UNIVERSITY OF CAPE COAST

A STUDY OF BASIC SCHOOL BAND PUPILS' INSTRUMENT CHOICES: A CASE STUDY OF SCHOOLS IN THE ACCRA METROPOLIS, GHANA.

BY

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree or certification in this university or elsewhere.

Candidate's Signature: …… Date: ……..

Name: John-Doe Dordzro

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

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ABSTRACT

The purpose of this study was to investigate reported influences on Ghanaian Basic School band pupil's instrument choices, to gain an understanding of reasons expressed by students for preferring certain instruments and not others, in addition, to explore whether Ghanaian children are gender-stereotyped in their musical instrument choices. A questionnaire was developed to gather information concerning students' instrumental music experience, family participation in band, reported reasons for instrument choice, non-choice, and several other questions just to give readers an insight into how Ghanaian basic school bands operate. The sample consisted of 142 pupils from five basic school bands in the Accra metropolis.

Results revealed a strong gender/instrument associations and pupils indicated that their choices were most influenced by their school band teacher. Other reported influences included instrument sound and programmes the school band attends. The results also revealed that girls in the Accra metropolis who are members of the school bands tend to prefer playing the "percussions" which are mostly regarded to be for boys. Gender association with certain instruments seemed to override professed reasons for instrument selection.

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DEDICATION

To my father, Joseph Kofi Dordzro and my late mother, Grace Abui Adzo Matey.

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CHAPTER ONE

INTRODUCTION

Background to the Study

Music allows us to celebrate and preserve our cultural heritages and to explore the realms of expression, imagination, and creation resulting in new knowledge. Exposing students to a wide range of musical experiences is a major goal of music education (Hui, 2009; Wiggins, 2001). However, guiding students to participate in a variety of musical styles and genres remains a challenge. Students may be resistant to different and unfamiliar music, preferring to participate in music that is popular and familiar to them (Greer, Dorow, & Randall, 1974; May, 1985). Every individual should be granted the opportunity and be encouraged to learn music or play any musical instrument and to share in musical experiences since this allows us to celebrate and preserve our cultural heritage and to explore the realms of expression, imagination, and creation resulting in new knowledge.

Of the many factors that influence a child's decision to play a particular instrument, the following repeatedly appeared in the research literature: Gender, peer and parental influence and instrument timbre, personality, exposure to music, and music educators' influence. Several studies have been done to determine the components that contribute to instrument choice. Many researchers found gender to be an influence as well as instrument timbre, parental and peer influences, personality and the amount of exposure to music as well as several other factors of significant relevance (Abeles & Porter, 1978; Bruce & Kemp, 1993; Delzell & Leppla, 1992; Fortney, Boyle, & DeCarbo, 1993; Griswold & Chroback, 1981; Tarnowski, 1993).

Historically, all cultures have differentiated the roles of males and females. The nature and extent of this differentiation has varied between cultures and within them, depending on other factors, for instance, social class, religious beliefs (Maccoby, 1988; Unger & Crawford, 1992) and so on. One aspect of this differentiation has been the gender- stereotyping of musical activities that are perceived as appropriate for males and females and, in parallel with this, the gender stereotyping of musical instruments. There is no doubt that gender stereotyping of musical instruments exists among Ghanaian cultures with respect to traditional musical instruments especially the "drums". The latter is prevalent in Nketia (1999) when he said that 'There are instruments that are played only by men and not by women and sometimes instruments that are played mostly by women' (p. 5). But the question is; are Ghanaian basic school children aware of these stereotypes and think about them when it comes to western instruments?

The gender stereotyping may depend on a range of other factors, including the shape or size of the instrument, its pitch, and quality of sound or the need for particular characteristics in order to play it, for instance, physical endurance. While examples of these differences can be found in many cultures, most large-scale explorations of the factors that influence students' choice of musical instruments have been carried out in the developed world and these factors inevitably have an impact on the preferences of boys and girls for playing particular instruments.

Although there is a great overlap in the musical instrument choices of males and females, research has demonstrated that many sociological, psychological, and physiological factors are influential in the preferences

towards and selection of instruments by the two sexes (O'Neill, 1997, p. 48). There is evidence to suggest that external or self-imposed restrictions are limiting the range of musical instruments available for boys and girls to select from, thereby also limiting their musical experience, participation in instrumental groups and opportunities for careers in instrumental music. Numerous studies have demonstrated these phenomena (Abeles & Porter, 1978; Bruce & Kemp, 1993; Delzell & Leppla, 1992; Fortney, Boyle, & DeCarbo, 1993; Griswold & Crookback, 1981; Tarnowski, 1993). However, the fact that this issue persists can be illustrated by subsequent research based on the same subject matter (Harrison, 2003; Sinsabaugh, 2005).

Historically, instruments such as drums, trombone, and trumpet have tended to be played more by boys, while flute, violin, and clarinet have tended to be played by girls (Abeles & Porter, 1978). Sheldon and Price (2005) carried out an extensive survey of gender and instrumentation in wind and percussion ensembles from 25 countries among 8146 children. The data showed a gender-bias in instrument selections. This supports findings from earlier research and that by Cramer, Million and Perreault (2002), Fortney, Boyle and DeCarbo (1993) and Trollinger (1993). Parents (Delzell & Leppla, 1992) also share these instrument gender-stereotypes. For instance, from a selection of eight instruments, clarinets, flutes and violins were preferred by parents for girls, while drums, trombones and trumpets were preferred for boys. The cello and the saxophone were seen as having no significant gender association (Abeles & Porter, 1978).

It is evident that girls tend to select a wider variety of instruments that they would like to play along the feminine–masculine continuum than boys.

Zervoudakes and Tanur collecting data between 1959 and 1990, showed an increase in the proportion of females who played both feminine and masculine instruments. The effects were greatest at the primary school, with stereotypical choices remaining at secondary level (Zervoudakes & Tanur, 1994). There is some evidence that these stereotypical preferences can be changed. Presenting instruments to children aurally and visually without players can encourage boys to select more feminine instruments, although it has little effect on girls' choices, which continue to be selected from a wide range (Abeles & Porter, 1978). Changing the gender- role-model playing the instrument has also been shown to be effective with children aged five to seven years. When a female is playing a 'masculine' instrument, more girls opt for playing it (Bruce & Kemp, 1993). Where children choose to play an instrument that is considered gender inappropriate, they may experience bullying or loss of popularity in school (Howe & Sloboda, 1992). Children are aware of which instruments are gender typical and have clear ideas about which ones are likely to lead to bullying if they are played (O'Neill, 1997; O'Neill & Boulton, 1995).

Despite the fact that this is not a historical research, the researcher deems it fit to add a little historical perspective to this discussion to educate his readers on the history of wind bands, how they found their way into the educational system, the instruments, and especially how these instruments found their way into Africa for that matter Ghanaian schools. The discussion below follows the following pattern: A short history of Wind bands, Bands in early Europe, Developments in instrumentation, Brass band music in Ghana, the current scene and the values of playing a musical instrument.

Wind Bands in Schools

A short history of Wind bands

The word “band” comes from the middle French *bande* meaning “troop.” The significant difference between a band and an orchestra is that musicians who play in a band play brass, woodwinds, and percussion instruments. The orchestra, on the other hand, includes bowed stringed instruments. The word *band* is also used to describe a group of people who perform together such as dance bands. It can also be used to describe a specific instrument played by a group such as brass, woodwind, percussion and guitar bands (Espie, 2011).

Bands in Early Europe

The modern tradition of both concert and marching bands has developed over the centuries out of an even older tradition of military music. There is much evidence of trumpets, horns and drums being employed for military purposes in ancient times in many places, including Egypt, China, Greece and Rome. Throughout ancient and medieval times, however, the army used these instruments for signaling, not for playing music (Farmer, 1912). When a tune was needed for marching, instruments such as flute or bagpipes were preferred. In the Middle Ages, this led to different musicians being hired as needed by different companies: cavalry required trumpets, horns, and drums, while foot soldiers hired fife and bagpipes players.

Until about the seventeenth century, *band* was a generic term for any group of musicians playing together (much as it still is now). There was not even any differentiation between *band* and *orchestra*, or any attempt to

standardize the instrumentation of musical groups. Composed music was generally for small consorts of similar instruments, for example, a group of recorders of various sizes, or a group of trombones. Larger ensembles of mixed instruments played popular songs and dances, probably with little or no written music, improvising their parts as early jazz musicians did and as many musicians in traditions around the world still do (Martin & Waters, 2006).

One type of ensemble of the sixteenth and seventeenth centuries that can be considered a precursor to the band tradition was the municipal, town or tower musicians (White, 1944). These groups grew out of the tradition of announcing the hours of the day by musical signals, and their duties gradually expanded to playing chorales from the city tower and to providing music for festivals, state occasions, weddings, and church services. Typical instruments for this kind of group included trombones of various sizes and cornets. The latter were not the trumpet-like instrument of today, but a wooden instrument with cup-shaped mouthpiece like a trumpet but with finger holes like a recorder. Tower musician groups disappeared by the early eighteenth century, and were replaced by other wind groups (White, 1994).

'Bands' are said to have originated in Germany around the 15th century, using mainly bassoons and oboes (Espie, 2011). By the end of the 18th century Janissary (Turkish), band music became popular featuring instruments such as triangles, flutes, cymbals, and large drums. In addition, during this time the number of musicians who played in a band grew. In 1838, a band comprising of 200 drummers and 1,000 wind instrument musicians performed for the Russian emperor in Berlin. Band competitions were held,

notable of which were those held at Alexandra Palace, London and Bell Vue, Manchester. The National Brass Band Festival was held in 1900 (Espie, 2011).

In the United States, Military bands emerged during the Revolutionary War. The role of bands at that time was to accompany soldiers during battle. In time the use and role of military bands were lessened; this marked the beginning of town bands. Town bands are made up of local musicians who perform during special occasions such as national holidays. Town bands continued to flourish through the 20th century; composers and band directors like John Philip Sousa helped promote band music. Today, many educational institutions in the United States have marching bands that are composed of students. Competitions for high school and college bands help promote American bands and band music (Espie, 2011).

School bands began in the United States in a rather haphazard fashion. In some localities, small ensembles (whose members had studied with private music teachers) were organized for special events such as Christmas programs and speech days (House, 1965, p. 6). Qualified conductors were also found among the academic teaching staff or within the local community. By 1910, however, over a hundred orchestras and bands were found in American schools.

The First World War was one factor that stimulated the development of school bands in the U.S. “At that time, there were service bands to imitate and parades to see. Then veterans with band experience returned home and some became teachers in the schools. Also, bands became identified with the surge of interest in interscholastic athletic events” (House, 1965).

Developments in Instrumentation

Major developments and innovations in the instruments themselves were necessary to producing today's top-quality band, which can perform with the same precision, tuning, and virtuosic playing as the orchestra. One such development was the rise of the clarinet. Invented around 1690 by improvements on an earlier instrument called the "chalumeau," the clarinet was already in common use by 1720 (White, 1944). Easier to play while marching and with a large range, bright timbre and great capability for nuance and dynamics, the clarinet became a major part of most wind ensembles and eventually replaced the oboe in military and marching bands.

The bass section of the bands also evolved during the eighteenth century. During the oboe period, the bass part had largely been filled by large double –reeds such as the curtall and bassoon. These were gradually replaced largely by the trombone and the serpent, a large wooden instrument, which like the cornet, has the cup-shaped mouthpiece of a brass instrument, but the wooden body (with finger holes) of a woodwind.

Bands continued to change throughout the nineteenth century. This change was largely due to tremendous technical improvements in the building of wind instruments. One major step was the development of the valve for brass instruments. "Until the eighteen hundreds, the slide trombone was the only brass instrument that was fully chromatic, easily capable of playing any note in any key in tune" (Schmidt-Jones, 2007, p. 4). Natural horns and trumpets, without any valves, were bugle-type instruments, capable of playing only the notes of a single harmonic series. Instrument makers first tried to fix this deficiency in trumpets with the keyed trumpets, and in horns with

instruments that could change the length of tubes, and thus, key relatively quickly.

The keys of the trumpet worked similarly to woodwind keys, opening holes in the instrument and making it effectively shorter and higher-pitched. The timbre and tuning of the instrument were not considered ideal. However, keyed trumpets disappeared by the 1840's and were replaced by valve trumpets (Schmidt-Jones, 2007).

The brass valve, unlike the woodwind key, works more along the lines of the early experiments with making horns that could change their tube length, and thus their harmonic series, relatively quickly. The early experimental horns still required time to change keys, usually requiring the player to replace one section of the instrument's tubing with a shorter or longer section. The modern brass valve made it possible to instantly change the length of the instrument by opening as extra length of tubing using the valve. (So that a valve effectively makes the instrument longer and slightly lower, rather than shorter and higher as opening keyholes does in woodwinds.)

Most brass instruments have three valves, as three harmonic series are enough to play a fully chromatic scale in tune in the full range of the instrument, but some low brasses have more valves. In fact, one of the important effects of the valve instrument was to make low-range brass instruments practical. Tubas were first built in the 1830's and were quickly adopted by brass bands. The serpent and ophicleid persisted in the orchestra through the 1800's, but were eventually completely replaced by the tuba and its slightly-higher-voiced relatives, the baritone and euphonium. Prussian bandmaster Wilhelm Wieprecht was a major force both in actually improving

valve instruments and in encouraging bands to adopt them ((Schmidt-Jones, 2007). (It is unclear which of several instrument makers actually invented the first brass valve.)

Another important influence in the nineteenth century was the instrument maker and prolific inventor Adolphe Sax. Although never adopted by orchestras, the four types of saxophone that are still in use- the soprano, alto, tenor and baritone saxophones – have had a tremendous influence on marching, concert and particularly jazz bands ((Schmidt-Jones, 2007). These are not the only instruments that Sax invented, however, and many of the bands of the nineteenth century included a wide variety of saxhorns and saxtrombas, as well as saxophones.

The percussion section of the ensemble also grew, with composers experimenting in the nineteenth century with such sounds as bells, whip, anvil, jingles, gongs, castanets, glockenspiel, and xylophone. The twentieth century saw the addition of many percussion instruments from the Latin tradition, such as marimba, maracas, claves, bongos, conga, and guiro.

Brass Band Music in Ghana

The earliest musical stream that fed into what later became called 'highlife' developed out of the 19th century military brass and fife bands associated with the British settlements in Cape Coast. As will be discussed, the Africanisation of western regimental military music seems to have been linked to the innovative role of coastal African ethnic groups, African, and West Indian soldiers and in some cases African sailors and stevedores.

Brass band music in Ghana can be traced back far earlier; to a regimental 'native orchestra' the British set up at the Cape Coast Castle in the 1830s that played western military marches, polkas and dance music. However, this band did not play local songs (Beecham, 1841). But this all changed after 1873 when the first of 7000 soldiers from the English speaking West Indies were stationed at Cape Coast and the neighboring Elmina Castle, to help the British in their 1873-1901 war against the inland Ashanti Kingdom (Aboagye, 1999). These West Indian Rifles naturally had regimental brass-bands and in their spare-time they played early forms of calypsos and other Afro-Caribbean music that, like African music, utilizes call- and-response, rhythmic off-beats and syncopated clave/bell rhythms. Not surprisingly Afro-Caribbean music resonated with the local Fanti brass band musicians who had obtained their skills from military personnel. At first, these local musicians simply copied the West Indians clave rhythms and melodies. For instance, according to Attah Annan Mensah (unpublished 1969/70 manuscript), the early highlife tune 'Everybody Likes Saturday Night' which was recorded in Lagos in 1942 by Akanabi Wright (Oliver, 1990, p. 71) was based on a calypso melody. Despite this initial imitation phase, Ghanaian brass band performers later moved on to develop their own distinct 'adaha' music. Adaha utilized local melodies and bell rhythms and was played in both syncopated 4/4 time and, using the hemiola techniques, in polyrhythmic 6/8 time. In short Black Caribbean music acted as a catalyst for Ghanaian brass band musicians to indigenize their own music (Collins, 2011).

According to Attah Annan Mensah (unpublished 1969/70 manuscript) two late 19th century local brass bands from Elmina were the Lions Soldiers

and Edu Magicians and these included *adaha* music in their repertoires, as well as imported marches, polkas and calypsos. These and the others that followed were street- bands whose members had colourful uniforms (red-rimmed black shorts and jackets and red caps with tassels) that were borrowed from the 'zouave' uniforms worn by the West Indian Regiment on ceremonial occasions. It should be mentioned that there were objections to adaha and its street parades by the Europeans. In 1888 Reverend Kemp described the sound of drum and fife bands as 'tormenting' and warned that allowing Sunday-school processions to be led by them would 'ultimately lead to the ballroom, the heathen dance and other worldly amusements' (Boonjazer-Flaes & Gales, 1991,p. 13). Then in 1908 as cited in Collins (2011) the district Commissioner of Cape Coast, A. Foulkes, put a curb on the five local brass bands of the town from playing their 'objectionable native tunes' as these, he claimed, led to competitive quarrelling, obstruction of roads, drinking and dancing (Letter from District Commissioner's Office, 16 March 1909).

Despite European colonial and missionary protestations, these local marching bands spread like wildfire from the coastal Fanti area into southern Ghana, in both urban and even the rural areas where there was money coming in from the boom in the cocoa industry. As a result, from the early 1900s and up until the 1930s brass bands were the principal popular music ensembles of Ghana, until they were eclipsed by elite dance orchestras and a poor-man's copy of *adaha* brass band music known as '*konkoma*' or '*konkomba*'.

Other scholars also traced band music in Ghana back to the beginning of the 20th century. Amuah and Flolu wrote in (2003): 'By the beginning of the 20th century, having recognized the musical enthusiasm of the Gold Coast

people, the missionaries began to import some Western instruments for the purpose of enhancing church musical activities. Harmoniums and, later, church organs were brought in to accompany hymn singing… School brass bands and fife bands started to emerge in many towns and villages. These activities, combined with those of the regimental bands of the forts and the sea shanties and folk songs of the sailors, began to influence the public. Many native musicians came together to form orchestras, concert bands and brass bands from which the Highlife later grew' (p. 9).

With this assertion, one will get the impression that the proliferation of band music in Ghanaian schools will by now be at its peak with several schools having well designed and organized school music programmes as it is in the United States and other European countries. But this is not the case. Despite the important roles band music plays in the Ghanaian community today (eg: during processions, demonstrations, festivals, funerals, outdoorings, engagements, weddings, opening ceremonies and other state events), only few private and mission schools have some band instruments. There have been quite a number of famous bands some years back in this country namely, Kwanyaku, Swedru, Winneba, Keta, Aflao, Afife and Denu bands most of which are not in existence today.

Basic school bands in Ghana have collections of musical instruments that can best be described as a "Marching band." According to Ratey et al (2003), "a marching band is an activity consisting of a group of instrumental musicians who generally perform outdoors and incorporates some type of marching with their musical performance. Instrumentation typically includes brass, woodwinds and percussion instruments. Most marching bands use

some kind of uniform (often of a military style) that include the school or organization's name or symbol" (p.25).

Band musical activities are regarded as a positive element in school life and an integral part of assemblies and other corporate events. There is undoubtedly much enthusiasm for music and the other arts in basic schools in the Accra metropolis. School bands are in existence and they play important roles during end of term celebrations, anniversaries and regular occurrences and events highly valued for both educational and social reasons. Modern day marching bands consist of various combinations of the following instruments; trumpet, cornet, second trumpet or French horn, trombone, euphonium, tuba, saxophone, clarinet, oboe and percussions such as; snare drum, bass drum, cymbal and tenor drum (Lawson et al, 1994).

Brass Band Music in Schools in the Accra Metropolis

I briefly describe the organization of basic school bands in the Accra Metropolis. Basic school bands in the Accra Metropolis are usually under the direction of one or two band directors who are experts in wind/percussion instruments and with a degree or diploma in music from one of the public universities in Ghana (except the band instructor of Rev. John Tei Memorial School Band who was trained in the United Kingdom).

Although some children learn to play an instrument prior to entering a school or a school band, students generally start daily band classes from classes two or three. The beginning band students usually make up a band based upon their class, which may then be broken up into sectionals such as trumpeters to one side, snare drummers to the other to provide better

instrument-specific instruction. School bands are not that common in public schools in Ghana due to the poor financial status of the schools and the Ghanaian economy at large. School bands in the Accra Metropolis are generally similar to those in the United States and the United Kingdom in terms of instrumentation although pure brass bands are more commonplace among Accra metro schools.

School bands tend to be more common in private and mission schools in Ghana these days partially because parents/proprietors are becoming aware of the benefits their wards/students can derive from participating in music. Some also organize it as a medium of "advertisement" for their schools and some as a business venture; this applies to private schools especially. Often, the Parents Teacher Associations (PTA) of the various schools come into agreement to raise funds for such projects. Sometimes donor agencies, individuals, and community members also help in providing the schools with some of the instruments. Most school bands have some instruments available for the students to practice with, but do not have nearly enough for every band member. Therefore, what happens is that parents who really want their children to play in the school band and of course, have the resources may purchase the instrument for their wards, which they bring along with them to school anytime they have band rehearsal.

Usually, large percussion equipments, sousaphones and contrabass clarinets and other expensive woodwinds are not common in Ghanaian school bands due to lack of funds.

School bands in the Accra Metropolis follow some sort of dress code for performances. Dress requirements for band performances vary greatly

from one school to another or even from one band to another at the same school. Expensive items, like marching uniforms, are usually owned by the schools. Some school bands may require the purchase of matching t-shirts or polo shirts with the band or school name for each band member- these are mostly provided by PTA in collaboration with the school administration or donations from benevolent societies and individuals.

The study deemed it expedient to make it clear that school band projects in Accra metro are not part of the school curriculum but can better be described as what Adentwi (2002) termed as an "extra-curricular" activity. Therefore, a school owning a band is a sole prerogative of the head teacher, PTA, Proprietors (for private schools), churches for mission schools or benevolent societies.

Since school band programmes are not part of the school's official curriculum, rehearsals are normally scheduled either early morning 6am to 7.30am, during break period or after class hours each day or even weekends in order not to hinder regular academic work. School bands play Military tunes (marching songs), hymns, patriotic songs and arrangements of existing works such as folk tunes, highlife and gospel tunes and today operatic and symphonic arrangements remain popular as school bands perpetuate that tradition.

These school bands attend events/programmes such as; Speech and prize giving days, Independence Day parades, weddings, funerals, graduation ceremonies of their schools and other schools, sports festivals, school worship, school carol services, anniversaries of their schools and other schools and school fun fair programmes.

The Values of Playing a Musical Instrument

The basic reason why music education is so important for every child is that music is a part of the fabric of our society. The intrinsic value of music for each individual is widely recognized in the many cultures that make up the world. Indeed, every human culture uses music to transmit and preserve its ideas and ideals. The importance of music to the world's economy is massive. Moreover, the value of music in shaping individual abilities and character are evident in the discussion below.

'Music is not only a field of enjoyment but also an area that lend itself to discipline and training of the mind and body and a field of cultural knowledge and artistic behaviour' (Nketia, 1999, p. 11). Playing musical instrument (an aspect of music) is clearly essential to human beings. According to research by Hallam (2005), music serves to assist in the process of increasing communication and enabling people to function together more effectively. Robinson (1996, p. 17) also confirms that 'musical intelligence is a human capacity'. She further talks about music as a major civilizing force. Thus, music contributes to the development of culture as 'the state of intellectual development of a people' (Awoyemi *et al* 2003). Even though it does not necessarily make people more moral, music does help them learn to be empathetic towards others. It teaches them to feel and care. It puts them in touch with some of the highest achievements of humankind.

A groundbreaking study published in the February 2005 issue of the *International Research Journal Medical Science Monitor* shows for the first time that playing a musical instrument can reverse multiple components of the human stress response on the genomic level. The study's principal

investigator, Barry Bittman, M.D. of the Mind-Body Wellness Center in Meadville, PA, says these unique findings not only shed new light on the value of active music participation, but also extend our understanding of individualized human biological stress responses on an unprecedented level.

Another study by Johnson & Memmott indicated that students in high-quality school music programmes score higher on standardized tests compared to students in schools with deficient music education programs, regardless of the socioeconomic level of the school or school district. Results from this study revealed that students in top-quality music programs scored 22% better in English and 20% better in mathematics than students in deficient music programmes. Students in schools with excellent music programs had higher English and math test scores across the country than students in schools with low-quality music programs the same way students in regions with lower-quality instrumental programs scored higher in English and math than students who had no music at all (Johnson *et al* 2006).

Researchers have also found the first evidence that young children who take music lessons show different brain development and improved memory over the course of a year compared to children who do not receive musical training. The finding, published on 20 September 2006 in the online edition of the *Journal of Brain research* show that not only do the brains of musically-trained children respond to music in a different way to those of the untrained children, but also that the training improves their memory as well. After one year the musically trained children performed better in a memory test that is correlated with general intelligence skills such as literacy, verbal memory, visiospatial processing, mathematics and IQ. This conclusion came

about after measuring changes in brain responses to sounds in children aged between four and six (Oxford University Press 2006, September 20).

Statement of the Problem

The choice of musical instrument is among the most important factors in determining the course of a student's instrumental music education. Music and gender research suggests that many of the same stereotypes that dictated musical instrument choice over 30 years ago are still predominant in school instrumental music programmes today (Delzell & Leppla, 1992; Tarnowski, 1993; Trollinger, 1994; Zervoudakes & Tanur, 1994; Green, 1997; Kelly, 1997; Harrison & O'Neill, 2000, 2003; Pickering & Repacholi, 2002; Harrison, 2003; and Eros, 2008). Instrument selection can be a lengthy process accomplished through a variety of factors. The stereotyping of instruments by gender can unfortunately be one of those factors. The association of gender with particular instruments can significantly influence a student in choosing an instrument, thereby resulting in numerous negative consequences— including fewer instrument choices, limited ensemble participation, and peer disapproval. Numerous studies have demonstrated this phenomenon (Abeles & Porter, 1978; Bruce & Kemp, 1993; Delzell & Leppla, 1992; Fortney, Boyle, & DeCarbo, 1993; Griswold & Chroback, 1981; Tarnowski, 1993). However, the fact that this issue persists can be illustrated by subsequent research based on the same subject matter (S. D. Harrison, 2003; Sinsabaugh, 2005).

The fact that some basic schools in Ghana have provided an opportunity for their pupils to learn to play a band instrument is unique among

basic schools in the country since just a handful of schools can provide their pupils with this potential musical experience. One determinant of a child's success or failure in instrumental music is the child's selection of an instrument for study. Almost all instrumental music instructors have had students drop out of a program because the students ostensibly disliked the instrument they were playing (Fortney, *et al*, 1993). Several studies have been conducted to determine the components that contribute to instrument choice. Many researchers found gender to be an influence as well as instrument timbre, parental and peer influences, personality and the amount of exposure to music as well as several other factors of significant relevance." Many sociological, psychological, and physiological factors may influence this decision making process and music educators need to know and have an understanding of these factors" (O'Neill, 1997, p. 48). Having an understanding of these influences can provide a better perception as to the reasons why students select certain instruments and how to better recruit students in instrumental music. Student satisfaction in instrumental music contributes to continued participation, which preserves the instrumental music programme and for that matter music education in general. This researcher believes that information about factors influencing students' choice of a band instrument which is non-existent in Ghana, will help Ghanaian instrumental music teachers in guiding students to make better instrument selections, which in turn may facilitate greater success in school band music programmes.

Purpose of the Study

The purpose of this study is to investigate factors that influence Ghanaian school pupils' choice of musical instrument for study and to explore if gender stereotyping of musical instruments exist among Ghanaian children.

Theoretical Foundation

Establishing a study in the wider context of a working theory carries with it a number of advantages. It provides a framework for interpreting environmental observations and gives focus and direction as well as increases construct and cumulative validation in the study. It helps in formulating questions that will guide the study and provide a good basis for interpreting the findings in the research. Without theories, research findings would be disorganised (Schunk, 1991, p. 3). Therefore, the theoretical underpinning of this research was **LeBlanc's (1982) theoretical model of music preference.**

One model that tries to explain musical instrument preference is mentioned frequently in the international literature: LeBlanc's (1982) *interactive theory of musical preference*. This model underlines the interactive nature of instrument preference and attempts to explain the complex correlations of the different integrated variables (Lamont & Greasley, 2009, pp. 165–167).

Many researchers have addressed questions about musical instrument preference with respect to different music parameters. Nevertheless, little research exists on the instrument preferences of primary-school-age children (Gembris & Schellberg, 2007; Greer, Dorow, & Randall, 1974; LeBlanc, Sims, Siivola, & Obert, 1996; Kopiez & Lehmann, 2008; for an overview, see

Hargreaves, North, & Tarrant, 2006, p. 146; for a summarizing comment, see Lamont, 2009, p. 238).

Research on musical instrument preferences has focused on sex stereotyping, timbre discrimination and sociological and physiological influences (Coffman & Sehmann, 1989). LeBlanc's (1982) theoretical model of music preference is potentially helpful in understanding the influences on students' musical instrument preferences (Fortney et al., 1993). The factors included in Leblanc's interactive model are: (a) physical properties of stimulus, (b) complexity of stimulus, (c) referential meaning of stimulus, (d) performance quality, (e) media, (f) peer group, (g) family, (h) educators and authority figures, and (i) incidental conditioning.

Educators, authority, incidental conditioning, family, peer group figures, and the media influence music preference decisions. However, these influences vary in intensity and direction at different stages of a child's life (LeBlanc, 1982).

As indicated by the model (LeBlance, 1982), all the input variables (listed above) may interact. This is evident in Leblanc's own words; "Input information from the musical stimulus and the cultural environment must pass through the intervening variables of physiological enabling conditions, basic attention, and current affective state before it can interact with the listener's personal characteristics and be processed by the listener's brain" (p. 34). For example, the music teacher who encourages her students to value relatively complex Ghanaian traditional ensemble music may be rivaled by the student's peer group, which values choral music.

LeBlanc's model is supported by Niermen (1990), who spoke of the possible influences of peers, siblings, and parents and suggested that these may be greater factors than school music activities. Webster and Hamilton (1981-82) also corroborate a portion of LeBlanc's model: Their results indicated that parents influence their children's musical preferences. These results detract from the notion that students are "easily influenced" by peers when making independent and private decisions about various styles of music (Webster & Hamilton, 1981-82, p. 18).

However, drawing from LeBlanc's theoretical model, it may be that peers, parents, and educators have influence on instrument choices in a manner similar to their influence on music preferences. Research on instrument preference per se reveals that certain gender/instrument associations exist, although they vary for different age groups, culture, and studies; thus the need for this study to elicit additional information on student's instrument choices.

Research Questions

Questions that guided this research include the following:

- What are the factors that influence pupils in their choice of a band instrument for study?
- What is the significance difference between the pupils' choice of instrument among the various school bands?
- To what extent does gender stereotyping of musical instruments affect Ghanaian children's choice of musical instrument?
- To what extent are boys' choices of instrument different from that of girls?

- To what extent does the child's home environment affect his/her choice of musical instrument?
- At what level are pupils eligible to play in the school band?

Significance of the Study

The problem at hand is an inquiry into the instrument choices of boys and girls in Ghanaian basic school bands. Data on school band music activity of Ghanaian children is limited. There appears to be even "little" or "no" information related to instrumental music involvement of children, although internationally this is an area that has received so much attention. There is an urgent need for data in this area to provide a solid basis for further research and to provide a baseline to determine trends.

This research finding will be beneficial to instrumental music teachers and scholars. For example, the findings will serve as a resource base, which will guide instrumental instructors in understanding and guiding their students in the selection of musical instruments for study.

The findings will also assist parents, teachers, and counselors to make informed decisions as to the instrument choices of their wards, students, and counselees respectively. Finally yet importantly, this research will increase the body of knowledge in music education in Ghana.

Delimitations

It was my wish to include basic school bands such as; combo bands and orchestras in this study but due to the absence of required time, funds, and labour, I selected five school bands (brass bands) to work with to be able to complete the work in time.

Secondly, the generalization of the research findings would be limited since only school bands from Accra Metro were included in this research. Though the sample size included in the study was more than (30) which satisfied the central limit theorem criteria (Glenburg 1988; Wiersma, 1986), they were selected from school bands in Accra Metro and thus making general statements of the findings for the whole country (Ghana) would be quite inappropriate.

Limitation

Since the study was mainly qualitative and the instrument used was a questionnaire, a pilot study was conducted to ensure that the research instrument would measure what it intended measuring. Efforts were made to reduce variability in sample by taking a large sample size and make sure to reduce variability in measurement by collecting all data under conditions that are as uniform as possible.

Though data from self-report survey instruments have many inherent limitations, the self-report survey is believed to be the only practical way to obtain the desired data, especially from an adequately large sample. Therefore, the results and discussions of the data from this study, however, must be considered in light of this limitation.

Definition of Terms

A school band: A group of students' musicians who rehearse and perform instrumental music together.

Band Pupils: School children who are involved or participate in the playing of the band instruments.

Junior High School: The last three years of nine years basic education after which one gets admission into the senior high school.

Band master or mistress: People who train, conduct and lead the band and perform for others. In Ghana band masters are the music professionals in charge of church bands, school bands and other professional groups.

Accra Educational Metropolis: Accra Educational Metropolis is one of the 10 educational districts in the Greater Accra Region in the country Ghana; which has Seven hundred and ninety-two (792) basic schools made up of both public and private in Accra. This study includes both schools. Each Educational Directorate functions from the Metropolis, Municipality and District capitals as a department under their respective Metropolitan, Municipal and District Assemblies but are supervised, co-ordinated and monitored by the Regional Education Directorate which acts as a liason between the Metropolitan, Municipal and District Directorates of Education, Ghana Education Service-

Headquarters and the Ministry of Education on one hand and the Regional Co-ordinating Council on the other (GES Regional Annual Review Report, 2011).

Basic school: The first nine years of schooling in Ghana for children between the ages of six and fifteen.

Gender: Being either male or female as in biological sex.

Gender Stereotype of musical instruments: The belief that some musical instruments belong to the domain of men and some the domain of women.

Musical Instruments: Objects such as piano, guitar and drums that are used for playing music.

Extracurricular: Activities that goes on in school but are not part of the official school curriculum.

Adaha Music: It is considered the earliest form of highlife music performed in Ghana. It was created by the blend of syncopated march music fused with Caribbean and local Ghanaian music.

Organization of the Study

The entire study consists of five main chapters: Chapter One consists of introduction, background to the study, definition of the research problem and outlining of the research questions which were addressed in the study. Chapter Two consists of the review of related literature. Chapter Three focuses on the research methodology, and this covered the description of the procedures by which data was collected and analysed. It also takes a critical

look at the research design, population, sampling, and sampling procedure, research instrumentation, data collection procedure and data analysis. In chapter four, analytical techniques, with appropriate statistical modules that were used in analysing the data were discussed. Chapter Five states the presentation of the findings from the research. It summarizes the work, draws conclusions from the findings, offers suggestions, and makes recommendations for future research.

REVIEW OF RELATED LITERATURE

Introduction

In the words of Merriam (1968) as cited in Kofie (1994), "it is a truism in anthropology that no event or object in human society or culture exists as an isolate; rather, all phenomena are interrelated into a complex whole whose parts are delicately and inextricably interwoven with one another." By inference therefore, aspects of this write up have been discussed or addressed by some scholars; which review will be significant to the purpose of this study. This literature review therefore recapitulates things different scholars have said about students' musical instrument preferences or choices for that matter; factors that are likely to affect students' choice of musical instrument. The review is done under the following headings: Sex-Stereotyping of musical instruments, the genesis of gender stereotyping of musical instruments in children, perceptions by other students, directors' role in instrument assignment, crossing the gender line and Parent involvement and home environment.

Sex- Stereotyping of Musical Instruments

In my research regarding the sex-stereotyping of musical instruments, one individual keeps popping up as a viable resource. Hal Abeles, the head of the Music Education Department at Teachers College of Columbia University has been in the forefront of researching this topic. In 1978, Abeles, in collaboration with Susan Yank Porter, first published a study in the *Journal of Research in Music Education* entitled "The Sex-Stereotyping of Musical Instruments", in which they reported a series of studies the two had conducted

over the previous couple of years. There were four main studies: The first study investigated musical preferences adults had for children. The second surveyed a population to place specific instruments on a scale from most feminine to most masculine. The third study investigated the instrumental preferences of children in grades K-5. The final study explored procedures used to present instruments to preschool children.

In the first study of the series, Abeles and Porter (1978) systematically examined the gender stereotyping of musical instruments. They asked undergraduate music and non-music students to determine the placement of eight instruments (Violin, cello, clarinet, drums, flute, saxophone, trombone, and trumpet) on a masculine-feminine continuum (these same instruments were used in each study). Participants were presented with randomly ordered pairs of instruments and were asked to circle the instrument they considered most "feminine" and most "masculine." They found a perfect correlation of 1.00 for ranked gender ratings between two groups. The most masculine instruments were the drums, trombone, and trumpet; the most feminine instrument were the flute, violin and clarinet. The cello and saxophone were ranked in the middle.

Since parental involvement plays a HUGE role in participation in a music program, let alone selection of musical instruments, it was quite interesting to find such a bias towards the more "masculine vs. feminine" instruments. If the parents do not want their sons to play a particular instrument, what motivation would a student have to pursue that instrument? (It does not matter that most of the prominent trombone players are males). The entire influence of parents on sex-stereotyping of musical

instruments is what I think is essentially keeping the bias alive. It is an unending cycle between judgments of peers and parents. The parents, when they were students, saw the trumpet and drums as masculine instruments. Not wanting their children to be anything but normal to spectacular, they refrain from encouraging, even discourage, the cross gendering of instrumental participation. This new generation now has bias coming from two angles: they have that prejudice from their peers as well as the judgments from their parents. This sense of tradition keeps the world cultures in a stuck community, with no real ability to break free without social persecution.

Other studies have also reported similar findings. Griswold and Chroback (1981) found that undergraduate students at an American university, regardless of their sex, had gender-stereotyped associations for instruments, which were regarded as 'feminine' and 'masculine'. Crowther and Durkin (1982) also found such differences in the instrumental choices of 12-18 year-old secondary pupils in England.

Abeles and Porter (1978) also asked adults to select a musical instrument for their (hypothetical) daughter or son from a list of eight instruments as follows: cello, drums, flute, saxophone, trombone, trumpet, clarinet, and violin. They found a significant main effect for sex of child. Participants were more likely to choose a clarinet, flute, and violin for a daughter and drums, trombone and trumpet for a son. There were no significant sex differences in the preferences shown for cello and saxophone. In addition to demonstrating that particular instruments are associated with gender categories of 'masculine' and 'feminine', Abeles and Porter concluded that their results suggest but do not establish that parents may encourage their

sons and daughters to select instruments based on gender-stereotyped associations. As Golombok and Fivush (1994) pointed out, 'even if adults do not consciously believe they are making a distinction in the way they perceive a female versus a male infant, they nevertheless behave in very different ways depending on the given gender label… this is evidence of the pervasiveness of gender stereotypes' (p. 26). It is possible that a similar phenomenon exists among parents and teachers regarding musical instrument selection, although few studies have explored this issue.

Clearly, gender stereotyped associations of musical instruments are present in adults and adolescents. Do children, however hold similar gender stereotyped beliefs? Abeles and Porter (1978) showed girls and boys (aged 5-10) pictures and played tape recordings of eight musical instruments, asking them to indicate their preferences. The preference scores were then related to the scores of femininity/masculinity they obtained from adult participants in their first study. Results showed a significant age by sex interaction. The youngest children showed no difference in the extent to which girls and boys preferred instruments that were viewed by adults as feminine and masculine. However, the older children showed a gender divergence with the girls exhibiting a preference for "feminine" instruments. The results also indicated that girls selected a wider variety of instruments along the masculine-feminine continuum, whereas boys' choices tended to be narrow and near the masculine end of the scale.

In a similar study, Delzell and Leppla (1992) showed children (aged 9-10) pictures of eight musical instruments and asked them to indicate the one they would prefer to learn to play. More girls than boys were found to prefer

the flute, clarinet, and violin, and more boys than girls were found to prefer the drum, saxophone, and trombone. However, the majority of boys wanted to play either the drums or saxophone, whereas the majority of girls showed a preference toward a wider selection of instruments.

In a more recent study carried out by Susan O'Neill and Michael Boulton, they also found gender differences in the types of instruments boys and girls would be prepared to play (O'Neill and Boulton, 1996). They examined the instrument preferences of 153 children aged 9-11 from the North West of England. These children were shown a pictorial array of six instruments (without performers) and were asked to name each of the instruments. The instruments included two 'feminine' instruments (flute and violin), two 'masculine' instruments (drums and trumpet), and two instruments that have featured much less in previous research in this area (piano and guitar). The children were then asked to rank the instruments from the one they would most like to learn to play to the one they would least like to learn to play. Their findings indicated that girls showed a stronger preference for the flute, piano, and violin, whereas boys expressed a stronger preference for the drums, guitar and trumpet.

Speaking of role models, the last of Abeles' studies in this series of research looked at the perspectives of musical stereotypes in young children. There were three groups of children surveyed. One group was introduced to the instruments just by hearing the sounds each instrument makes as well as pictures of each instrument –without any one in the picture. A second group had people playing the instruments with corresponding gender-stereotypes. The third and final group included video of gender-crossing instrumental

playing. The results of this study showed there was no real significant preference of instrument by gender on the part of the children. The bias is not in the children – it is by their reaction to peers and parents.

Research on musical instrument preferences has focused on sex stereotyping, timbre discrimination and sociological and physiological influences (Coffman & Sehmann, 1989). For that matter reviewing the literature on sex stereotyping of instruments provides the opportunity to know what has been said already by other researchers and will also help strengthen the researcher's claims by citing what other reliable authors have said about the topic when discussing the results in chapter five of this thesis.

The Genesis of Gender Stereotyping of Instruments in Children

Children begin to be aware of the gender stereotypes relating to objects and activities that differentiate the sexes by three years of age (Huston, 1983) and continue to develop these stereotypes throughout childhood (Martin et al., 1990). Duveen and Lloyd (1986) argue that children construct a social understanding of gender differentiation from the social interactions they experience and witness in everyday life. The social influences of parents, teachers, peers and the media provide important sources of information for children regarding appropriate gender stereotyped cues (Kohlberg, 1966; Mischel, 1970). The effects of gendering on the socialization process is well researched in the field of developmental psychology for school subjects such as mathematics and science where, historically, through the ideology of femininity, girls are taught to take less interest in these traditionally 'male' activities. In music, however, a different picture emerges because both girls

and boys are more likely to perceive music as a 'feminine' subject (Griswold & Chroback, 1981). Although no reliable gender differences in musical ability and aptitude have been found (O'Neill, 1997), a gender reversal is apparent in girls' and boys' musical involvement and achievement. More girls than boys are involved in, and successful at, musical activities at school, and yet men continue to have more prominent roles in the music profession, achieving higher levels of success in their music careers. As Eccles et al., (1993, p. 845) point out, ' instrumental music is the only instance we know about in which the gender-role, differentiated beliefs and self-perception in childhood are opposite to the gender differences in participation one observes in the adult world'.

Most research on children's development of gendered knowledge and preferences in music is focused on gender stereotyped beliefs about musical instruments (Abeles & Porter, 1978; Crowther and Durkin, 1982; Delzell and Leppla, 1992; Griswold and Chroback, 1981; O'Neill and Boulton, 1996). Girls and boys tend to prefer different musical instruments, and their preferences correspond with their gender-stereotyped associations of certain instruments as 'masculine' or 'feminine'. For example, in a study of 357 children (aged 7-8) it was found that girls indicated stronger preferences for piano, flute and violin (which they considered would be played by girls), whereas boys expressed greater interest in playing trumpet, drums and guitar which they also considered would be played by boys (Harrison & O'Neill, 2000). According to Maccoby (1990), once a child understands gender categories, subsequent information may be integrated in terms of this influential classification. Once established, these categories are resistant to

change and disconfirmation, and as it is intended to show in discussion that follows, they convey a constraining influence on girls' and boys' engagement in music.

As girls grow up, they find that the generically 'feminine' territory of music experienced in childhood becomes increasingly a 'masculine' domain, putting additional pressures on their participation in music. Many boys decline musical opportunities, preferring more 'masculine' activities such as sport. Green (1993) suggests that boys are more likely to create and succumb to peer pressure against school music because it may offer a threat to their masculinity. Only if an individual is considered a 'gifted' musician can gendered associations of musical involvement be overridden. However, boys are acknowledged by teachers to be ultimately more musically successful than girls, even in the face of their explicitly acknowledged lack of interest (Green, 1997). Nevertheless, why is this?

One explanation is that the gendered expectation that boys who engage in music have more 'natural' ability and therefore greater potential for musical careers compared with girls (who are viewed as having to work hard in the absence of any 'real' talent) continues to be transmitted through socialization processes and is internalized through gendered musical activities deemed appropriate for their sex, such as singing, and away from forms of public performances that receive the highest recognition and status in society. These widely held beliefs about gendered musical practice mean that girls and boys are not just learning music, but are also negotiating a gender identity through their musical experiences (Green, 1997).

Many instrumental teachers in schools, particularly at the basic level, are men who tend to play instruments such as brasses, guitar, and keyboard. Children are therefore presented with predominantly male role models in the school environment who play instruments associated with 'masculinity'. The role models that children experience most through the media are associated far more with popular forms of music, which are dominated by males who play 'masculine' instruments such as trumpet, guitar, and drums.

In popular music, women often fulfill supportive roles rather than those of active production (Bayton, 1998). As such, Bayton argues that women's lives are 'accompanied by a male soundtrack' (p. 1), which reflects and constructs gender differences. Women are in the minority in all subworlds of popular music; most notably when looking at gender imbalances in instruments. Rock and popular music are perceived as 'masculine' domains, dominated by men. Female pop musicians are predominantly associated with singing rather than with playing instruments. Thus there is differentiation within the generic term 'music'. Gospel and classical music conforms to notions of the femininity of music in Africa and Europe respectively but, in contrast, a separate subordinate category exists to encompass masculinity in music – that of rock and popular music. North et al., (2000) found that adolescent boys were more concerned than girls with how playing an instrument might create an external impression of being 'trendy' or 'cool'. The choice of instruments associated with masculine domains of music may be a salient aspect in creating such an impression.

Harrison and O'Neill investigated the reactions of 192 children (aged 7-8) to hypothetical peers playing gender consistent or gender inconsistent

instruments (Harrison & O'Neill, 1999). The children provided liking ratings for a new boy/new girl in their class who played a gender consistent or gender inconsistent instrument. Children showed a preference for same sex children over other sex peers (Serbin et al., 1993). However, they also liked hypothetical peers who played gender consistent instruments more than those who played gender inconsistent instruments. In other words, boys and girls adjusted their predicted liking according to the sex and interest of the child.

The children were also asked about expected social consequences if they played a gender consistent and, separately, a gender inconsistent instrument. Children provided ratings on three outcomes – being liked, bullied and ignored by classmates the most common behavioral responses to gender inconsistent behavior include active ignoring and verbal criticism; see, for example, Fagot, 1977; Langlois & Downs, 1980). Children thought classmates would like them more if they played a gender consistent instrument, and they considered that they would be bullied more if they play a gender inconsistent instrument. Similarly, they also thought that children in their class would stop playing with them and ignore them more if they play a gender inconsistent instrument. In other words, children expected negative social consequences for playing a gender inconsistent instrument. O'Neill and Boulton (1995), who reported that 9-11 year old children expected negative social outcomes for a child of their own sex who plays a gender inconsistent instrument, support this finding.

Children in other parts of the world are aware of both the gender stereotyping of instruments and of the potential consequences of crossing gender boundaries. But, are Ghanaian children also aware of this?

In childhood, girls experience music as a generically 'feminine' territory and so expressing preferences for 'masculine' instruments may offer less of a conflict with 'femininity' than it does for boys playing classical and 'feminine' instrument such as flute and violin (Harrison & O'Neill, 2002). There is, of course, greater tolerance for gender inconsistent behavior in girls across other domains (Brown, 1958; Fagot, 1977; Green et al., 1980) and girls do not express the same degree of rejection of opposite sex behavior as boys (Bussey & Perry, 1982).

It seems, therefore, that peers may play a key role in maintaining children's gender stereotyped preferences for musical instruments. Children adjust their actions to the norms for gender stereotype behavior that their peers are reinforcing (Lamb et al., 1980) and thus the peer group has an important influence on the development and maintenance of gender stereotype behavior (Zucker et al., 1995). Children can make inferences about peers' probable responses to gender inconsistent behavior and thus their beliefs about these reactions may limit the expression of such behavior (Carter & McCloskey, 1984). On the bases of the foregoing, one may argue that children make a distinction between 'possible' and 'acceptable' behavior- they may recognize the possibility for variability in gender stereotyped behavior, but consider cross gender behavior unacceptable.

Children's expectancies of behavior may inhibit the violation of gender stereotyped norms, their shared beliefs about outcomes of such behavior exerting a powerful influence on actual behavior (Carter & McCloskey, 1984). Proportionally, not many children in a school class play instruments, and even fewer of these play gender inconsistence instruments. As the actual

consequence of playing gender inconsistence instrument may often not be observed, it is not surprising that children continue to avoid playing or expressing preferences for gender inconsistent instruments. With many peers believing in the negative consequences of playing gender inconsistent instruments, it is perhaps not surprising that children maintain gender typed preferences.

Reviewing the literature on the genesis of gender stereotyping of instruments- the sources of the idea that some musical instruments belong to girls and others to boys is very much related to the topic under discussion. It provides the researcher with the possible sources of the problem so as to enable the researcher suggest possible solutions to the problem when discussing the results in chapter five of this thesis.

Recent Scholarship on Students' Musical Instrument Choices

Numerous researchers have revisited the presence and nature of gender stereotypes in music programs (Boulton & O'Neill, 1996; Elliot & Yoder-White, 1997; S. D. Harrison, 2003). Although not explicitly stated, the research literature presents few disagreements that brass and percussion are male-stereotyped instruments whereas high woodwinds (flute, oboe, clarinet) and high strings (violin) are female stereotyped.

In addition, this literature review includes studies carried out in England (Boulton & O'Neill, 1996; A. C. Harrison & O'Neill, 2000, 2003), Australia (Harrison, 2003; Pickering & Repacholi, 2002), Canada (Cramer, Million, & Perreault, 2002), and Britain (Bruce & Kemp, 1996; Crowther & Durkin, 1982; Green, 1993; MacKenzie, 1991). Although it is certainly true

that there may be cultural differences among these countries, the research literature has not examined these differences.

Furthermore, researchers in this area commonly cite the results of research related to gender stereotypes from a variety of countries. Boulton and O'Neill (1996) individually interviewed 153 students between the ages of 9 and 11. Students indicated which of six instruments (two masculine, two feminine, and two neutral) they would prefer to play and in which order of preference. Students were also asked to explain their reasons and to comment on whether certain instruments should not be played by boys or by girls. Boulton and O'Neill concluded that gender associations did indeed remain and had changed little in the time since similar studies were performed.

Previous research has suggested that stereotypes have a more significant impact on boys, frequently in the form of increased social pressure and fewer instrument choices (Cramer et al., 2002; Delzell & Leppla, 1992; Sinsabaugh, 2005). In the first study, 102 primary students were asked to indicate their first choice of instrument to play. Drum and guitar were the top two instruments for both sexes, suggesting a pop music influence, followed by saxophone and trumpet for males and piano and voice for females. In his second study, 98 students completed a survey modeled on the work of Griswold and Chroback (1981). The results described the drums, trombone, and trumpet as the most masculine instruments and the flute as the most feminine. In the third study, 903 secondary students were surveyed about their primary performing instrument, with results being largely consistent with previous findings. Boys' top instruments were tuba, trombone, guitar, bass, and percussion; girls' top instruments were oboe, flute, and bassoon.

As a side note, bassoon has rarely been included in gender–instrument research—that a large, low-register instrument was a top female choice demonstrates a possible anomaly in the assumption that low register is masculine stereotyped. In addition, although gender was not specifically addressed, it was included in some students' comments, such as in one boy's stating that the flute was his least preferred "because it's a girl's instrument" (Harrison, 2003, p. 151). Harrison's final study (2003), a 3-year longitudinal study of secondary students, again showed a proclivity for males to favor brass and percussion and for females to favor woodwinds and strings. In an example of gender transition, however, the saxophone moved from being a gender-neutral instrument to a female-identified instrument.

Harrison concluded by observing that stereotypes exist and are damaging, particularly for the topic of his study— namely, boys. He observed that this situation will be a difficult one to address, requiring "a long-term attitudinal change . . . to change the perception of the feminine as being inferior" (p. 169). Elliot and Yoder-White (1997) investigated the question of gender associations with instrumental timbres. In an attempt to remove any visual recognition, the researchers designed an investigation in which no images of the instruments were present. In sum, 106 children listened to a tape of eight instruments playing the same four-measure excerpt. Flute and oboe were the instruments most strongly associated with femininity, whereas the trombone and bassoon were those most strongly associated with masculinity. Gender association was determined by the students' selecting between two sets of drawings, one drawing of two boys and one of two girls, although the drawings were themselves arguably stereotypical. Boys were depicted holding

either a skateboard or a fishing pole, whereas girls were depicted either jumping rope or holding a stuffed animal. The idea of removing any mention of the instrument is perhaps advantageous, but the images used in their place must also be carefully examined for gender stereotype implications. Kelly (1997) also investigated timbre as a possible influence on instrument selection. In the study, 261 third-grade students listened to a tape of seven instruments playing two short songs and then indicated whether the instrument in question "sounded like an instrument a boy would play or an instrument that a girl would play" (p. 47). Five instruments (flute, violin, trumpet, trombone, cello) were chosen along recognized gender lines, although two (clarinet, saxophone) did not produce clear distinctions. This is most significant for the clarinet, which is otherwise strongly identified in the literature as a female instrument. It is also significant in that Elliot and Yoder-White (1997) found clarinet timbre to be feminine identified in a study published during the same year. The difference between the studies suggests that timbre associations might not be consistent for all instruments.

Reviewing the literature on recent scholarships on factors that affects students' choice of musical instrument will help provide information on very recent works done in this area of study for the past ten or twenty years. This review is directly related to the main topic since it provides as with the information if the research problem, which was identified so many years ago, still exists today. However, the fact that this issue persists can be illustrated by subsequent research based on the same subject matter (Harrison, 2003; Sinsabaugh, 2005; Eros, 2008).

Perceptions by Other Students

Cramer et al. (2002) surveyed 98 college students about their perceptions of femininity and masculinity of fictional male and female musicians who played either a male- or female-stereotyped instrument. Participants were first assessed using the Bem Sex Role Inventory (Sinsel et al., 1997) and were then given a survey in which they evaluated the four possible combinations of male/female students and masculine/feminine instruments.

Participants evaluated each hypothetical player/instrument in terms of nine personality stereotypes (three male, three female, three gender neutral). The study found that those who played feminine instruments were characterized as warm, caring, and sensitive and that female musicians were judged to be more dominant, active, and strong leaders. Male players of female instruments were judged harshly on the masculine traits. The researchers concluded that females are indeed allowed to choose from a broader range of instruments than that of males and that males face significant social penalties when they cross the gender line. A. C. Harrison and O'Neill (2003) explored the question of children extending their preferences to the preferences of others. Using a 26-item survey, the researchers assessed 312 children, aged 8 to 9, about their first choice of six instruments, as well as their gender association for each instrument. Students were then asked, using one of two scenarios, to speculate on whether a hypothetical new student would be more likely to play masculine instruments or feminine instruments. In the first scenario, children were asked which type of instrument a "new boy" or a "new girl" would play. In the second, children were told that the new student played

either flute or drums, but they were not told the sex of the student. Results indicated that students not only held stereotypical associations but also believed that other children held the same associations. Results also indicated that students thought that other-sex children were more likely to choose cross-gender instruments, thus suggesting a projection of students' beliefs onto other children.

Review of literature on the perception of other students as to whether they are aware of the 'perceptions of femininity and masculinity' of musical instruments is directly related to the main topic. It provides the researcher with an additional information as regards how other factors that affects instrument choices among children and also supports LeBlanc's (1982) accession that 'peer group' is one of the factors that affects children's choice of musical instrument for study.

Directors' Role in Instrument Assignment

Among the factors used in choosing an instrument, director's input can be significant. Although many studies have focused on student perceptions, recent research has examined teacher perceptions of gender stereotypes in terms of gender stereotype presence in the selection process and the role that gender plays in directors' assignments. Johnson and Stewart (2004) investigated sex identification in the process of beginning band instrument assignment. Eighty-four band directors were asked to individually assign students to an instrument on the basis of a whole-face picture or a picture of the mouth area only. The researchers concluded that knowing the sex of the

student did not have a significant impact on which instrument band directors recommended for a particular student.

In a 2005 follow-up study, Johnson and Stewart added race to their investigation. In sum, 201 music educators were asked to individually assign 14 students to one of six beginning band instruments. The participants were shown full-face pictures of students or pictures of the mouth area only. The 14 students, 7 male and 7 female, included European American students (n = 8) and African American students (n = 4), as well as a Native American student and a Latino American student. The researchers concluded that race and sex identification did not play a significant role in directors' assignments of students. This study is commendable for expanding the scope of gender and instruments to explore ethnicity—although ethnicity, or race, played a limited and arguably minor role in this investigation. Furthermore, the absence of other ethnicities, such as Asian Americans, is notable. Bayley (2004) submitted a 26-question survey to 322 beginning band instructors regarding methods used in their instrument selection processes. Gender association was among the areas addressed, although teachers indicated that they thought that students' friends formed the strongest factor in their choices. The majority (95.2%) indicated that they guide their students in the selection process, although it was frequently in the name of balanced instrumentation. Bayley called for teacher education to assert its role in counteracting stereotypes: "It is . . . essential that gender-stereotyping issues be addressed more effectively during pre-service teacher education" (p. 32).

In a study based on Bayley's investigation (2004), Bazan (2005) surveyed 56 beginning band directors about instrument selection processes in

their programs: 91% of directors indicated guiding students to instruments, although 6% indicated that they did the actual selection. Similar to Bayley's participants (2004), those in this study believed that peer influence was the strongest factor influencing students' choices. Directors believed that students' preferences were consistent with typical gender stereotypes (brass and percussion for boys, high woodwinds for girls). The participants were not asked if they thought that gender played a role in their guidance of students, although they did indicate that they believed gender bias to be present and influential in their programs.

The relationship between director's role in instrument assignment and student's instrument choices cannot be over emphasized. Among the factors used in choosing an instrument, director input can be significant. Although many studies have focused on student perceptions, recent research has examined teacher perceptions of gender stereotypes in terms of gender stereotype presence in the selection process and the role that gender plays in directors' assignments.

Demonstration

A substantial amount of literature has been written on the effects of the method used in presenting instruments to students. Studies have indicated that the manner in which instruments are demonstrated to beginning students, particularly in terms of the relationship of the performer's gender to the instrument's gender, has a powerful impact on instrument preference and perception. The gender of the performer has often been more compelling than the gender stereotype of the instrument itself. Harrison and O'Neill (2000)

used demonstration concerts with gender-consistent performers and gender-inconsistent performers to study students' instrument preferences and gender associations. In sum, 357 children were asked to rank their order of preference for learning to play six instruments, as well as state their gender associations for each instrument. The students were grouped into three clusters of schools, with one school receiving a gender consistent concert, one receiving a gender-inconsistent concert, and one control group who did not receive a concert. The results indicated that gender inconsistent concerts influenced students' preferences for gender-consistent instruments. For example, after seeing a male pianist, girls had a lower preference for the piano, a traditionally female-associated instrument.

Harrison and O'Neill added a new factor to presentation investigation by interviewing students individually before the demonstration concerts, with the goal of removing immediate peer influence and allowing the students to speak candidly. Although they are more time-consuming, individual interviews seem to be a way to counter social pressure, which has shown to exert a strong influence. By speaking individually, students might be able to candidly discuss their instrument ideas.

In an effort to consider performers' age as well as gender, Pickering and Repacholi (2002) used high school–age gender-consistent performers and gender inconsistent performers as models, based on the idea that children might be more responsive to adolescents than adults and that seeing older students might provide more sense of relevance. A total of 618 children viewed videotapes of performances or instrument only displays. The preferences of those who saw the gender-inconsistent performers did not fall

as strongly along gender lines as it did for those who saw gender-consistent performers or instruments alone. Pickering and Repacholi suggested that whereas the more immediate goal is for children to not be limited by gender stereotypes, the true goal is gender neutrality for all instruments. They further cautioned that if too heavy an emphasis is placed on counter examples, "we run the risk of creating a new set of stereotypes, when the goal should be to encourage children to view these instruments as gender neutral" (p. 642). Although their point might seem excessive given the current evidence pointing toward firmly entrenched stereotypes, it is not inconceivable.

Studies have indicated that the manner in which instruments are demonstrated to beginning students, particularly in terms of the relationship of the performer's gender to the instrument's gender, has a powerful impact on instrument preference and perception (Harrison & O'Neill, 2000). In the light of this, literature review on instrument demonstration as one of the possible factors that affects students' choice of musical instrument for study is in the right direction.

Ensemble Composition

Gender associations and stereotypes make their presence known in more ways than who is playing what. Who is playing what becomes who is playing where. When gender associations affect instrument selection, it influences the musical ensembles themselves, and it limits performers' future ensemble options as well, considering that many traditional ensembles have instrumentation that falls along gender lines. Although it is true that all instrument choices result in at least some form of limitation for performers and

ensembles, there is cause for concern when the prevailing reason behind the choice is a gender stereotype. Therefore, a boy who follows traditional gender lines in the instrument selection process is significantly lowering his chance of playing in a woodwind quintet. Similarly, if a girl makes her initial selection according to traditional gender lines, then she will have few opportunities to play in a jazz ensemble. In those cases, the stereotyped choices have removed students' access to entire genres of music. Harrison (2003) investigated the question of gender distribution in ensembles by observing them in a large music festival. He found that there were twice as many stage bands from boys schools as there were from girls schools, that concert bands were relatively even, and that string ensembles were weighted toward girls schools. McKeage (2002, 2004) performed two studies investigating female participation in jazz ensembles. Of the standard jazz ensemble instruments, only the piano has been shown to lean toward the feminine preference. McKeage investigated 628 students representing 15 college programs: 28% of females and 72% of males played a primary instrument that was common of jazz. As a reference for the music education profession, 42% of women and 12% of men indicated never playing instrumental jazz at any level. Given that many instrumental teaching positions include a jazz component, students with limited jazz experience are at a distinct disadvantage. Therefore, a clear link exists between gender-influenced instrument choice and career opportunities.

In a similar study in 2002, McKeage presented a finding that demonstrates a possible strategy to counter stereotypes—namely, that stereotypes had less of an effect on secondary instrument choices. She concluded that perhaps students feel themselves being safe if they declare

primary allegiance to a gender-consistent instrument. Given the tradition of instrument doubling, particularly in jazz ensembles, this may be a point of access for students to reach music and ensembles previously impeded by gender stereotypes.

Crossing the Gender Line

Despite the strong presence of gender stereotypes and their effects on programs and students, there are those who choose to play gender-stereotypical instruments. Conway (2000) interviewed 23 high school students who had broken gender stereotypes in their choice of instruments. Students who had crossed the gender barrier reported a desire to be different, as well as encouragement from elementary school music teachers and parents. Those comments point to the strong influence that adults have on the selection process and the fact that there are students who are perfectly happy to go against stereotypes. Initially inspired by a viola student who came to his lesson with a black eye, Sinsabaugh (2005) studied eight cases of students who had crossed gender lines: two boy flutists, two boy violinists, two girl trombonists, one female trumpeter, and one female percussionist. Her study provides substantial insight into the experiences of those who choose reverse-gender instruments. In terms of the selection process, the students reported common factors, ranging from student choice to assignment, although two boys researched their instruments before choosing them. Most of the students believed that any student should be able to play any instrument (gender consistent or inconsistent) and stated that their parents had played an encouraging role, which included pointing out reverse-gender role models. In

addition, all students believed that girls had more choices than boys did, a finding consistent with numerous other studies. Interestingly, however, only one of the students stated that she regularly carried her instrument openly; others either carried instruments in their bags or had two instruments. Both flute players (boys) reported harassment and did not carry their instruments openly. They described using additional support mechanisms, including seeking male flutist role models and even changing schools. In describing his choice of instrument, one flutist remarked that the music was more important to him than the particular instrument: "It's the music, not the instrument itself'" (p. 87). Sinsabaugh's study (2005) included a mixture of ethnic and racial backgrounds. One of the flute players had come to the United States from Korea when he was 13; the other was of mixed Puerto Rican–Dominican descent; and the female trumpet player was Indian. A variety of other ethnic backgrounds were represented, which asks the question of the gender–stereotype relationship among different ethnicities. Sinsabaugh's study brings us to the present state of our students' experiences with the effects of gender association and stereotype. The presence remains strong; the effects remain limiting; and the consequences for students can be damaging in numerous ways.

In each of the above-mentioned studies, researchers compared children's preferences for musical instruments with the way instruments are gender stereotyped by adults. Few studies have directly assessed children's own views on why they chose to study the instrument they are playing; thus the need for this study.

Parent Involvement and Home Environment

In the life of a preschool child, the importance of the parent or primary caregiver is unparalleled. During this time, the parent assumes many roles including provider, playmate, and teacher, hence; "a parent is their child's first teacher" is a plausible and often-quoted phrase. Parents also assume the responsibility of shaping the home environment (HE) where the child spends much of his time. A large body of research suggests that parent involvement (PI) and home environment throughout childhood greatly influence future success.

Sloboda and Howe (1991) discovered that only 14% of students did not need parental encouragement or support in music making. In another article on the importance of parents in the musical development of a child, McPherson (2009) states that parent involvement in music can help students feel more competent and can foster a strong bond between parent and child. The field of education has also acknowledged the importance of parent involvement.

Increasing parent involvement partnerships with schools has been made a priority in education in recent years (Through the formation of Parent Teacher Associations and the introduction of Open-days for parents to interact with their wards and teachers in the classrooms). A substantial body of general education literature suggests PI is positively correlated with school success, academic achievement, and school readiness (Englund, Luckner, Whaley, & Egeland, 2004; Fan & Chen, 2001; Hong & Ho, 2005; Macron, 1999; Miedel & Renyolds, 1999; Parker, Boak, Griffin, Ripple, & Peay, 1999). Music researchers have found positive correlations between PI-HE, music retention,

plans to pursue music, music achievement, music aptitude, as well as cognitive, affective, and performance outcomes (Brand, 1986; Sichivista, 2004; Zdzinski, Gumm, Orzolek, Cooper, Dell, Rinnert, Yap & Keith, 2008; Zdzinski, 1992; Zdzinski, 1996; Zdzinski, 2008). This research suggests that parents play a vital role in the success of their children in many aspects of their schooling and interests, including music. While most of this research, especially research in general education, focuses on school-based involvement (i.e., volunteering, conferences, and attendance at school functions), PI is a multi-faceted construct. Due to the variety of operational definitions of PI, research regarding PI and HE has produced conflicting results (Fantuzzo, Tighe, & Childs 2000; Fan & Chen, 2001; Marcon, 1999; Miedel & Reynolds, 2000). To help clarify this issue, general education researchers have attempted to define parent involvement via the creation of frameworks to better describe the various types of PI. Perhaps one of the most influential of these frameworks is by Epstein (1995) who created a six-factor framework to describe various types of involvement interactions between schools, communities, and families. Researchers including Fantuzzo (2000) have created scales to further define PI in early childhood educational settings. Music researchers have also created frameworks to define musical PI-HE. In a study on musical home environment, Brand (1985) created *the Home Musical Environment Scale* (*HOMES*). Factor analysis of this scale produced four musical home environment factors for elementary children. More recently, Zdzinski (2008) created *the Parent Involvement and Home Environment in Music scale* (*PI-HEM*) that revealed seven PI-HE factors.

In addition to exploring the various types of PI-HE through creation of frameworks or factor analyses, general education researchers have found that PI-HE is influenced by demographic characteristics. Differences in ethnicity, (Fan & Chen, 2001; Hong & Ho, 2005; Huntsinger, 2009; Keels, 2009) family composition, (Arnold, Zeljo, Doctoroff, & Ortiz, 2008; Fantuzzo, 2000) and socioeconomic status (SES) (Arnold et al., 2008) have been significantly associated with differences in PI. Parent gender (Huntsinger & Jose, 2009; Mcbride, Dyer, Liu, Brown, and Hong, 2009), parental education level (Arnold et al., 2008; Castro, Bryant, Peisner-Feinberg & Skinner, 2004; Englund et al., 2004; Fantuzzo et al., 2000), and parent employment status (Castro et al., 2004) have also been shown to significantly affect PI and HE. Music researchers have also studied several aspects of the home environment of young children. Several of these studies relate to the type and frequency of musical interactions that occur in the home. The majority of this research is focused on homes with children under 3 years old (Barrett, 2009; Custodero, 2003; Custodero, Britto & Brooks-Dunn, 2003; De Vries, 2007).

Current research suggests that musical home environment is influenced by several factors. Just as general education researchers discovered, music researchers found that demographic characteristics affect PI-HE (Custodero et al., 2003; Zdzinski, 1992; Zdzinski, 1996; Zdzinski et al., 2008). Another factor that has been shown to influence musical home environment is the personal musical experience of the parent. Research suggests that parents with a rich musical background or those currently involved in music provide more musical experiences for their young children (Custodero, 2003; Galliford, 2003; Kelly & Sutton-Smith 1987; Zdzinski, 2008).

Reviewing the literature on parent involvement and home environment provides the opportunity to know what has been said already by other researchers and strengthens the researcher's claims by citing what other reliable authors have said about the topic.

Summary

A review of related literature appears to suggest that despite the amount of research done in the area of students' musical instrument choices, there does not exist any documentation on factors that affect Ghanaian students' musical instrument choices.

Research is conducted in order to inform people with new knowledge or discovery. However, it is not to be expected that everybody would willingly believe what you are tackling in your whole research paper. Thus, to make this research more credible is to support it with other works, which have spoken about the same or related topic as the one in discussion. This is where this literature review comes in.

Literature review is the part of the research paper where the researcher is given the opportunity to strengthen his claim by citing what other reliable authors have said about the topic. This proves that the researcher is not just writing about any random subject but that many others have also poured their thoughts on the topic. What a research work without a literature review would most certainly be lacking is the fact that the paper, without the literature review, only contains the researcher's opinions about the facts that he has discovered through his research. By the mere fact that this researcher uses referencing by citing what more credible people had said about the topic will

build a stronger foundation for this thesis. It also establishes the lacuna in the field, supports instrument construction, data analysis and discussion of data (Boswell & Cannon 2009).

There are clear-cut ties between the works cited, the topics on which the literature review were based and the main research topic. The topics that were discussed in the literature review were under the following headings: musical instrument preferences, Sex-Stereotyping of musical instruments, the genesis of gender stereotyping of musical instruments in children, perceptions by other students, directors' role in instrument assignment, crossing the gender line and Parent involvement and home environment.

CHAPTER THREE

METHODOLOGY

The purpose of this study was to investigate what Ghanaian Basic school band pupils report to be influences on their instrument choices and to explore whether Ghanaian children are gender stereotyped in their band instrument choices. In this chapter, the research design, the population, the sample, and the method of sample selection, the design of the instrument, and the procedures followed in collecting and analyzing the data are discussed.

Research Design

According to Johnson (1994, p. 174), selecting the research method is a "crucial element" in the research process. The researcher used the descriptive research strategy including a variety of complimentary research designs, which are mainly qualitative through survey (questionnaire) and observations to form case study (Gravetter & Forzano, 2006). Although a case study research has had its critics in the past, it is "now widely accepted as a form of research" (Simons, 1996, p. 225). The above fits my objectives of investigating the factors that affect the individual basic school pupils in their choice of musical instruments for study. The notion of the "paradox of case study" is introduced by Simons (1996, p. 225) who claims "by studying the uniqueness of the particular, we come to understand the universal" (p. 231).

Johnson (1994, p. 183) notes that "qualitative methods are slow" and indeed visiting five school bands was a time-consuming process, but one which I felt worth pursuing in order to obtain a better illustration of the varied nature of the school bands and to reflect the individual perceptions and

experiences of the individual students. According to Gravetter & Forzano (2006), a study using a survey simply for descriptive purpose is classified as a *survey research design* the same way a study using an observation simply for descriptive purpose is classified as an *observation research design.* Survey research design involves asking the same set of questions, often a written questionnaire of a large number of individual participants and a (participant) observation research design was used in this study so that the researcher could engage in the same activities as the participants in order to observe their behavior. Gravetter & Forzano also recommended the suitability of this design for generalizing from a sample to a population. It is therefore hoped that results of this study will be generalizable to the population of basic school bands in the Accra metropolis.

In this study, each individual student from each of the five selected school bands in the Accra metropolis completed a questionnaire (See Appendix A) on the factors that affected their choice of the various instruments they play in the school band. The questionnaire included items on demographic information, questions on factors that affected their choice of instrument and gender stereotyping of musical instruments, method of band teaching, programmes the school band attends, types of pieces they play and rehearsal schedule. Getting a sufficient number of questionnaires completed and returned so that meaningful analysis could be done is a weakness of the survey design. However, this was not the case in this study. The researcher accompanied by the various school band teachers sat in the class with the students and ensured that they completed the questionnaire and doing so independently of another person's influence. One hundred and forty-two (142)

students constituted the sample of the research. The main advantage of a case study is that it gives you a chance to study one aspect of a real-world problem in detail from many different viewpoints. It does not just restrict itself to a single research procedure such as a survey, observation, or interview data – but it could use the combination of any. The way you would write up a case study depends on the purpose of the case study (Yin, 1994, pp. 4-6). In the light of this, the researcher identifies this kind of case study as an "exploratory case study since it seeks to investigate factors that influence Ghanaian Basic school pupils' choice of musical instrument.

Population

All Basic school bands in the Accra metro constitute the target population of the study. Accra metro has a total number of 14 Basic School Bands (Nine are private and five mission schools). The accessible population for this study, however, included boys and girls from primary one to JHS 3 of all Basic Schools with school bands in the Accra metro.

Sample and Sampling Technique

The sample included in this research consisted of students from five basic school bands selected using the random sampling with replacement or independent (within-sample) random sampling method (Glenburg, 1988). This was done by writing the name of each school band on a standard-size slip of paper. The researcher put all the slips of paper in a large hat and thoroughly mixed them. He then closed his eyes, stuck his hand into the hat, and pulled out one slip of paper and recorded it and then put the slip back into the hat and

thoroughly remixed the slips of paper. This was done repeatedly until the five school bands that are supposed to make up the sample were selected. The name sampling with replacement is used because after a slip of paper is selected, it is replaced in the hat before the next draw. The other name, independent (within-sample) random sampling, highlights the fact that what is selected in one draw from the hat has absolutely no affect on what is selected in the next draw (Glenburg, 1988).

Therefore, the 142 pupils from the five school bands that made up the sample for this research were selected because they belonged to one of the five basic school bands that made up the sample. The five basic school bands that made up the sample for this study were Rev. John Tei memorial school band (28 pupils), Mary Mother of Good Counsel School band (37 pupils), Providence School band (23 pupils), De-youngsters School band (24 pupils) and St. Theresa's School band (30 pupils).

Design of the Instrument

The survey instrument used in this study was a three-page, 33-item survey modified from a questionnaire previously used by Fortney, Boyle and DeCarbo (1993) in a large study in the U.S. Items in the questionnaire were arranged under the following topics: demographic questions and factors influencing instrument choice.

The survey included both closed-response and open-response items. Besides soliciting background information regarding the respondents' instrumental music experiences, gender, age, denomination (religious affiliation), level/class, parents occupation and family members' instrumental

music experience, the survey asked respondents to rate ("none," "some extent" or "large extent") the influence of 14 factors on their choice of a band instrument. In addition, the survey asked respondents to select, given free choice, which instrument they would like to play and why they would like to play it and which instrument they would least like to play and why they would not like to play it. For issues concerning gender stereotyping of musical instruments, questions were asked soliciting the students' views on which instruments should boys and girls play and whether they are playing instruments that match their gender. Questions on rehearsal schedule, method of band teaching and the programmes the school band attends were also asked to get a fair idea on the activities of school bands in the Accra metropolis.

A Likert scale with three categories ("None", "some extent" and "large extent") was used to determine the intensity of their response to specific questions. For example some likert type questions were:

1. To what extent did the following factors influence the choice of your instrument:

	None	Some extent	Large extent
(a) Father	☐	☐	☐
(b) Mother	☐	☐	☐

Other data was collected from yes/no responses to questions posed. Example of such questions includes:

2. Do you watch TV?

   YES ☐ NO ☐

In addition, respondents were asked to explain their reasons for selecting specific choices with comments. For example:

3. Are you playing an instrument that matches your gender?

   YES ☐ NO ☐

4. Why do you think your instrument matches your gender?.....

   ……

   ……

The questions "Which church do you attend?", and "What work does your father/male guardian and mother/female guardian do?" were asked to solicit information on the respondents' *home environment*. This was to ascertain if the assertion that home environment affects children's choice of musical instruments (Custodero et al., 2003; Zdzinski, 1992; Zdzinski, 1996; Zdzinski et al., 2008) is a reality among Ghanaian children.

Pilot Study

The term pilot study is used in two different ways in social science research. It can refer to so-called feasibility studies that are "small scale versions, or trial runs, done in preparation for the major study" (Polit *et al*., 2001, p. 467). However, a pilot study can also be the pre-testing or "trying out" of a particular research instrument (Baker, 1994, p. 182). The latter meaning is the main reason for the current pilot study. One of the advantages of conducting a pilot study is that it might give advance warning about where the main research project could fail or whether proposed methods or instruments are inappropriate. This is why Ve Vaus insists "Do not take the risk…Pilot test first" (1993, p. 54).

Data on school band music activity of Ghanaian children is limited. There appears to be even "little" or "no" information related to instrumental

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music involvement of children, although internationally this is an area that has received so much attention. A pilot study was therefore conducted as a feasibility study done in preparation for the main work.

The Objectives of the Pilot Study were:

(a) To examine the reliability and validity of the survey instrument, (b) To assess the feasibility of the major work (c) To identify possible problems which might occur using the proposed method and (d) to assess if each question measure what it was supposed to measure

The advantages of this questionnaire were:

It was modified from a questionnaire previously used by Fortney, Boyle and DeCarbo (1993) in a large study in the United States. The majority of the questions had been well tested. It took about 30 minutes to complete therefore suitable for children and could be completed in a short while.

Procedure for the Pilot Testing

A set of questionnaire was used. The students that made up the sample completed the questionnaire during one of their early morning rehearsals. The exercise was supervised by the researcher and the University Primary School Bandmaster, providing an overview to the survey and available to answer any questions. Data were based on the responses of 30 band pupils from the University Primary School Cape Coast. They were each given a 33-item questionnaire to respond to. The sample included 2 pupils in class three, 21 in class four, 1 in class five and 6 in class six.

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All copies of the questionnaire were checked for completeness at the time of completion at the practice grounds. Any missing data identified was clarified immediately with the student. The questionnaire data were entered into a computer for analysis using the Statistical Package for the Social Sciences (SPSS) version 16.0.

Reliability and Validity of the Questionnaire

Joppe (2000) defines reliability as: "The extent to which results are consistent over time "and "Validity determines whether the research instrument truly measures that which it was intended to measure" (p. 1).

The Cronbach's alpha was used to compute the internal reliability of the questionnaire. Based on the several problems associated with Spearman-Brown and Kuder-Richardson formulae, Gravetter & Forzano (2006) recommends the Cronbach (1951) formula for internal validity tests. "Like the K-R20 formula, Crombach's alpha is intended to measure split-half reliability by estimating the average correlation that would be obtained by considering every possible way to split the data in half. In addition, like the K-R 20 formula, Cronbach's alpha produces values between 0 and 1.00, with a higher value indicating a higher degree of internal consistency or reliability" (p. 421). All variables with zero variance were removed from the scale. Table 1 shows the details of the Reliability of the questionnaire, while Table 2, and 3 presents the breakdown of the reliability data.

Table 1: **Reliability of research instrument**

Cronbach's value	**N**	**No. of items**
0.884	30	23

Table 2: **Reliability of Closed-ended questions**

Items	**N**	**Mean**	**S.D**
Did you learn any instrument outside of school?	30	1.833	0.37905
Has any member of your family ever participated in school band?	30	1.6000	0.49827
Does your band teacher discuss the pieces before teaching you?	30	1.0667	0.25371
Does your band teacher play the pieces on CD for you?	30	1.4000	0.49827
Does the band teacher talk to you about your part in the new piece?	30	1.0667	0.25371
Does the band teacher discuss with you how beautiful the pieces are?	30	1.0667	0.25371
Do students ask the band teacher questions on form and structure of pieces?	30	1.2000	0.40684
Are playing an instrument that matches your gender?	30	0.1000	0.30513
Does your band teacher discuss the pieces with you before you learn to play them?	30	0.0333	0.18257
Does your band teacher play the pieces on CD for you to listen before teaching you how to play them?	30	0.3667	0.49013
Does your band teacher discuss with you how beautiful the new pieces are before teaching you to play them?	30	0.2333	0.43018

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Does your band teacher allow you to ask questions about the new pieces you learn to play?	30	0.1000	0.30513
Do students ask the band teacher questions about the form and structure of the pieces before the band teacher teaches you how to play them?	30	0.2000	0.40684

Table 3: **Reliability of possible factors influencing instrument choice**

Factors	**N**	**Mean**	**S.D**
Parents	30	2.5000	0.73108
Friends	30	2.3333	0.60648
Music teacher	30	2.7000	0.65126
Other teacher's advice	30	1.8000	0.71438
I like the sound	30	2.6667	0.54667
I saw it on TV	30	2.2667	0.82768
Cost of the instrument	30	1.8333	0.87428
Size of the instrument	30	2.2000	0.61026
Availability of the instrument	30	2.3000	0.65126
Method of band teaching	30	1.4333	0.76112
Programmes the school band attends	30	1.2000	0.76112
Repertoire	30	1.6333	0.66868

Validity

According to Wilson (2008); "There are three forms of validity that are applicable to self-report questionnaires: content, construct and concurrent validations" (p. 32).

Content Validity

A measure is considered to have content validity if it covers all possible dimensions of the research topic (Sarantakos, 2005). In view of this the researcher did a thorough literature review of existing literature to find out what other researchers say can influence children's musical instrument choices. Several researchers made mention of parents, gender stereotyping of musical instruments, timbre, family, peers groups and educators and authority figures to be the possible factors likely to affect children's instrument choices (Abeles & Porter, 1978; Bruce & Kemp, 1993; Delzell & Leppla, 1992; Fortney, Boyle, & DeCarbo, 1993; Griswold & Chroback, 1981; Tarnowski, 1993). However, the fact that this issue persists can be illustrated by subsequent research based on the same subject matter (Harrison, 2003; Sinsabaugh, 2005).

The questions in the questionnaire were therefore chosen to cover all aspects of the research topic and most importantly be exhaustive of the research questions that guided the research.

Construct Validity

Assessment of construct validity is done by comparing trends or relationships found in the questionnaire with established trends from other forms of research (Wilson, 2008). Evidence of construct validity is seen in a number of results:

The data yielded some clear-cut instrument preferences and instrument/gender associations slightly different from the one in my literature

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review. With the exception of the trumpet and tenor drum, the sample clearly reflected gender bias toward certain instruments. Females tend to play and indicate preference for Tenor and snare drums, whereas males tend to play and indicate preference for trumpet, trombone, and Euphonium. These data support previous research that has found strong gender associations with certain instruments (Ableles & Porter, 1978; Delzell & Leppla, 1992), although there are some differences between the data of the present study and some of the earlier studies. For example, the popularity of the percussion (snare drum and tenor drum) with the females that was found in the present study was not apparent in the earlier studies.

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Responses regarding influences on the choice of instrument gave credence to Gordon's (1984; 1986) assertion that instrument timbre is a strong consideration in instrument selection. The present data suggests that instrument timbre is an important consideration in instrument selection for many students, but this finding is contrary to that of Rideout and Clinton (1987).

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Concurrent Validity

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The validity of a new measurement is established by demonstrating that the results obtained from the new measurement technique are directly related to the outcomes from another, better-established procedure for measuring the same variable (Gravetter et al, 2006). Validity here is assumed if the findings are supported by already existing empirical evidence. In the light of this, I can confidently say that my questionnaire has concurrent validity since I have already made it clear that it was modified from a

questionnaire previously used by Fortney, Boyle and DeCarbo (1993) in a large study in the U.S.

The Objectives of the Pilot Study were met:

All questions on the questionnaire measured what they were supposed to measure except for question numbers 22 to 33 that were placed there for the purpose of triangulation and to provide additional background information on the realities on the ground.

I realized that, there were not enough questions that will help answer the research questions so I quickly reviewed the questions on the questionnaire and made sure they help answer the research questions for the main work.

It was satisfying to note that all questions on the questionnaire were well understood except for "denomination" which was changed to "church" for easy understanding by the respondents. It was also good to note that all items on the questionnaire were responded to except question number 31; "What is the ranking of your school band?" to which nobody responded. I also realized that the word "Parents" in question number 11 was not well understood by the respondents so I restructured the questions on the factors to distinguish between mother and father so that pupils with single parents could also respond.

The Respondents followed every direction given them, which meant that the survey instrument created a positive impression that motivated the pupils to respond within the period of about 30 minutes.

The logistics and practicality of undertaking the survey was established.

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And most importantly, it was good to note that the reliability of the questionnaire was confirmed with a confidence level of 88.4%.

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Data Collection Procedure for the Main Work

The procedure for the collection of data involved a consultation with the school heads of all the five schools and the teachers in charge of the school bands. The Head of the Department of Music, University of Cape Coast signed an official introductory letter for data collection on November 1, 2011 (See Appendix B). A copy of this letter was then forwarded to the five schools officially informing them about my intentions.

The very first introductory letter for this study was signed on May 17, 2011 to the Accra metropolitan Education office where I had access to the list of basic schools in the Accra metro including their locations. After receiving the list of schools and permission from the metropolitan education director for that matter, I started the hunt for basic school bands in the Accra metropolis. This search was made a little easier through the kind courtesy of the internet (face book). I visited all the five school bands included in the sample informing the school heads about the study.

After consultations with the school heads, dates for the administration of the research questionnaire were decided. Doing this was not difficult at all since I had already familiarized myself with the schools through my frequent observational visits. It was agreed by the five school bands that November 1 to 11, 2011 be used for the study. I therefore organized myself quickly and met with the individual schools bands during their rehearsals for the questionnaire administration exercise.

The exercise was supervised by the researcher and the respective school band teachers, providing an overview to the survey and available to answer any questions. After the distribution of the questionnaire to the respondents, the researcher read the questions and explained the terms that the participants were not familiar with before allowing them to answer the questionnaire. Questionnaire administration lasted about 30minutes.

Data Analysis Procedure

A descriptive research strategy was used in gathering the data, so descriptive analytical method was used in summarizing the information obtained. According to Ary et al (1972), qualitative research does not require complex statistical analysis. In view of this, the data was analyzed using frequencies, and percentages. Case study data analysis generally involves an iterative process that proceeds from more general to more specific observation and since data was in the form of written records (questionnaire), analysis involved the coding of data and the identification of salient points (Creswell, 1998; Palys, 1997; Silverman, 2000). Tables (also provided chi-square values) and graphs were used to support the analysis to make it clearer and more comprehensible.

Both descriptive and inferential statistics were used in the data analysis. The study employed the SPSS version 16.0, a computer software, to capture and run analyses. Statistical tables and graphs were constructed. In analysing the first research question: What are the factors that influence the pupils in their choice of a band instrument?, frequencies, simple percentages, means and standard deviations were computed and discussed. For the second

research question: Is there any significant difference between the choices of instruments among the various school bands?, the analysis of variance (ANOVA) test was run.

Also, for research question three: To what extent does gender stereotyping of musical instrument affect Ghanaian children's choice of musical instrument?, the study employed the frequencies and percentages. The Chi-square test was used to address the fourth research question, while an Independent-Samples t-test was run for the fifth research question: Is there any relationship between instrument choices and gender of the pupils? Research questions 6 and 7 were addressed using frequencies and percentages.

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CHAPTER FOUR

RESULTS AND DISCUSSION

The results from the investigation of Basic School pupils' choice of musical instruments in the Accra Metropolis are presented in this chapter. The researcher examined five basic school band pupils' musical instrument choices in selected bands from Accra Metro schools. The factors that influenced the pupils in their choices of band instruments, differences in the choice of instruments among the various school bands, issues of gender stereotyping among pupils, relationship between gender and instrument choices, effect of home environment on choice of musical instruments, and pupils' eligibility to play in school band were investigated.

Hence, the data analysis was done under the following thematic areas:

1. Background information of respondents.
2. Factors influencing pupils' choice of band instruments,
3. Comparison of instrument choices among the various school bands,
4. Impact of gender stereotyping on children's choice of musical instruments,
5. Relationship between gender and instrument choices,
6. Effect of home environment on choice of musical instruments, and
7. Pupils' eligibility to play in school band.

All the 142 randomly selected pupils for the study participated in the study recording a 100.0% coverage rate. Responses gathered were summarised in statistical tables and graphs for easy understanding and also to answer the research questions posed in Chapter One.

The Cronbach's alpha was used to compute the reliability of the questionnaire. All variables with zero variance were removed from the scale. Table 4 shows the details of the reliability of the questionnaire.

Table 4: **Reliability of research instrument**

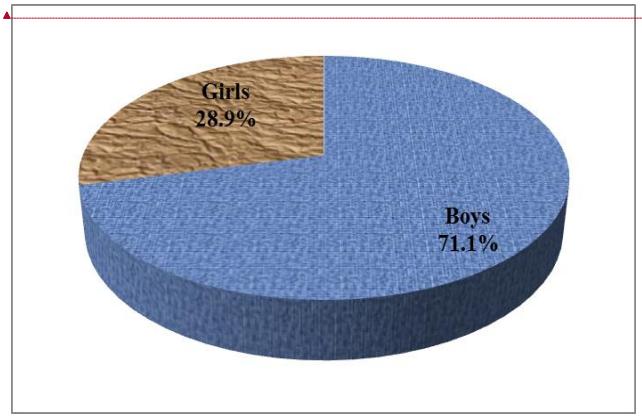
Cronbach's Alpha	N	N of Items
0.884	30	23

A Cronbach's Alpha reliability coefficient of 0.884 indicated that the questionnaire had adequate internal consistency. Hence, the instrument was "good."

Background Information of Respondents

The study requested participants to indicate their background characteristics since these characteristics and attributes could affect their responses. These included sex, age, and forms (classes) of the respondents.

Figure 1: Sex Distribution of the Respondents



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Out of the 142 respondents, majority 101 (71.1%) of them selected from the participating school bands were males, while the remaining 41 (28.9%) were females. The selection of the pupils was however, strictly random. This result is consistent with the general notion that boys mainly dominated school bands. There was a conscious attempt by the researcher to be gender sensitive, but the actual gender distribution of students who play in the school bands is in itself, positively skewed towards the males and thus, the frequencies shown in figure one. This gender imbalance finds justification as far as professional and academic musical practice is concerned. To Schloesser (2002), "women have historically been underrepresented in many fields. While the number of women in professional music has increased over the last few decades, the 25 largest orchestras still have three times more men than women." He goes on to say that, in high schools and colleges, the number of female instructors is little more than half the number of male instructors. Thus, the imbalance here is a reflection of what actually exists in other countries.

There is also extensive evidence from around the world that differs from Schloesser's assertion that boys are under-represented among those learning to play an instrument (Acker, 1994; Associated Board of the Royal Schools of Music, 1994; Gates, 1989; Green, 1993, 1997; Hanley, 1998; Koza, 1994; Mizener, 1993). Nevertheless, this is not the case with Ghanaian children but the former.

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Age of Respondents

Table 5 presents the summary of the information on the ages of the pupils respondents.

Table 5: Age of Respondents

	Sex				Total	
	Boys		Girls			
Age (in years)	No.	%	No.	%	N=142	%
9 – 11	17	12.0	2	1.4	19	13.4
12 – 14	71	50.0	30	21.1	101	71.1
15 – 17	13	9.1	9	6.4	22	15.5
Total	101	71.1	41	28.9	142	100.0

Table 5 revealed that a majority (71.1%) of the respondents aged between 12 and 14 years, while 22 representing 15.5% fell within the age bracket of 15 – 17 years. Also, 19 (13.4%) of them between 9 and 11 years. Computationally, their average age was 13.1 years. This meant that the band members were generally young.

Instruments Respondents Currently Played

Gender representation on instruments that the respondents currently played in their bands is summarized in table 6.

Table 6: Distribution of Instrument Currently Played by Gender

Instruments	Gender		Total	Percentage
	Boys	Girls		
Trumpet	25	8	33	23.2
Side Drum	24	4	28	19.7
Trombone	12	3	15	10.6
Tenor Drum	4	11	15	10.6
Cornet	7	3	10	7.0
French Horn	5	5	10	7.0
Bass Drum	7	3	10	7.0
Euphonium	9	0	9	6.4
Tuba	5	0	5	3.6
Cymbal	2	1	3	2.1
Sousaphone	2	0	2	1.4
Saxophone	1	1	2	1.4
Total	101	41	142	100.0

The sample included mostly players of brass instruments and seems to reflect a more or less typical balance of basic instrumentation for beginning bands. Most (33 made up 25 boys and 8 girls representing 23.2%) of the respondents played Trumpets, 28 (19.7%) currently played Side Drum, while 15 (10.6%) each played the Trombone. Ten representing 7.0% each played the Cornet and French Horn. Also, 9 (6.3%) and 5 (3.5%) of them played Euphonium and Tuba respectively and 2(1.4%) person played saxophone. Some instruments seemed to be dominated by either boys or girls. Males

dominated the playing of trumpet, trombone, side drum, sousaphone, Tuba, bass drum and euphonium. Girls were found to have dominated the playing of Tenor Drums. There was no girl that played the euphonium, tuba and sousaphone.

The sample reflected strong gender associations; which is slightly different from Abeles & Porter, (1978); Bruce & Kemp, (1993); Delzell & Leppla, (1992); Fortney, Boyle, & DeCarbo, (1993); Griswold & Chroback, (1981); Tarnowski, (1993); Harrison, (2003); Sinsabaugh, (2005) assertions; that is, females mostly play strings and woodwinds, whereas males mostly play the drums, and brass instruments.

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Factors Influencing Pupils' Choice of Band Instruments

The study examined the factors that influenced the choice of musical instruments among the pupils. They were asked to rate thirteen factors they considered influential in their choices. Their responses are summarised in Table 7.

Table 7: Influences on Instrument Choices

	Responses								
	LE		SE		N				
Sources of Influence	No.	%	No.	%	No.	%	Mean	S.D.	Total
Father	62	43.7	50	35.2	30	21.1	2.33	0.449	142
Mother	61	43.0	55	38.7	26	18.3	2.25	0.818	142
Friends	63	44.4	49	34.5	30	21.1	2.23	0.900	142
Music teacher	99	69.7	29	20.4	14	9.9	2.60	0.740	142
Other teachers' advice	51	35.9	53	37.3	38	26.8	1.73	0.609	142
I like the sound	89	62.7	44	31.0	9	6.2	2.56	0.712	142
I saw it on TV	57	40.1	54	38.0	31	21.8	2.18	0.506	142
Cost of the instruments	48	33.8	52	36.6	42	29.6	2.04	0.518	142
Size of the instruments	53	37.3	53	37.3	36	25.4	2.12	0.908	142
Availability of the instruments	57	40.1	55	38.7	30	21.1	2.19	0.717	142
Repertoire	46	32.4	72	50.7	24	16.9	2.15	0.841	142
Method of band teaching	84	59.2	44	31.0	14	9.9	2.49	0.399	142
Progammes the band attends	80	56.3	49	34.5	13	9.2	2.47	0.911	142

Mean – Large extent (LE) – 3; Some extent (SE) – 2; None (N) – 1.

Reported influences on instrument choices were many and varied. Table 7 summarised respondents' ratings of the degree of influence that selected factors had on their choice of an instrument to play in band. As shown, the highest mean value was 2.60 out a total of 3.00, while 1.73 was the least. The most influential factor in the pupils' choice of musical instruments was music teacher. This factor recorded the highest average value of 2.60 with a standard deviation of 0.740. On percent basis, 90.1% of the 142 pupils responded positively, while the remaining 9.9% responded "none." The second factor influencing the instrument choice among the pupils was the like for the sound. On the average, they rated it 2.56 out of 3.00. Specifically, 89 (62.7%) and 44 (31.0%) of them responded "large extent" and "some extent" respectively. This factor had an associated deviation of 0.712.

Additionally, the method of band teaching featured strongly as the third determinant of the choice of musical instruments among the pupils. Eighty-four representing 59.2% of the pupils said that, to a large extent, this factor influenced their choices, while 44 (31.0%) of them said "some extent." This obtained a mean value of 2.49 with a variation of 0.399. Another major factor was the programmes the band attends (since they are given food, drink and money) With an average value of 2.47, vast majority (90.8%) of the pupil respondents somewhat agreed that this factor influenced their choices. However, the two least influential factors in their choices included "other teachers' advice" and the "cost of the instruments." "Other" influences, many of which were not stated but a few stated "so I can play in the brigade band at church".

Comparison of Instrument Choices among the Various School Bands

The study sought to determine whether there are differences in the pupils' choice of musical instruments among the selected school bands in the Metropolis. The aim was to test whether there existed any statistically significant difference among the pupils from the five schools bands with regards to instrument choices. The analysis of variance (ANOVA) was run, and Table 8 contains the results.

Table 8: Instrument Choices among School Bands

	Sum of Squares	*df*	Mean Square	*F*	*p* (2-tailed)
Between Groups	201.334	4	50.334	3.713	0.007
Within Groups	1856.975	137	13.555		
Total	2058.310	141			

Results in Table 8 show that $p = 0.007 < \alpha = 0.025$. This implies that there existed a significant difference in the instrument choices among the pupils in the five studied school bands. A further exploration revealed that the Mary Mother of Good Counsel School Band had the highest average value of 6.11, followed by Rev. John Tei Memorial School Band with 4.89, St. Theresa's School Band (4.47), Providence School Band (4.17) and the De Youngster's School Band with 2.46 in that order. It can therefore, be concluded that the choice of instruments differed from school band to school band.

Impact of Gender Stereotyping on Musical Instrument Choices

The objective of the study was to find out whether there was a gender stereotyping with respect to the choice of instruments among the pupils. On whether instruments that the respondents currently played matched their respective gender, Figure 2 presents their responses.

Figure 2: The Match between Instrument Played and Gender

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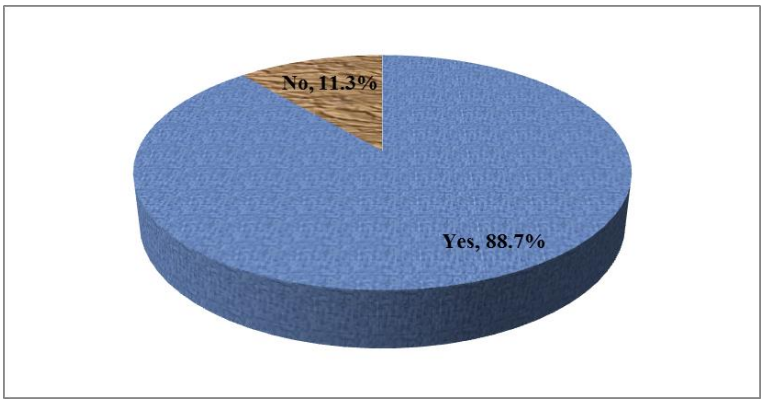


As indicated in Figure 2, a greater majority (126 representing 88.7%) of the respondents agreed that the instruments that they currently played perfectly matched their gender, while the remaining 16 (11.3%) said "No". Those who said "Yes" cited the following reasons: "I have the strength and energy to play it," "it fits my body," "it fits my height," "it fits my gender," "I need more energy to play it," "it's where my interest is" and so on. However, the remaining 16 of them who claimed that their instruments did not match their gender gave reasons such as "I get tired quickly since I don't have enough energy like boys," "boys play it better," "it's difficult to play," "we don't have girls in the band," and so on. It can

thus, be concluded that majority of the respondents played instruments that they think matched their gender.

The pupils were also asked to identify what instruments boys and girls should play, and Tables 9 and 10 summarised their responses.

Table 9: Instruments Boys Should Play

Instruments	**Sex**		**Total**	**Percentage**
	Boys	Girls		
Drums	17	5	22	15.5
Side Drum	13	4	17	12.0
Trumpet	10	4	14	9.9
Sousaphone	10	0	10	7.1
Trombone	6	2	8	5.6
Bass Drum and Side Drum	8	0	8	5.6
Bass Drum	2	6	8	5.6
Bass Guitar	3	3	6	4.3
All instruments	3	1	4	2.8
Drums, Guitar and Trumpet	0	4	4	2.8
Euphonium	2	2	4	2.8
Trumpet and Side Drum	3	1	4	2.8
Trumpet and Bass Drum	3	1	4	2.8
Tuba	3	1	4	2.8
Euphonium and Tuba	0	3	3	2.1
Bass Drum and Tuba	3	0	3	2.1

Trumpet and Trombone	0	3	3	2.1
Saxophone	3	0	3	2.1
Others	12	1	13	9.2
Total	101	41	142	100.0

The main musical instrument suggested for boys to play was the Drum as indicated by most (22 representing 15.5%) of the respondents. Seventeen representing 12.0% of them also indicated that boys should play Side Drums, while 9.9% said "Trumpet." Again, 10 (boys only) said that boys should play Sousaphone, while 8 (5.6%) each reported that boys should play the Bass Drum only, and Bass Drum and Side Drum.

Six pupils made up of three boys and three girls indicated that boys should play the Bass Guitar, while 4 made up of 3 boys and a girl said that boys could play all instruments. In addition, 4 (2.8%), girls reported that boys must play Drums, Guitars and Trumpets, and 4 (2.8%) claimed that boys should play the Euphonium. Four made up of 3 boys and a girl suggested that boys should play the Trumpet and Side Drum, and 4 of them also said "Trumpet and Side Drum." Three each (all girls) of the respondents indicated that boys should play the Euphonium and Tuba, and the Trumpet and Trombone.

In conclusion, the instruments that were considered as boys-dominated were the Drums, Side Drum, Trumpet, Sousaphone, Trombone, and Bass Drum. They cited reasons such as "boys have energy to play such instruments," "they play it better than girls," and "those instruments look manly."

Similarly, the respondents were asked to indicate instruments that girls should play, and Table 10 contained their responses.

Table 10: Instruments Girls Should Play

Instruments	**Sex**		**Total**	**Percentage**
	Boys	Girls		
Tenor Drum	26	10	36	25.4
Cornet	10	6	16	11.3
Flute	13	3	16	11.3
Tenor Drum and Triangle	8	2	10	7.0
Trumpet	7	3	10	7.0
Tenor Drum and Cymbal	5	4	9	6.3
Cymbal	7	0	7	4.9
Any instrument	5	2	7	4.9
French Horn	2	2	4	2.8
Recorder	0	4	4	2.8
Flute and Recorder	3	1	4	2.8
Piano and Recorder	3	0	3	2.1
Trumpet and Tenor Drum	2	1	3	2.1
Others	8	2	10	7.2
Total	101	41	142	100.0

Table 10 revealed that 36 (25.4%) respondents (made up of 26 boys and 10 girls) indicated that the Tenor Drum was the musical instrument meant for

girls, while 16 (11.3%) of them recommended the Cornet, and the Flute. Again, 10 (7.0%) made up of 8 boys and 2 girls said that girls should play the Tenor Drum and Triangle, while 10 (7.0%) also suggested that girls should play the Trumpet only. Four representing 2.8% (all girls) reported that they (girls) should use the Recorder. Seven representing (4.9%), all boys, recommended that girls should play the Cymbal, while 5 boys and 2 girls said that girls could play any instruments of their choice and ability.

In summary, the respondents said that girls should play the Tenor Drum, Cornet, Flute, triangle, violin and recorder with the reasons like "they are easy to play by girls," "girls like playing them," "they like it," and "it's for girls." Indeed, this finding corroborated their responses when they were asked to indicate the instruments they currently play. The boys dominated the playing of instruments such as the Trumpet, Side Drum, Bass Drum, Trombone, and the Euphonium, while their counterparts mainly played the Tenor Drum, and the French horn. This finding is consistent with that of Abeles and Porter (1978) who found (United States of America) that the most masculine instruments were the drums, trombone, and trumpet, while the most feminine instrument were the flute, violin and clarinet.

Relationship between Gender and Instrument Choices

The study investigated whether there existed any statistical relationship between musical instruments and the gender of the pupils. The study therefore,

used the Chi-square test at 5% significance level, and the results are contained in Table 11.

Table 11: Chi-Square Test

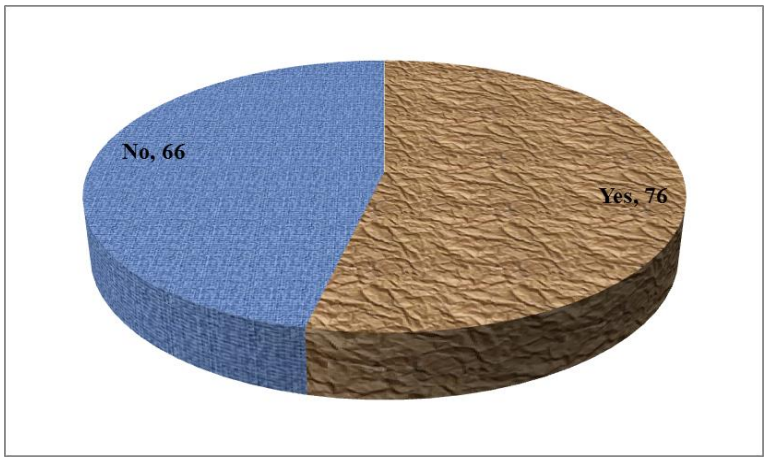
	Value
Chi-square	24.160
df	11
p (2-tailed)	0.012

Figures from Table 11 showed that there was a statistically significant association between gender and the choice of musical instruments since $p < 0.05$. This means one's sex determined his/her choice of instruments. That is, there were some musical instruments reserved solely for boys and others for girls.

Effect of Home Environment on Pupils' Choice of Musical Instruments

The study also investigated the influence of home environment (e.g. fathers' occupation, mothers' occupation, church, family involvement in school band, and watching of TV at home) on the pupils' choices of instruments yielded some statistically significant results. On whether any family member had participated in school band before, 76 (53.5%) said "Yes," while the remaining 66 (46.5%) indicated "No" as depicted in Figure 3.

Figure 3: Family who played Members in a School Bands



Again, a Chi-square test however, revealed that there was no significant association between the choice of instruments and any family member's participation in a school band since $p = 0.180 > \alpha = 0.05$.

On the churches that they attended, their responses showed that more than half (64.1%) of the pupils were Orthodox Christians, while the remaining (35.9%) were Charismatic Christians. A sensual observation revealed that the use of brass instruments in orthodox churches was much more than in the Charismatic churches therefore resulting in orthodox Christians forming the majority in school band programmes.

The respondents were requested to indicate who encouraged them to play in the school band, and their responses are tabulated in Table 12.

Table 12: Advisors of Respondents to Join School Bands

Advisors	Frequency	Percentage
Music teachers	39	27.5
Father	36	25.4
Mother	24	16.9
Friends	15	10.6
Parents	10	7.0
Nobody but songs play	8	5.6
Aunties	4	2.8
Others	6	4.2
Total	142	100.0

Table 12 shows that 70 (49.3%) of the pupils were encouraged by their fathers or mothers or parents (both). Also, 39 representing 27.5 were advised by their music teachers, while 15 (10.6%) were also motivated to join the school band by friends. A few (8) of them reported that they were encouraged only by the songs the bands played. The study further used the Chi-square test to see whether any relationship existed among 'Advisors' and 'Choice of instruments.' The test showed a significant result suggesting that the person who encouraged a pupil to join a school band contributed to his/her choice of musical instrument(s). On whether or not the occupation of the respondent's father determined his/her choice of instrument, a Chi-square test was conducted. A p-value of 0.003 was obtained which indicated that the relationship was statistically significant at 5%

significance level. This means that the occupation of one's father had an influence on his/her musical instrument choices. This supports McPherson's (2009) finding that parent involvement in music can help students feel more competent and can foster a strong bond between parent and child. However, the same could not be said for the mothers' occupation as $p > 0.05$ as summarised in Table 13.

Table 13: Chi-Square Test

	Value
Chi-square	17.697
df	242
p (2-tailed)	0.0534

The study also analysed the relationship between the choice of musical instruments by the pupils and watching of TV at home. Figure 4 summarised these responses.

Figure 4: Watching of TV at Home

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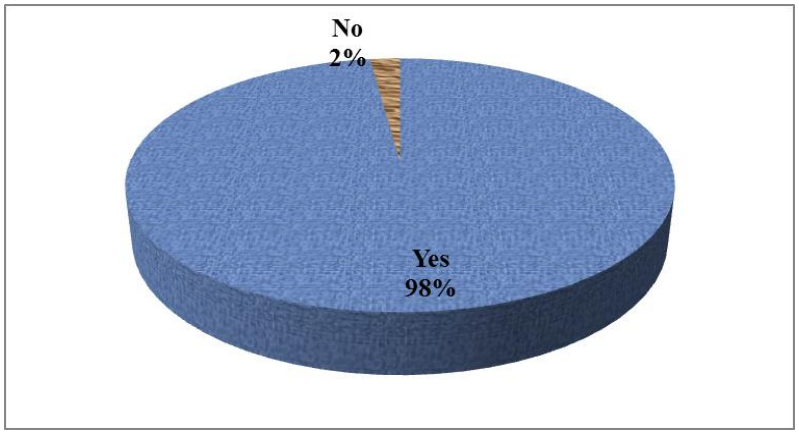

An overwhelming majority (98%) of students claimed to have watched TV at home, while only 3 (2%) said otherwise. A Chi-square test was run to determine if there existed any significant relationship among this and their choice of instruments. A Chi-square value of 4.311 was obtained with $p = 0.960$. Since $p > 0.05$, it can be concluded that watching of TV had nothing to do with the instrument choice of the pupils.

Conclusively, the variables that influenced the choice of musical instruments by the pupils were the advisors (persons who encouraged them to join the school bands), and fathers' occupations.

Pupils' Eligibility to Play in School Bands

The level (class) at which one qualified to join a school band differed from school to school. Table 14 summarized their responses.

Table 14: **Eligibility to Join School Bands**

Class/Form	Frequency	Percentage
Class 2	5	3.5
Class 3	16	11.3
Class 4	40	28.2
Class 5	39	27.5
Class 6	37	26.1
JHS 1	5	3.5
Total	142	100.0

The data revealed that most (28.2%) of the pupils joined school bands at Class 4, while 39 (27.5%) and 37 (26.1%) joined at Class 5 and 6 respectively. Sixteen representing 11.3% of them started at Class 3, while 5 (3.5%) joined the school bands in JHS 1. Interestingly, 5 (3.5%) started very early as Class 2. It can be deduced that there existed no age and level (class) restrictions for joining the school bands.

Discussions

Data yielded some clear-cut instrument preferences and instrument/gender associations slightly different from the findings in my literature review. If given a choice of instrument with no restrains to the selection process, the instruments reported as most preferred would be the trumpet and the tenor drum; however, more males than females in the sample actually play the trumpet the same way more females than males play the Tenor drum. With the exception of the saxophone and French horn, the sample clearly reflects gender bias toward certain instruments. Females tend to play and indicate preference for tenor and snare drums, whereas males tend to play and indicate preference for trumpet, trombone, bass drum, euphonium, tuba, and sousaphone. These data support previous research that has found strong gender associations with certain instruments (Ableles & Porter, 1978; Delzell & Leppla, 1992), although there are some differences between the data of the present study and some of the earlier studies. For example, the popularity of the percussion (snare drum and tenor drum) with

the females that is prevalent in the present study was not apparent in the earlier studies. Reasons for the current popularity of the percussion among females are difficult to discern from the data, but it is speculated that the "myth" that females cannot give birth if they involve themselves in the playing of wind instruments especially the brass (wind) instruments could be an important factor.

Responses regarding influences on the choice of instrument give credence to Gordon's (1984; 1986) assertion that instrument timbre is a strong consideration in instrument selection. The present data suggests that instrument timbre is an important consideration in instrument selection for many students, but this finding is contrary to that of Rideout and Clinton (1987) whose findings does not support this statement.

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Factors other than timbre also influence instrument choices, but ascertaining the relative influence of each is difficult. The fact that the instrumental music teacher, and parents were reported to be important influences in instrument selection resulting in some instruments being preferred over others cannot be over emphasised. Although data presented in this study do not allow for examination of any interactive effects of the timbre and "people" influences, it seems that certain social influences are operating among Accra Metropolis basic school pupils' instrument choices. These social influences seem to be an integral factor in the strong gender/instrument association preferences revealed by the data. For example, it is highly unlikely that most females just happen to prefer the timbre of percussion instruments and that most males just happen to prefer the timbre of brass (wind) instruments. Regardless of what students say in response to

questions about the influence of the various factors, males tend to choose to play instruments that are considered difficult and masculine, and females tend to choose to play instruments that are considered "easy" to play. Practical considerations such as instrument size, availability, cost, and perceived difficulty also have strong influences on instrument selection.

The performances attended by the school band, the types of songs they play and the method of band teaching are great motivators for other students to join. This means the band teacher must do well to perform variety of repertoire and songs selected must be interesting. It cannot be overemphasized that one of the major catalysts for the growth and success of many surviving bands is the repertoire that the group performs and the regular invitation of the band to public performances. Helping the school band embrace diversity and respect differences in repertoire, the band teacher needs to select variety of good repertoire. This will determine the personal satisfaction each individual will receive because of his or her school band music experiences.

School bands in the Accra metropolis are involved in off-campus music activities. Apart from school worship services, morning assembly, speech and price giving ceremony, sports festivals and carol services, the school bands are also invited for off-campus events such as; Independence day celebration, weddings, funerals and other state functions.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the overview of the entire study and the conclusions drawn from the study. It also includes recommendations and suggestions for further studies.

Summary

The choice of musical instrument is crucial to the success of basic school pupils in their instrumental music expeditions. Therefore, the study sought to determine the factors that influence their choices. The study specifically answered the following questions:

- What are the factors that influence pupils in their choice of a band instrument?
- Is there any significance difference in pupils' choice of instrument among the various school bands?
- To what extent does gender stereotyping of musical instrument affect Ghanaian children's choice of musical instrument?
- Is there any relationship between instrument choices and gender of the pupils?
- To what extent does the child's home environment affect his/her choice of musical instrument?
- At what level are pupils eligible to play in the school band?

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Related literature was reviewed under the following sub-headings: musical instrument preferences, sex-stereotyping of musical instruments, directors' roles in instrument assignment, demonstrations, crossing the gender line, and parental involvement and home environment.

The study adopted a descriptive survey design where a questionnaire was designed, vetted, and piloted on 30 pupils of the University of Cape Coast Primary School Band, Cape Coast, during one of their morning rehearsals under the supervision of the Bandmaster and the researcher. The main study involved five randomly selected school bands out of the 14 school bands in the Accra Metropolis in the Greater Accra Region, Ghana.

In all, 142 pupils participated in the study. Before the data collection exercise, the researcher obtained an introductory letter from the Head of the Department of Music of the University of Cape Coast, and with the cooperation of head teachers and bandmasters, the researcher was able to gather relevant data. The data was edited, coded, and analysed using the SPSS package. Data gathered were analysed both descriptively and inferentially. Descriptively, I used the frequencies, simple percentages, means, standard deviations, cross tabulations and graphs. The Chi-square test, t-test, and ANOVA were used for inferential purposes at 5% significance level.

The study revealed that boys overwhelmingly dominated the school bands by 71.1%. The average age of the respondents was 13.1 years. Currently, most of the boys play the trumpet, side drum, sousaphone, bass drum euphonium, and trombone, while the girls play the Tenor drum and French horn primarily.

Major Findings

The following major findings emerged from the study: (a)Music teacher (Mean = 2.60), sound of instrument (Mean = 2.56) and the method of band teaching (Mean = 2.49) were the most influential factors in determining the choice of pupils' instrument choices. (b) There was significance difference in the pupils' choice of instrument among the various school bands since $p = 0.007 < \alpha = 0.025$. (c) The impact of gender stereotyping was great since there existed a statistically significant relationship between gender and the choice of musical instruments. (d) Home environment such as father, the church the child attends and the person who advised a pupil to join a band significantly influenced his/her choice of instrument. (e) There was no age or class restriction on any prospective band member. There were some pupils who joined the school band as early as Class 2 .

Conclusions

The study concluded on the following based on the above findings: The influence of people (teacher, parents, etc.) in the choice of pupils' musical instruments is so immense that this can even outwit their own interest. This could be more disastrous when no preliminary tests/investigations are made before the prescription.

The method of band teaching will also affect the interest of the pupils in his/her choice. If the method is interactive and congenial, many of them will be attracted to instruments they had never been attracted to. The issue of gender

stereotyping continues to influence the choice of musical instruments as the relationship between them is significant. Hence, its elimination is paramount.

Home environment particularly fathers' occupation, and the person who encourages a pupil to join a school band must be of interest in determining what instrument one plays in the band. This is because pupils tend to comply with the directives or suggestions of their advisors and mentors.

Recommendations

In line with the conclusions drawn, the following recommendations were made for possible consideration and implementations:

It is sometimes very necessary for Music teachers to assign students to certain musical instruments against their wish for balancing of parts of their school bands, but teachers must also allow their student to play more than one instrument in the school band so they can satisfy their interests too.

Bandmasters should use simple and friendly methods/techniques to teach their students since this will inspire them.

Element of gender stereotyping concerning musical instrument choices must be eliminated by stakeholders. The choice of band instrument should be based purely on competence and interest.

Parents, especially fathers must be involved in the procedure of instrument choosing but their suggestions must not override the choice of their wards.

Bandmasters must maintain the status quo of no age or class/form restrictions.

Suggestions for Further Studies

The study presented must be viewed as an exploratory study of students' stated reasons for instrument selection and preference. The data regarding the degree of influence of certain factors do not necessarily reflect whether the influence was positive or negative, and there is a need for subsequent research to clarify the positive and negative dimensions of the various influences. For example, the influence of instrument size could work two ways: some students might select a cornet because of its small size, while others might not select a tuba because of their large size. Perhaps an approach using something like double-digit analysis procedure, which allows respondents to express both their "enthusiasm for" and "reservations about" choices or preferences, would enable researchers to sort out both positive and negative dimensions of the various influences (Kuhn & James, 1988).

There is also a need for research to examine the relative influence of selected factors on instrument choices. Perhaps a multiple regression analysis of factors underlying instrument choices could provide such data. Such an analysis will enable researchers to account for the proportion of the final choices that are due to each of the respective predictor variables.

Finally, the clear-cut gender/instrument associations tend to suggest strong sociocultural influences on instrument choices. The strength and pervasiveness of such influences, however, are difficult to ascertain, and there remain many interesting questions for those researchers concerned with societal influences on children's musical interests and preferences.

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APPENDIX A

QUESTIONNAIRE

A STUDY OF BASIC SCHOOL PUPILS' MUSICAL INSTRUMENT CHOICES: A case study of School bands in the Accra Metro.

The purpose of this survey is to solicit information about your choice of the instrument you play in the school band. Consider each question and answer it as honestly as you possibly can. Please respond by checking the appropriate box and/or fill in the blanks as required.

Demographic Information:

1. Sex: ☐ Male ☐ Female
2. Stage/class: ……..
3. Age……
4. Which band instrument do you currently play? ……
5. In what stage/class did you begin playing in the band? ……
6. Which church do you attend?.....
7. Have you ever taken lessons on any musical instrument outside of school?

   ☐ Yes ☐ No
8. If your answer is "yes" to question 7, on which instrument did you take lessons? .....
9. Has any member of your family ever participated in a school band other than you?

   ☐ Yes ☐ No

If "yes", who? ……..(E.g. father, mother, cousin, niece etc)

10. Do you watch T.V.? Yes ☐ No ☐
11. Which instruments do you see your favorite performers on TV play? ……
12. What work does your father/male guardian do? .....
13. What work does your mother/female guardian do? .....

Factors Influencing Instrument Choice

14. To what extent did the following factors influence the choice of your instrument :

		None	some extent	large extent
I.	Father/ male guardian	☐	☐	☐
II.	Mother/female guardian	☐	☐	☐
III.	Friends	☐	☐	☐
IV.	Music teacher	☐	☐	☐
V.	Other teacher's advice	☐	☐	☐
VI.	I like the sound	☐	☐	☐
VII.	I saw it on T.V.	☐	☐	☐
VIII.	Cost of the instrument	☐	☐	☐
IX.	Size of the instrument	☐	☐	☐
X.	Availability of the instrument	☐	☐	☐

XI. Repertoire ☐ ☐ ☐

XII. Method of band teaching ☐ ☐ ☐

XIII. Programs the band attends ☐ ☐ ☐

XIV. Other reasons not listed……...

……

15. If you were asked to choose another instrument besides what you play now which instrument would you choose?…….

Why?……

……

16. Which instrument would you least like to play?.....

Why?.....

17. What instruments should boys play?.....

18. What instruments should girls play?.....

19. Are you playing an instrument that marches your gender?

Yes ☐ No ☐

20. Why do you think your instrument matches your gender?

.....

…….

21. Who encourages you to play in the school band? .....

22. How many times does your school band rehearse in a week?.....

23. Who teaches you the pieces you learn to play?.....

24. Does your band teacher discuss the pieces with you before you learn to play the pieces? YES ☐ NO ☐

25. Does your band teacher play the pieces on CD for you to listen before teaching you how to play them? YES ☐ NO ☐
26. Does your band teacher talk to you about your part in the new piece before teaching you how to play it? YES ☐ NO ☐
27. Does your band teacher discuss with you how beautiful the new pieces are before teaching you to play them? YES ☐ NO ☐
28. Does your band teacher allow you (students) to ask questions about the new pieces you learn to play? YES ☐ NO ☐
29. Do students ask the band teacher questions about the form and structure of the pieces before the band teacher teaches you how to play them? YES ☐ NO ☐
30. What types of pieces do you play?.....
    ……
31. What is the ranking of your school band among bands in Accra metro? If any……..….
32. How many times does the band stage public performances in a term?.....
33. On what occasions/events does the school band perform?
    …….

APENDIX B

APPENDIX C

BASIC SCHOOL BANDS IN THE ACCRA METOPOLIS

SCHOOL BAND		**LOCATION**
Accra Royal School Band		
Alsyd Academy School Band	-	Dzorwulu
Christ the King International School Band	-	La
Day Spring Montessori International School Band	-	Kokomlemle
De youngsters International School Band (Adenta)	-	Kotobabi
De youngsters International School Band	-	Ring road central
Mary, Mother of Good Councel School Band	-	Airport Residential
Sunbean School Band	-	South Odorkor
Rev. John Tei Memorial School Band		
Orion Internatioal School Band	-	Adenta
Providence School Band		
St. Therasa's School Band	-	Bubuashi
St. Peter's School Band	-	Madina
Victory Church School Band	-	Adenta