teachers who use the Dalcroze eurhythmics approach in their lessons often teach learners through body movements before teaching them to read

music. In addition, teachers who use the Dalcroze eurhythmics approach believe that using movement reinforces the concepts they are teaching with the goal of improving the learners' awareness and association of rhythm in the music. The insights gained from these authors' discussions were applied in the current study not only in examining the use of Dalcroze eurhythmics approach but also in finding whether the approach has been used by music tutors in Kenya during music lessons and its implication on the academic performance of the students at the primary teacher education level.

Abril (2017) on his part reports that the music activities used in Dalcroze classroom include the following categories of movement: functional (example, showing a pitch level with hand), rhythmic, creative and dance. Movement of the whole body in a space is linked with listening; studying the elements of music (such as tempo, meter, rhythm, dynamics and harmony); exploring time/space/energy relationships; and developing the capacity to invent, interpret and express. Typical exercises include; 'follow exercises' (for example stepping to the tempo of recorded music or exact rhythm simultaneously as it is improvised by the teacher); 'quick response exercises' (for example responding to a signal or a change in music for instance changing the direction of walking when the teacher says "hop"). In particular, 'quick response exercises' are devised to develop mental and physical alertness, control and memory.

The Dalcroze eurhythmics approach includes four interrelated areas; eurhythmics (rhythmic and a sense of rhythm), ear training (solfege and finesse of hearing), improvisation and kinesthetic awareness (plastic movement) (Anderson, 2012). The four components produce musicians who know music from kinesthetic point of view, who can sight sing and gain deep knowledge of harmony and have ability to improvise on their instruments.

Rhythmics and a Sense of Rhythm

According to Sheridan (2015), Dalcroze believed that rhythm is the fundamental, motivating force in music and is best internalised through movement. Juntunen (2016), having a sense of rhythm means the capacity to feel the space/time and energy in movement. A sense of rhythm is manifested in rhythmic movements that in turn affect the rhythmic expression of musical performance. Hence, in rhythmic exercises, the body movement is combined with music listening based on the argument that music and body movement are intrinsically linked. For example, in a music lesson, a teacher may play repeated rhythmic patterns that students have to realize, explore, recognize and remember in movement, or a teacher can ask students to express freely in movement what they hear in music for instance, a certain aspect of the music.

According to Abril and Gault (2016), the eurhythmic movement helps students become proficient as they follow the tempo, rhythm and meter with their bodies. Dutton (2015) found that Dalcroze eurhythmics approach helps in teaching intervals as students use movement while singing the notes. This usage of movement to learn about intervals helps students to incorporate the visual, aural and kinesthetic aspects of music by means of a concrete physical motion. Stumpf (2018) asserts that experiencing whole and half steps may help the students develop acute listening skills and foster positive motivation, which comes from the felt body. The study found the arguments of the various authors instrumental in establishing how Dalcroze eurhythmics approach applied to teaching musical rhythm help the student to recognize, perform and transcribe the rhythmic elements.

Solfege and Finesse of Hearing

According to Juntunen (2016), the term solfege refers to exercises and studies that aim to build up the limit of hearing, tuning in, reacting to, singing, distinguishing and

documenting any mix of sounds. The primary intends to construct an association between what is heard and what is composed that is show the students to compose songs, rhythms and harmonies by ear. Solfege look to build up the inward ear' that is the capacity to intellectually deliver accurate sound pictures without the assistance of voice or instrument. For instance, an educator can build up students' inward hearing abilities by having them practice alternating between singing loud and internally.

Abril (2017) noticed that Dalcroze great hearing creates listening aptitudes and that music instruction ought to be founded on hearing abilities. For example, the students can be approached to recognize one and two line tunes and walk alone when hearing a harmony tune and along with an accomplice when a two section song is heard; or, when figuring out how to recognize major and minor groups of three, students can be approached to fold their arms when hearing a minor tune of three and to keep their arms open when hearing a significant set of three. These arguments were relevant to the current study in examining the use and significance of solfege during music lesson.

Improvisation and the Ability of Spontaneous Expression

In Dalcroze classroom activities and exercises, students learn by moving, singing or playing an instrument. Act of spontaneity inspires students to communicate their own thoughts, makes students think bigger and realizes a feeling of achievement and fulfillment (Abril, 2017). As per Sheridan (2016) Dalcroze included act of spontaneity as a third segment of the way to deal with and orchestrate the hypothetical information and abilities increased through solfege and eurhythmic encounters. All these articulations can be argued to affirm that music improvisation offers away to apply and give vibrant structure to things learned, for instance, different rhythms, harmonies and elements to reveal musical comprehension and create sense of accomplishment. Therefore, the

current study used the articulations to show that in solfege, students are taught to understand tones, semitones, and their relationships in scales, songs and musical passages.

Plastic movement and Kinesthetic Awareness

Plastic movement within Dalcroze eurhythmics approach is connected to personal experiences and feelings, which aim at expressing music in movement and making it visible (Juntunen, 2016). In exercises, students make movement to a given piece of music that is associated with choreography. Juntunen's piece of work resonated with the current study in illustrating that Dalcroze eurhythmics approach helps teach scales and intervals as students use movement while singing the notes. These arguments were relevant to the current study in examining the interrelationship of the scales that becomes clear when students are able to aurally determine the order of tones and semitones. In addition, assessing the movement of the fingers accompanying singing on the arm as an imaginary keyboard and investigating how the students are led to responding through movement to harmonic progressions; for instance, facing centre for tonic, turning right for dominant and moving left for subdominant chords in Kenyan primary teacher education level.

According to Anderson (2012), Dalcroze activities use movement to sharpen student perception and engender a more sensitive response to the musical elements of timing, articulation, tone quality and phrasing. This finding agrees with Ristow et. al., (2014) who found that music is best understood through body movement. The movement involved in making music increases bodily knowledge and is directly connected to attention, memory, concentration and responsiveness. Dalcroze eurhythmics approach is based on the question of the body in relation to music and movement. A study by

Juntunen (2016) posits that through movement of the whole body music is felt, experienced and expressed, reciprocally the movements express what the participants hear, feel, understand and know.

Anderson (2012) noted that active participation in Dalcroze eurhythmics approach allow students to be much better prepared to enter their general academic studies as well as more advanced music studies. Marzuola (2019) found that Dalcroze eurhythmics approach facilitates sureness in students conducting gestures as well as the quality of gestural choices that they make. The finding is in support of Hart (2016) who observed that Dalcroze eurhythmics approach advances students' musicianship holistically, which can heighten the skills needed to be an effective music educator. This study applied these articulations in explaining the hidden role of Dalcroze eurhythmics approach during the music lesson. Whereas Anderson, Marzuola and Hart assessed the role of Dalcroze eurhythmics approach, in general the current study investigated the impact of the use of the approach on the trainees' academic performance in Kenya.

The conception of learning in Dalcroze resonates with the basic principles of constructivism: teaching processes build on students' earlier understanding and knowing and gradually proceed based on students' ongoing responses and progress. The fact that a student is seen as an active agent, constructing knowledge as a result of interaction, communication and expression, reflects social constructivist views (Vygotsky, 1986). Furthermore, viewing the teacher as guiding the learning process rather than transmitting knowledge is foundational to the constructivist conception of learning. Walker (2015) reports that usage of movement to learn about scales in Dalcroze eurhythmics approach helps students to incorporate the visual, aural and kinesthetic aspects of music by means of a concrete physical motion. The review of this literature lays foundation for establishing the key features of Dalcroze eurhythmics approach.

It is argued that music education has evolved over a very long period of time and music educators now support pedagogical approaches intended to advance the musical development of learners (Campbell & Scott-Kassner, 2014). The approaches to music learning pair active and actual music making with conceptual learning experiences offered in a systematic approach (Abril & Gault, 2016). Chosky et. al., (2000) indicate that the music pedagogical approaches are comprehensive and holistic in preparing children to be artists, creators and producers and not just consumers of music.

According to Sucic and Benic (2017) learner centred approaches have positive influence on students' academic performance and motivation compared to the students from music schools with conventional method. Hence, music-based pedagogical approaches are significant in enhancement of students learning of music. It is for this reason that music teachers need to demonstrate skills of an effective teacher and employ pedagogical approaches that can enhance the musical competencies of students.

The study examined in detail three music-based pedagogical approaches; the Kodaly, Orff and Dalcroze because Kodaly, Orff and Dalcroze pedagogical approaches explore a holistic, artistic and integrated approach to understanding the developmental connections between music and child. According to Sheridan (2015), Kodaly, Orff and Dalcroze pedagogical approaches to teaching music provide music teachers with methodological techniques that can be applied in the classroom to build students' music literacy and understanding. The approaches guide music professionals to work through music, harnessing the processes that underlie music learning and outlines appropriate procedures to understand the role of music in students' lives through creativity and movement.

2.7 Impact of the Use of Kodály, Orff and Dalcroze Pedagogical Approaches on Academic Performance

Many researchers in the field of music education have studied the impact of the use of Kodály, Orff and Dalcroze pedagogical approaches. Abril and Gault (2016) noted that the use of Kodály, Orff and Dalcroze pedagogical approaches give a lot of clues to verify teaching and learning achievement, and concluded that students who are taught using the pedagogical approaches had significantly higher scores than their counterparts who were not taught with the approaches. Sandberg et. al., (2013) report that student learning achievement may heavily depend on teacher's teaching approach and variety of learning activities. This literature review provides a background and rationale for studying the impact of the use of Kodály, Orff and Dalcroze pedagogical approaches in teaching and learning of music at the primary teacher education level in Kenya.

Various studies have reported that Kodály and Orff pedagogical approaches influence the teaching and learning outcomes of students (Ward, 2018; Scott, 2018; Till, 2017; Fell, 2016). Sucic and Benic (2017) found out that Orff and Kodály approaches have positive influence on students' academic performance and motivation if effectively used. Korarit et.al., (2012) report that Conservatories in Philippines apply Kodály and Orff approaches to teaching music education for the development and knowledge improvement in higher education. The studies of Korarit et. al., (2012) provide a good insight on the effect of the use of pedagogical approaches on academic performance in primary and university level of education. However, they have not analysed the impact of the use of Kodály and Orff pedagogical approaches in the primary teacher education level in Kenya, which the current study wishes to examine.

Studies in regard to the utilization of Kodály pedagogical approach show that there is an effect of the methodology on students scholarly accomplishment. In United States of America, Sheridan (2015) notes that Kodály pedagogical approach furnish music educators with methodological strategies that can be applied in the classroom to assemble students' music proficiency and seeing consequently increment in hear-able and improvement in scholastic execution. A study by Lori (2012) on indicated that Kodály based music guidance can bring about expanded scholastic accomplishment, innovativeness and confidence. These discoveries recommend that the utilization of Kodály pedagogical approach improve not exclusively students' melodic development yet additionally their scholarly execution.

A study by Moralista (2016) in Philippines, observed that the use of Kodály approach has a positive influence on students' academic performance. Bidner (2016) report that Kodály music teaching approach uses the folk music repertoire in the classroom for students to learn what music is. The study used the folk songs as classroom activities in a music class to enhance students overall academic achievement.

Smuta (2017) uncovers that Kodály based music guidance improve spatial acknowledgment (thinking aptitudes) and non-spatial capacities (general knowledge) though not significant. Houlahan and Tacka (2015) researched the connection between Kodály music guidance and spatial-transient thinking and found that Kodály music guidance fundamentally upgraded spatial – fleeting thinking. In any case, Houlahan and Tacka (2015) saw that Kodály music guidance created noteworthy impact ($p=.05$) on students spatial acknowledgment and non-spatial capacities utilizing Raven's Progressive Matrices.

See and Ibbotson (2018) indicated that Kodály approach improves IQ scores, psychomotor aptitudes, observation capacity just as other scholarly zones, for example, perusing and arithmetic. This finding is in line with the investigation by Goopy (2013) in Australia who found that Kodály approach music had dependably bigger increments in full scale IQ. Music instruction programs established on Kodály theory feed learning aptitudes and perspectives that relate to different zones of learning (Goopy, 2013). The study found these arguments instrumental in establishing whether Kodály based music guidance improves general knowledge and thinking aptitudes.

As to the utilization of Orff approach of instructing, investigation of Womack (2010) indicated that there was a more noteworthy improvement from students who showed dependence on Orff ways of thinking of music training. Ventura (2014) found that participatory students and educators in the Orff bunch showed a superior nature of essential music and a more uplifting mentality towards music and advancement of music abilities than the customary music instruction gathering.

An investigation by Vance (2014) likewise indicated that students who were utilizing Orff approach made a noteworthy addition in arithmetic scores than the gathering which got no music guidance. Long (2013) discovered that both the Orff approach and Traditional methodology added to the securing of music abilities however none was better than the other. As indicated by Long (2013), research on the effect of Orff approach of instructing music recommended that there is a positive connection between the methodology and students' scholastic execution, yet not generally a noteworthy or a completely direct one. Lopez-Ibor (2013) found that the utilization of Orff approach by music instructors to present and prompt exercise substance to give more powerful and effective guidance in class improves understudies presentation in music. These

discussions were relevant to the current study in examining the impact of the use of Orff's pedagogical approach in the primary teacher level in Kenya.

Studies concerning the utilization of Dalcroze demonstrate that there is a positive and noteworthy effect on the utilization of Dalcroze eurhythmics approach and scholastic execution. Wang (2013) found that Dalcroze eurhythmics approach exercises created measurable contrasts in the capacity of students' advancement in learning melodic rhythms in Secondary school training level. Anderson (2012) commented that guidance to students utilizing Dalcroze eurhythmics approach expanded students' beat competency. He further on his part noticed that guidance for understudies that utilized Dalcroze eurhythmics approach exercises expanded student's execution in melodic parts of register and melodic form segregation.

An exploration by Stumpf (2018) uncovered that the nearness of Dalcroze exercises positively affected the capacity of 6th grade understudies to aurally see the melodic ideas of register and melodic form. This impact was found in the way that the gathering utilizing Dalcroze eurhythmics approach essentially expanded their scores from pre-test to post-test results, while a benchmark group not taking an interest in Dalcroze practices exhibited no specific improvement. Abril (2017) announced that the utilization of development builds up an student's feeling of rhythm and beat, cadenced abilities and comprehension of pitch ideas.

Habron et al., (2012) analyzed encounters and impression of student's authors at Coventry University, England subsequent to partaking in a progression of discretionary Dalcroze exercises. Some 66% of the members announced roundabout impacts on their compositional work, for example, improved aural mindfulness, gain in melodic information, simple understanding and general scholarly accomplishment. Lastly, van

der Merwe's (2015) study analyzed first year lone ranger level music understudies in South Africa. She reports that Dalcroze propelled exercises during a music training module improved students' innovativeness, comprehension of melodic components and scholarly accomplishment.

Berger (2013) discovered that those exercises in Dalcroze eurhythmics approach that underscored pitch did not increase third and fifth grade understudy competency in pitch. Students who got Dalcroze guidance that underlined musicality expanded understudy competency in meter yet not in mood (Berger, 2013). Further investigations of Marzuola (2019) and Juntunen (2016) demonstrated that there was a prominent improvement from students who showed dependence on Dalcroze eurhythmics approach. Walker (2015) observed that guidance to Kindergarten first grade utilizing Dalcroze eurhythmics exercises expanded student's presentation in the melodic parts of register and form separation. The author Marzuola (2019) continues to demonstrate that Dalcroze guidance improved students' participatory and directing down beat motions since they needed to figure out how to time their developments to finish errands while taking an interest in Dalcroze exercises. The current study investigated the impact of the use of Dalcroze pedagogical approach in Kenya thereby deviating from the work of Berger, Marzuola, Juntunen and Walker which discusses the impact of Dalcroze pedagogical approach in the American context.

2.8 Discourse on Music-based Pedagogical Models

Instructional model is a framework of ideas about a subject through which that subject can be taught or learnt (Hubbell & Goodwin, 2019). In order for teachers to understand how to effectively deliver learning opportunities for learners, Asad et. al., (2014) report that instructional models are proposed to help teachers acquire plans to enhance the learning capabilities of the learners and allow them to design course contents more

efficiently. Therefore, the current study used the positions in showing that instructional models can assist teachers in structuring the learning activities that can raise the effectiveness and efficiency of their instructional input.

Essentially, instructional models should fulfill the needs of learners today while analyzing, identifying the problems and providing the solutions accordingly. In support of this view, Abeles et al (1995) identified three basic instructional models that can be used in planning a curriculum. A particular philosophical perspective governs each of the models. The models include:

1. Linear/control model: this is where the goal of teaching is to enable learners to perform delineated responses
2. Consensus model is where the needs and concerns of the learners are identified and the teachers' role is to guide learners into gaining understanding, skills and values
3. Dialogue/freedom is a model that has a minimum control over the learner's outcomes and the teacher serves as a facilitator and guide.

The need for impact-directed music-based pedagogical model for teacher training colleges (TTCs) is grounded on the consensus model that ultimately harmonizes well with the music-based pedagogical approaches used in the study. The music-based pedagogical approaches where the teacher guides the learners by first involving them in discrimination learning after which learners are able to use the skills and content learned to make inferences and to gain theoretical understanding of music. According to Serdenciuc (2015), the goal of the instructional designs is to ensure that learners are able to demonstrate their learnt competences after they have acquired necessary skills,

knowledge and attitudes. The learners acquire the competences through learning experiences and appropriate pedagogical approaches.

It is evident from the scholarly discourses and reflections that proposed models provide means for acquiring both the necessary knowledge and the ability to use that knowledge in a specific context. This is supported by KICD (2018) report that competency-based curriculum (CBC) embraces the need for learners to be able to think about and solve problems, communicate through discussions, work in teams, take initiatives and bring various viewpoints to their learning environment. This implies an improved role for teachers as CBC entails making learners learning visible to the teachers, appropriate pedagogical approaches required and guided feedback expected so that teachers can know whether they are creating impact on learning or not.

In the Basic Education Curriculum Framework (BECF), it is reported that CBC provides guidelines on the nature of approach in the learning set up between the teacher, learner and the environment. (Republic of Kenya, 2016). Specifically, in music the competences focus on performance in terms of the goal state of instruction. For instance, the strand Creating and Composing, sub strand melody the competence of creativity and innovation is developed through development of skills of composing own original melodies. This is a significant component towards a complete development of the musician and not just a musician but a lifelong musician. To this end CBC has been proposed as a stepping stone to achieving better teaching and faster learning of concepts particularly music concepts which is facilitated by careful selection of pedagogical approaches and utilization of appropriate learning resources by competent teachers.

The model was proposed after establishing that there is a wide spread use of conventional approaches at the teacher training colleges in Kenya. The conventional

approaches do not allow teacher trainees to experience experiential learning. It is hoped that the proposed model if utilized will allow for experiential learning of music that is not attained when conventional approaches are used in teaching and learning of music.

2.9 Summary of the Reviewed Literature

In summary, considerable researches have examined the impact of the use of Kodály, Orff and Dalcroze pedagogical approaches on students' academic performance. In particular, issues are noted relating to over-reliance on conventional teaching approach and theoretical approach to teaching music curriculum. However, little has been documented about the impact of Kodály, Orff and Dalcroze pedagogical approaches for teaching music in Kenyan primary teacher training colleges.

Studies on the use of Kodály pedagogical approach have noted positive impact on the academic performance (Isa et al., 2020; See & Ibbotson, 2019; Houlahan & Taka, 2015; Smuta, 2017; Moralista. 2016; Sheridan, 2015; Goopy, 2013). These studies were conducted in elementary schools, secondary schools and universities in developed countries. Literature searches indicate that there is scanty information on the impact of the use of Kodály pedagogical approach on academic performance in Kenya.

Studies have also pointed out that there is a slight effect of Orff approach in teaching music and academic performance (Scott, 2018; Eren & Gul, 2017; Locke, 2016; Baker, 2014; Vance, 2014; Ventura, 2014). These studies were conducted in USA, UK, Canada and Turkey. A similar study on the effect of Orff pedagogical approach on teacher trainees' academic performance in Kenya has not been conducted.

Several studies indicate that the use of Dalcroze eurhythmics approach to teaching music bring slight positive effect on academic performance (Marzuola, 2019; Stumpf, 2018; Abril, 2017; van de Merwes, 2015; Wang, 2013; Daley, 2013; Hadley, 2013; Anderson,

2012). The studies of Berger (2013) have shown that the use of Dalcroze eurhythmics approach in the classroom did not increase 5th and 6th grade student competency in music. Limited studies have however been done on the use of Dalcroze pedagogical approach in Sub-Saharan Africa (Dalcoze, 2013; Juntunen & Westerlund, 2011). Instead, most of the studies have been done in developed countries.

Scholars and researchers are generally in agreement that pedagogical approaches used by teachers impact on the quality of instruction in the classroom (Sarrazin, 2016; Singh & Savita, 2016; Shehan, 2016; West, 2015; Westbrook et al. 2013; West, 2012). Teachers in this case play a vital role helping students acquire desired knowledge and appropriate skills that they will need as citizens and as workers. Music teachers should apply specific pedagogical approaches without which their influence may not be reflected in their student's performance in the subject. For teacher trainees' to be able to make connection between what is taught in teacher training colleges (TTCs) and its application in real life problem solving situation, the music tutor has to be effective in teaching and delivering the music subject content.

There is an urgent need to understand the primary root cause of the decline in primary teacher education (PTE) music examination performance. In addition, there is need to reverse the state of affairs in Kenyan Primary Teacher Training Colleges (PTTCs). The researcher sought to develop a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills.

2.10 Theoretical Framework

The study was anchored on the Music Learning Theory (1994) which postulates that learner's progress through a process that begins with oral reception, finally leading to an understanding of music theory. The theory assumes that music teaching and learning is

similar to language learning proceeding from sound to symbol. Music Learning Theory describes how students learn music.

Music Learning Theory (MLT) is also an explanation of music learning based on 'audiation'. According to Gordon (2007) audiation refers to the ability to think musically. This is supported by Abril and Gault (2016) who defines audiation as music thinking. Music learning potentials and music learning achievements are based on our music thinking (Abril & Gault, 2016). Hence, the main objective is to help students understand the music they study in classroom activities.

MLT explains that audiation skills can be taught according to a systematic and progressive method (Dalby, n.d; Gordon, 2007). This is affirmed by Valerio (n.d) who posits that the key component to Gordon's approach to music learning is the idea and the role of instructional sequencing. Sequence accounts systematically for the readiness needed to learn each new musical skill.

Music Learning Theory (MLT) comprises of three categories of music learning sequence (Taggart, 2016). They include skill learning sequence, tonal content learning sequence and rhythm content learning sequence. For the purposes of this study skill learning sequence was described because skill learning sequence must be used in conjunction with either tonal content sequence or rhythm content sequence.

Gordon (2012; 2007) outlines two main categories of skill learning sequence based on his research on audiation: Discrimination and Inference learning. Discrimination learning is fundamental; it is the readiness for inference learning. Rote learning is accentuated at discrimination levels of learning and conceptual learning accentuated at inference levels of learning. Discrimination learning involves Aural/oral, verbal association, partial synthesis, symbolic association and composite synthesis. Inference learning is whereby

the students take an active role in their own education to identify, create and improvise unfamiliar patterns. It involves generalisation, creativity/ improvisation and theoretical understanding.

Nuzzaci (2016) aural/oral involve activities such as hearing, moving and singing back to the instructor. In verbal association learners are required to associate words, tonal and rhythm syllables with sound that is contextualize meaning to what they are imitating through tonal syllables. Partial synthesis enables learners to recognize and identify familiar tonal and rhythm patterns performed. In symbolic association syllables and sounds are associated with music notation. In composite synthesis learners give context to familiar tonal and rhythm patterns by reading and writing them, that is, characteristics of whole are recognized.

Inference learning involves learning of concepts. It begins with generalization which involves identifying the unfamiliar on the basis of similarities to and differences from unfamiliar. For instance, learners listen to sets of familiar and unfamiliar tonal and rhythm patterns and determine whether the patterns are the same or different. Creative learners use the skill and content learnt at lower levels of learning to improvise and create music. In theoretical understanding learners learn to recognize and perform patterns that apply concepts learnt. Discrimination learning basically precedes inference learning because learners cannot make inferences unless they have learnt how to make discrimination.

Many studies have been conducted to test the efficacy of Music Learning Theory (MLT). In USA, Gordon (2011) used the theory to justify the Aural/oral level of learning as being fundamental. The study investigated whether students should be listening (aural) or performing (oral) or both listening and performing. The group listening and

performing performed significantly better than either of the two groups. Both listening and performing appeared necessary for a well-structured education in music. The purpose of using MLT in this current study is to indicate the analysis and synthesis of the sequential manner in which we learn music.

A study from United Kingdom involving students taught to learn to read music notation by associating tonal syllables and rhythm syllables and students taught to use pitch letter names a common music theory practice (Gordon, 2011). The purpose of the study was to predict which group would read notation with confidence and with less effort. The result noticeably indicated that students taught according to tenets of MLT were superior to those taught traditionally.

From the research that has been conducted to test the MLT, overall results suggest that the theory can be useful as a predictor of student music learning. In the current study, if primary teacher trainees were taught music using the tenets of MLT, then they would be able to apply what they were taught in discrimination learning before inference learning. The process will obviously tap into music achievement.

However, Music Learning Theory posed limitations for the study. The teaching and learning of music in primary teacher education is basically problem solving. According to Isbell (2012) the learner's problem solving ability can be accelerated with the use of appropriate pedagogical approaches. The Music Learning Theory (MLT) focuses on music learning processes but does not state how the learner uses problem solving ability after learning what music is. Hence, Music Learning theory was complemented by the theory of Multiple Intelligence.

The theory of Multiple Intelligences (MI) was proposed by Gardner (1983). Gardner (2006) views intelligence as 'the capacity to solve problems'. Further, Gardner (2006)

identifies eight intelligences that everyone possesses and clarifies that they act as a toolkit for solving problems. These intelligences are Linguistic intelligence, Logical-mathematical intelligence, Spatial intelligence, Interpersonal intelligence, Bodily-kinesthetic intelligence, Intrapersonal intelligence and Musical intelligence. Gardner argues that intelligence is a dynamic collection of these intelligences. Each of these intelligences can be strong, moderate or weak in every student. Music is one of the intelligences identified.

Katie et. al., (2011) note that musical intelligence involves performance, composition, appreciation and use of musical elements like melody, rhythm and harmony. Integrating different forms of music in the classroom both utilizes the capabilities of this intelligence and peaks the students' interest especially those students strong in the musical intelligence (Katie et al., 2011). If music is its own intelligence (yet one, which everyone possesses) then to interact with music will surely increase students' problem-solving capabilities. Anderson (2017) investigated the relationship between musical intelligence and musical skills. The study reports that people who remember melodies or are well aware of pitch and rhythm show musical intelligence. They listen and recognize surrounding sounds.

The purpose of using MI now is to indicate that multiple intelligence-based activities meet the needs of teacher trainees. Music tutors do not need to teach eight different ways to match teacher trainee's intelligences. However, they must ensure that teacher trainees are given opportunities to choose more than one way of developing the concepts and skills related to the topic being taught, thus allowing them to truly maximize their capabilities by representing knowledge in other ways.

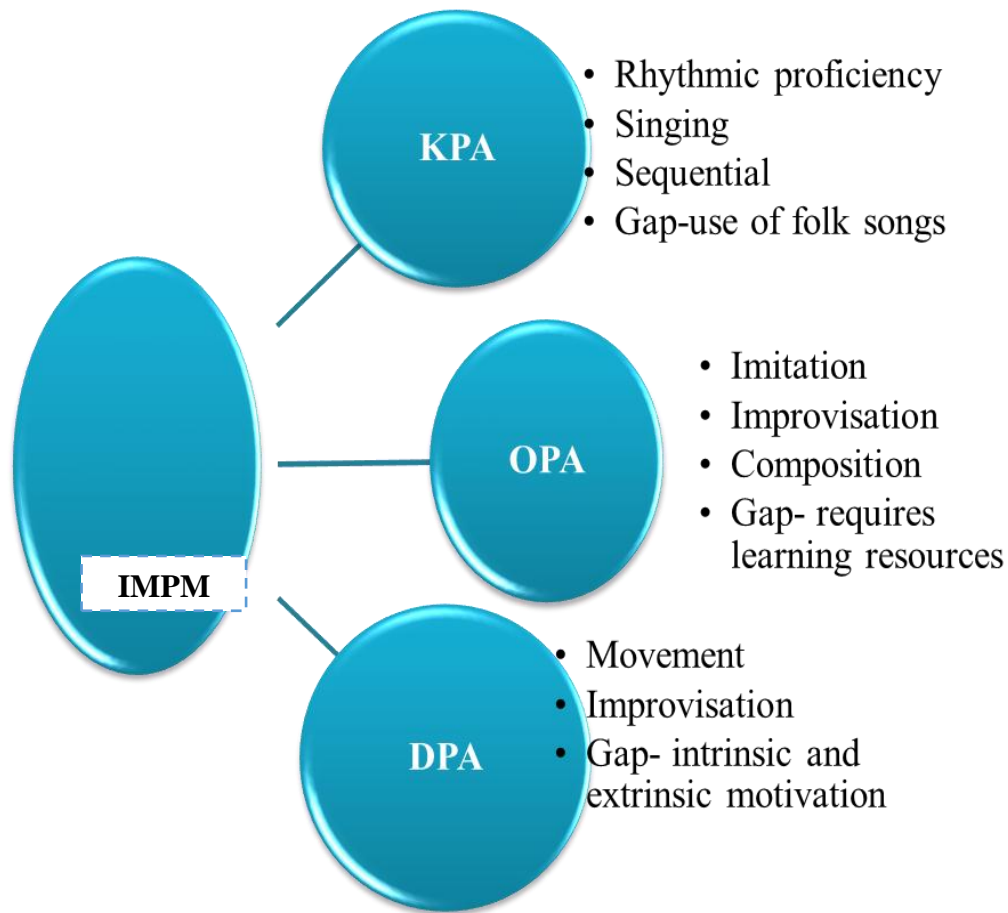
Music-based pedagogical approaches such as Kodály, Orff and Dalcroze promote the development of multiple intelligences (Anderson, 2017; Strauss, 2013). Further, they also offer other cognitive benefits such as enhancing the sense of sequence and memory. Music tutors therefore should use pedagogical approaches that would meet each teacher trainees' strong points.

2.11 Conceptual Framework of the Study

The conceptual framework depicts the model of impact-directed music-based pedagogical approach. The model (independent variable) addresses experiential learning at the same time embraces the principles of Kodály, Orff and Dalcroze pedagogical approaches (independent variable) thereby allowing experiential learning of music. The study variables and how they interact was shown in Figure 1.

Figure 1

Conceptual Framework: A Model for an Impact-directed Music-based Pedagogical Approach



Source: Researcher, 2022

The conceptual framework shows that Kodaly pedagogical approach offers experiential learning however; there is a gap to be bridged for the teacher trainees to experience experiential learning. The gap identified is the use of folk songs from the diverse Kenyan communities. Orff pedagogical approach does not offer experiential learning, therefore the gap identified to allow experiential learning is provision of learning resources such as pianos, melodica, drums, playbacks, CD, DVD and even music rooms. Dalcroze eurhythmics approach does not offer experiential learning and so to allow experiential

learning, the music tutor has to make sure that the trainees are motivated both intrinsically and extrinsically. This implies that the trainees have to appreciate the movements as required by the approach. This interaction with music will sharpen the teacher trainees' music skills and surely will increase their problem solving capabilities.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the procedures that were utilized in the study in order to realize the set objectives of the research. It describes the research design, location of the study, target population, sampling procedure and sample size. It further described the research instruments, pilot study, data collection, analysis procedures and concludes with a description of ethical considerations of the study.

3.2 Research Design

Research design is regarded as an arrangement of condition for collection and analysis of data in a manner that aims to combine relevance with research purpose. It constitutes the blue print for the collection, measurement and analysis of data (Kothari, 2014). The study adopted mixed methods quasi-experimental research to establish the impact of music-based pedagogical approaches on teacher trainees' performance in primary teacher education music examination. Mixed methods research refers to a combination of quantitative and qualitative methods incorporated into a single study. In this type of research design, neither the quantitative nor the qualitative methods alone would provide an in-depth understanding of the overall research problem (Creswell, 2014). Particularly in this study, the approach was convergent parallel mixed methods. In convergent parallel mixed methods, the researcher merges quantitative and qualitative data to provide a comprehensive analysis of the research problem (Creswell, 2014). Hence, both quantitative and qualitative methods were used to collect data to achieve the objectives of the study.

Over the course of one term, quantitative data was collected using questionnaires, pre and posttest scores and qualitative data using interviews regarding the impact of the use of Kodály, Orff and Dalcroze pedagogical approaches. The research study was quasi-experimental in nature because first, experimental research seeks to determine if a specific treatment influences an outcome (Creswell, 2014). In this study, the specific treatment was the use of Kodály, Orff and Dalcroze pedagogical approaches and the outcome was the level of music performance teacher trainees demonstrated over the course of the term. Secondly, the selection process of the respondents also lends to quasi-experimental design.

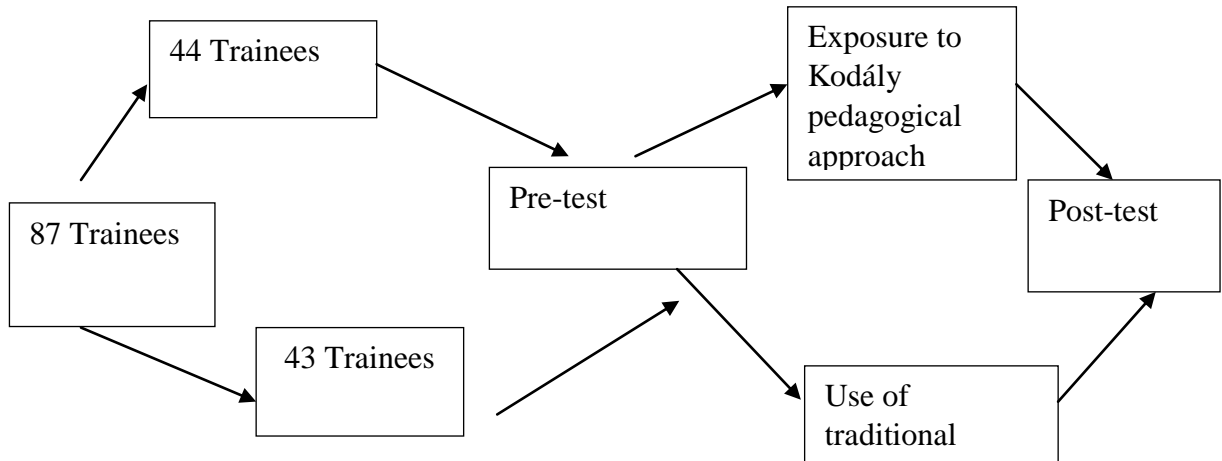
The study was conducted in an educational setting. Due to the structure of the class and because the teacher trainees were already pre-determined at the onset of a particular class, random assignments of subjects was not possible (White & Sabarwal, 2014; Ellis & Levy, 2011). This design allowed for a comprehensive comparison between the use of Kodály, Orff and Dalcroze pedagogical approaches at the beginning and at the end of the term. In addition, the research design dove deeper into looking at specifically which pedagogical approach had the greatest impact on teacher trainees' performance in primary teacher education music examination.

The design required two groups; experimental and control group (Thyer, 2014). It also required two assessment phases, pre-testing phase and post testing phase. The researcher formed the two groups by assigning three classes to the experimental group and one class to the control group. The groups were assigned through self-selection. The groups were assessed twice. The first assessment served as the pre-test while the second assessment was post-test. In the experimental group, the researcher gave a pre-test, treatment by using the Kodály, Orff and Dalcroze pedagogical approaches and then post-test while in the control group, the researcher only gave a pre-test and a post-test without treatment.

The pre-test and post-test were administered at the same time for both groups as summarized in the following figures. Figure 2 shows a diagrammatic representation of the experimental study using Kodály pedagogical approach.

Figure 2:

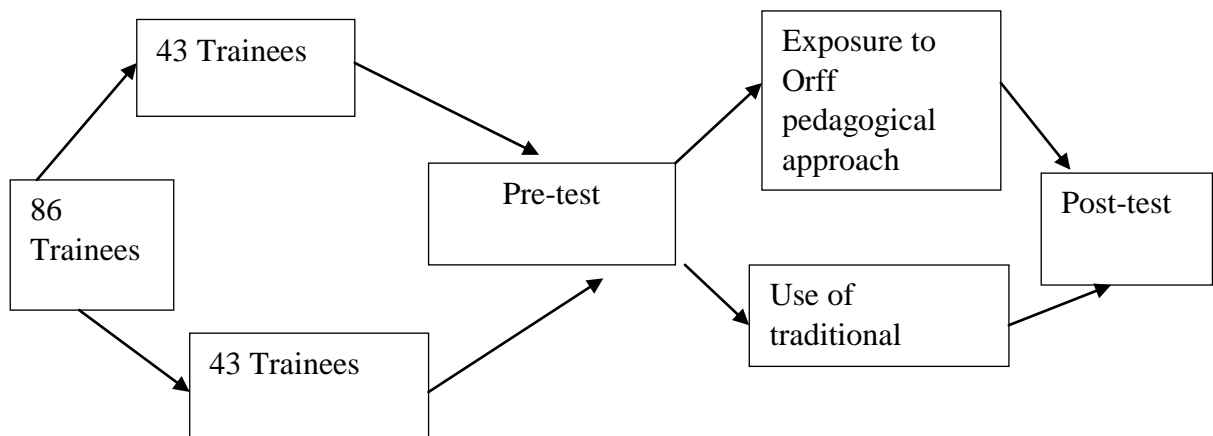
A Diagrammatic Representation of Teacher Trainees in Group 1



The diagram in Figure 2 shows the dispersion of teacher trainees into the Experimental study of Kodály Pedagogical approach. It had a total of 87 teacher trainees of these 44 were taught using Kodály pedagogical approach and 43 taught using the traditional teaching approaches. Figure 3 shows a diagrammatic representation of the experimental study using Orff pedagogical approach.

Figure 3

A Diagrammatic Representation of Teacher Trainees in Group 2

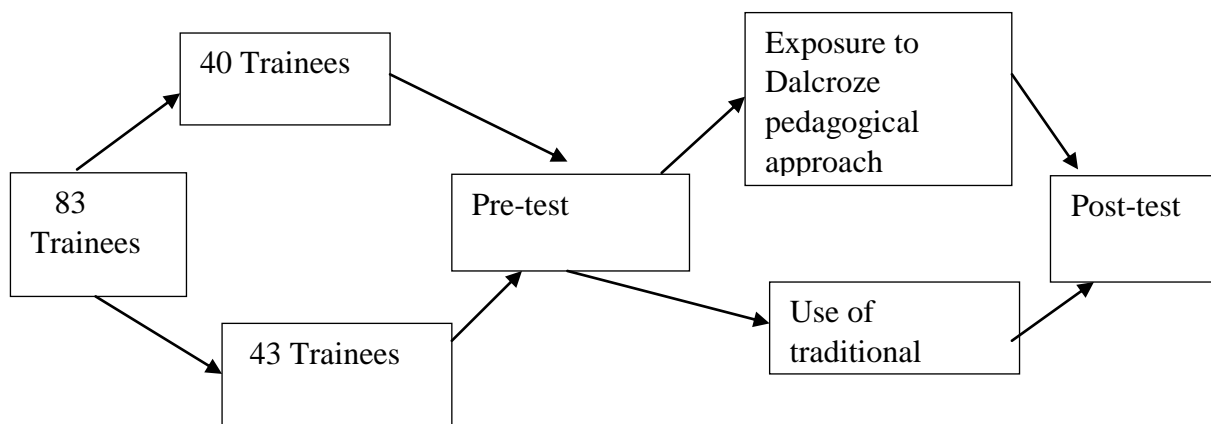


The diagram in Figure 3 represents the Experimental study of Orff pedagogical approach. It was made up of 86 teacher trainees of which 43 were taught using Orff pedagogical approach and 43 taught using the traditional teaching approaches.

Figure 4 shows a diagrammatic representation of the experimental study using Dalcroze pedagogical approach.

Figure 4

A Diagrammatic Representation of Teacher Trainees in Group 3



The diagram in Figure 4 represents the Experimental study of Dalcroze Pedagogical approach. It had a total of 83 teacher trainees of whom 40 were taught using Dalcroze pedagogical approach and 43 taught using the traditional teaching approaches. The Experimental groups had a total of 127 teacher trainees while the Control group had 43 teacher trainees.

3.3 Location of the Study

The study was conducted at PTTC1 in Nandi County which is located in the former Rift Valley Province of Kenya. The county borders Uasin Gishu County to the North and East, Kericho County to the South East, Kisumu County to the South, Vihiga County to the South West and Kakamega County to the West. The county lies approximately between latitudes 00° 10' and 0° 00' north of the equator and longitudes 35° 08' and 60°

00' east of the great Meridian. The County covers an area of 2,884.4 square kilometres which forms 0.46 percent of the total land area of the Republic of Kenya. The County comprises of over 20 tertiary institutions including a private university, a teacher training college, several commercial colleges and polytechnics. As at August 2009, the population of the county stood at 752,965 people, with a population density of 261 persons per square kilometre and an annual growth rate of 2.9 percent (KNBS, 2009). The county is made of a number of Kenyan communities, the majority of whom belong to the native tribe called Nandi.

Data obtained from Nandi County Director of Education indicates that there is one public primary teacher training college, PTTC1 and other commercial private primary teacher training colleges where music is offered at the PTE level. As of December 2019, the data indicates that the staffing at PTTC1 stood at 70 tutors, 3 being tutors of music.

The study area was selected because of the one public primary teacher training college available and proliferation of private colleges and campuses. This conveniently enabled the researcher to promptly administer the instruments and receive feedback. The public and private teacher training colleges were important considering the nature of the target population (trainees and tutors). The public teacher training college (PTTC1) in the study area was chosen based on fact it is the oldest, started in 1960s, has better physical facilities, higher enrolment of the teacher trainees, music taught for a long time and performance mean score at PTE examination between 2014 and 2018 is dismal. The private primary teacher training colleges were left out for reasons of instability, that is, information obtained cannot give a reliable data.

3.4 Population of the Study

Suter (2012) defines the target population as all the members of a real or hypothetical set up of people, events and objects to which a researcher wishes to generalize the results of the study. The target population for this study comprised of all teacher trainees in their year two (341) and music tutors (3) in Nandi County. However, the study's accessible population was teacher trainees studying music in year two (170) and music tutors (3) at PTTC1 for they are directly involved in the teaching and learning of music. PTTC1 had 341 teacher trainees in second-year but only 170-teacher trainees' studied music at the time of conducting this study.

Table 4

Population of Music Tutors and TTs in Year Two in Nandi County as at 2019

S/No.	Primary Teachers Training College	Music Tutors	Teacher Trainees Year 2	Population
1.	PTTC1	3	341	344

Source: Nandi County Director of Education, 2019.

For the purposes of anonymity, the primary teacher training college that participated in this research study was coded as PTTC1.

3.5 Sampling Procedures and Sample size

Amugune (2015) describes sampling as the process of selecting a sample from a population such that the selected group contains elements representative of the characteristics found in the entire group. The intention of sampling is to select individuals who are a good representation of a larger group so that research study outcomes can be generalizable to that population.

To determine the study sample, the following sampling procedure was employed.

3.5.1 Sampling Procedure

The study employed purposive sampling to select college tutors teaching music with the assumption that they utilize the music-based pedagogical approaches. Further, purposive sampling was employed to select teacher trainees studying music in their second-year of study at the college with the assumption that the year two group have gone through more music instruction and possess more content knowledge foundation than the first-year counterparts. According to Creswell (2014) in purposive sampling, researchers intentionally select individuals and skills to learn or understand the central phenomenon.

3.5.2 Sample Size

Sample size refers to the number of units that were chosen from which data were gathered (Malone et al., 2016). This implies that a sample size is the number of units for which data are actually collected. The major issue in sampling is to determine samples that best represent the population to allow for an accurate generalization of results. The sample for the study was believed to produce a representation of the music tutors and teacher trainees studying music in second-year.

The study adopted census sampling since the population was of a small group and did not warrant any further sampling. Census sampling is a systematic method that collects and records the data about all the members of the population and occurs if the entire population is small (Kothari, 2014). The sampling technique ensured that samples of the population were adequately represented in the sample to increase the level of accuracy when estimating parameters.

All the 170 teacher trainees studying music in year two and 3 college music tutors were selected to participate in the study. Table 5 shows the final sample size distribution of the

teacher trainees (TTs) studying music in year two and music tutors at PTTC1 in Nandi County, Kenya.

Table 5

Sample Size for Music Tutors and TTs Studying Music in Year two at PTTC1 in Nandi County as at 2019

S/No.	Primary Teachers Training College	Sample Music Tutors	Sample Year 2 Teacher Trainees Studying Music	Total Sample Size
1.	PTTC1	3	170	173

3.6 Instrumentation

According to Weinhardt et. al., (2017), research instruments are the devices that are used by the researcher to gather data from the sample. Researchers prefer using instruments that provide high accuracy, generalizability and explanatory power with low cost, rapid speed and maximum management demands and administrative convenience. Primary data was collected from the respondents who were music tutors and teacher trainees in teacher training college (TTC) in Nandi County. The primary sources included questionnaires and interview schedule. Questionnaires were used to gather information from teacher trainees while interview schedule was used on music tutors. The questionnaire was designed for collecting data from teacher trainees' studying music in year two. They were used to obtain information regarding previous musical experiences, the current musical instruction, Kodály pedagogical approach, Orff pedagogical approach, Dalcroze pedagogical approach, other activities teacher trainees engage in during music lessons and other pedagogical approaches the college music tutors employ in teachers training college.

The questionnaire (Appendix II) had four sections: A, B, C and D. Section A was used to generate data on trainees' demographic data. Section B was for eliciting data on the use of Kodály pedagogical approach, what aspects the music tutors include, the music activities teacher trainees engage in and how those activities help in the development of their music skills. Section C was used to collect data on the use of Orff pedagogical approach, the music activities teacher trainees engage in and how those activities help in the development of their music skills. Finally, section D was used to generate data on the use of Dalcroze pedagogical approach, the music activities teacher trainees engage in and how those activities help in the development of their music skills.

The questionnaire consisted of both open ended and close ended questions in order to come up with a comprehensive study. The items in section A were open ended questions. Ravitch and Carl (2016) emphasize that open ended type of questions give informants freedom of response. The items in section B, C and D were closed ended likert point scale. The study used closed ended questions mainly likert scale because closed ended questions have an advantage of helping respondents make quick decisions to choose among set alternatives. Closed ended questions also make it easier to code the information for subsequent analysis (Mugenda & Mugenda, 2010). The numerical scale helped minimize the subjectivity and made it possible to use quantitative analysis. The responses to the items were scored as follows; To a Very Large Extent (5); To a Large Extent (4); To Moderate Extent (3); To a Small Extent (2); To No Extent at All (1).

Interview is a technique of gathering data from respondents by asking questions and getting them respond verbally (Kothari, 2014). It gives the participants the opportunity to reconstruct their own experiences within the topic of study. The researcher conducted in-depth interviews with the college music tutors to understand their experiences on the use

of music-based pedagogical approaches. The interview schedule attempted to probe on the use of Kodaly, Orff and Dalcroze pedagogical approaches by the college music tutors and their views on the impact of music-based pedagogical approaches on academic performance. This information was compared to that of the questionnaires to authenticate the information on the interviews.

The semi-structured interviews consisting of structured questions with some open-ended questions were utilized as these types of questions allow for adequate probing and development of qualitative insights through talking to the college music tutors. The interview with the college music tutors took an average of 45-60 minutes each. The feedback was written on the interview sheet as the interview was conducted. A probing technique enhanced communication of full and accurate response from the interviewees. The interview schedule consisted of guiding questions based on research objectives.

In pre-test and post-test, two groups of teacher trainees were used; one group called experimental group (treatment given) and control group (no treatment is given). The two groups were measured twice. The first measurement was done prior to the treatment and served as the pre-test while the second done after the treatment was post-test. The purpose of the pre-test and post-test was to find out whether teacher trainees taught using the Kodály, Orff and Dalcroze pedagogical approaches performed better than those who were taught using other approaches.

The researcher developed the pre-test and post-test based on the music activities the teacher trainees engage in during music lessons. The pre-test and post-test had the same content (refer to Appendix IV). The test consisted of the following six exercises:

- (a) Rhythms, where the teacher trainees were required to clap/tap a given rhythmic pattern using French rhythm names, create a short rhythmic pattern of four bars and then clap/tap the created rhythmic pattern.
- (b) Melody is where the teacher trainees were required to sing short melodies using hand signs, sol-fa names, construct given scales and play the constructed scale on a pitched instrument.
- (c) In Intervals, the teacher trainees were required to visually identify, sing using sol-fa names, play the intervals, and move wide and narrow to indicate intervals.
- (d) Triads, the teacher trainees were required to visually and aurally identify; and write down the triads as played.
- (e) Translation, the teacher trainees were required to write down the sol-fa notation and sing the translated melody.
- (f) Finally, in Transposition the teacher trainees were required to transpose the given melody at an interval and sing the transposed melody.

The steps in administering the pre-test and post-test included: the researcher assigned teacher trainees to control group and experimental group; administration of the pre-test to both groups; administration of the treatment to experimental group but not to the control group; and administration of the post-test to both the experimental group and control group. The control group was used for purposes of comparison with the experimental group in terms of their overall mean. The college music tutors were trained and used to ensure that activities in music lessons were carried out objectively. Hence, the music test was administered to all sampled teacher trainees before and after the experiment to find out music performance of the teacher trainees.

3.6.1 Pilot Study

In order to gauge the effectiveness of the instruments, a pilot study was conducted to establish whether the instruments could be used to collect relevant data and to identify any problems that were likely to occur at the time of actual data collection process. The purpose of piloting the instruments is to assess their clarity, validity and reliability of each of the items in the instruments and suitability of the language used (Campos et al., 2017). This exercise was conducted in the neighbouring PTTC in Vihiga County which is outside the study region and has all the categories of teacher trainees similar to those of the region under study. The teacher trainees and music tutors were chosen purposively for the pilot study to help evaluate the competency and quality of the questionnaires and to estimate the length of time to take the questionnaires, interviews, pre-test and post-test before the final administration. A total of 30 teacher trainees studying music in year two from the pilot PTTC participated in the pilot study that were later excluded in the actual data collection process. The assigning of 30 respondents was based on the sample size rule of thumb that states that a minimum sample size of 30 subjects per treatment is approximately normal when estimating the sample size for pilot trial (Whitehead et al., 2016).

A trial of the pre-test and post-test was carried out to help in refining the instrument before the actual study. One stream was assigned the experimental group and the other stream control group for a period of two weeks. The trained music tutor in the experimental group taught using the Kodály, Orff and Dalcroze pedagogical approaches while the one in control group taught using other approaches. With the help of the trained music tutors who doubled up as research assistants, the questionnaires and interview schedules were mailed to the pilot PTTC and responses given were to help refine the instruments. Machin et. al., (2018) observe that pilot study can reveal

deficiencies in the design of a proposed procedure. From the pilot test results, the questionnaires yielded a reliability of 0.876 as shown on Table 6.

Table 6

Pilot Study Results

Variables	Cronbach's Alpha	Number of Items
Kodály approach	0.876	10
Orff approach	0.876	10
Dalcroze approach	0.876	10
Overall Reliability Coefficient	0.876	30

From the results in Table 6, Cronbach's Alpha Coefficient of 0.876 was achieved which indicates that the instrument was reliable enough to solicit for the required information.

3.6.2 Validity of Research Instruments

According to Mugenda and Mugenda (2010), validity refers to the degree to which results obtained from analysis of data collected actually represent the phenomena under study. This implies that validity is the degree to which the results obtained from the data actually represents the phenomena under a study. According to Bajpai and Bajpai (2017), validity of an instrument is improved through expert judgement.

As such, the content and construct validity, were ascertained by engaging the research supervisors and other research experts from the School of Music and Media and School of Education. The research supervisors and experts checked and assessed frequency of errors and the accuracy of data expected. This process of validation enabled the researcher to test the suitability of the questions and adequacy of the instructions provided to ascertain whether the question items in the instruments measured what they were purported to measure. Content validity ensured that the instrument covered all areas

to be examined while construct validity ensured that the question items measure the construct it purports to measure. For face validity, the researcher did ensure that the general outlook of the instrument is appropriate and appealing to the respondents by use of correct font size and type, adequacy of workspace, clarity of printing among others. Feedback was revised and reviewed to ensure that the question items were adequately, properly structured and final version was printed out.

3.6.3 Reliability of the Research Instruments

According to Mugenda and Mugenda (2010) reliability is the measure of the degree to which a research instrument yields consistent results or data after repeated trials. Reliability enhances dependability, accuracy and adequacy of the instruments through piloting. Campos et. al., (2017) recommend pre-testing of research instruments before use in research.

Reliability of research instruments was tested after piloting using Cronbach's Coefficient Alpha method, which is a measure of internal consistency of items. The method is found to be the most appropriate as it involves a single administration of the instruments. The Cronbach's test of reliability was also adopted for the study because the items in the questionnaires were not scored dichotomously, thus the multiple-choice items in the questionnaires have several possible answers each of which is given a different weight.

To ensure reliability of the instruments, piloting in the neighbouring PTTC in Vihiga County that reflects similar characteristics with the study location was done. Using the (SPSS) computer software, the results of the Cronbach Alpha Coefficient values normally ranges between 0 and 1. The formula used in the calculation is;

$$\alpha = r * k / [1 + (k - 1)r]$$

Where k is the number of items considered and r is the mean of the inter-item correlations. The size of alpha is determined by both the number of items in the scale and the mean of inter-item correlations. According to Taber (2017), a threshold of acceptability for alpha values is a rule of thumb. Further, he provides the following rules of thumb: ≥ 0.9 – Excellent, ≥ 0.8 – Good, ≥ 0.7 – Acceptable, ≥ 0.6 – Questionable, ≥ 0.5 – Poor, and < 0.5 – Unacceptable. Thus, an alpha range of 0.7 is commonly the accepted rule of thumb that indicates good reliability. A reliability Coefficient level of 0.7 or more would indicate that the instrument is reliable enough to solicit for the required information (Taber, 2017). The current study indicated a reliability coefficient level of 0.879.

3.7 Data Collection Procedure

Before proceeding to conduct the study, an introductory letter was obtained from the Kabarak University Institute of Post Graduate Studies and Research. This facilitated the issuance of research authorization permit from the National Council of Science Technology and Innovation (NACOSTI). The researcher then proceeded to the County Director of Education in charge of the region under study to be allowed to conduct the study. Thereafter, the researcher received introduction letter to the primary teacher training college (PTTC) under study. After which, the researcher visited the selected PTTC and sought permission from the principal to administer questionnaires to teacher trainees studying music in year two. The researcher also booked an appointment with the music tutors for a face-to-face interview.

3.7.1 Administration of the Pre-test and Post-test

The music tutors who double up as research assistants from the primary teacher training college (PTTC) under study were trained for two days on how to use the Kodály, Orff and Dalcroze pedagogical approaches. These approaches were applied with their help by

providing guidance in carrying out appropriate music activities in the classroom. The administration of the pre-test and post-test consisted of three phases; pre-testing, instruction and post-testing and took one term.

3.7.2 The Procedure

The first procedure was, pre-test administered to both the experimental group and control group. An independent sample of t-test was used to check for equivalence between the two groups. The trained music tutors in the use of Kodály, Orff and Dalcroze pedagogical approaches administered the music basic skills test to both groups.

During the instructional phase (a one term period), one of the trained music tutors taught the experimental group using Kodály, Orff and Dalcroze approaches. For example, the teacher trainees created simple rhythmic patterns, clap/tap them, chanted them using French rhythm names, sang d, r, m, f, s, l, t, d', played electric keyboard, sang using hand signs, used gross motor skills as they sang, listened to pre-recorded music, danced and played unpitched percussion instruments like hand drum (Refer to Appendix VIII). The other trained music tutor taught control group using other approaches where they were not actively making music. For example, they did not create rhythmic patterns neither did they use hand signs to sing familiar tunes. The instruction for both groups consisted of three-hour lessons per week for 12 weeks, since TTCs function on three hours per week for music in year two (KIE, 2004). At the end of the 12-weeks, the same test on music basic skills was given to the experimental group and control group as a post-test to examine the impact of the intervention. The test was marked for three days and an independent sample of t-test was done on the difference of the post-test and pre-test to determine if there was an improvement in music theory after the 12 weeks of instruction.

Data collection involving the interviews and the distribution of questionnaires was done immediately after the pre-test and post-test. The researcher and the participants decided on the venue for the interviews. Each participant was interviewed at a venue chosen and at a time that was convenient to him/her. The participants indicated a preference for the interviews to take place at their places of work. An appointment was made with each at the time convenient to both the researcher and the participant. The background of the research was explained as well as the ethical considerations relating to participation. This process encouraged the participants to respond to the questions as accurately as possible.

The researcher conducted all interviews in the participants' place of work. The interviews were conducted in the official language of instruction English. Conducting interviews in English allowed the researcher to transcribe the interviews as presented by the participants without any translations. The researcher used audio recording devices to capture and preserve the originality of the responses. Audio recording is the best way of recording interview proceedings because of portability and availability of digital recording devices. Brundett and Rhodes (2014) note that audio recording remains the most common approach since recording devices are easy to operate and allow for the collection of a large volume of data materials speedily, in such a way that it can be played back and transcribed. The researcher also took notes. Note taking was done in shorthand and expansion of notes done at a later stage. Cohen and Manion (2011) observed that note-taking makes data collection flexible and can be used to collect large amount of data at the same time. This helps maintain a good relationship between the researcher and the participants.

The researcher and the respondents set dates for administering the questionnaires. On the material day, the researcher and her assistants explained to the respondents the modalities of filling in the questionnaires and then administered them. The respondents

were given adequate time to fill the questionnaires which they were expected to fill without any assistance. Filled in questionnaires were collected and organized awaiting analysis.

3.8 Data Analysis

Data analysis is a process of organising data into categories and identifying similar patterns among them. In this study, data analysis was determined by interpretation of raw data from the three data collecting procedures. Data was processed and analysed based on the objectives and research hypotheses. This was done using both descriptive and inferential statistics. Descriptive statistics enabled the researcher to meaningfully describe a distribution of measurement (Mugenda & Mugenda, 2010). Thus, frequency tables, means, percentages and standard deviation were used to summarize raw data for clarity and brevity.

Inferential statistics entailed Analysis of Variance. One-way Analysis of Variance (ANOVA) is used to determine whether there were any statistically significant differences between the means of three or more independent or unrelated groups (Eva & Oskar, 2015). In general, variances tests assess the variability of the data multiple groups to determine whether they are different. One-way ANOVA was used to establish the difference in the performance of the three different groups that were taught using Kodály, Orff and Dalcroze pedagogical approaches.

Qualitative data from the interviews was transcribe and emerging themes noted. This helped to corroborate the information given by the teacher trainees in the questionnaires. Table 7 gives a summary of data analyses methods.

Table 7*Summary of Data Analyses Methods*

Research Hypotheses	Independent Variable	Dependent Variable	Method of Analysis
Ho1. There is no statistically significant impact of the use of Kodály Pedagogical Approach on teacher trainees' performance in Primary Teacher Education music examination	Use of Kodály pedagogical approach	Teacher trainees' performance in Primary Teacher Education music examination	Frequencies Means Percentages ANOVA T-test
Ho2: There is no statistically significant impact of the use of Orff Pedagogical Approach on teacher trainees' performance in Primary Teacher Education music examination	Use of Orff pedagogical approach	Teacher trainees' performance in Primary Teacher Education music examination	Frequencies Means Percentages ANOVA T-test
Ho3: There is no statistically significant impact of the use of Dalcroze Pedagogical Approach on teacher trainees' performance in Primary Teacher Education music examination	Use of Dalcroze pedagogical approach	Teacher trainees' performance in Primary Teacher Education music examination	Frequencies Means Percentages ANOVA T-test

3.9 Research Ethical Considerations

According to Mugenda and Mugenda (2010), ethics is a branch of philosophy that deals with moral values, which guide one's behaviour. Thus, the researcher obtained informed consent from each research participant. This was obtained in writing after the participants had gotten the opportunity to carefully consider the risks and benefits and ask pertinent questions.

For the purpose of the study, an authorization letter was obtained from Kabarak University Institute of Post graduate studies (refer to appendix XI) to facilitate the issuance of a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) (Refer to appendix XII). It was the permit from NACOSTI that authorized the researcher to proceed to the County Director of Education (CDE) Nandi County to seek permission to contact the targeted primary teacher training college (PTTC) (refer to appendix XIII).

The respondents were provided with adequate information about aims of the study, the procedures to be followed, possible benefits for them and the way in which results would be used. This enabled the respondents to make informed decision on whether to participate or refrain from participating in the study. The respondents were in no way intimidated nor coerced into participation. In carrying out the experiment, reasonable precautions were taken to ensure anonymity of the respondents. Teacher trainees, especially in the experimental group were informed that they were taking part in a research study, the results would be reported correctly with an honest, and truthful account of what took place. Permission was sought from college music tutors to conduct interviews. The study adhered to professional research ethics to avoid unnecessary misunderstanding, conflicts and ethical misconduct.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This Chapter covers the analysis of data as well as discussion of the research findings. The findings relate to the research objectives that guided the study. Data was analysed to identify, describe and explore the development of a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills. The research objectives of the study were formulated and stated as follows:

- i. To determine the impact of the use of Kodály pedagogical approach (KPA) on teacher trainees' performance (TTP) in basic music skills
- ii. To establish the impact of the use of Orff pedagogical approach (OPA) on teacher trainees' performance (TTP) in basic music skills
- iii. To analyse the impact of the use of Dalcroze pedagogical approach (DPA) on teacher trainees' performance (TTP) in basic music skills
- iv. To propose a model for an impact-directed music based-pedagogical approach that could enhance teacher trainees' performance in basic music skills.

The first part of the Chapter presents teacher trainees demographic characteristics, teacher trainees questionnaires, music tutors demographic characteristics, information from the music tutors interview and the pre and post-tests results.

4.2 General and Demographic Information

This section presents results of descriptive statistics of the profile of respondents. Frequency and percentages were used to examine the distribution of the respondents.

4.2.1 General Information

Orodho (2012) defines response rate as the extent to which the final data sets includes all sample members and is calculated as the number of respondents with whom questionnaires are completed and divided by the total number of respondents in the entire sample including non-respondents. As presented in Table 8, out of one hundred and seventy questionnaires that were administered to the teacher trainees, one hundred and sixty seven were filled, returned and utilized for purposes of analysis. This yielded a response rate of 98.2%. Responses from all the 3 music tutors (100%) were utilized in the analysis. Mugenda and Mugenda (2010) argue that response rate of 50% and above is appropriate in conclusion of research findings. This impressive response rate can be attributed to the enthusiasm with which the respondents wanted to share their opinions regarding the issues being investigated.

Table 8

Research Instruments Response Rate

Response Rate	Frequency	Percent
Returned	167	98.2
Unreturned	3	1.8
Total	170	100

4.2.2 Teacher Trainees Demographic Characteristics

This section presents information on the teacher trainees' characteristics by gender, music experience before college, ranking overall high school music experiences and current music experiences in college. Such information is considered important in providing a better understanding of the respondents thus assisting in the interpretation of the results. The information in this section was not the main focus of the study. However, it was considered that to some extent they may have some influence on how teacher

trainees’ perceive music instruction. In the questionnaire, the teacher trainees’ background was sought as follows:

4.2.3 Gender of the Teacher Trainees’

The researcher sought information on the gender of teacher trainees’ who participated in study. Data related to gender of the respondents is presented in the Table 9.

Table 9
Gender of the Teacher Trainees

Gender	Frequency	Percent
Female	98	58.93
Male	69	41.07
Total	167	100.00

From the findings in Table 9, majority 98 (58.93%) were female as the remaining 69 (41.07%) were male. It can be observed that there were more female teacher trainees than the male teacher trainees who opted to study music in year-two. The policy of gender equity is supposed to be upheld by all sectors of the Ministry of Education, TTC inclusive. Subsequently, to better understand the decision process regarding studying music in Primary Teacher Education (PTE), gender was investigated in the current study to specifically understand how it influences the teacher trainees’ decision to pursue music. The results suggest that the teacher trainees’ population in primary teacher training college (PTTC) level in Nandi County is skewed towards the female population.

The findings of this study are closely related with the findings of UNESCO (2014) where data indicates that primary school teaching is a female dominated profession in countries such as Hungary (97%) and Belarus (99.5%). Madagascar, Namibia and South Africa also report pronounced gender disparities at the primary teacher education level. The proportion ranges from 77%-80% in Swaziland to over 80% in Botswana and Lesotho.

On the contrary, Guinea, Liberia and Djibouti post low proportions of female teachers of 30%, 25% and 14% respectively. However, in Nandi County, Kenya gender disparity places women over men.

4.2.4 Music Related Activities Before and During High School

The study sought information on music related activities of the participants before and during high school. The results are presented in Table 10.

Table 10

Music Related Activities Before and During High School

Musical activities	Frequency	Percent
Participate in School and church choirs, also Kenya Music Festival (KMF)	9	5.38
Participate in school, church and private choirs	7	4.19
Participate in school, church, private choirs and KMF	12	7.19
Sing in school and private choirs and at KMF	8	4.79
Singing and playing	10	5.99
Singing and playing in school and church choirs	5	2.99
Singing in school and at KMF	3	1.80
Singing in school and church choirs including KMF	85	50.90
Singing in school, church and private choirs including KMF	20	11.98
Studying music, sing in school and church choir including at KMF	5	2.99
Studying music, sing in School and private choir and KMF	3	1.80
Total	167	100.00

From the findings presented in Table 10 above, it is evident that 85 (50.9%) of the respondents participated in Singing in school, church choirs, also Kenya Music Festival (KMF) while 20 (11.98%) participated in Singing in school, church and private choirs including KMF with 12 (7.19%) of respondents participating in school, church, private choirs and KMF. In Singing and playing 10 (5.99%) of the respondents had participated.

About Singing in school, church choirs and KMF 9 (5.38%) of the respondents participated. Another 8 (4.79%) of the respondents participated in school, private choirs and at KMF while 7 (4.19%) participated in school, church and private choirs. Singing, playing in school, church choirs, studying music, singing in school and church choir including performing at KMF constituted 5 (2.99%). Singing in school, at KMF and studying music, singing in school, private choir and KMF constituted 3 (1.8%). It can be deduced that majority of teacher trainees participated in music related activities through singing in school, church choirs and KMF.

Music experiences play a vital role in shaping students' attitudes and feelings towards music and in influencing music learning. Thus, if students experience music through music activities, they will value and have pleasure in music. It is for this reason that the researcher sought to know the music related activities of the respondents before and during high school.

From the findings in Table 10, it is evident that 85 (50.6%) participated in singing in school, church choirs, also Kenya Music Festival (KMF). Participating in school choirs, church choirs, and Kenya Music Festival are informal music experiences. This means that majority of teacher trainees had more experiences of informal music activities than formal activities. This finding concurs with those of Elliot (2005) which highlights the significance of informal music experience towards music learning. Elliot (2005) argues that the value of music through interaction of musical works extends the range of expressive and impressive powers that in turn challenge the conscious powers and musical understandings of the learners. It is thus valuable to ensure that teacher trainees' experience a diverse musical experience (formal or/and informal) in their early years to increase their overall mastery of musical experiences for music learning.

On the contrary, 3 (1.79%) studied music in their secondary schools. Studying music at the secondary level is a formal activity. This finding corroborates other studies by Tiija (2018); Siebenaler (2016) and Kigozi (2015) in which scholars established that teacher trainees' do not have a strong formal musical background experiences before college. This suggests that music subject had a dismal performance at secondary school level and this could be what is extended to the college level.

4.2.5 Ranking Overall High School Music Experience

The researcher sought information on the overall ranking of high school music experience of the respondents. The information generated from this item is presented in Table 11.

Table 11

Ranking Overall High School Music Experience

My high school music experience was	Frequency	Percent
Very negative	32	19.16
Negative	51	30.54
Positive	50	29.94
Very positive	34	20.36
Total	167	100.00

In regard to ranking of the overall high school music experience, Table 11 indicates that 51 (30.54%) of the respondents ranked their high school music experience as negative while 32 (19.16%) considered the experiences as being very negative. Respondents that viewed their experiences as positive were 50 (29.94%) while 34 (20.36%) reported the experiences to be very positive. The given findings reflect that although majority of the teacher trainees had a negative music experience, a high percentage believed that high school music experiences had positively shaped their perceptions about music. Of great

concern to the study was the 51(30.54%) that ranked music experiences as negative and were still studying music at the college level.

Music experience is an important element of providing motivation and interest in music. Students create challenges when they are not motivated or are disinterested in the class, demonstrated through lack of participation and preparation for class. Hence, students' lack of music experiences may hinder their ability to be motivated effectively. For this reason, the researcher included ranking of high school music experience of the respondents in the study.

The given findings in Table 11 reflect that a high percentage of the teacher trainees could not be having the passion in music as a teaching subject. These results are a pointer to the reason why teacher trainees' studying music do not do well in music as indicated by Kenya National Examination Council (KNEC).

4.2.6 Duration of Study

The question presented to the respondents required that they indicate how long they have studied music at the current institution. Table 12 presents the results of the analysis.

Table 12
Duration of Study

Terms	Frequency	Percent
1	2	1.20
2	1	0.60
5	164	98.20
Total	167	100.00

Concerning the duration of study presented in Table 12, 164 (98.2%) had studied music in college for 5 academic terms; 2(1.2%) had studied for 2 academic terms while 1 (0.6%) had studied music for only 1 academic term. It can be deduced from the given

analysis that majority of the respondents had been in the TTC long enough to understand music subject, had gone through more music instruction and possess more content knowledge foundation.

4.2.7 Decision to opt for Music in College

The respondents were asked to indicate their decision to opt for music in college. The results of the analysis are presented in Table 13.

Table 13

Decision to opt for Music in College

Response	Frequency	Percent
College Policy	29	17.37
Friends	17	10.18
Myself	12	7.19
Nothing	27	16.17
Teaching practice	75	44.90
Inspiring teachers	7	4.19
Total	167	100.00

As shown in Table 13, it is evident that majority 75(44.9%) of respondents indicated that teaching practice at the college inspired them a great deal. Respondents that indicated College Policy were 29 (17.37%), those who reported Nothing were 27 (16.17%) while those who considered Friends constituted 17 (10.18%). Some 12 (7.19%) of the respondents reported Myself while respondents who considered inspiring teachers constituted 7 (4.19%). The question was intended to find out reasons for opting to pursue music. The results in Table 13 implies that the teacher trainees viewed the interactions from teaching practice as an opportunity to practice further, what they had been learning in class. Hence, the interactions played a role in shaping their attitude and feelings

towards music. This is true because participants had already been to two teaching practice sessions prior to this study and had taught music during the two sessions.

4.2.8 Current Music Instruction Influence on Performance

The question was intended to establish influence of current music instruction on music performance. The results of the analysis are presented in Table 14.

Table 14

Current Music Instruction Influence on Performance

Response	Frequency	Percent
Influential	100	61.21
Not influential	67	38.79
Total	167	100.00

The findings in Table 14 indicate that 100 (61.21%) of the teacher trainees rated their current music instruction as influential with 67 (38.79%) not influential on their performance in music. It can be observed that the current music instruction substantially influenced the teacher trainees' performance in music. Instructional approaches are very vital in ensuring that music content and skills are taught in a systematic order.

4.3 Impact of the use of KPA on TTP in Basic Music Skills

The first objective was to determine the Impact of the use of Kodály Pedagogical Approach (KPA) on teacher trainees' performance in basic music skills. The hypothesis stated that there is no statistically significant impact of the use of KPA on teacher trainees' performance in basic music skills. The impact of use of the KPA on teacher trainees' performance in basic music skills was determined using the descriptive and inferential analysis.

4.3.1 Descriptive Statistics on the Impact of the use of Kodály Pedagogical Approach

The impact of the use of Kodály pedagogical approach was measured using a set of 8 statements in the questionnaire. Respondents were requested to rate the extent of which they experienced the use of Kodály approach in music lessons. The information was analyzed by determining the percentages, mean and standard deviation on eight items on a 5-point Likert scale where: To a Very Large Extent=5; To a Large Extent=4; To Moderate Extent=3; To a Small Extent=2; To a No Extent at All=1. Table15 presents the results of the analysis.

Table 15*Descriptive Statistics on the use of the Kodály Pedagogical Approach*

Kodály Pedagogical Approach (KPA)	To no extent at all (1)	To a small extent (2)	To moderate extent (3)	To a large extent (4)	To a very large extent (5)	Mean	Std. Dev
To what extent do you clap rhythmic patterns before writing them down				11.39	88.61	4.5689	.68967
To what extent do you engage in chanting the rhythms using French system of 'ta's and 'ti's			17.72	16.46	65.82	4.5689	.068967
To what extent do you sing back melodic patterns before writing them?			22.15	22.15	55.7	4.1737	.61096
To what extent do you participate in creating/composing your own rhythms that contain particular rhythmic patterns			14.56	13.92	71.52	4.5689	.68967
To what extent do you participate in creating/composing your own melodies that contain particular pitch patterns		11.54	22.44	23.08	42.95	2.7665	.66978
To what extent do you practice folk songs in your music lesson?	11.39	12.66	39.24	31.65	5.06	4.1629	.62025
To what extent do you sing melodic phrases using Hand signs in music lessons?	6.33	22.15	29.11	31.65	10.76	2.7844	.68206
To what extent do you play simple accompaniment on pitched and non-pitched musical instruments to teach?	2.58	5.81	27.1	12.26	52.26	4.5928	.63203
Overall						4.0712	.64375

As reflected in Table 15 above, the overall mean of all the respondents was 4.07 (SD=0.64) out of the maximum mean score of 5 points. This suggests that teacher trainees' experienced the use of Kodály approach to 'a large extent'. Teacher trainees' to a very large extent experienced the use of Kodály approach in the clapping of rhythmic patterns before writing them down as indicated by 88.61% of response and the mean of 4.56 (SD=0.68) although 11.39% to a large extent. Creating/composing own rhythms was experienced to a very large extent as reported by 71.52% and the mean of 4.56 (SD=0.68) while 13.92% to a large extent. Chanting the rhythms using French system to a very large extent as indicated by 65.82% and the mean of 4.5 (SD=0.68). Singing back melodic patterns before writing constituted 55.7% and the mean of 4.1 (SD=(0.61). However, playing simple accompaniment on pitched and non-pitched musical instruments was experienced to a very large extent as reported by 52.26% and the mean of 4.59 (SD=0.63). The respondents experienced creating/composing own melodies to a very large extent as was confirmed by 42.95% and the mean of 2.76 (SD=0.66) while 11.54% to a small extent. Singing folk songs to a moderate extent as indicated by 39.24% of response and the mean of 4.1 (SD=0.62). Moreover, singing melodic phrases using hand signs had 31.65% and the mean of 2.7(SD=0.68). It can be observed that there was teacher trainees' greater experience of KPA in music lesson. This concurs with Smuta (2017) that Kodály pedagogical approach has the ability to stimulate students' knowledge of music through reading and writing activities. Students build a better understanding of music concepts while experiencing Kodály Pedagogical Approach more effectively when they engage to solve problems during class activities. This help to improve students' music performance (Smuta, 2017).

Kodály pedagogical approach improves students understanding in rhythmic and melodic elements and singing improves remarkably (Tabuena, 2020). This agrees with the results

in Table 15, in which, the teacher trainees' 'to a very large extent' experienced the use of Kodály Pedagogical Approach in the clapping of rhythmic patterns as confirmed by 88.6%. Composing own rhythms 71.52%, chanting rhythms 65.82%, singing back melodic patterns 55.7% and playing simple accompaniment on pitched and non-pitched musical instruments as indicated by 52.26%. The Kodály pedagogical approach to learning music enhances deeper learning and greater engagement in music elements such as rhythm, melody and harmony (Tabuena, 2020).

The finding is supported by music tutors' interview that they are knowledgeable in the use of Kodály Pedagogical Approach and use it to 'a large extent' (4). In affirmation, music tutors agreed that Kodály Pedagogical Approach is a practical oriented approach that motivates the teacher trainees and hence improve their academic performance. This finding reinforces the idea that Kodály Pedagogical Approach is effective in the improvements and achievements of teacher trainees' studying music.

In addition, responses given by the music tutors regarding the experience and the use of Kodály Pedagogical Approach were that Kodály approach is practical in nature and requires more time. This is supported by Goopy (2013) who noted that increased time allocation to Kodály based music instruction in a music program enhances academic results significantly. Gault (2016) asserts that music students experiencing Kodály approach be given more time to train with a balance between artistic aspects of music and technical mastery to music interpretation and expressivity.

Further, responses given by music tutors indicated that in primary teacher education (PTE) music curriculum the practical aspect of music is not tested and teacher trainees' do not appreciate what is not tested nationally (PTE music examinations). Hence, the Kenya National Examination Council (KNEC) should strive to evaluate both theory and

the practical aspect of music in TTCs using either the formative or the summative evaluation. This is supported by Emel and Ilkrun (2018) who found that evaluation and grading in teaching music, students should receive marks for their theoretical knowledge as well as their practical skills. According to Emel and Ilkrun (2018), what is certain is that the more practical activities the teacher gives, the more student love music and cultivate a positive and life long relationship to music. The aim of the music teacher should be to bring students to love music, show them the value of music and pleasure of music. In short, the student will be enthusiastic and motivated. Motivation is an important contributor to academic performance (Baker, 2014).

Music Theory of Learning on which the current study draws its principles, advocates for sequential and orderly approach of teaching and learning music. The response given by music tutors indicate that Kodaly approach is the most sequential and orderly approach of teaching and learning music. This is consistent with Gordon's theory of Music Learning as reported by Valerio (n.d) that the key component to Gordon's approach to music learning is the idea and the role of instructional sequencing. The finding is in support of Smuta (2017) who observed that Kodály approach embodies a sequential process by which a culture's folk songs and active, authentic singing games are implemented to rhythm, melody, harmony in addition to the skills of singing, listening, moving, reading and writing notation.

See and Ibbotson (2018) remarked that Kodaly approach uses a sequential building of concepts that enable each student of whatever age to become so musically literate that she or he understands the music without a score as well as understand the score without music. According to Smuta (2017), sequence accounts systematically for the readiness needed to learn each new musical skill. For instance, the pre-requisite for educating music experts is the acquisition of music skills and application of the skills to learning to

read and write notations in music. This sequential process teaches the music educator to introduce more abstract concepts and skills gradually, through sequential learning (See & Ibbotson, 2018).

From the foregoing discussions, Kodály Pedagogical Approach plays a very important role in teacher trainees' grasping of the content that is taught. Further, the approach ensures that systematic teaching and sequential learning takes place in the classroom. It is certainly effective during classroom delivery.

4.3.1.1 Classroom Music Activities Experienced other than KPA Activities

The question presented to the respondents required that they indicate the music activities they engaged in if they did not engage in the above Kodály Pedagogical Approach activities. Table 16 indicates the findings of the analysis.

Table 16*Classroom Music Activities other than Kodály Pedagogical Approach*

Music Activities Experienced	Frequency	Percent
Clapping	13	7.78
Clapping and dancing	4	2.40
Clapping and tapping	10	5.99
Dancing	11	6.59
Dancing and jumping	9	5.38
Movement	34	20.15
Movement and clapping	12	7.19
Movement and dancing	34	20.36
Movement and singing	15	8.98
Movement and tapping	7	4.19
Movement, clapping and tapping	6	3.59
Movement, dancing and stumping	4	2.40
Movement, dancing and tapping	4	2.40
Singing	4	2.40
Total	167	100.00

In regard to classroom music activities other than Kodály Pedagogical Approach activities, Table 16 indicates that 34 (20.36%) of the respondents reported Movement, Movement and dancing while 15 (8.98%) of the respondents indicated Movement and singing. Some 13 (7.78%) of the respondents considered Clapping while 12 (7.19%) Movement and clapping. Dancing constituted 11 (6.59%) while 10 (5.99%) constituted Clapping and tapping with 9 (5.38%) reporting dancing and jumping. In addition, 7 (4.19%) of the respondents indicated Movement and tapping while 6 (3.59%) Movement, clapping and tapping. Clapping and dancing, Movement, dancing and stumping, Movement, dancing tapping and Singing all constituted 4 (2.4%). It can be deduced from the findings that music activities experienced in the classroom other than Kodály Pedagogical Approach activities were movement and dancing.

4.3.1.2 Additional Instructional Approaches Used by Music Tutors

With regard to the above concern, the respondents were asked to suggest additional approaches in which their tutors engaged them in during music lessons. Table 17 presents the results of the analysis.

Table 17

Additional Instructional Approaches

Additional Approaches	Frequency	Percent
Demonstration	22	13.17
Imitation	8	4.79
Imitation and recitation	5	2.99
Lecture	90	53.89
Participatory, demonstration and others	3	1.80
Lecture and participatory	4	2.40
Lecture and recitation	8	4.79
Participatory	5	2.99
Recitation and demonstration	4	2.40
Imitation and lecture	9	5.39
Non response	9	5.39
Total	167	100.00

The findings in Table 17 indicate that most music tutors taught using lecture method which constituted 90 (53.89%) while 22 (13.17%) of the music tutors used demonstration. It is clear that 9 (5.39%) of the music tutors used imitation and lecture method while 8 (4.79%) of the tutors preferred to use lecture method, recitation and imitations. It is evident that 5 (2.99%) of the tutors used imitations, recitation and participatory while 4(2.4%) reported that tutors used lecture, participatory, recitation and demonstration. In addition, 3 (1.8%) of the respondents indicated that tutors used participatory, demonstration and others while 9 (5.39%) constituted non response. The

results show that varieties of additional approaches were used but least utilized were participatory, demonstration and others while the most used was lecture. As observed a high percentage (53.89%) uses lecture which is teacher-centred. The findings concur with Maina (2015) who established that teachers in Kenya commonly use lecture method. This is a reflection that music tutors emphasize content and knowledge acquisition in Teachers Training College (TTC). This makes teacher trainees passive with little participation that could possibly have a negative impact on their understanding of the music curriculum content. This is contrary to the PTE music curriculum requirements that emphasize on learner-centered approaches that engages the learners in musical experiences in the classroom.

4.3.1.3 Inferential Statistics for the Use of Kodály Pedagogical Approach

The impact of the use of Kodály pedagogical approach (KPA) on teacher trainees' performance (TTP) in basic music skills was determined by performing One-way Analysis of Variance (ANOVA) analysis. Table 18 presents the findings.

Table 18

One-way ANOVA: Kodaly Versus TRt

Source	Df	Ss	Ms	F	P-value
TRr	3	708.1	236.03	2.79	0.043
Error	147	12432.7	84.58		
Total	150	13140.9			

From Table 18 above, a one-way ANOVA revealed that probability value (p-value) is less than 0.05 ($p= 0.043$). Hence, there is a significant difference in the performance of teacher trainees in different groups (each experimental and control groups). This means that each group showed significant growth in the use of Kodály Pedagogical Approach

and that training of the teacher trainees' using Kodály pedagogical approach improve both music and academic performance.

This study findings above concur with a study by West (2012) 'on teaching music in an era of 21st century high-stakes testing' who found that there was improvement and achievements of the students who were preparing for final external academic examinations. This finding is similar with Sheridan's (2015) observations that Kodály approach to music teaching and learning provide music teachers with methodological techniques that can be applied in the classroom to build learners' music literacy and understanding hence increase in auditory and improvement in academic performance. A research study by Lori (2012) in Canada showed that Kodály based music instruction can result in increased academic achievement, creativity and self-esteem. These findings suggest that the use of Kodály Pedagogical Approach improves not only students' musical growth and maturity but also their academic performance.

Studies regarding the use of Kodály Pedagogical Approach show that there is a significant effect of the use of the approach on students' academic performance. A study by Moralista (2016), on 'factors affecting music education in Philippines' confirmed that the use of Kodály approach has a positive influence on students' academic performance. Smuta (2017) states that Kodály based music instruction improve spatial recognition (reasoning skills) and non-spatial abilities (general intelligence) though not significant. Goopy (2013) observed that Kodály music instruction significantly enhanced spatial – temporal reasoning of the learners exposed to the instruction.

See and Ibbotson (2018) reported that Kodály approach to music learning improves IQ scores, psychomotor skills, perception ability as well as other academic areas such as reading and mathematics. This finding resonated with Goopy's (2013) assertion that

Kodály-based music groups had reliably larger increases in full scale IQ whereas the non- Kodály based music groups exhibited increases in IQ. Music education programs founded on Kodály philosophy nourish learning skills and ways of thinking that correlate to other areas of learning (Goopy, 2013).

ANOVA reveals statistically significant differences between experimental and control groups but it does not indicate where the differences between the groups lie (Eva & Oska, 2015). After a significant difference is found, it is necessary to carry out further analysis to examine which groups differ. A possible further analysis of an ANOVA applied was post hoc tests. Hence, Fisher Pairwise Comparisons (FPC) follow up test was used to determine if any of the means were different. Grouping Information Using the Fisher LSD Method and 95% Confidence. Table 19 presents these findings.

Table 19

Fisher Pairwise Comparisons

TRt	N	Mean	Grouping
Experiment Post	44	44.810	A
Experiment Pre	44	44.543	AB
Control Post	43	40.67	BC
Control Pre	43	40.11	C

From the analysis of post hoc test in Table 19 above, it was established that there was a significant difference in mean performance of the experimental post-test, experimental pre-test, control post-test and control pre-test groups. The mean performance of experimental post-test mean scores (44.810 mean) showed a significant growth over the mean performance of control post-test mean scores (40.67 mean). This suggests that after treatment the experimental group performed better in the post-test than the control group. This could be due to the emphasis on the planning, preparation and use of Kodály

Pedagogical Approach during treatment period where a high level of methodological control within the lesson was possible.

From the previous and the present study, the findings reveal that there is a significant gain in the use of Kodály Pedagogical Approach on teacher trainees' performance in music leading to high mean score, musical development and technical competencies. Kodály Pedagogical Approach enhances music-learning experience and this is developed through the presentation of music concepts in a sequence. The teacher trainees' involvement in the learning process and the learning activities raised their ability levels in music performance.

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

The second objective was to establish the impact of the use of Orff Pedagogical Approach on teacher trainees' performance in basic music skills. The hypothesis 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 use of the Orff Pedagogical Approach on teacher trainees' performance in basic music skills was determined using the descriptive and inferential analysis.

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

Locke (2016) and Sangiorgio (2010) contend that the use Orff approach of 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 results of the analysis are presented in Table 20.

Table 20

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 moderate extent (3)	To a large extent (4)	To 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 of 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 lesson 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 20, 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. The Table 20, also revealed that majority 75.95% response and the mean of 2.3 (SD=0.66) of the respondents experienced the 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% and the mean of 2.2 (SD=0.63) respondents while 60.13% response 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% and the mean of 2.2 (SD=0.68). The playing of pre-recorded music with chords constituted 46.15% and the mean of 2.3 (SD=0.65) while improvising chords played during music lesson to create/compose own melodies 45.16% and the mean of 2.3 (SD=0.65). However, 41.77% of the response 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% 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 lack of prior knowledge on Orff approach results in 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 (MOE, 2011) observation that tutors have little knowledge and experience of 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 organization 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, 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 the music teachers in America do not apply Orff approach for 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 is a key component towards realization 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 actualization. In Kenya, primary teacher training colleges are still using training manual and traditional approaches of training. E-learning is yet to be established and utilized effectively (Owino, 2014). According to Apudo (2019) content delivery, using digital music technology is fast; music teachers who integrate digital technologies in music teaching and learning to present their teachings have advantage over those who do not use music digital technology.

The findings in Table 20 further reflected that most teacher trainees 75.95% 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) then listening to various modes according to the abilities of the students. This finding is similar with 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 prioritizing singing in the classrooms. In addition, Vance (2014) noted that Orff based approach is a transformative pedagogy which is characterized by skills, knowledge and voices developing from engagement in the 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 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. To 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 have a negative impact on teacher trainees that is 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.

4.3.2.2 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 21 presents the results of the analysis.

Table 21

Music Activities other than Orff Pedagogical Approach Activities

Music activities	Frequency	Percent
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 21, 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, clapping and movement all constituted 6 (3.59%). Further, Singing and tapping rhythm 5 (2.99%) with 10 (5.99%) constituting non response. 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.

4.3.2.3 Additional Instructional Approaches Used by Music Tutors

Respondents were asked to indicate additional instructional approaches their music tutors engage them in. Table 22 presents these findings.

Table 22

Additional Instructional Approaches

Additional Instructional Approaches	Frequency	Percent
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 22 above, majority 75 (44.91%) of the music tutors taught using 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 lecture. Another 9 (5.39%) of the tutors taught using Lecture method and demonstration while 4 (2.4%) of the tutors preferred dancing and demonstration, Lecture and participatory, Lecture and recitation. In addition, 10(5.99%) constituted nonresponse. As reflected in the results, most of the music tutors taught using lecture method. This is also an indication that music tutors use teacher-centered methods and thus emphasize content knowledge. These results are a pointer to the reason why there is decline in performance of the teacher trainees in PTE music examination.

4.3.2.4 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 performing One-way Analysis of Variance (ANOVA) analysis. Table 23 presents the findings.

Table 23

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			

In regard to Orff Pedagogical Approach and teacher trainees performance in basic music skills, Table 23 indicates that 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 groups). In addition, there was no further comparisons. That is mean performance of experimental pre and post-tests mean scores were not different from mean performance of control pre and post-tests mean scores. This finding agrees with the study finding of Long (2013) who found out 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 Orff pedagogical approach notes that there is a positive effect on students' academic performance, but not always a significant or an 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 Orff approach made a significant gain in mathematics scores than the group which received no music instruction. Further studies of Womack (2014) reported that there was a significant greater improvement from students taught based on Orff 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 development of music skills than the traditional music education group.

The findings generally indicate that there is a slight 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 tutor's use lecture method more than Orff pedagogical approach. The fact that music tutors use only lecture shows that they are limited in applying Orff pedagogical approaches that is ideal for teaching various music concepts to develop music literacy. The research findings also hinged around professional development of the music tutors. For teacher's effectiveness is measured in

terms of learner performance on standardized tests which in Kenya include PTE examination in Primary Teacher Training Colleges (PTTC).

4.3.3 Impact of the use of DPA on TTP in Basic Music Skills

The third objective was to analyse the Impact of the use of Dalcroze eurhythmics Pedagogical Approach on teacher trainees' performance in basic music skills. The hypothesis stated that there is no statistically significant impact of the use of Dalcroze eurhythmics Pedagogical Approach on teacher trainees' performance in basic music skills. The impact of use of the Dalcroze eurhythmics Pedagogical Approach on teacher trainees' performance in basic music skills was determined using the descriptive and inferential analysis.

4.3.3.1 Descriptive Statistics on the use of Dalcroze Pedagogical Approach (DPA)

According to Anderson (2012), Dalcroze eurhythmics inspired activities during a music education module improve students' creativity, psychomotor skills, perception ability as well as academic performance in music education. The Dalcroze eurhythmics Pedagogical Approach experience 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 Dalcroze eurhythmics Pedagogical Approach were analysed by determining the percentages mean and standard deviation. The results are presented in Table 24.

Table 24*Descriptive Statistics on the use of the DPA*

Dalcroze Pedagogical Approach	To no extent at all (1)	To a small extent (2)	To moderate extent (3)	To a large extent (4)	To a very large extent (5)	Mean	Standard Deviation
To what extent do you realize compound time through movement	1.32	4.61	4.61	67.76	21.71	3.9677	.60771
To what extent do you realize simple time through movement		1.94	5.16	80.65	12.26	3.9317	.67262
To what extent do you realize articulation through movement		2.61	4.58	80.39	12.42	3.9317	.67262
To what extent do you realize rhythmic phrases through movement		2.6	15.58	60.53	14.29	3.9078	.65886
To what extent do you realize dynamic changes through movement		3.92	21.57	58.82	15.69	3.9078	.65886
To what extent do you sing with movement until the melody is synchronized together	1.94	5.81	7.1	67.65	24.52	3.9078	.65886
To what extent do you step rhythms of the songs while singing them	3.87	14.84	10.97	58.71	11.61	2.812	.83585
To what extent do you move wide and narrow steps to indicate intervals between wide pitch	14.57	13.25	9.27	57.09	25.83	4.3569	.71646
Overall						3.8404	.67875

As shown in Table 24 above, the overall mean of all the respondents was 3.84 (SD=.68) out of the maximum mean score of 5 points. This suggests that teacher trainees' experienced the use of Dalcroze eurhythmics approach to a moderate extent. Majority of respondents 80.65% and the mean of 3.9 (SD=0.67) experienced simple time through movement and 80.39% and the mean of 3.9 (SD=0.67) articulation through movement. Respondents who indicated that they realized compound time through movement constituted 67.76% and the mean 3.9 (SD=0.65). Rhythmic phrases through movement was confirmed by 60.53% and the mean of 3.9 (SD=0.65) of the respondents while 67.65% and the mean of 3.9 (SD=0.65) experienced singing with movement. Dynamic changes through movement was reported by 58.82% and the mean of 3.9 (SD=0.65) of the respondents. It is clear that 58.71% and the mean of 2.8 (SD=0.83) of the respondents indicated stepped rhythms of the songs while singing. In addition, moving wide and narrow steps to indicate intervals between different pitches was confirmed by 57.09% and the mean of 4.3 (SD=0.71). Hence, it can be observed that there was teacher trainees' moderate experience of the use of Dalcroze eurhythmics Pedagogical Approach activities in music lesson.

This finding resonates reasonably well with Anderson (2012) who observed that Dalcroze eurhythmics activities use movement to sharpen student perception and engender a more sensitive response to the musical elements of timing, articulation, tone quality and phrasing. This agrees with Ristow (2017) that music is best understood through body movement. The movement involved in making music increases bodily knowledge and is directly connected to attention, memory, concentration and responsiveness (Juntunen, 2016).

This concurs with the music tutors' response that DPA helps teacher trainees become better at choosing appropriate movements as well as improve the quality of the

movement. This is consistent with Marzuola (2019) who posits that Dalcroze eurhythmics approach facilitates sureness in students conducting gestures as well as the quality of gestural choices that they make. The finding is in support of Hart (2016) who observed that the approach advances students musicianship holistically which can heighten the skills needed to be an effective music educator.

The study findings indicated that majority of teacher trainees 80.65% experienced simple time through movement. This finding resonates with Juntunen (2016) who notes that in Dalcroze eurhythmics approach learners exhibited an ability to slow down or speed up their movements in relation to given rhythms in simple meter. Therefore, bodily skills and physical expression should be developed so that studying music starts through exercises of rhythmic movements. The study finding of Anderson (2012) who noted that the development of fine and gross motor skills is promoted through many rhythmic activities which allow students to be much better prepared to enter their general academic studies as well as more advanced music studies supports this. The emphasis on rhythm shows that it is a very important aspect of most music literacy because rhythm is a defining feature of music (Anderson, 2012).

The study findings indicate that Dalcroze eurhythmics Pedagogical Approach centre on active involvement in musical experience. This is applicable because, through creative expressions, the practical aspect of the music syllabus will be addressed and through realization of music elements, the basic skills aspects will be addressed and through participating in improvisation and various music making processes, appreciation will be addressed. Hence, if the Dalcroze eurhythmics pedagogical approach is effectively utilized, it would allow music tutors prepare teacher trainees adequately in subject content.

4.3.3.2 Additional Music Activities Other than Dalcroze Pedagogical Approach Activities

Responses to any additional music activities teacher trainees had been involved in a music lesson other than those associated with Dalcroze eurhythmics Pedagogical Approach (DPA).

Table 25

Additional Music Activities Other than DPA Activities

Additional Music Activities	Frequency	Percent
Clapping	7	4.19
Hand signs	17	10.18
Hand signs and singing	6	3.59
Hand signs, singing and clapping	3	1.80
Hand signs, singing and movement	3	1.80
Movement and dancing	8	4.79
Singing	59	35.32
Singing and clapping	37	22.16
Singing and tapping	8	4.79
Singing, clapping and movement	4	2.40
Tapping	15	8.98
Total	167	100.00

Table 25 above shows that singing constituted 59(35.32%) of the respondents while singing and clapping 37(22.16%). Another 17 (10.18%) of the respondents indicated use of Hand signs with 15(8.98%) reporting Tapping. In addition, 8 (4.79%) of the respondents considered Singing and tapping, Movement and dancing while 7 (4.19%) clapping. It is clear that 6 (3.59%) of the respondents reported Hand signs and singing while 4 (2.4%) constituted singing, clapping and movement. In addition, Hand signs, singing and clapping and Hand signs, singing & movement constituted 3 (1.8%). It can

be deduced from the findings that singing is the other music activity that music tutors engage the teacher trainees in, in a music lesson.

4.3.3.3 Other Instructional Approaches Used by Music Tutors

Respondents were asked to suggest additional approaches their tutors employ during music lessons. Table 26 presents these findings.

Table 26

Other Instructional Approaches

Other Instructional Approaches	Frequency	Percent
Demonstration	18	10.78
Imitation	18	10.78
Lecture	77	46.11
Dancing and demonstration	4	2.40
Lecture and demonstration	6	3.59
Lecture and participatory	4	2.40
Lecture and recitation	4	2.40
Recitation	16	9.57
Imitations and lecture	13	7.78
Non response	7	4.19
Total	167	100.00

Table 26 above reveals findings on other instructional approaches music tutors engage teacher trainees in during music lessons. Majority 77 (46.11%) of the respondents indicated that music tutors taught using lecture while 18 (10.78%) of the music tutors used demonstration and Imitation. It is evident that 16(9.57%) of the music tutors used recitation while 13 (7.78%) Imitations and lecture. Further, 6 (3.59%) of the music tutors preferred to use Lecture and demonstration while 4 (2.4%) used dancing and demonstration, Lecture and participatory, Lecture and recitation with a nonresponse of

7(4.19%). As reflected in the results, most of the music tutors taught using lecture method. This implies that in TTCs music tutors emphasize content knowledge.

4.3.3.4 Inferential Statistics on the Use of Dalcroze eurhythmics Pedagogical Approach

The impact of the use of Dalcroze eurhythmics pedagogical approach (DPA) on teacher trainees' performance (TTP) in basic music skills was determined by performing One-way Analysis of Variance (ANOVA) analysis. Table 27 presents the findings.

Table 27

One-way ANOVA: x2 Versus TRt

Source	Df	Ss	Ms	F	P-value
TRr	3	32.92	10.97	0.56	0.644
Error	147	2890.26	19.66		
Total	150	2923.18			

From Table 27 the results indicate that probability value (p-value) is greater than 0.05 ($p= 0.644$). Therefore, there is no significant difference in the performance of teacher trainees in different groups (each experimental and control groups). Consequently, there was no further comparisons. That is mean performance of experimental pre and post-tests mean scores were not different from mean performance of control pre and post-tests mean scores. This finding is in line with Berger (2013) claims that some lessons in Dalcroze eurhythmics approach did not increase 5th and 6th grade student music competency in meter. On the contrary, concerning the meter, Anderson (2012) remarked that instruction to students using Dalcroze eurhythmics approach increased students' beat competency.

A research by Stumpf (2018) revealed that the presence of Dalcroze eurhythmics activities does make a difference, although not significant in the ability of sixth grade

students to aurally perceive the melodic concepts of register and melodic contour. This effect was realized in the fact that the group that used Dalcroze eurhythmics approach did not significantly differ in their scores from pre-test to post-test mean scores. This indicates that significant gains were not found in comparison of pre-test and post-test mean scores for each experimental group. Hebron, Jesuthasan and Bourne (2012) examined experiences and perceptions of student's composers at Coventry University, England after participating in a series of optional Dalcroze lessons. Two-thirds of the participants reported indirect influences on their compositional work such as improved aural awareness, gain in musical knowledge, easy understanding and general academic achievement.

The findings of Stumpf (2018) were however contrary to study by Wang (2013) who found that Dalcroze eurhythmics approach activities produced statistical differences in the ability of students' progress in learning musical rhythms in Secondary school education level. Anderson (2012) noted that instruction for students that used Dalcroze eurhythmics approach lessons increased student performance in melodic aspects of register and melodic contour discrimination.

4.4 Test of Research Hypotheses

This section presents analysis and results of the tests of hypothesis using inferential statistics. Hypothesis formulated were tested followed by discussions of results. The results obtained from statistical analyses using one-way ANOVA and interpretations of the results are summarized in Table 28.

Table 28*Summary of the Results of the Test Hypotheses*

Research Hypotheses	Results	Conclusion
Ho1. There is no statistically significant impact of the use of Kodály Pedagogical Approach on teacher trainees' performance in basic music skills	Positive statistically significant impact of the use of Kodály Pedagogical Approach on teacher trainees' performance in basic music skills (F(3,147, 0.005)= 2.79 with a p-value = 0.043).	Ho1 Rejected
Ho2: There is no statistically significant impact of the use of Orff Pedagogical Approach on teacher trainees' performance in basic music skills	Positive statistically insignificant impact of the use of Orff Pedagogical Approach on teacher trainees' performance in basic music skills (F(3,147, 0.005)= 0.37 with a p-value = 0.778).	Ho2 Accepted
Ho3: There is no statistically significant impact of the use of Dalcroze Pedagogical Approach on teacher trainees' performance in basic music skills	Positive statistically insignificant impact of the use of Dalcroze Pedagogical Approach on teacher trainees' performance in basic music skills (F(3,147, 0.005)= 0.56 with a p-value = 0.644).	Ho3 Accepted

The one-way ANOVA is a statistical test used to investigate whether there is statistically significant difference in the proportions of responses. In comparison of mean, lesser the probability value means there is a significant difference while the greater the probability value means there is no significant difference. Table 28 shows that the probability value of the first hypothesis (Ho1) ($p=0.043$) is less than the probability value of 0.05 meaning that there is significant difference in mean performance of different groups. Hence, we reject the hypothesis of equal proportions at the 5% significance level (95% confidence).

The results of one-way ANOVA revealed that the probability value for Ho2 (p-value = 0.779) and Ho3 (p-value = 0.644) are greater than the probability value of 0.05. This means that there is no significant difference in mean performance on of different groups. Hence, we accept the hypotheses.

4.5 Pre-test and Post-test Analysis

The experimental and control groups were first tested for equivalency before the experiment began. Analysis of Variance (ANOVA) and further post hoc test was used to establish equivalency of the experimental and control groups.

4.5.1 Difference between Mean Scores on Pre-test and Post-test of the Kodaly Group

The Pre-test was given to both the experimental and control groups as part of pre-testing. The results are presented in Table 29.

Table 29

Difference between Mean Scores on the Pre-test and Post-test

Group	Range	Mean	Standard Deviation	Df	t-Ratio
Control	5--55	40.11	7.78		
Experimental	6--63	44.543	7.74	132	2.49

From the findings in Table 29, the range of scores for the control group was 5-55. The mean score was 40.11. For experimental group, the range of scores was 6-63. The mean score was 44.543. This implies that the groups were significantly different as measured by Pre-test.

4.5.2 Presentation of Difference Between Mean Scores on Post-test scores

The Post-test was given to both the experimental and control groups for post-testing. The results are presented in Table 30.

Table 30*Difference Between Mean Scores on the Post-test Scores*

Group	Range	Mean	Standard Deviation	Df	t-Ratio
Control	15--70	40.67	9.56		
Experimental	8--70	44.81	11.91	132	4.24

The findings in Table 30 indicate that the range of scores for the control group was 15-70. The mean score was 40.67. For experimental group, the range of scores was 8-70. The mean score was 59.83. The means were subjected to a t-test for analysis of the difference between the means. The t-ratio for mean scores was 4.24. This implies that the groups were significantly different after the post-test.

4.5.3 Comparison of Mean Scores on the Pre-test and Post-test

The results of comparison of the mean scores on the pre-test and post-test are presented in Table 31.

Table 31*Comparison of Mean Scores on the Pre-test and Post-test Scores*

Group	Pre-test mean	Post-test mean	Gain
Control	40.11	40.67	0.56
Experimental	44.543	44.81	0.267

The findings in Table 31 indicate that, for the control group the pre-test mean score was 40.11. The post-test mean score was 40.67. The difference between these two scores represents a gain of 0.56. For the Experimental group the pre-test mean score was 44.543. The post-test mean score was 44.81. The difference between these two scores represents a gain of 0.267.

After instruction using the Kodály pedagogical approach, it was observed that there was a difference in performance between Experimental and Control groups. The Experimental group performed better in the post-test than the Control group. However, the post-test mean score for both groups was higher than the pre-test mean score as summarized in Table 31. A possible explanation for the gain of the Experimental group was that, there were teacher trainees' active involvements in the learning process coupled with the use of Kodály pedagogical approach activities.

Mbeche (2010) explains that the impact of an experiment is assessed by comparing the amount of variability in the data that the experiment can explain, against the variability that it cannot explain. Therefore, if some of the unexplained variance can be explained in terms of other variables, then the variance is reduced allowing for accurate assessment of the impact of the independent variable. In this case, a possible explanation for the gain of the Control group mean score was that the experience of the music tutor in the Control group contributed to the gain of the group. Owing to this outcome, music tutors use music-based pedagogical approaches to some extent.

4.6 Music Tutors' Interviews

Qualitative data from interviews were thematically analyzed. The researcher read the scripts and then transcribed the data. Coding was done to derive recurring themes from the interviews and a connection was built between the themes identified and the phenomenon under study. This helped to corroborate the information given by the teacher trainees in the questionnaires.

4.6.1 Music Tutors' Demographic Characteristics

This section presents information on the music tutors' demographic characteristics by teaching experience and qualification. The information provided a better understanding of the respondents thus assisting in the interpretation of the results. In the interview schedule, the music tutors' background was sought as follows:

4.6.1.1 Teaching Experience of the Music Tutors

Work output and productivity to a great extent depends on appropriate experience. Hence, it was important to consider respondent's experience reckoned in the number of years within the organization. For this reason, the researcher sought to know the experience of the respondents of the tutors' category. More often than not, teaching experience is measured in terms of years of teaching at a particular level of education and program.

Music tutors with a minimum of 10 years teaching experience were considered in this study. This was because this study examined teacher trainees' performance in music examination from 5 years preceding the study. In teacher training colleges (TTCs), teacher trainees take two years to complete their study. It would have been thus futile to consider tutors with less than 10 years' experience. Thus, music tutors that participated in the study and who have been in the teaching profession for 10 years. This could suggest that they were conversant with the requirements of the PTE. Hence, all the music tutors were sampled. From the interview findings, it was evident that the 3 music tutors had been in the teaching profession for 10 years and above.

Various scholars have highlighted the importance of teaching experience. Khurshid, Qasmi and Ashraf (2012) remarked that teachers with more work experience have higher self-efficacy and this explains why the students they teach perform well. According to

Okorgi and Ogbo (2013), an experienced teacher has been conceptualised as one who produces desired results in the course of his/her duty as a teacher. Many students perform poorly in both internal and external examinations as a result of inexperience in teaching methodology and content (Okorgi & Ogbo, 2013). This implies that when inexperienced teachers handle students their learning environment is likely to be negatively affected. To the contrary, Adeyemi (2010) findings showed that teachers experience do not influence students' academic performance.

4.6.1.2 Qualification of the Music Tutors

For an individual to work in any field of education competently, one must have specific relevant qualification. Thus, the researcher investigated the professional and academic qualification of the music tutors. The qualification of the music tutors was measured in terms of their highest academic qualification. The findings reveal that 3 (100%) of the respondents hold a Bachelor of Education degree with music as their teaching subject. This was a strong characteristic for effectively handling teacher trainees' learning needs.

Teacher professional training and competencies made them motivated and enable trainees to achieve better grades in both internal and external examinations. According to Yala and Wanjohi (2011), there is a significant correlation between teacher qualification and pupils' performance in Kenya. The good performance was attributed to excellent instructions given by qualified teachers in addition to other inputs (Kharsud, 2010). Adunola (2011) avers that availability of qualified teachers determined the academic performance of students. However, Adeyemi (2010) findings reveal that professional qualification beyond first degree does not necessarily lead to improved competence of teaching at secondary school level.

4.6.1.3 Other Qualifications With Regard to Music

Regarding other professional training, 1 out of 3 music tutors had sat for the Associated Board of the Royal Schools of Music (ABRSM) Examinations at different levels. Acquisition of other qualifications with regard to music simply implies that music tutors have mastered the content of their subject besides being role model to the trainees by encouraging search for new knowledge. Teachers quest for information and knowledge and upgrading in knowledge would be used meaningfully to determine ones experience (Yala & Wanjohi, 2011). This may assist in improving quality and maintenance of music education standards.

4.6.2 Data Presentation from the Interviews

Data from the interviews was analysed to corroborate information given in the teacher trainees' questionnaire. A total of three music tutors from the sampled teacher training college (TTC) was interviewed. It was designed to find out the pedagogical issues faced in the use of the Kodály, Orff and Dalcroze pedagogical approaches, music activities involved and the challenges influencing the extent of use of the pedagogical approaches.

The following were the emerging pedagogical issues faced by music tutors: limited time allocated for teaching music, scope of the primary teacher education (PTE) music curriculum, inadequate teaching and learning resources and limited pre-service training. The emerging themes are discussed in the following sections. This section describes the clusters of data that emanated from the coding process.

4.6.2.1 Limited Time for Teaching and Learning Music

It emerged that music is allocated very little time on the timetable. For instance, in the first year of the study, music is allocated one hour per week while in second year of the study two hours per week. One music tutor commented:

“..this time is hardly enough for us music tutors to guide trainees in teaching most of the music basic concepts using Kodály, Orff or Dalcroze approaches”. I hope the current curriculum reform will address this challenge. **Participant S.**¹

One of the participants averred:

“...two hours lesson time is not adequate. Kodály, Orff and Dalcroze pedagogical approaches require more time during music lessons, so I use any approach...(laughs) bora aelewe (so long as he/she understands). **Participant Q.**²

From the sentiments shared by music tutors, more time should be given to music lessons because there are more skills that need to be taught. Hence, it can be argued that because of insufficient time, music tutors resort to traditional approaches in teaching and learning music basic skills. Even so, this could explain why there is dismal performance at the end of two-year course as there was inadequate time to teach using Kodály, Orff and Dalcroze pedagogical approaches. Therefore, the three pedagogical approaches (Kodály, Orff and Dalcroze) receive less attention and inadequate application. This implies that the three pedagogical approaches are occasionally employed as there is limited time to examine and chose most appropriate music activities. Like any other discipline, employing a variety of pedagogical approaches does not only ensure that learners perform well in such a discipline but also makes learning enjoyable (Singh & Savita, 2016). The conclusion being music teaching and learning should be allocated more time in the curriculum for studying and examining musical aspects in a practical way.

¹ Interview conducted on 6th February 2020 at 1.00pm in Room 2. Refer to Appendix IV for full transcription of interview conducted with participant ‘S’

² Interview conducted on 13th February 2020 at 1.00pm in Room 2. Refer to appendix VI for full transcription of interview conducted with participant ‘Q’

4.6.2.2 Scope of the PTE Music Curriculum

It also emerged that there are topics that are rarely or literally not assessed in primary teacher education (PTE) music syllabus. While noting her experiences on interacting with the college music curriculum **participant R** notes the following:

“I teach the practical which takes a lot of time, yet it has never been assessed..., so why is it in the curriculum then? (laughs) as we know in Kenya what is not tested is not appreciated.”³

Participant S reports...the fact that practical aspect of music is not examined is a clear indication that it is not at all that important”⁴

These responses indicate that the scope of music curriculum is wide with areas that are rarely assessed in PTE music exams. This is a pointer to the reason why music tutors tend to focus more on the examinable areas of the subject without teaching teacher trainees all that is required. In addition, the absence of what is supposed to be taught in the music curriculum trickles down to the music curriculum in primary schools in Kenya. This can therefore explain the lack of music practical skills among the teacher trainees in Kenya. This being the case, it is possible to conclude that music in primary teacher education (PTE) is affected by too much content in the music curriculum. Hence, the scope should be reduced to fit into the limited hours that is allocated for the two-year course.

Consider the observation by **participant Q**:

“...music curriculum in primary teacher education emphasizes more on theory...music has only a theory paper... the approach to teaching music is theoretical”⁵

³ Interview conducted on 10th February 2020 at 1.00pm in Room 3. Refer to Appendix V for full transcription of interview conducted with participant ‘R’

⁴ Interview conducted on 6th February 2020 at 1.00pm in Room 2. Refer to Appendix IV for full transcription of interview conducted with participant ‘S’

⁵ Interview conducted on 13th February 2020 at 1.00pm in Room 2. Refer to Appendix VI for full transcription of interview conducted with participant ‘Q’

The observation by Participant Q corroborates the finding by Chokera (2016) who noted that the music syllabus in primary teacher training college (PTTC) in Kenya is ‘too theoretical’. Subsequently, Akuno (2012) established that primary school head teachers viewed the training received by in-service primary school teachers as being ‘too theoretical’. The findings by Chokera (2016) and Akuno (2012) are similar to the finding by Muchira (2010) who found that 8-4-4 system is characterized by a theoretical approach to teaching music. Hence, it can be stated that PTE music curriculum is overloaded and unmanageable therefore an approach taken to teach music is fundamentally hypothetical rather than reasonable. These could be reasons why teacher trainees studying music do not perform well in the basic skills as indicated by KNEC report (2018).

4.6.2.3 Inadequate Teaching and Learning Resources

The theme inadequate teaching and learning resources emerged strongly. One of the music tutor’s response while expressing dissatisfaction with the level of outdated textbooks said:

“...How do you expect us to teach when there are no textbooks?...course books do not contain the details of the use of Dalcroze eurhythmics approach...there are few transcribed folksongs. (*Sighs*)... even the available folksongs have complicated rhythms you can’t move to,” commented **participant R**.⁶

Participant R observes the outdated information in the course books. This portrays a need by the experienced music tutors and music educators in conjunction with Kenya Institute of Curriculum Development (KICD) to update the information in the course books by reviewing the music curriculum. While the music tutors may use various textbooks, the scenario stated above depicts the unsatisfactory results of teacher trainees in primary

⁶ Interview conducted on 10th February 2020 at 1.00pm in Room 3. Refer to Appendix V for full transcription of interview conducted with participant ‘R’

teacher education (PTE) music examination. The music tutor is forced to use a traditional approach for lack of print material and non-print material (audio). For instance, not all music tutors can access the different textbooks for use in their colleges bearing in mind the acquisition procedures and if they are, the music textbooks seem not to be readily available.

Another respondent reports:

“...there is a serious inadequacy of musical instruments (laughs). The college does not have any musical instruments either Western or African...reason...their prices are perceived to be very expensive...colleges avoid buying musical instruments. I borrowed a musical instrument melodica⁷ until I had to buy mine. The classrooms allocated music lessons are not ideal...moreover their close proximity is even a challenge” **Participant Q.**⁸

This is a situation where the music tutor has to play the major and minor scales, play simple melodies, transpose the simple melodies, play the intervals and triads as required by the syllabus and the musical instrument available to him or her is a borrowed melodica. This paints a grim picture of how the music tutors are able to develop teacher trainees’ musicianship skills with such limited musical instruments or lack of the same. This also limits teacher trainees practice of the skills and could lead to low acquisition of the same. It is important to note that the use of musical instruments in the teaching and learning of music is one of the key factors in achieving musicianship. This implies that appropriate availability of proper music teaching and learning resources will provide learners with opportunity to enhance development of their musical skills.

⁷ Melodica is a musical instrument which has a musical keyboard on top and is played by blowing air through a mouth piece that fits into a hole in the side of the instrument

⁸ Interview conducted on 13th February 2020 at 1.00pm in Room 2. Refer to Appendix VI for full transcription of interview conducted with participant ‘Q’

4.6.2.4 Limited Pre-service Training

Training is simply learning that is provided in order to improve performance on the present job. It also emerged that music tutors had limited pre-service training in specific content areas at the university level, which affected their use of Kodály, Orff and Dalcroze pedagogical approaches.

“...I did not have adequate training at the university, for example, Kodály, Orff and Dalcroze were briefly introduced in undergraduate education... I am not able to teach all the aspects of music using the approaches...through interest and self-motivation, I use the approaches (laughs)” retorted **participant S**.⁹

Participant R reports “... I use the Kodály approach with the help of my own studies and interest ... it is easier to use in topics such as rhythm and melody. For example, chanting the rhythmic patterns using French rhythm names”. Apart from the limited training or brief introduction at the university, I think that the main issue is that there is no follow-up from the Ministry of Education through Quality Assurance and Standards Officer in supervising the teaching of Music subject in a TTC.¹⁰

The explanations above revealed that the music tutors are not adequately trained on how to use the Kodály, Orff and Dalcroze pedagogical approaches in the teacher training colleges (TTCs). This is a negation of their roles as fountains of knowledge. The music tutors’ inability to teach all music concepts has a negative impact on teacher trainees.

In view of the fact that music tutors cannot teach all the concepts, there is a possibility that teacher trainees are being denied the opportunity to learn the music concepts. It can be concluded that the music tutors may not effectively apply the three pedagogical approaches in the teaching of music. Hence, commitment to taking the initiative in the use of the three pedagogical approaches to training the teacher trainees is minimal.

⁹ Interview conducted on 6th February 2020 at 1.00pm in Room 2. Refer to Appendix IV for full transcription of interview conducted with participant ‘S’

¹⁰ Interview conducted on 10th February 2020 at 1.00pm in Room 3. Refer to Appendix V for full transcription of interview conducted with participant ‘R’

4.7 Proposed Model for an Impact-directed Music-based Pedagogical Approach

This section outlines the proposed model for teaching and learning music basic skills at the primary teacher training colleges (PTTCs). The instructional model was proposed after analyzing the teacher trainees' responses to the questionnaires, conducting an experiment with trainees in the study and music tutors' feedback from the interviews. The instructional model is also proposed from the theoretical framework and would be useful to the music tutors in terms of structuring teaching strategies and learning experiences. The basic objective of this model is to ensure that teacher trainees studying music acquire skills, knowledge and attitudes that would lead to successful learning of music.

4.7.1 Rationale for the Approach

Research shows a paradigm shift in the 21st Century towards a more flexible, relevant and effective pedagogical approaches. Some of the general objectives of music education in Kenyan primary teacher training colleges (PTTCs) include equipping teacher trainees with adequate basic music knowledge, practical skills and methodology to enable him or her cope with music activities in primary school level. This model ensures that there is skill acquisition and knowledge based on 'doing' as found in Kodály, Orff and Dalcroze pedagogical approaches.

This model is based on presentation of concepts in a sequential manner. Sequence accounts systematically for the readiness needed to learn each new musical skill (Gordon, 2012). Consequently, a systematized knowledge base will act as a foundation on which other musical information is linked. Valerio (n.d) who posits that the key component to Gordon's approach to music learning is the idea and the role of instructional sequencing affirm this. This model aims at promoting creativity and imagination among the trainees. Creative abilities once gained in music could produce

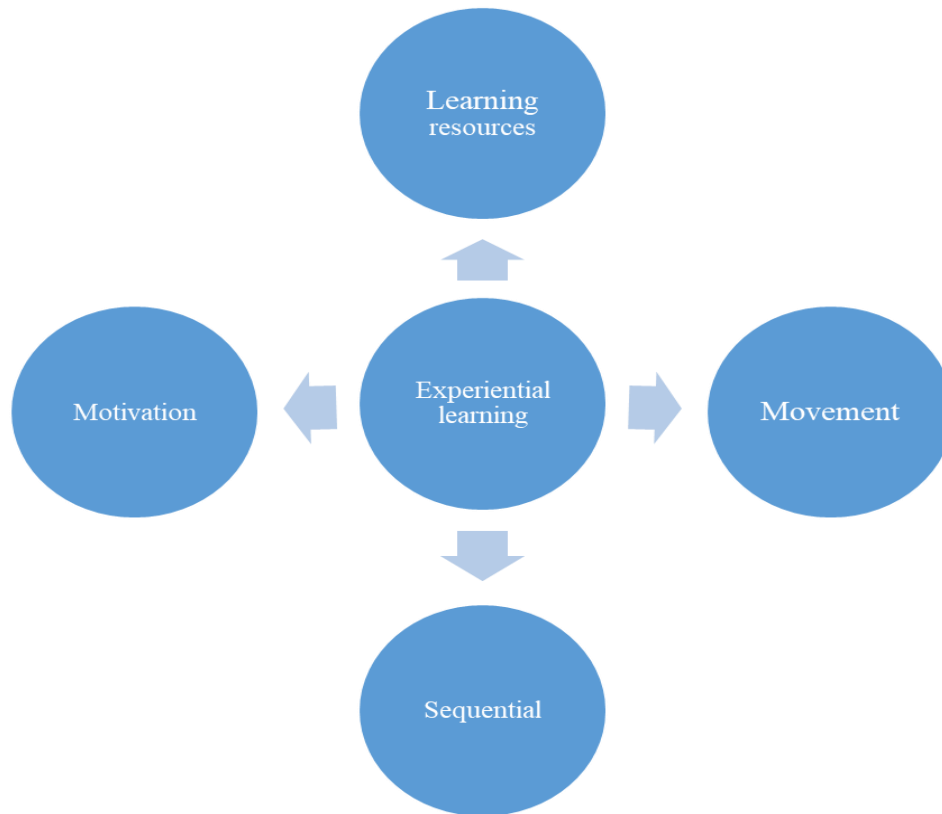
sustainable musicians who can function as musicians for life across a wide range of contexts. Further, the model fully allows experiential learning.

4.7.2 Impact-directed Music-based Pedagogical Model (IMPM)

An important observation to start the presentation of the IMPM is get a good picture to what extent it really meets its expectation. In teacher training colleges, conventional approaches are pre-dominant. The conventional approaches do not allow experiential learning of music. Therefore, the researcher realized that there is need to bridge the gap that addresses lack of experiential learning in music. Hence, the model was developed from the concerns from the field. The model constitutes the following principles as summarized in Figure 5.

Figure 5

The Diagrammatical Representation of the Principles of the Model



Source: Researcher, 2022)

The information from Figure 5 shows the principles of the model. They include the following;

1. Learning resources. These include musical instruments, audio-visual (non-print), print materials like music scores, music extracts. From the music tutors interview responses, music instruments and proper music classrooms were some of the challenges faced in teaching music. This observation confirms that learning in primary teacher training colleges is theoretical as trainees are denied experiential learning due to inadequate learning resources.

2. Movement. The movement-based learning is where trainees make movement to a given piece of music that is associated with choreography. For example, Dalcroze eurhythmics approach helps teach scales and intervals as students use movement while singing the notes. The appropriate use of movement allows experiential learning of music in class.
3. Sequential. Kodaly approach uses a sequential building of concepts that enable each student of whatever age to become so musically literate. This sequential process teaches the music educator to introduce more abstract concepts and skills gradually, through sequential learning. Sequential learning takes place in the classroom and certainly allows experiential learning.
4. Motivation. It is an important predictor of learning and achievement. Students who are motivated to learn persist longer, learn more deeply and perform better in classes and in examination. From the model, the trainees should be motivated intrinsically and extrinsically. For lack of motivation affects the trainees attention.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings of the study in relation to the specific objectives. Conclusions in relation to the purpose of the study were then made based on these findings. The chapter ends with recommendations to stakeholders on the model of an impact-directed music-based pedagogical approach on teacher trainees' performance in basic music skills.

5.2 Summary of the Study Findings

The purpose of this study was to develop a model for an impact-directed music-based pedagogical approach for enhancing teacher trainees' performance in basic music skills. Chapter I of the thesis provided an overview of the study. The background of the current study was done by studying literature on the situation globally, continentally, regionally and nationally. The aim was to understand how low academic performance is linked to ineffective use of pedagogical approaches. Chapter II contains a critical review of literature related to the purpose of the study. Research studies specific to music instruction programs were reviewed with the aim of identifying the gaps the studies unearthed in an attempt to improve on them. In general, the purpose was to establish gaps that offer justification of the study.

Chapter III provides a detailed description of the procedures and techniques employed to collect data. Mixed methods Quasi-experimental research design was adopted since it assisted the researcher to come up with new knowledge systems to close the gap in the teaching and learning pedagogy on music basic skills. Analysis of Variance (ANOVA) was preferred because it purposed to assess whether a significant difference existed in

the mean achievement of each experimental and control groups. Chapter IV reports the results that were derived from the data including discussion of the results. The thesis concludes with Chapter V that gives the summary of information produced by the study including conclusions and recommendations. This section summarizes the research findings of the study on the basis of formulated research objectives.

5.2.1 Impact of the use of KPA on TTP in Basic Music Skills

The study's first objective was to determine the impact of the use of Kodály pedagogical approach (KPA) on teacher trainees' performance (TTP) in basic music skills. The teacher trainees were first asked to indicate to what extent they experience the use of KPA. It was found out that the teacher trainees' to 'a very large extent' experienced the use of KPA in the clapping of rhythmic patterns as confirmed by 88.6%. Composing own rhythms 71.52%, chanting rhythms 65.82%, singing back melodic patterns 55.7% and playing simple accompaniment on pitched and non-pitched musical instruments as indicated by 52.26%. From these findings, there is a clear indicator that there was teacher trainees' greater experience of KPA in music lessons.

A one-way analysis of variance (ANOVA) was used to test the impact of the use of KPA on TTP in basic music skills. It revealed that there was a significant difference on the performance of the control and experimental groups. The data suggest that teacher trainees taught by KPA performed better in music examination than those taught by the conventional approaches. Hence, there was a positive effect of the use of KPA on teacher trainees' performance in basic music skills.

A post hoc test using the Fisher Pairwise Comparisons of means revealed that there was a significant difference in mean performance of the groups. The mean performance of experimental post-test mean scores (44.810 mean) showed a significant growth over the

mean performance of control post-test mean scores (40.67 mean). This could be due to the emphasis on the planning, preparation and use of KPA during treatment period where a high level of methodological control within the lesson was possible.

The research findings also revealed that KPA is practical in nature and needs more time. The Kenya Institute of Curriculum Development (KICD) could provide more time in the primary teacher education music curriculum for the use of the KPA in the current curriculum reform. In addition, it was noted that in primary teacher education music curriculum, the practical aspect of music is not tested and teacher trainees' do not appreciate what is not tested internally (Mock exams) or nationally (PTE music examination). Therefore, the Kenya National Examination Council (KNEC) evaluation and grading system for PTE music examination should not only receive marks for teacher trainees' theoretical knowledge but also their practical skills.

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

The study's second objective was to establish the impact of the use of Orff pedagogical approach (OPA) on teacher trainees' performance in basic music skills. The results showed that most teacher trainees' experienced the use of OPA to a 'small extent' which had an effect on their learning outcomes. Majority 75.95% listened and sang various melodies and 66.02% played chords of various scales in a class to small extent. It is noted that there was less experience of OPA in music lessons, which negatively affected the learning outcomes in music examination. This was attributed to the fact that music tutors had little knowledge and experience of 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 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 groups). In addition, there was no further comparisons. That is, mean performance of experimental pre and post-tests mean scores were not different from mean performance of control pre and post-tests 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 on the use of OPA. The emerging issue of limited knowledge and that of the 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 music 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 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 effective use of Orff Pedagogical Approach because of insufficient time allocated for music lessons. As a result of insufficient time, music tutors resorts to drilling teacher trainees to pass examination. In addition, it was established that the current PTE music evaluation does not require the practical aspect of music because there is lack of formative or summative evaluation of music practical. This has led to music tutors not teaching using the OPA.

5.2.3 Impact of the Use of DPA on TTP in Basic Music Skills

The study's third objective was to analyze the impact of the use of Dalcroze eurhythmic pedagogical approach on teacher trainees' performance in basic music skills. The teacher trainees were required to indicate to what extent they experienced the use of DPA in a music lesson. The results showed that there was teacher trainees' greater experience of DPA in music lessons. Majority 80.65% confirmed that they experienced the use of DPA through movement in simple time to a large extent. The results also indicate that the use of DPA in the classroom encourages active involvement and concentration on the part of teacher trainees. Dalcroze pedagogical approach (DPA) is important in teacher trainees' music performance because it strongly reinforces cognitive learning, improves coordination and heightens awareness of the body-mind connection which contribute significantly to the education of the holistic mind-body experiences for musical knowing.

The results of the ANOVA showed that probability value (p-value) ($p=0.664$) is greater than 0.05. Therefore, there is no significant difference in the performance of teacher trainees in different groups (each experimental and control groups). Consequently, there was no further comparisons. That is mean performance of experimental pre and post-tests mean scores were not different from mean performance of control pre and post-tests mean scores. This meant that training of the TTs using DPA had no impact on their

academic performance. Some of the variables that may have affected the results were: 1. age of the teacher trainees whereby them being adults, it has become a big challenge to impose the teaching of movement to them, 2. diverse cultural backgrounds. For instance, some are from strong backgrounds that are of the view that any movement of body parts not from their background should be avoided. Therefore, if the movements are brought in the classroom, those from the strong cultural backgrounds tend to shun them and 3. attitude where teacher trainees do not feel like participating in music lessons while incorporating Dalcroze eurhythmics music activities. Hence, it can be deduced that DPA is not taken seriously, as it should hence no significant difference.

The research results also established that the current PTE music curriculum does not allow the use of DPA because of insufficient time allocated for music lessons. As a result of insufficient time, music tutors resorts to drilling teacher trainees to pass examination. Further, it was established that the current PTE music evaluation does not require the practical aspect of music because it is not evaluated and so music tutors do not effectively use the DPA.

5.2.4 Impact –directed Music-based Pedagogical Model

The study's fourth objective was to propose a model for an impact-directed music-based pedagogical approach that would enhance teacher trainees' performance in basic music skills. The instructional model was proposed after analyzing the teacher trainees' responses to the questionnaires, conducting an experiment with trainees in the study and music tutors' feedback from the interviews. The instructional model is proposed from the theoretical framework and would be useful to the music tutors in terms of structuring teaching strategies and learning experiences. Summary of the factors observed in relation to the use of the pedagogical approaches by music tutors include: 1. lack of an instructional model to help music tutors in selecting and structuring materials to deliver

content and provide appropriate learning experiences; 2. the pedagogical approaches used tend to be more teacher-centered than learner-centered which denies the trainees an opportunity to experience various musical sounds.

5.3 Conclusion

Based on the research findings of the study, the following conclusions were made;

5.3.1 Impact of the Use of KPA on TTP in Basic Music Skills.

The study established that Kodály pedagogical approach has a great impact on teacher trainees' academic performance. Research studies by Tabuena, 2020; Moralista; 2016; Sheridan, 2015 and Lori, 2012 observed that the use of Kodály pedagogical approach has a positive influence on students' academic achievement, creativity and self-esteem. This finding is similar with the responses from the music tutors, teacher trainees who studied music at the time of the research and the analysis showed that the Kodály pedagogical approach greatly improve the teacher trainees' academic achievement. These results greatly prove that Kodály pedagogical approach (KPA) promote teacher trainees' participation and build the required level of reasoning among the teacher trainees. The KPA is effective in the improvements and achievements of teacher trainees' performance in music basic skills and academic. It should be noted that KPA assists music tutors plan more, talk less and trainees learn more while interacting in-group activities.

Another important finding was that KPA is a practical oriented approach that motivates the teacher trainees in a music lesson and needs more time in the primary teacher education (PTE) music curriculum. The sentiments shared by the music tutors are that more time should be given to music lessons since they are various skills that need to be taught. Obeng and Osei-Senyah (2018) indicated limited time as one of the major challenges teachers of music encounter when teaching music in selected schools in

Ashanti region of Ghana. The finding of this study concerning time allocation agrees with the findings of a study by Akuno (2005) that established that music teaching is not given priority because of time factor. More time should be given to music basic skills development because the teaching of music skills is usually done in a gradual manner and many musical aspects are interconnected. The conclusion is that music teaching and learning should be given more time in the primary teacher education (PTE) music curriculum.

Further, the study revealed that in PTE music curriculum, the practical aspect of music is not tested and teacher trainees' do not appreciate what is not tested nationally (PTE music examinations) and internally (Mock, tests and quizzes). Research study by Jacksova (2015) notes that lack of assessment of practical music results in complete stagnation of musical growth. All music tutors agreed that the unexamined part of music is practicals. When music examination focuses only on knowledge, it influences acquisition of the required skills hence working against the goal of education which is to produce an all-round individual who can fit in the society (Gantan, Baking, Quiambo, Nicdao, Nuqui & Cruz, 2015). The implication is that teacher trainees are taught content that is predicted to be examined and music tutors preferred pedagogical approaches that help in passing examination compared to other pedagogical approaches required by education goals. The study concludes that practical aspect of music in the PTE music curriculum should also be examined because Kenyan education is examination based, and examination is used as a way of improving college pass rates.

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

The main finding regarding the use of Orff pedagogical approach (OPA) is that the OPA does not have an impact on the performance of teacher trainees' performance (TTP) in

basic music skills. This finding agrees with the study finding of Long (2013) that Orff approach contributes slightly to the acquisition of music skills but not always significant. The finding is similar to the music tutors' interview responses that they are unable to teach music concepts using OPA and teacher trainees' responses that they experience the use of Orff pedagogical music activities to a small extent. Since music tutors cannot teach music concepts using OPA, there is a possibility that teacher trainees are being denied the opportunity to learn them. The results prove that OPA does not have an effect on the teacher trainees' academic performance. This finding is a concern because it contradicts the contributions of major theorists, including Orff, Moore who stress the importance of music teaching and learning to child development. Therefore, the approach should not be abandoned but the stakeholders should work efficiently as possible to help facilitate improvements and success of the use of OPA.

Another major finding of the study was that music tutors' pedagogical knowledge was limited. Pedagogical knowledge (PK) consists of general elements regarding teaching, instructional models and strategies and classroom communication (Chokera, 2016). The challenge evolves from teacher training programs experienced by the music tutors. Since development of music basic skills involves a lot of challenging tasks such as creation of rhythmic patterns, recognition of melodies visually and aurally and analysis of music elements, a great deal of intensive training is required. The same observation on lack of pedagogical knowledge was also made by Haston & Rusell (2012) and Henley (2011) who reported that teachers joining the teaching profession hold similar concerns that they did not receive adequate training during their teacher training at the university.

This finding agrees with the music tutors' interview responses that they had limited training on the use of Orff pedagogical approach (OPA) at the university. There is need

to relook on the relevance of the teacher training music programs at the university. In order to improve teacher trainees (TTs) music learning and academic performance, focus should be on the development of qualified and experienced music tutors with more pedagogical knowledge on the use of OPA. Music tutors are responsible for the actual implementation of the college music curriculum. As implementers of the curriculum, how they deliver content in their classes directly affect teacher trainees' academic performance. The study therefore concludes that music tutors should be thoroughly prepared in their training in the use of OPA before being deployed in the teacher training colleges.

In addition to the above major findings, limited teaching and learning resources was also considered as an important finding in the current study. A view held by all music tutors interviewed revealed that lack of adequate teaching and learning resources is a challenge detrimental to music teaching and learning in primary teacher training colleges. The finding is similar to a research study by Henley (2011) who observed that there is a shortage of resource materials in schools to facilitate the teaching and learning of music subject in some schools in England. Juxtaposing what is currently happening in Kenyan primary teacher training colleges, teaching and learning resources are inadequate. For instance, there are very few musical instruments in some teacher training colleges because of the prices are perceived to be very expensive.

The finding corresponds to the study by Owino (2014) who noted that most Learning Resource Centres (LRC) in Kenyan primary teacher training colleges (PTTCs) 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 OPA and teach music effectively. 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 is a key component towards realization 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 actualization. This is in line with Orff's contribution to the need for incorporating varied educational media in music learning process.

5.3.3 Impact of the Use of DPA on TTP in Basic Music Skills

A major finding on the impact of the use of Dalcroze pedagogical approach (DPA) was that the approach does not have an impact on the teacher trainees' performance in basic music skills. Research study by Berger (2013) noted that some lessons in Dalcroze eurhythmics approach did not increase 5th and 6th grade students music competency in pitch. On the contrary, concerning meter, Anderson (2012) remarked that instruction to students using Dalcroze eurhythmics approach increased students' beat competency. This finding on no significant difference in the use of Dalcroze pedagogical approach (DPA) is a concern since it contradicts the contributions of major music theorists including Kodály, Orff and Dalcroze who advocated for all learners' actual participation in appropriate music making processes.

Another important finding revealed was the teacher trainees' attitude towards the use of Dalcroze pedagogical approach (DPA). Negative perceptions and attitude towards the use of DPA by many teacher trainees is a major pedagogical challenge. The research findings from music tutors interview responses revealed that teacher trainees' perceptions and negative attitude are affecting the proper teaching and learning of music

in primary teacher training colleges. Music tutors cited that some of the negative attitudes emanate from the fact that Kenya National Examination Council (KNEC) does not assess kinaesthetic awareness of musical sounds. Lack of assessment is not a good development because the perception is that a music aspect not examined is not that important. Hence, if majority of teacher trainees in a college share the view, then there is need for policy makers to have a relook on the status accorded to the kinaesthetic awareness of musical sounds. This finding is a concern because it contradicts the philosophy of Dalcroze who argues that movement is for all and emphasis is on the need to involve all learners in the lesson by way of using appropriate music and movement. The study concludes that negative perceptions and attitude were detrimental to the teaching and learning of music using DPA in primary teacher training colleges.

Despite the fact that Kodály, Orff and Dalcroze pedagogical approaches are being used in teacher training colleges, the findings of this study revealed that there is still a wide range of intervening factors such as time allocation, scope of primary teacher education music curriculum, inadequate teaching and learning resources, limited pedagogical knowledge and relevance of music programs in the university. Addressing these issues will likely result in improved teaching of music and improved quality of music education in Kenya as a whole.

Now, than never before, music tutors are expected to demonstrate effectiveness in the classroom. As pressure for higher test scores mounts, the responsibility of raising teacher trainees' achievement falls, ultimately, on the classroom music tutor. Even though teaching the teacher trainees using Kodály, Orff and Dalcroze pedagogical approaches present greater challenges, accountability demands that music tutors ensure that they make academic progress. If all teacher trainees are to have a chance for success, they must have tutors who know how to teach every trainee to a high standard.

5.3.4 Impact-directed Music-based Pedagogical Model (IMPM)

The study has come up with the model that is meant to allow experiential learning with a view of improving music performance at PTE level. The Impact-directed Music-based Pedagogical Model (IMPM) proposed can be adopted in primary teacher training colleges since systematic music instruction is used. The model (IMPM) is for enhancing teacher trainees' performance in basic music skills. The model addresses experiential learning by embracing the principles of the KPA, OPA and DPA and bridging the gaps thereby allowing experiential learning. While the IMPM is relatively easy to use, additional steps are taken to ensure that successful implementation and widespread use. The additional steps include: suggested learning experiences where the learner is exposed to situations and learning activities that would help develop desired knowledge, skills, values and attitude. Assessment takes place throughout the learning process as trainees' participate in various learning experiences in and out of the classroom.

Overall conclusion is that whereas KPA is effective in music instruction, there is inadequate learning resources. In addition, there is negative perception and attitude which lead to poor performance in music at the national level. Further, the study has come up with the model that is meant to allow experiential learning with a view of improving music performance at PTE level.

5.4 Recommendations

Based on the research findings and conclusion of the study, the following recommendations were made:

5.4.1 Objective 1: To determine the impact of the use of Kodály pedagogical approach on teacher trainees’ performance in basic music skills.

The study recommends more planning and preparation on the use of KPA by music tutors for continual improvement in music development in teacher training colleges. Aspects of KPA should be polished from time to time for instance music tutors re-training should be ongoing. This will go a long way in not only enhancing teacher trainees’ music performance but also boosting their academic achievement and graduation rates.

5.4.2 Objective 2: To establish the impact of the use of Orff pedagogical approach on teacher trainees’ performance in basic music skills.

The study recommends widening of 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, adequate library and improved music room facilities. Reviewing 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.

5.4.3 Objective 3: To analyze the impact of the use of Dalcroze pedagogical approach on teacher trainees' performance in basic music skills.

The study having established that there was no statistically significant impact of the use of Dalcroze pedagogical approach (DPA) on teacher trainees' performance in basic music skills. The study recommends that music tutor to provide both intrinsic and extrinsic motivation to the learners.

5.4.5 Recommendations for Further Research

In respect to further research:

- i. There is need for further extensive experimental study on the impact of the use of KPA, OPA and DPA on teacher trainees' performance in basic music skills in other TTCs in other counties.
- ii. A further investigation should be conducted to find out the reasons for ineffective use of OPA and DPA in other colleges in other counties.

5.4.6 Recommendations for Policy Guidelines

In line with the policy:

- (i) The Kenya Institute of Curriculum Development (KICD) should consider inclusion of the principles of all music-based pedagogical approaches in the current curriculum reform.

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APPENDICES

Appendix I: Letter of Introduction

Dear Respondent,

My name is Dorothy Atieno Okeyo. I am doctoral candidate in the School of Music and Performing Arts, Kabarak University. I am conducting a research study as part of the requirements for my degree in Music Education.

The title of my Thesis is '*A model for an impact-directed music-based pedagogical approach for enhancing teacher trainees ' performance in basic music skills*'.

My major research tools are questionnaires which will be filled by the teacher trainees' pursuing music in year two and an interview schedule for the college music tutors. The activity is voluntary and I will appreciate if you kindly answer the questions as truthfully as possible. Any information you provide will be treated with strict confidentiality and will be used solely for the purpose of the study.

Thank you for your sincere responses and co-operation

Yours faithfully

Dorothy A. Okeyo

Appendix II: Questionnaire for Teacher Trainees'

The following is a questionnaire designed to evaluate the impact of music-based pedagogical approaches on teacher trainees' performance in basic music skills. Your participation in filling the questionnaire will be highly appreciated. Your responses will be handled with confidentiality.

INSTRUCTIONS:

Please respond to the following questions. (Tick where applicable)

A. General Information

1. Please indicate your gender

Male ()

Female ()

2. Which of these music related activities (in or out of school) were you involved in before high school and while in high school. Put a tick on all that apply. If you did not engage in any, please leave blank.

() School choir

() Church choir

() Singing/playing for fun with friends

() Private music lesson

() Studying music

() Kenya music festival

Others, please specify

3. On a scale of 1-4, how would you rate your overall high school music experience?

My high school music experience was

1. Very negative 2. Negative 3. Positive 4. Very positive

Comment: (Add a comment that will help understand your response)

4. For how long have you studied music in this institution?

5. What influenced your decision to opt for music?

6. How would you rate the level to which your current music instruction has influenced your performance in music?

() Not influential

() Very influential

Comment: (Add a comment that will help understand your response)

SECTION B: Kodály Pedagogical Approach

7 (i). You are requested to use the rating scale below to tick the response that best describes the extent to which you have experienced the use of Kodály pedagogical approach

Key: To no extent at all; To a small extent; To a moderate extent; To a large extent; To a very large extent

S/N	Kodaly Pedagogical Approach	To a very large extent	To a large extent	To moderate extent	To a small extent	To no extent at all
	Rating	5	4	3	2	1
A	To what extent do you clap rhythmic patterns before writing them down					
B	To what extent do you engage in chanting the rhythms using French system of ‘ta’s and ‘ti’s					
C	To what extent do you sing back melodic patterns before writing them?					
D	To what extent do you participate in creating/composing your own rhythms that contain particular rhythmic patterns					
E	To what extent do you participate in creating/composing your own melodies that contain particular pitch patterns					
F	To what extent do you					

	practice folk songs in your music lesson?					
G	To what extent do you sing melodic phrases using Hand signs in music lessons?					
I	To what extent do you play simple accompaniment on pitched and non-pitched musical instruments to teach?					

ii) If you have not engaged in the above Kodály approach activities before, include any other activities you have been involved in, in a music lesson

iii) Suggest other approaches in which your tutors engage you during music lessons

SECTION C. Orff Pedagogical Approach

8a(i) You are requested to use the rating scale below to tick the response that best describes the extent to which you have experienced the use of Orff pedagogical approach

Key: To no extent at all; To a small extent; To a moderate extent; To a large extent; To a very large extent

S/N	Orff Pedagogical Approach	To a very large extent	To a large extent	To moderate extent	To a small extent	To no extent at all
	Rating	5	4	3	2	1
A	To what extent do you sing melodic phrases using solfa syllables (doh, rah, me, fah, soh, lah, te, doh)					
B	To what extent do you incorporate playing of chords of various scales in class?					
C	To what extent do you play two intervals harmonically or melodically?					
D	To what extent do you listen and sing the intervals before notating them?					
E	To what extent do you play pre-recorded music with chords?					
F	To what extent do you listen and sing the various melodies and identify the triads/chords?					
G	To what extent do you listen and identify the new key in a transposed piece of music?					
H	To what extent do you improvise chords played during music lesson to compose/create your own melodies					

bi) If you have not engaged in the above Orff approach activities before, include any other activities you have been involved in, in a music class.

ii) Suggest other approaches in which your tutors engage you during music lessons

SECTION D. Dalcroze Pedagogical Approach

9(i) You are requested to use the rating scale below to tick the response that best describes the extent to which you have experienced the use of Dalcroze pedagogical approach

Key: To no extent at all; To a small extent; To a moderate extent; To a large extent; To a very large extent

S/N	Dalcroze Pedagogical Approach	To a very large extent	To a large extent	To moderate extent	To a small extent	To no extent at all
		5	4	3	2	1
A	To what extent do you realize simple time through movement					
B	To what extent do you realize compound time through movement					
C	To what extent do you realize articulation through movement					
D	To what extent do you realize rhythmic phrases through movement					
E	To what extent do you realize dynamic changes through movement					
F	To what extent do you sing with movement until the melody is synchronized together					
G	To what extent do you step rhythms of the songs while singing them					
I	To what extent do you move wide and narrow steps to indicate intervals between wide pitch					

ii) If you have not engaged in the above Dalcroze eurhythmics approach activities before, include any other activities you have been involved in, in a music lesson

iii) Suggest other approaches in which your tutors engage you during music lessons

Appendix III: Interview Schedule for Music Tutors

1. For how long have you taught music?
2. What is your highest academic qualification with regard to music?
3. What other qualifications do you have with regard to music?
- 4 a) To what extent do you use Kodály approach in teaching music?
 - (b) What activities do you employ in Kodály approach?
 - (c) What challenges do you encounter when using Kodály approach?
 - (d) What do you think about the use of Kodály approach in teaching music?
- 5a) To what extent do you use Orff approach in teaching music?
 - (b) What activities do you employ in Orff approach?
 - (c) What challenges do you encounter when using Orff approach?
 - (d) What do you think about the use of Orff approach in teaching music?
- 6a) To what extent do you use Dalcroze eurhythmics approach in teaching music?
 - (b) What activities do you employ in Dalcroze eurhythmics approach?
 - (c) What challenges do you encounter when using Dalcroze eurhythmics approach?
 - (d) What do you think about the use of Dalcroze eurhythmics approach in teaching music?
7. Which approach helps teacher trainees get most music concepts?
 - 8a) Which is your favourite approaches that enable teacher trainees to get music Concepts?
 - (b) Why is it favourable?

Appendix IV: Full Transcription on Interview Conducted with Participant ‘S’

Introduction

Thank you for making time for this session. The purpose of this interview is to evaluate the impact of the use of Kodály, Orff and Dalcroze pedagogical approaches on teacher trainees’ performance in basic music skills. The information that will be gathered from this interview will be able to influence my study.

The interview conducted with participant ‘S’ was on 6th February 2020 at 1pm in Room 2.

Objective 1

- a. What is Kodály approach in your own understanding?

Response

This is an approach which focuses on singing folksongs, clapping and tapping of rhythms. (*Laughs*) in brief Kodály approach is a vocal approach to music literacy

- b. How did you learn Kodály pedagogical approach?

Response

I only studied the approach in my undergraduate studies at the university for the sake of passing the unit. This implies that I did not have adequate training at the university, the reason being the approaches Kodály, Orff and Dalcroze were briefly introduced in undergraduate as mentioned earlier. Therefore, I am not able to teach all aspects of music using the approaches but through own studies and interest, I use the Kodály approach more.

- c. To what extent do you use Kodály approach in teaching music?

Response

Kodály approach is my favourite approach, and this is because of interest and self-motivation as hinted earlier (*hey!*) I think it is the best approach and that is why I use it to a large extent. For instance, when teaching rhythm, it simplifies the aspects of rhythm and the trainees simply love my classes.

- d. What activities do you employ in Kodály approach?

Response

(*Sighs*) just as I have mentioned earlier. There is clapping and tapping while counting numbers, chanting French rhythm names (ta-te, ta-fa-te-fe), creating

rhythms or writing rhythms. Playing of non-pitched instruments where my trainees usually hit the desks. Not forgetting that (i) clapping/tapping helps the trainees to register rhythm counts as they establish strong and weak beats (ii) melodies are mostly sounded instead of played, my friend, voice is readily available, so I use voice to sound the melodies because the available Piano was last tuned very many years ago.

Follow up Question: Use of Hand signs is one of the Kodály approach classroom activities. Do you use Hand signs?

Response

Hand signs are part of classroom activities yes, but I don't use them because they tend to slow down the tempo of the songs I use in the music lesson. Again, because of the visually impaired students studying music, I usually avoid them.

- e. What challenges do you encounter when using Kodály approach?

Response

My friend they are numerous. The current course books have excessive theoretical information. Folksongs available in the course books have complicated rhythms.

Follow-up question: Which course book in particular?

Response: Distinction Creative Arts, published in 2004.

Another real challenge is lack of appropriate musical instruments. Something worth noting is that, Music curriculum has the provision of practical music which is not examined. The fact that practical aspect of music is not examined is a clear indication that it is not all important and trainees don't appreciate what is not examined nationally (*hiyo sasa ni PTE exams*). In addition, the music curriculum doesn't allow full use of Kodály approach coz of insufficient time allocation for music lessons. Therefore, I usually prefer conventional methods such as lecture, recitation or memorization. For instance, trainees memorize the qualities of intervals like, major 2nd has two notes and one tone (*tosha*).

- f. What do you think about the use of Kodály approach in teaching music?

Response

Kodály approach is very effective especially in teaching rhythm and melody which are the core components of Section A: Basic skills in music examination

paper. I would like to inform you as a friend, time allocated for music, I mean that time is hardly enough for us music tutors to guide trainees in teaching most of the music basic concepts using Kodály approach.

Objective 2

- a. What is Orff approach in your own understanding?

Response

Orff approach is an approach that involves playing musical instruments and improvisation. I only studied the approach in my undergraduate studies for the sake of passing exams, then there were no more serious implementation as such.

- b. To what extent do you use Orff approach in teaching music?

Response

(Sighs) up to now, I think I have little information on the use of Orff approach. This is because the training involved a little information and lack of exposure to the use in a music lesson. Therefore, I use it to a small extent. For instance, in topics like Translation and Transposition, we (trainees and I) sing scales and translated simple melodies using sol-fa syllables and that's all. Sometimes the trainees sing what is sounded for example, sounding melodic or harmonic intervals and triads.

- c. What activities do you employ in Orff approach?

Response

(Laughs) as indicated earlier, we sound pitches in various simple melodies.

Follow-up question: Do you play and listen to recorded music?

Response:

(still laughing) You expect me to play and listen at this college while it doesn't have even a record player? Where in this world can that happen? Again, this is aural work which is not examined, so I don't play or listen. By the way, I do follow the format of the music exam paper where there is no provision for listening.

- d. What challenges do you encounter when using Orff approach?

Response

First, Orff approach requires playing of musical instrument for it to be applied effectively. With the knowledge from Royal school of music, I can play piano,

but it's not available. In short, inadequate teaching and learning resources is a challenge. Textbooks do not contain details of the use of the approach. With the little knowledge I have on the use of Orff, I think the best thing to do is ignore the approach and use other approaches I'm comfortable with. Why should I embarrass myself? PTE music curriculum has the provision of practical but it's not tested. In addition, because of exams which I had hinted earlier, I don't use Orff approach and therefore I don't take it seriously.

- e. What do you think about the use of Orff approach in teaching music?

Response

I have realised that Orff approach has less singing but more playing. Hence, music tutors should be made aware of the correct way of using it. KICD to provide every detail of using Orff approach in the new music curriculum. Ministry of Education to organise workshops/seminars on the use of Orff approach.

Objective 3

- a. What is Dalcroze eurhythmics approach in your own understanding?

Response

This approach uses movement to teach music concepts like rhythm, melody and others. As pointed out earlier, I only studied the approach in my undergraduate studies for the sake of passing exams, then there were no more serious application.

- b. To what extent do you use Dalcroze eurhythmics approach in teaching music?

Response

Dalcroze eurhythmics approach with its movement is time consuming and there is limited time to cover the syllabus. Hence, I use it to a small extent. Specifically to show how the wide and narrow steps are made.

- c. What activities do you employ in Dalcroze eurhythmics approach?

Response

Basically, movement. With movement, the emphasis is put on the main beat. For example, the song '*nya-ndo-lo ni-ndo te-re*'. *The trainees jump twice at the same spot(s:s), then two steps behind (s:m:-)until they master the movement.*

- d. What challenges do you encounter when using Dalcroze eurhythmics approach?

Response

The course books have little information on the use of Dalcroze. The available folksongs for use in the textbooks have complex rhythms you can't move to. (*Laughs*) tell me how do you move to a time signature like 5/8. It's hard, especially when you've not been told how to do it. This means that I create or improvise simple melodies which take time. In some songs, I have realised that movement interferes with the tempo and meter. In addition, KNEC does not examine the movement so no one appreciates its use. Further, some cultures do not accept some movements. Finally, trainees' attitude is another challenge.

- e. What do you think about the use of Dalcroze eurhythmics approach in teaching music?

Response

The approach is effective but will be more effective if details are provided in the music curriculum. Therefore, KICD to provide every detail of using Dalcroze approach in the new music curriculum. I would like to inform you that time allocated for music is hardly enough for us music tutors to guide trainees in teaching most of the music basic concepts using Kodaly, Orff and Dalcroze approaches. I hope the current curriculum reform will address this serious challenge.

Appendix V: Full Transcription on Interview Conducted with Participant ‘R’

Introduction

Thank you for making time for this session. The purpose of this interview is to evaluate the impact of the use of Kodaly, Orff and Dalcroze pedagogical approaches on teacher trainees’ performance in basic music skills.

The interview conducted with participant ‘R’ was on 10th February, 2020 at 1pm in Room 3.

Objective 1

- a. What is Kodály approach in your own understanding?

Response

The essence of Kodály approach is singing folksongs. Then I am aware Kodály believed that singing is the foundation of musical language. I also know, he advocated for music literacy that is reading and writing music.

- b. How did you learn Kodály pedagogical approach?

Response

I only studied the approach in my undergraduate studies at the university for the sake of passing the unit.

- c. To what extent do you use Kodály approach in teaching music?

Response

After university, I got interested in Kodály approach. So I use the approach with the help of own studies and motivation. I realised that it is the best in teaching topics like rhythm. For instance, chanting rhythmic patterns using French rhythm names. I use it to a large extent. Something I have noted is that, apart from the limited training or brief introduction of the approach, I think there is no follow-up from the MOE through QASO in supervising the teaching of music subject at the TTC.

- d. What activities do you employ in Kodály approach?

Response

Chanting French rhythm names (ta-te, ta-fa-te-fe) my favourite activity, clapping and tapping while counting numbers, creating rhythms. Singing simple folksongs then clapping the rhythms. Playing of non-pitched instruments such as hitting the desks.

Follow up Question: Use of Hand signs is one of the Kodály approach classroom activities. Do you use Hand signs?

Response

No, I don't use them at all. Surely, if I may ask you, where will they apply them? Remember in primary school, nothing of the sort, college not tested (laughs) so I don't bother.

- e. What challenges do you encounter when using Kodály approach?

Response

Hey, that's a good question. The current course books have excessive theoretical information. Lack of appropriate musical instruments is a challenge. Music curriculum has the provision of practical music but because it's not examined, trainees don't appreciate what is not examined nationally, again the music curriculum doesn't allow full use of Kodaly approach coz of insufficient time allocation for music lessons. Therefore, I usually prefer conventional methods such as lecture or memorization. For instance, trainees memorize the qualities of intervals .

- f. What do you think about the use of Kodály approach in teaching music?

Response

Kodály approach is very systematic and effective especially in teaching rhythm and melody as set in Basic skills section of PTE music examination paper. I would like to inform you as a friend, that time allocated to music subject is hardly enough for us music tutors to guide trainees in teaching most of the music basic concepts using Kodaly approach.

Objective 2

- a. What is Orff approach in your own understanding?

Response

Orff approach is an approach that emphasizes improvisation. The rest I'm not sure. I only studied the approach in my undergraduate studies for the sake of passing exams, then nikaachana nayo (I stopped studied it).

- b. To what extent do you use Orff approach in teaching music?

Response

(Sighs) to a small extent. I think limited experience and understanding contributes to the small extent use.

- c. What activities do you employ in Orff approach?

Response

(Laughs) in most cases singing simple melodies using sol-fa syllables, singing translated simple tunes in sol-fa and even singing transposed melodies using sol-fa.

- d. What challenges do you encounter when using Orff approach?

Response

Challenges include; limited knowledge on the use of the approach. May be CBC is going to include the details of the use. Even if I was to use it, there are no resources like Western or African musical instruments in college. PTE music curriculum has the provision of practicals. However, just imagine I teach the practical aspect of music which takes all of my time, yet it has never been assessed. So why is it in the curriculum (laughs) as we know in Kenya what is not tested is not appreciated. In addition, because of exams, I drill the trainees to pass exams but they still don't pass because of negative attitude. For instance, they claim music is not examined in primary schools.

- e. What do you think about the use of Orff approach in teaching music?

Response

The approach is learner-centred and can be adapted. The approach can promote communication and collaboration very well. It is important to avoid prejudices. Ministry of Education should organise workshops/seminars on the use of Orff approach.

Objective 3

- a. What is Dalcroze eurhythmics approach in your own understanding?

Response

This approach introduces music concepts through movement. As pointed out earlier, I only studied the approach in my undergraduate studies for the sake of passing exams.

- b. To what extent do you use Dalcroze eurhythmics approach in teaching music?

Response

Dalcroze eurhythmics approach is very helpful in the afternoon. The movements and dances break boredom and makes afternoon classes lively. Hence, I use it to a moderate extent. Specifically moving to simple familiar tunes like ‘*Nyuki wee, nyuki lia wee*’ (s:f:m:-/d.r:m.r:d||

- c. What activities do you employ in Dalcroze eurhythmics approach?

Response

Main activity is moving to simple familiar tunes emphasising the main beat. For example, the song ‘*Nyuki wee, nyuki lia wee*’.

- d. What challenges do you encounter when using Dalcroze eurhythmics approach?

Response

My friend, how do you expect me to teach when there are no textbooks? Even course books available do not contain the details of the use of Dalcroze eurhythmics approach. In the available course books, there are few transcribed folksongs (sings) and even the available folksongs have complicated rhythms you can’t move to. In short, the course books/textbooks have little information on the use of Dalcroze eurhythmics approach. It’s hard to use the approach if you’ve not been told how. Therefore, I need the methodology (*laughs*) is that the how? There is the issue of insufficient time; seriously if I was to use Dalcroze the time allocated to music is not enough. In addition, KNEC does not examine the movement so no one appreciates its use. Finally, trainees’ negative attitude is a serious problem.

- e. What do you think about the use of Dalcroze eurhythmics approach in teaching music?

Response

Even though trainees take the approach as childish, the approach encourages active involvement. Hence, it should be advocated for by advising KICD to provide every detail of using Dalcroze eurhythmics approach in the new music curriculum and improve on the time allocation for music.

Appendix VI: Full Transcription on Interview Conducted With Participant ‘Q’

Introduction

Thank you for making time for this session. The purpose of this interview is to evaluate the impact of the use of Kodály, Orff and Dalcroze pedagogical approaches on teacher trainees’ performance in basic music skills.

The interview conducted with participant ‘Q’ was on 13th February, 2020 at 1pm in Room 2.

Objective 1

- a. What is Kodály approach in your own understanding?

Response

It is an approach that advocates singing folksongs of a particular country. Like in Kenya, the folksongs from different communities are adapted as we use Kodály approach. However, our trainees are familiar with simple tunes that’s what I use to identify different rhythms, melodies and transpose to different keys. I tell you, it’s very nice

- b. How did you learn Kodály pedagogical approach?

Response

I only studied the approach in my undergraduate studies at the university. Nevertheless, using it in the classroom is a matter of doing what you are comfortable with or what drives the message home.

- c. To what extent do you use Kodály approach in teaching music?

Response

I mostly use the approach to teach rhythm like the French rhythm names very nice. Clapping the rhythms, to either establish the main beat in simple time or compound time. I admit that I use it a lot in those topics.

- d. What activities do you employ in Kodály approach?

Response

Clapping and chanting rhythmic patterns using French rhythm names (*taa-aa, taa, ta-te,*), singing common songs not necessarily folksongs for example; ‘*maua mazuri ya pendeza*’; *Buzz buzz oh my little bee*’; *Baa baa black sheep*’. These songs are appropriate to the primary school pupils. Another activity is, playing of non-pitched instruments where my trainees usually hit the desks. Note: In creating melody, I occasionally involve the trainees because in 2013, KNEC did

set an exam on completing a melody up to 4 bars, my friend the consequences were dire. All my trainees failed, but you see it was mass failure in all TTCs, from then on I teach it just in case.

Follow up Question: Use of Hand signs is one of the Kodaly approach classroom activities. Do you use Hand signs?

Response

I don't use them because KNEC has never assessed such kind of thing. So why waste my precious time.

- e. What challenges do you encounter when using Kodály approach?

Response

Insufficient time allocation. Kodály is practical in nature and for it to be effective more time should be allocated. Let the education policy in Kenya accord a fair distribution of time in the PTE curriculum in all subjects, as for now there is bias towards subjects especially music. Another point, KNEC should also examine the practical aspect of music for us to put music in its place. As per now, music is just done for the sake of it, which is very risky. I hope CBC will bring back the real music at the TTC. In addition, the current course books have excessive theoretical information. No varied composed or transcribed folksongs, Lack of appropriate musical instruments and even equipment that is, inadequate teaching and learning resources. Finally, Music curriculum in primary teacher education emphasizes more on theory. The fact that music has only a theory exam paper, the result is that the approach to teaching is theoretical. Therefore, I usually prefer the methods that I am comfortable with like lecture.

- f. What do you think about the use of Kodály approach in teaching music?

Response

Kodály approach is very effective. It improves trainees' knowledge in rhythm and melody. If there is, something good KICD should consider in the current PTE music curriculum reform is more time to execute the approach.

Objective 2

- a. What is Orff approach in your own understanding?

Response

An involving approach. For instance, you improvise on the instruments; sing sol-fa syllables, playing done by the ear and listening to music.

b. To what extent do you use Orff approach in teaching music?

Response

(Laughs) I can't tell, because one thing I know is that I was not given orientation in the use apart from the little knowledge I acquired after my undergraduate studies. In addition, lack of musical instruments both Western and African limit the use of this approach in this college. Mostly, I sing simple melodies, different scales and translated melodies using sol-fa names.

c. What activities do you employ in Orff approach?

Response

(Laughs) as indicated earlier, we sing and sound pitches in various simple melodies because of lack of melodic instruments.

d. What challenges do you encounter when using Orff approach?

Response

Great, a major challenge is lack of teaching and learning resources. In my college, there is a serious inadequacy of musical instruments (*laughs*), the college doesn't have any functional musical instrument either Western or African. For instance, there is piano but not in tune, Orutu is there but not in good shape. The reason being their prices are perceived to be very expensive, so to be on economic safer side, college avoids buying musical instruments. I borrowed an instrument called melodica until I had to buy mine.

Follow-up question: Why can't you give trainees some projects of making musical instruments? Response: Good. I tell you we managed to do that sometimes back but there was no music room so all was destroyed coz of poor storage.

In addition, insufficient time allocated to music. Imagine sometimes I borrow the instrument melodica that plays melodies but no time to practice the learnt music concepts. This is tempting, so I use any approach bora trainees *waelewe*. Remember they are supposed to pass exams. Inadequate teaching and learning resources is another challenge. Textbooks do not contain details of the use of the approach. With the little knowledge I have on the use of Orff, I think the best thing to do is ignore the approach. In addition, PTE music curriculum has the provision of practical but it's not tested. Finally, the classrooms allocated music

lessons are not ideal because they are too small. Moreover their close proximity to other classes is a challenge

e. What do you think about the use of Orff approach in teaching music?

Response

Orff approach is learner- centred, therefore, music tutors should be made aware of the correct way of using it. KICD to provide every detail of using Orff approach in the new music curriculum.

Objective 3

a. What is Dalcroze eurhythmics approach in your own understanding?

Response

This approach introduces musical concepts through movement. As pointed out earlier, I only studied the approach in my undergraduate studies. I use it to train the body in rhythm and dynamics. For example, soft (P) trainees bend while loud (f) they stand.

b. To what extent do you use Dalcroze eurhythmics approach in teaching music?

Response

I mostly use Dalcroze eurhythmics approach to show the difference between wide and narrow movements and the common dynamics like soft and loud. These are minimal coz of time allocation. Hence, I use it to a moderate extent.

c. What activities do you employ in Dalcroze eurhythmics approach?

Response

Mostly, moving to simple familiar tunes like '*Baa baa black sheep*', '*Row row row your boat*'. Sometimes we move to the sol-fa syllables of the scale degrees *d r m f s l t d*' where between the 3rd and 4th degrees of scale (*m-f*) we move a narrow step while between the 1st and 2nd degrees of scale (*d-r*) we move a wide step.

d. What challenges do you encounter when using Dalcroze eurhythmics approach?

Response

Trainees' attitude, where they feel like the activities are for children and not them. Hence, they don't take the activities seriously. Insufficient time allocated for music. The course books have little information on the use of Dalcroze

eurhythmics. The available folksongs for use in the textbooks have complex rhythms you can't move to. KNEC does not examine the movement so no one appreciates its use. Some cultures do not accept some movements. I have an idea of what the approach involves but now putting it in practice as a professional needs guidance. Let there be workshops/seminars on methodology that is pedagogical knowledge. What we had in the University as Subject methods. Remind you that last year (2019) Languages had a program 'TUSOME' where they were taught how to teach English and Kiswahili, EGMA for Mathematics, all at the college. Music should follow by forming a forum for teaching music from primary level to university level. The place of music should be known at the TTC

e. What do you think about the use of Dalcroze eurhythmics approach in teaching music?

Response

The approach is effective but will be more effective if details are provided in the music curriculum. Therefore, KICD to provide every detail of using Dalcroze eurhythmics approach in the new music curriculum.

Appendix VII: Pre-Test/Post-Test (Year Two Basic Skills)

1. Rhythms:

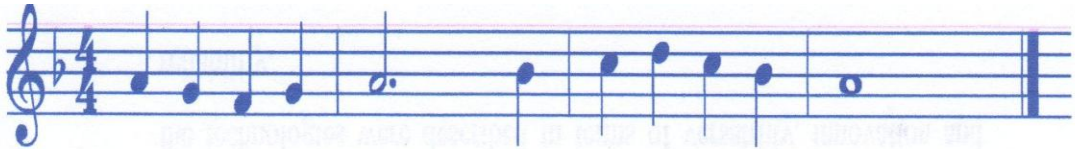
(a) Clap/tap the following rhythms using French rhythm names (5 marks).



(b) Using taa, ta-te, create your own rhythmic patterns of eight bars. Clap/tap your created rhythmic pattern (5 marks).

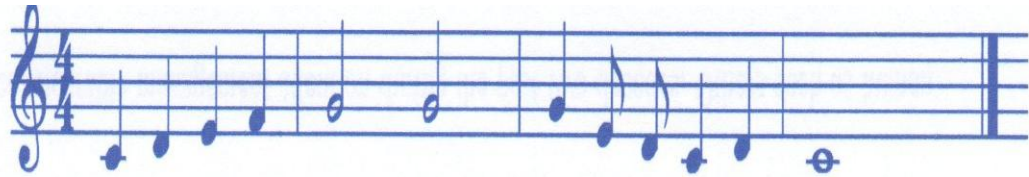


(c) Step the rhythms of the following melody while singing (15 marks)

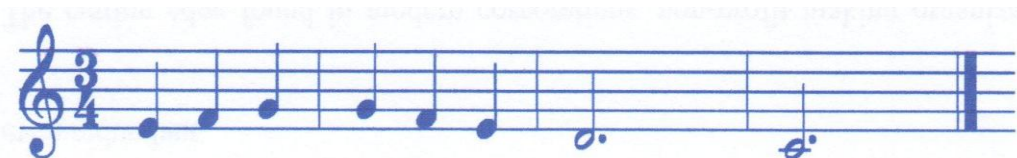


2 a) Melody:

i. Sing the melody below using hand signs (5 marks)



ii. Sing the following tune using sol-fa names (3 marks).



(b) Use the staff below to construct the scale given

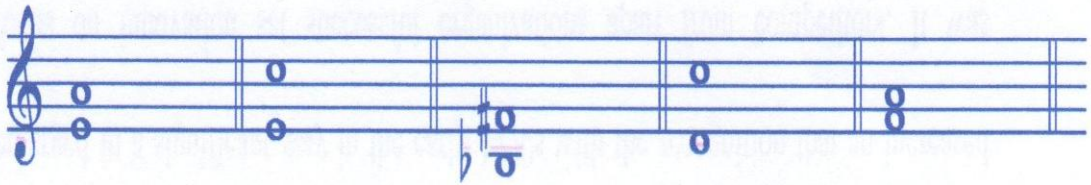
(i) D major with key signature ascending and descending use Treble clef (2 marks).



(ii) Move wide and narrow steps to indicate intervals between pitches in the scale constructed in (bi) (10 marks).

3. Intervals:

(a) Visually identify and write down the following intervals given (5 marks)

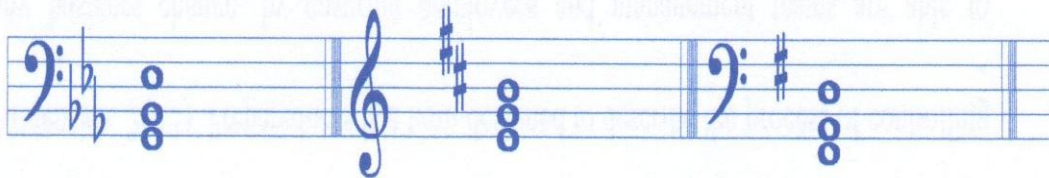


i. _____ ii. _____ iii. _____ iv. _____ v. _____

b) Play the harmonic intervals in (3a) (5 marks).

4. Triads:

(a) Identify and write down the following triads as played (5 marks)



i. _____ ii. _____ iii. _____

Appendix VIII: Phases of Intervention

PHASE	DESCRIPTION
1. Pre-test	Week 1: Administering of the pre-test. Analyzing the test to check for equivalence between the two groups
2. Instructional	Week 2: Delivering teaching and learning materials
	Week 3: Introduce teacher trainees to Kodály, Orff and Dalcroze pedagogical approaches
	Week 4: Kodály - Rhythm reading (say <i>taa</i> for quarter note and its equivalent rest, <i>taa-aa</i> for half note and its rest, <i>taa-aa-aa-aa</i> for whole note and its rest and <i>ta-te</i> for two eighth notes and its rest Orff-Introduce concepts of high low Dalcroze eurhythmics-Introduce concept of a beat. Match to the given beat
	Week 5: Kodály -Reading rhythms in varied meters such as 2/4, 3/4, 4/4 6/8 Orff-use sol-fa syllables (<i>d r m f s l t d'</i>) to perform sol-fa ladder Dalcroze eurhythmics– Listen to pieces of music in different meter and establish the beat. Match to the beat as they sing simple songs
	Week 6: Kodály -Rhythm and rhythm structure were described verbally for the teacher trainees. Rhythm dictation Orff-use sol-fa syllables to perform simple melodies such as ' <i>Hot cross buns</i> ', ' <i>Mary had a little lamb</i> ' Dalcroze eurhythmics- Introduce concept of tones(full step) and semitones(half step)
	Week 7: Kodály - Teacher trainees clapping and tapping varied rhythms including own created rhythms Orff-Listen to simple melodies and aurally recognize melodic and harmonic intervals. Dalcroze eurhythmics-Watch clips on how to move narrow and wide steps and imitate

	<p>Week 8: Kodály -Watched clips on hand signs and imitated Orff-Write and describe melodic and harmonic intervals (<i>major, minor, perfect</i>)</p> <p>Dalcroze eurhythmics-Move as they sing simple songs in simple time</p>
	<p>Week 9: Kodály -Use hand signs to perform simple melodies such as ‘ <i>Row row row your boat</i>’, ‘<i>Twinkle twinkle little star</i>’</p> <p>Orff-Orally and in writing shift the pitch of a piece of music from one key to another</p> <p>Dalcroze eurhythmics- Move as they sing simple songs in compound time</p>
	<p>Week 10: Kodály -Played random tunes by rote on the piano. Accompanied simple tunes using drums and shakers</p> <p>Orff-Listen and identify primary triads (I, IV, V) in a piece of music. Improvise chords to create own melodies of about 4 bars long</p> <p>Dalcroze eurhythmics- Move as they sing simple songs in given time signatures</p>
3. Post-test	Week 11: Administering post-test
	Week 12: Analyzing the test to check for equivalence between the two groups

Appendix IX: Kodaly Hand Signs



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Appendix X: Post Graduate Letter of Authorization

KABARAK		UNIVERSITY
Private Bag - 20157 KABARAK, KENYA http://kabarak.ac.ke/institute-postgraduate-studies/		Tel: 0773 265 999 E-mail: directorpostgraduate@kabarak.ac.ke
BOARD OF POSTGRADUATE STUDIES		
<p><i>18th October 2019</i></p> <p>The Director General National Commission for Science, Technology & Innovation (NACOSTI) P.O. Box 30623 – 00100 NAIROBI</p> <p>Dear Sir/Madam,</p> <p>RE: DOROTHY ATIENO OKEYO (GDM/M/2304/09/16)</p> <p>The above named is a PhD Student at Kabarak University in the School of Music and Performing Arts. She is carrying out a research entitled <i>“Relationship Between use of Music-Based Pedagogical Approaches and Teacher Trainees’ Performance in Primary Teacher Education Music Examination in Nandi County, Kenya”</i>. She has defended her proposal and has been authorized to proceed with field research.</p> <p>The information obtained in the course of this research will be used for academic purposes only and will be treated with utmost confidentiality.</p> <p>Please provide her with a research permit to enable her to undertake her research.</p> <p>Thank you.</p> <p>Yours faithfully,</p> <p> Dr. Betty Jeruto Tikoko <u>DIRECTOR, POSTGRADUATE STUDIES</u></p>		
<hr/> <p><u>Kabarak University Moral Code</u> <i>As members of Kabarak University family, we purpose at all times and in all place to set apart in one's heart, Jesus as Lord. (1 Peter 3:15)</i></p> <p> Kabarak University is ISO 9001 2015 Certified</p>		

Appendix XI: Research Permit

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 393997	Date of Issue: 18/December/2019
RESEARCH LICENSE	
	
<p>This is to Certify that Miss.. DOROTHY OKEYO of Kabarak University, has been licensed to conduct research in Nandi on the topic: RELATIONSHIP BETWEEN USE OF MUSIC-BASED PEDAGOGICAL APPROACHES AND TEACHER TRAINEES' PERFORMANCE IN PRIMARY TEACHER EDUCATION MUSIC EXAMINATION IN NANDI COUNTY, KENYA for the period ending : 18/December/2020.</p>	
License No: NACOSTI/P/19/3147	
393997 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code 
<p>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>	

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies
5. The License does not give authority to transfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix XII: Research Authorization Letter from Ministry of Education

REPUBLIC OF KENYA



**MINISTRY OF EDUCATION STATE DEPARTMENT FOR EARLY
LEARNING AND BASIC EDUCATION**

Email: cdenandicounty@yahoo.com

Telephone: 0773044624

When replying please quote

County Director of Education

NANDI COUNTY,

P. O. Box 36-30300,

KAPSABET.

Ref: NDI/CDE/RESEARCH/1/VOL.11/218

Date: 16th January, 2020

Miss Dorothy Okeyo

Kabarak University

Private Bag - 20157

KABARAK.

RE: RESEARCH AUTHORISATION.

Reference is made to the National Commission for Science, Technology and Innovation's letter Ref: No. NACOSTI/P/19/3147 dated 18th December 2019.

The above named person has been granted permission by the County Director of Education to carry out research on "*Relationship between use of Music Based pedagogical approaches and teacher trainees' performance in Primary Teacher Education Music in Nandi County, Kenya* " for the period ending 18th December 2020.

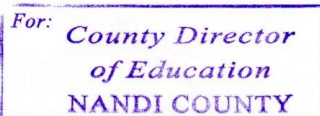
Kindly provide her all necessary support she requires.

A handwritten signature in blue ink, appearing to read 'Clare Kusa'.

Clare Kusa

For: County Director of Education,

NANDI COUNTY.




Appendix XIII: Research Authorization from Ministry of Interior and Coordination of National Government

THE PRESIDENCY
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Tel: 053 5252621, 5252003, Kapsabet
Fax No. 053 – 5252503
E-mail:
nandicountycommissioner@gmail.com
When replying, please quote

Ref: No. NC.EDU/4/3/VOL.I/(18)



County Commissioner's Office,
Nandi County
P.O. Box 30,
KAPSABET.

16th January 2020

Dorothy Okeyo
Kabarak University,
Private Bag - 20157,
KABARAK KENYA.

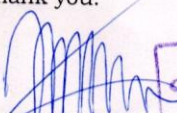
RE: RESEARCH AUTHORIZATION


This is in reference to Research License reference No. 393997 dated 18th December, 2019 from the Director General/CEO, National Commission for Science, Technology and Innovation on the above subject matter.

You are hereby authorized to conduct a research on **“Relationship between use of music-based pedagogical approaches and teacher trainees’ performance in primary teacher education music examination in Nandi County”** for the period ending **18th December, 2020.**

Wishing you all the best.

Thank you.


G.O. MATUNDURA,
For: COUNTY COMMISSIONER
NANDI.



Appendix XIV: Map of Nandi County



Source: Nandi County Integrated Development Plan, 2013-2017

Appendix XV: List of Publications



Journal of Education and Learning

[ISSN 2958-1168]

Volume: 01 Issue: 01 | November-2022

JEL

Determining the impact of the use of Kodály pedagogical approach (KPA) on teacher trainees' performance (TTP) in basic music skills

Authors

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Cite this article in APA

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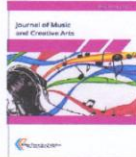
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Abstract

This study sought to determine the impact of the use of the Kodály pedagogical approach (KPA) 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 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 the 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. 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. The study concludes that the practical aspect of music in the PTE music curriculum should also be examined because Kenyan education is examination-based, and examination is used as a way of improving college pass rates. The study recommends more planning and preparation on the use of KPA by music tutors for continual improvement in music development in teacher training colleges. Aspects of KPA should be polished from time to time; for instance, music tutors' re-training should be ongoing.

Key terms: Teacher trainees' performance (TTP), Kodály pedagogical approach.



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

Authors

Dorothy Atieno Okeyo⁽¹⁾; Wilson Shitandi⁽²⁾; Lydia Kanake⁽³⁾

Main author email: dokeyo@kabarak.ac.ke

(1.2.3) Kabarak, University, Kenya.

Cite this article in APA

Okeyo, D. A., Shitandi, W., & Kanake, L. (2022). Establishing the impact of using Orff pedagogical approach (OPA) on teacher trainees' performance (TTP) in basic music skills. *Journal of music and creative arts*, 1(1), 11-24. <https://doi.org/10.51317/jmca.v1i1.309>



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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.

Appendix XVI: Conference Presentation



KABARAK UNIVERSITY

Certificate of Participation

Awarded to

Dorothy Okeyo

for successfully participating in the 10th Annual Kabarak University International Research Conference held from 12th – 13th October 2020 and presented a paper entitled “*A Competency-Based Curriculum For Kenyan Primary Schools: Learning From Theory*”

Conference Theme

**21st Century Issues And Practices In
Education**

A blue ink signature of Prof. Frederick Ngala, consisting of several horizontal strokes and a vertical line.

Prof. Frederick Ngala
Dean School of Education

A blue ink signature of Dr. Moses Thiga, consisting of a few vertical and horizontal strokes.

Dr. Moses Thiga
Director Research

Kabarak University Moral Code

As members of Kabarak University family, we purpose at all times and in all places, to set apart in one's heart, Jesus as Lord.

(1 Peter 3:15)



Kabarak University is ISO 9001:2015 Certified