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## Ignore it at Your Own Peril: Using Music to Enhance the Quality of Education

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### Abstract

Music is an integral part of culture and is crucial in the development of an all round individual. Its influence begins before birth and continues after death. Education, on the other hand, ought to develop the whole person from birth and throughout life. Therefore music and education play a complementary role and cannot be divorced- there is education in music and music in education. Without music, education becomes diluted and degraded. This paper highlights research on music and holistic education of the learner. Holistic education involves the cognitive, physical, spiritual and socio-emotional development. The review revealed that music is indispensable in quality education. The paper concludes by recommending that music be included at all levels to improve quality of education.

**Keywords:** Quality Education, Music, Intellectual/Cognitive Development, Physical/Motor Development, Intellectual/Cognitive Development, Socio-emotional Development.

### Introduction

“Education is not a preparation for life, rather it is the living. Education is the process of living through a continuous reconstruction of experiences” John Dewey

Education is concerned with the development of every person’s intellectual, emotional, social, physical, artistic, creative and spiritual potentials and promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way, even as it seeks to engage students in the teaching/learning process and encourage personal and collective responsibility (Miller, 2000). The Dakar Framework for Action affirmed that quality was ‘at the heart of education’ – a fundamental determinant of enrolment, retention and achievement. It is likely that the achievement of universal participation in education is fundamentally dependent upon the quality of education available (UNICEF, 2000).

According to the World Education Forum (2000) quality can be viewed in terms of input (buildings, physical facilities); in terms of process, (curriculum process, implementation and reform); and in terms of results (development status and learning of children). This paper proposes that quality education should concern itself with quality processes, that is, the

interactions that produce quality outcomes. Quality interactions can be used to bring relevance, depth, challenge and breadth to learning and can lead to quality outcomes (Miller, 2000). But definitions of quality must be open to change and evolution based on information, changing contexts, and new understandings of the nature of education's challenges.

### **Background**

Clark (2007) demonstrates that the established educational structure is not equipped to cope with the major changes taking place in the world today and calls for systemic restructuring while Doll (2003), in an examination of the assumptions of contemporary educational policies and practices makes it clear that our educational ideas have not kept pace with other intellectual currents of the 20th century. One fairly recent development is integration of learning styles theory which postulates that quality education lies in responsiveness to the diverse learning styles and needs of evolving human beings (Miller, 2000). Learning styles in education are the systematic differences in individuals' natural or habitual pattern of acquiring and processing information in learning situations. The core concept is that individuals differ in how they learn (Gardner, 1999a). Learning style theories include the Experiential Learning Theory (ELT), the theory of Learning Modalities (LM) and the theory of Multiple Intelligences (MI) among others. Proponents of the use of learning styles in education recommend that teachers assess the learning styles of their students and adapt their classroom methods to best fit each student's learning style. For the purpose of this paper, the researcher will lean more onto the theory of multiple intelligences.

In his theory of multiple intelligences, Gardner (1983) posits that there are at least eight different types of "intelligences" associated with human beings, rather than just one single quotient. He views intelligence as the capacity to solve problems or to fashion products that are valued in one or more cultural setting (Gardner & Hatch, 1989). One of these "intelligences" is "musical intelligence", which involves the performance, composition, and appreciation of musical patterns. According to Gardner (1999a) these differences confront an educational system that assumes that every person can learn the same materials in the same way. Most of the students would be better served if disciplines could be presented in a numbers of ways. The theory of multiple intelligences challenges teachers to think about its practical uses and applications in schools based on the idea that all students learn differently and must have the opportunity to learn in appropriate ways (Levin, 1994). This paper highlights the necessity for using music intelligence to improve the quality of interactions in the classroom setting.

### **Rationale**

Although music has many proven connections to holistic learning, the state of music in our schools is deplorable. Its status remains low (Digolo, 2003) and it is underused in education (Kenney, 1997). There is an almost total neglect for this subject (Akuno, 2012) and teachers do not include music activities in their teaching (Campbell & Scott-Kasner, 2002). Some teachers shy away from using songs in class (Okongo, 2009) and are seen as not competent in using music activities with learners (Kocabas & Ozeke, 2012). Most school programs offer few opportunities for exploring and experimenting or interacting with musical sound and opportunities for musical play are often sacrificed to teacher-controlled activities (Tsunady, 2001). This situation dilutes

the classroom interactions, hence degrading education. Could this state in our schools be as a consequence of lack information? Could this situation change if practitioners were aware of the benefits of music in the course of learning?

### **Guiding Questions**

The research was guided by the following research questions

- i) What is the importance of music to the learner?
- ii) Can music be used for intellectual/cognitive development?
- iii) Can music be used for physical/motor development?
- iv) Can music be used for spiritual development?
- v) Can music be used for socio-emotional development?

### **Literature Review**

The review of literature examined the research in music under the following sub-headings:

- Importance of music to the learner
- Music for intellectual/cognitive development
- Music for physical/motor development
- Music for spiritual development
- Music for socio-emotional development

### **Importance of Music to the Learner**

Music is an integral part of a peoples' culture. Much of culture is absorbed in music and has been for centuries. Indeed, music is culture. If education is a selection from culture as Lawton (1973) suggests, then including music in our curricula activities is inevitable. Just as all children are born with the potential to learn to speak and understand language, all children are born with the potential to learn to perform and understand their cultural music and that inborn potential can atrophy if neglected (Levinowitz, 1998). Music as a 'tool' is often overlooked though it has many proven benefits and connections to the body, brain and learning that are important and can aid in academic achievement (Merrell, 2004).

Undeniably education should play a significant role in imparting knowledge, skills and values capable of changing peoples' attitudes towards nature. However it should also be an enjoyable process to both the learner and the teacher. Quality education should therefore utilize what is interesting to the learner. Music can be, and is used to flavor the learning environment and make learning interesting to the learner.

Olson (2011) notes that music is an important and exceptionally useful tool in the way we learn and to deny its power is to squander a truly great resource. Music has positive contributions to human development in terms of feeling the sense of achievement, giving self confidence, learning developmental skills, enhancing self-esteem, having relaxation and teaching academic concepts (Kocabas & Ozeke, 2012). It is used as a bridge to integrate other subjects (Okongo, 2007), makes learning easier (Zinar, 1987), helps in "learning concepts and skills more easily, enjoying the learning activities and gaining social skills such as participating in group activity, following instructions and leading a group" (Kocabas & Ozeke, 2012 pg 87). Music is valuable in

its own right and enhances creativity as well as social, physical, intellectual and emotional development (Seefeldt & Barbour, 1998).

### **Music for Cognitive Development**

The use of music for cognitive development is supported by research studies. In one such study, an analysis of ten years of SAT data showed that students who took four years of arts courses in high school earned the highest scores on both the verbal and math SAT, but overall, students taking any arts courses scored significantly higher than students who took no arts courses. Of these students, those who took music courses earned the highest math and second highest verbal SAT scores (College Board, 2010). Another study by Chesky and Hipple (1997) consisting of 359 subjects found out that music majors felt more prepared for success in college than non-music majors. This readiness was attributed to the music majors' discipline and focus developed via intense practice and performance routines prior to college.

In a study in 1977, Andrews investigated the effects of integrating music in reading achievement using two intact classes balanced for gender (11 males and 8 females). The study found out that reading attitudes improved when coupled with music. In support, a meta-analysis by Butzlaff (2000) involving 30 studies demonstrated a reliable association between music instruction and standardized measures of reading ability. Even though the connection between music and performance on the SAT verbal test had already been established, this study found comparable results across a larger set of studies. This adds credence to the music-reading correlation.

An experimental study by Bilhartz (2000) on the effects of early music training on cognitive development found a strong link between music and spatial thinking. Preschoolers who received instruction in singing and pitch recognition outperformed their peers in the Bead Memory subtest of the Stanford-Binet Intelligence Scale, which measures abstract reasoning abilities, including visual memory, imagery and sequencing.

Through a series of experiments Wallace (1994) found that music is an effective tool in the learning and retrieval of information. When the researcher presented students with three verses of text put to music, the students had better recall of the text than when it was presented in spoken form, without music. Each of the three verses in this case was sung with the same melody. When the music was already familiar to the students, it worked quite well. In this study, Wallace (1994) showed that repetition and familiarity were crucial in information retrieval. With music, information is retrieved sequentially from memory, with fewer gaps and missing sections in the text and if the melody is simple and repetitive with a definite rhythm through the verses, it allows for better recall.

In one study of musical effects on memory, visual cues (filmed events) were paired with background music. Later, participants who could not recall details of the scene were presented with the background music as a cue and recovered the inaccessible scene information. Music has also been shown to improve verbal memory in children and adults (Ho, 2003). Participants trained in music and participants without a musical background were tested for immediate recall of words and recall of words after 15 minute delays. Word lists were presented orally to each participant 3 times and then participants recalled as many words as they could. Even when matched for intelligence, the musically trained participants tested better than non-musically trained participants.

Research has also shown positive effects of using music in the course of teaching. Rauscher & Zupan (2000) propose that integrating music education in early childhood curriculum can enhance young children's performance of spatial-temporal tasks. This is in agreement with other studies on active engagement with music and impact on visual-spatial intelligence.

### **Music for Socio-emotional Development**

Music forms part of the structure or fabric of a society; and nursery rhymes form part of a culture's linguistic customs and traditions, it is therefore not surprising to find that music is crucial for a child's social development. Teachers, using music activities, can guide young children's social development and can be active mediators of children's social competence. Music activities encourage participation, sharing, and cooperation; and form part of the early bonding process and part of the basic enculturation of childhood (McAllester, 1991). Through a simple musical activity such as the group singing games, children learn to subordinate their individual wishes to the goals of the group, that is, the essence of cooperation (Isenberg & Jalongo, 2003)

According to Robinson (2002), music helps children's socio-emotional development in that music experiences and interactions with other children provide children who have difficulty initiating an interaction with another child the motivation and context for practice of this skill. The acquisition of social skills is very significant during early childhood, and the ability to develop social relationships with peers has long been regarded as one of the most important development tasks of childhood (McClellan & Katz, 1992). Beginning very early in life, music exists at the core of family interactions and forms the basis for social and emotional communication (Zur & Johnson-Green, 2008). Researchers have documented the effective use of music to enhance children's social skills, especially when interventions and instruction involve the use of participatory activities (Standley & Hughes, 1996). Music has been recognized as an effective way to foster children's social behavior. Children who are lacking social skills can learn from children who are socially competent (Wortham, 2002).

Beyond such practical applications, research has shown that music instruction in the classroom has a positive impact on children's self-regulation. A study on aspects of attention and perseverance by Scott (1992) showed that participation in music lessons led to significant achievement in measures of self-regulation as compared to the achievements of students participating in movement classes, preschool without music instruction, or no preschool at all. Another study conducted with Head Start preschoolers taking part in a creative dance and movement program revealed positive effects on the children's social competence and behavior, including self-regulation skills (Lobo & Winsler, 2006). A publication of the Arts Education Partnership, in summarizing a body of research devoted to the exploration of "the use of music as a tool for social-emotional development and behavior modification in schools" affirms "several striking indications of positive effects on both academic performance and behavior (Deasy, 1991). There is compelling evidence linking social emotional development and school success and hence the necessity for this study.

### **Music for Physical/Motor Development**

Physical skills can be enhanced by using rhythmic accompaniment. Painter (1966) observed positive results in performance accuracy and endurance when music was rhythmically

synchronized with motor performance and Beisman (1967) found that throwing, catching, jumping and leaping improved when children participated in a programme involving rhythm, while Brown et al (1981) also found that an integrated music and PE programme improved preschoolers motor performance more than movement exploration. Derri et al (2001) investigated the effect of a 10 week music and movement programme on the quality of locomotor performance in children of 4-6 years and found that the experimental group improved on galloping, leaping, horizontal jump and skipping. A further study showed that the programme compared favorably with free play activities (Deli et al., 2006). There is also evidence that learning to play an instrument improves fine motor skills (Schlaug et al., 2005).

There may be particular health benefits for singing in relation to the immune system, breathing, adopting good posture, improved mood, and stress reduction. Most of the researches have been on adults, but the results can still be generalized to children. An exception is Ashley (2002) who studied choir boys aged 10-14 singing in a major city centre parish church. The boys showed deep appreciation of and engagement with music and exhibited many aspects of personal wellbeing including the social competence to combat a macho male culture. In a study of members of a university choir, Clift and Hancox (2001) found that 58% reported having benefited in some physical way, 84% responding positively in relation to health benefits mainly referring to lung function, breathing, improved mood, and stress reduction. A deeper analysis by Clift & Hancox (2001) identified 6 dimensions associated with the benefits of singing: well-being and relaxation, benefits for breathing and posture, social benefits, spiritual benefits, emotional benefits, and benefits for heart and immune system. In a subsequent study, Clift et al (2008) analyzed five studies which had used the immune system marker salivary immunoglobulin as a measure of the immune system's effectiveness and found out that four of them reported increase in this antibody associated with singing.

The range of health and well-being benefits of participating in singing include: physical relaxation and release of physical tension; emotional release and reduction of feelings of stress; a sense of happiness, positive mood, joy, elation, and feeling high; a sense of greater personal, emotional and physical well-being; an increased sense of arousal and energy; stimulation of cognitive capacities –attention, concentration, memory and learning; an increased sense of self-confidence and self-esteem; a sense of therapeutic benefit in relation to long-standing psychological and social problems; a sense of exercising systems of the body through the physical exertion involved, especially the lungs; a sense of disciplining the skeletal-muscular system through the adoption of good posture; being engaged in a valued, meaningful worthwhile activity that gives a sense of purpose and motivation (Clift et al., 2008)

Motor function is the ability to use small, acute muscle movements to write, use a computer, and perform other physical activities essential for classroom learning. The parts of the brain associated with sensory and motor function are developed through music instruction, and musically trained children have better motor function than non-musically trained children. This was demonstrated by Schlaug et al (2005) in a study in which musicians had a 5% more development on fine motor skills than did the non-musicians.

Music and movement activities promote fine motor skills, large motor skills, and the sensorimotor, eye-hand coordination skills. This is especially true of nearly all singing games (Robinson, 2002).

### Conclusions and Recommendations

In conclusion, music provides not only the opportunities for aesthetic and creative development, but also social development and social skills. Music also affects a child's approach to learning by increasing enthusiasm for and engagement in learning new skills (Ritblatt et al., 2013), thereby contributing to quality interactions. Based on the findings emanating from reviewed research, music should be included at every level of learning and teachers should incorporate music as a teaching tool in all lessons. This will ensure the learners enjoy the class interactions and contribute to quality education.

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