

**CAN A NON-TRADITIONAL APPROACH TO
MUSIC DEVELOP THE LEARNING POTENTIAL
OF PRIMARY SCHOOL LEARNERS ?**

by

Maria Emmerentia van Niekerk

Submitted in fulfilment of the requirements for the degree

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SYNOPSIS

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STUDY LEADER : DR ANNEMARIE VAN LOGGERENBERG

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According to various educationalists we have reached the end of the modern era and are facing the postmodern era. It has become necessary to explore the postmodern era to bring about an understanding of the current world the learner develops in. The postmodern learning area is an active, integrated, learner-centred learning environment where learners learn through communicating with peers and educators, by choosing their own learning activities and where own internal experiences, rather than external objectives are important.

Music bears the unique quality of possessing the potential of developing the whole person - intellectual, emotional, spiritual and psychomotor, the whole brain and the multiple intelligences of learners.

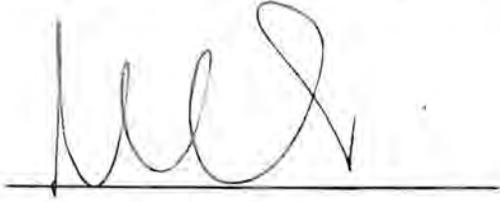
By means of a quantitative and qualitative research approach an investigation was launched into a non-traditional approach to music in the music and general learning environment. Questionnaires which included open-ended questions, as well as semi-structured interviews were administered to educators and primary school principals.

The abovementioned investigations lead to findings and conclusions. It was found that educators were aware of the development of the whole person, whole brain and multiple intelligence, but the level of implementation was mostly on the lower levels of learning performance.

Recommendations were made by means of the designing of a DLP-Conceptual Framework for Music. Secondary recommendations were offered as well as recommendations for further research in fields related to the topic of this study.

DECLARATION

I declare that the dissertation, which I hereby submit for the degree M.Ed. (Curriculum Studies) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at another university.



MARIA EMMERENTIA VAN NIEKERK

WORD OF THANKS

Dr Annemarie van Loggerenberg - study leader

Piet van Niekerk, Pieter-Peet van Niekerk, Nardo van Niekerk - husband and sons

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KEYWORDS

Postmodern paradigm

Transformational curriculum

Arts and Culture learning area

Non-traditional approach to music

Whole person

Whole brain

Multiple intelligence

Extracurricular involvement

Development of learning potential

CHAPTER 1

INTRODUCTION, CONTEXTUALIZATION OF THE STUDY, STATEMENT OF THE AIM, RESEARCH METHODOLOGY, SIGNIFICANCE AND OVERVIEW OF THE STUDY

1. INTRODUCTION

In the journal *The South African Music Teacher* (2000:13) Professor Kader Asmal claims that the value of music in the general learning experience of learners cannot, and dare not, be underestimated. The researcher shares this perception and investigated a non-traditional approach to music to develop the leaning potential of primary school learners. South Africa, as the rest of the world, is in a process of transformation. The modern paradigm of the past, is being replaced by a postmodern paradigm, with profound implications for education. Postmodern curriculum experts believe that a **transformative curriculum model** is necessary to deal with the postmodern learning environment. A transformative curriculum is about learners acquiring insight which is achieved through activities that develop the abilities of the learner. This has implications for all curricula - also the school curricula for the arts and music.

This study argues that traditional Class Music can be extended to perform a non-traditional role where the emphasis is on **developing the learning potential of learners**. Developing the learning potential of the learners is vital in the postmodern world in which the learners have to live and learn in. It is argued that music has the innate qualities to develop learning potential by developing the whole person - intellectual, emotional, spiritual and psychomotor abilities of learners. This study aims at exploring the development of learning potential of the primary school learner, through music, against the background of a postmodern world. The next section sketches the context of the study.

2. CONTEXTUALIZATION OF THE STUDY

2.1 LEARNING PARADIGM CHANGE FOR THE 21st CENTURY

According to Kirsten (1987b) and other educationalists we have reached the end of the modern era and we will have to find new resources upon which to shape a new society and learning environment. Kirsten (1987b:18) contends that:

Generally speaking it is a sophisticated articulation of the disseminated sentiment that the modern human being has exhausted its cultural, social and political resources and has reached the end of an era (translated).

South Africa faces a change towards a new paradigm, as well as a new education system. The South African education system of the past was seen by many as an irrelevant content based curriculum which did not reflect the life experiences, culture and traditions of the vast majority of the diverse learner population. There was an argent need for change in education and training in South Africa. These perceptions resulted inter alia in a new curriculum - Curriculum 2005 (C2005), underpinned by a philosophy which is labelled transformational outcomes-based education (OBE).

2.2 NEW CURRICULUM FOR SOUTH AFRICA: CURRICULUM 2005

On 24 March 1997 Doctor Sibusisu Bengu, Minister of Education, announced a new national curriculum for South Africa - Curriculum 2005. The new curriculum has been phased in from 1998 and is driven by the vision of lifelong learning for all South Africans. The new curriculum is a shift from a **content-based** to an **outcomes-based** curriculum. The aim is to equip all learners with knowledge, competencies and orientations needed for a successful future life. The vision for the future is to educate thinking competent citizens (Department of Education [DoE] 1997d:1) as mentioned in the following quotation:

The current scenario in South African education, is that of traditional curricula subjected to a time constraint and driven by the calender. It is a paradigm of structured and inflexible curriculum underpinned by poor quality educational materials. One in which we do not develop a vision for citizenship and not educate for the nation, so that education would have a social function and environmental determinism (DoE 1997c:6).

The South African government, through the South African Qualifications Authority (SAQA), has established an outcomes-based education system (OBE), around a National Qualifications Framework (NQF). The objectives of the NQF are to reconstruct and develop the current education system. Seven critical outcomes and five additional guidelines were adopted by SAQA, which serve as the point of departure for each of the eight learning areas. The main design features of C2005 are the critical outcomes, 66 specific outcomes, range statements, phase and programme organizers, assessment criteria, performance indicators

and expected levels of performance.

The 66 specific outcomes have been chosen for the eight learning areas to provide guidance to educators to design learning programmes or learning experiences. The learning programmes are the learning activities which the learner will be involved in, working towards the achievement of one or more specific outcomes. The learning programme is organized by means of a phase organizer (prescribed by policy) to encourage a holistic approach and to keep the focuses on the critical outcomes. A programme organizer assists in focusing on the concepts that the learning programme covers. Assessment takes place by means of assessment criteria which are broad criteria for providing evidence that the specific outcomes have been achieved. Range statements are part of assessment to indicate the scope, level of complexity and parameters of the achievement and performance indicators provide more detailed information on what the learners should know in order to show achievement (DoE 1997d:18-22).

Claassen (1998:35-36) clarifies the assessment policy of C2005 by claiming that the traditional tests and examinations are no longer the only methods used to assess learner performance in a summative way. Continuous assessment takes place with the aim of displaying a continuing awareness of the progress of the learner over a period of time. This approach accommodates all components of day to day learning and therefore much of that which cannot be easily measured and controlled by test and examinations. Methods such as teacher assessment, learner assessment, group assessment and peer assessment are utilized during formative assessment of learners.

Malcolm (Jansen 1999:102-105) analyses C2005 and claims that the South African critical outcomes are a mixture of competencies and role performances (the future role of the learner in adult life) where the specific outcomes are derived from the critical outcomes. The South African specific outcomes give a much broader definition of outcomes to the learning areas than for example those in Australia. The learning areas are defined by only three levels and the learner-centred approach of the South African model gives rise to a constructivist approach to learning. What is not clear about the South African model however, is whether it is an organic and a constructivist model (as in Australia) or a mastery learning model (as in the USA), according to Malcolm. In a mastery learning model, the learner must master or demonstrate the outcome and may repeat until the outcome is reached. In an organic model the outcomes are open-ended and educators design activities that cross levels of achievement. It must be noted however, that the existing uncertainty about assessment

underpinning the South African model, may lead to the input (activities and themes/topics) of governmentally published learning programmes. This position leads to educators setting own standards, which implicate that the standard is determined by the input (activities and themes/topics) and not by the outcome.

The implementation of C2005 presented educators with various problems and the Minister of Education, Professor Kader Asmal, announced the establishment of the Review Committee on C2005 on 8 February 2000. The report (DoE 2000:1-6) claims that Curriculum 2005 "*and not outcomes-based education*" had been reviewed and investigated. It was found that the educators have a shallow understanding of the OBE principles that underpin C2005. The complex language and confusing terminology used in documents, overcrowding of the curricula and the negligence of conceptual coherence are part of the basic design and structure flaws of C2005.

The main recommendations of the report fall into three categories, namely structure and design of the revised curriculum, implementation of the revised curriculum and pace and scope of implementation. The four key design features in the section on structure and design of the revised curriculum, recommend firstly that the critical outcomes should provide the learning goals, secondly that the learning area statements specify the learning area, thirdly that the learning outcomes specify core concepts, content and skills to be taught in each learning programme and fourthly that assessment standards describe the level of knowledge and skills expected and range for each outcome. These design features replace the specific outcomes, assessment criteria, phase and programme organizers, range statements, performance indicators and expected levels of performance. It is recommended that a more manageable time-frame should be phased in for the implementation of C2005. Adequate time should be provided for the changing of the curriculum structures. A Draft Revised National Curriculum Statement for Grades R-9 was introduced in July 2001.

The complexities of C2005 were dealt within the Draft Revised National Curriculum for Grades R-9 by reducing the design features of the curriculum to propose a simplified version of the original design. It is a National Curriculum Statement with the curriculum requirements at various levels and phases. This document "*strengthens and consolidates Curriculum 2005*" which was introduced in 1998.

The Draft Revised National Curriculum Statement (DoE 2001:1-2) reduces the design features of C2005 to critical and developmental outcomes, learning outcomes and

assessment standards. The learning outcomes are similar, but fewer than the original 66 specific outcomes. The assessment standards replace the range statements, phase and programme organizers, assessment criteria, performance indicators and expected levels of performance.

Other elements of the Draft Revised National Curriculum Statement for Grades R-9 (DoE 2001:39-40) are that the qualification framework defines the kind of learner to be produced at the General Education and Training band and it is derived from the critical and developmental outcomes and linked with the learning outcomes and assessment standards. The assessment standards allow for bench marking performance in Grade 3, 6, and 9. Integration has a new approach. Different learning areas deal with integration in the way best suited to the learning area. There is progression from grade to grade with some degree of emphasis on the same issues from year to year.

Up to this point, the position of Class Music in C2005 has not been addressed. This will be done in the following section after the traditional position and role of Class Music in the pre-C2005 curriculum have been discussed. In the following section the tenants underlying traditional Class Music will be analyzed by means of perusing Class Music syllabi (Transvaal Department of Education [TED] 1978 & 1995), study guide no. 9, subject policies (1992a) and related documents from the previous Transvaal Education Department. Documents and references from the Transvaal Education Department will be used since traditional Class Music figured in the traditional curriculum. Consequently the terminology belonging to the previous education system will be used in the text. It is important at this stage, to clarify the different terminology employed in this research study.

- ✓ *Class Music* is used in the above-mentioned documents and refers to the activities in the music classroom. The term *Class Music* will be used in this study when referring to the traditional curriculum.
- ✓ The term *music learning environment*, includes Class Music and Arts and Culture, but also with an extended meaning. It refers to the extended use of music as a group activity with diverse functions, including music therapy, memorizing of learning content with the help of music etcetera. It may be an inter- or extracurricular involvement. It also refers to the extended role of the music educator to fulfil these extended functions. *Music learning environment* refers to the complete or broad music involvement of the school: in the classroom, but also wherever music is

employed in the learning environment, which include all learning areas, performances, sport activities etcetera.

- ✓ *Learning environment* refers to the general learning environment in school context.

2.3 THE TRADITIONAL POSITION OF MUSIC IN THE SOUTH AFRICAN LEARNING ENVIRONMENT PRIOR TO C2005

Education in South Africa was characterized by racial and ethnic segmentation. Hauptfleisch (1998:12) explains that although a central education department existed, nineteen education departments were working under fourteen cabinets. These departments employed their own policies and regulations in terms of at least twelve education acts. Although Class Music education was compulsory, the fragmentation lead to uneven music education standards across the provinces. After a change of government in 1994 the education department was streamlined and reorganized into one education department. It must be acknowledged however, that the researcher's experience of twenty years in the field of general education and Class Music are mainly from the previous Transvaal Education Department, but the point of departure is fairly representative of music education in South Africa. Although the documents covered the different aspects of Class Music, only aspects relevant to this study will be discussed here.

The Syllabus for Class Music for Primary School (TED 1978:1-4) recommended a practical approach to music-making which was then followed by regular practical application in reading and listening exercises. The accepted approach was "*hearing, doing, seeing*". The learners listened to a song, performed movements to the song or accompanied the song by playing instruments and were then introduced to the symbols or notation of music. The learner's knowledge and understanding were supposed to increase gradually and finally a standard had to be reached where the learners were able to "*look at a piece of printed music and form a mental image of what it should sound like*". The learners had to learn to **read music at the earliest possible stage** and then to sing or play from the score.

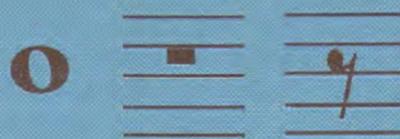
When analyzing the 1978 syllabus for Class Music, it becomes clear that the focus was mainly on the acquiring of knowledge which in the traditional music terms related to the reading of printed music. High standards of achievement were expected from the learners as they had to learn to read music in two periods of thirty minutes per week only. The following example is from the standard one (grade three) syllabus (TED 1978:23):

Rhythm and time

Sight-reading exercises for revision of note-values and rests learnt in Grade 3



Presentation and addition to the above of the following:



Simple duple, triple and quadruple time -
bar lines and time signatures

The music specialists placed the study of music on par with the so-called academic subjects through a rigorous aim of note reading. It must be acknowledged that an attempt was made to involve the learners actively, but the teacher-centred approach of the traditional curriculum did not provide the learner with the opportunity to construct own meaning. The intentions spelled out in the document did not, in all cases, realise in class practice methodology.

Study Guide no.9 (TED 1989:1-6) was issued to provide guidelines on the organization, administration and subject methodology of Class Music. The practical experience of musical concepts prior to the visual presentation was once again advocated. This document provided the music educator with typical activities and specific guidelines which had to proceed the theoretical aspects.

A change of focus, away from the transferring of rigid content to a more **learner-centred** approach, was apparent in Study Guide no. 9 (TED 1989:7-8). It was acknowledged that learners had different values, lifestyle experiences, different learning styles, experience music in different unique ways, as well as different needs. Although various suggestions were made, the document still did not depart from the teaching of music notation. Study Guide no. 9 (TED 1989:13-16) stated that teaching this skill had to take place naturally in the course of all music

activities. It was advised that the learning of a new note had to take place by learning the note symbol and immediate "*isolated drilling*" had to follow. This is an indication that the learner still had little opportunity of constructing own meaning and of developing own learning potential.

A Syllabus for Class Music for Standards 5, 6 and 7 (grades 5, 6 and 7) was introduced and implemented in 1991 and a Subject Policy for Class Music for Primary and Secondary Schools was introduced in 1992. The Subject Policy for Class Music for Primary and Secondary Schools (TED 1992a:1) stated that Class Music had the quality to develop **innate music potential and the motivation, knowledge and skills for lifelong participation in music activities**. It is also stated that the ability to apply music knowledge and skills to new music experiences had to be cultivated. Interesting was the mentioning of increased insight into the appreciation of own and the heritage of others. Class Music had to provide opportunities for spontaneous socialization and involvement in music activities. The Subject Policy (TED 1992a: 5-7) mentioned that the unique need of the target group had to be taken into account. This was a departure from the previous emphasis on note reading.

A further step away from the previous perceptions was taken with the introduction of The Regional Course on Class Music - Successful Class Music of 1992. The music educator was provided with extensive directions on implementing the Subject Policy for Class Music for Primary and Secondary Schools (1992a). It seemed when studying this document that the approach to Class Music has undergone a decisive change. It was a learner-centred approach, which recognized the life experiences of the learner. Listening skills had to be executed by means of listening guides, questionnaires and a variety of activities, the **cultural diversity** had to be acknowledged by not only including western art music in the curriculum, but also folk music and popular music. It was suggested that pop music should be used as a *torch* to illuminate and made relevant concepts which were common to all kinds of music. (TED 1992b:3-10).

It was recognized that traditional methods of teaching music notation as a separate entity distracted from the more enjoyable and practical aspects of Class Music and had led to negative feelings about Class Music notation. It was still perceived as an important skill, but it had to be included in various activities (TED 1992b:97-98).

In summary of the traditional curriculum it can be said that the Class Music syllabus of 1978 with its teacher-centred emphasis on music notation developed to Successful Class Music of 1992 where music notation was perceived as a skill to be included in various activities. The

music learning environment was active, learner-centred and cultural diversity was recognised. The developing of learning potential was mentioned in the subject policy of 1992. It seemed as if the music curricula had good intentions, but never realised fully at classroom level.

Hauptfleisch (1998:12) supports the view that little of the broader scope materialized in the general music education curriculum over the past decade, despite increasing attempts to include jazz, African, Indian and other music.

The historical imbalances of the education system of South Africa lead to a system of inequity and a situation where many learners were deprived of the benefits of Class Music education. Du Plessis (1995:15-17) argues that the period of transformation provides the music educator with a golden opportunity to rethink the present system of music education and identify outdated structures and thought not conducive to class music education. Music education is the right of all learners in a full and appropriate education. However, Class Music is in the process of being rerouted to arts education and the question is being asked if learners are really only "*appreciative consumers of music and arts*", or do they have the right to the enriching experience of good music education? Du Plessis (1995:17) claims that music teaching in schools should primarily be aimed at encouraging children to think.

2.4 MUSIC LEARNING ENVIRONMENT AFTER 1994

After 1994 the first indication of change to the traditional music curriculum was in the form of amendments to existing Class Music syllabi. Guidelines with regard to the Amendments to the existing Syllabus for Class Music, Grade 1 to Standard 10, was published by the Education Department. The one aspect of interest mentioned in these amendments document (DoE 1995b:1-5) was the development of musicianship of all learners through **active musical problem solving**. Problem solving is one of the generic outcomes included in the SAQA critical outcomes. This statement was a reaffirmation that Class Music should not be reduced to theoretical learning of content only. The approach to Class Music was active, learner-centred and included problem solving. It may be interpreted as a movement in the direction of employing music in the learning environment to develop learning potential of learners. But, although mentioned, problem solving was absent from the rest of the document.

Later an interim core syllabus was published: Supplementary Material. Interim Core Syllabus 1995. Class Music, Grade 1 to Standard 10 (DoE 1995a:27-32) claimed that music and dance were "*indispensable for the complete child - the child must develop brain, body and intellect*

(*spirit*)". This statement recognized the innate quality of music to develop the whole person and is in agreement with this study which argues that a holistic approach to the learner contributes to the development of learning potential. Another aspect mentioned in the document was **creative music activities**. It stated that creative activities had to be adjusted to the circumstances of each school and group of learners. Creative activities needed to be integrated with other music activities, such as singing, moving to music, playing the instruments, listening to music and the reading and writing of notation (DoE 1995a:59-73).

The emergence of a new conceptualization of Class Music and acknowledgement of cultural and intellectual diversity, diversity of capability and diversity of interests were noticeable. It was an active, learner-centred learning environment which recognized the emotional, social and intellectual needs of the learners. This approach to Class Music showed the potential to realise the aim of this study - the development of learning potential through music.

An increasing amount of research evidence suggests that music can improve the development of learning potential of the learner. Bresciani (1974:85) maintains that a music programme at primary school level which focuses on thinking provides suitable opportunities for the development of the growing intelligence of the young child. At the centre for Neurobiology of Learning and Memory at California's UC Irvine campus, a study measured the impact of listening to Mozart before writing a test. The learners listened to Mozart's Sonata for Two Pianos in D Major for ten minutes. The learners who listened to the Mozart music for ten minutes improved their marks in spatial and abstract reasoning. On an intelligence test the gain was nine points after only ten minutes. Those learners that listened to relaxing music or silence either improved their marks slightly or stayed the same. Certain music can improve attention, learning, motivation and memory (Jensen 1995:218).

Bradman (1997:5) agrees on the important and integral links between music and other spheres of intellect. She maintains that being involved with the arts in general can stimulate our brains to be more responsive and effective in the study of other seemingly unrelated subjects. Educators should explore the whole brain approach to learning and the role music plays in the approach. It is a theory that should be explored by teachers, but Armstrong (1994:77) feels that "*educators, however, have been slower to recognize the importance of music and learning*".

Jensen (1995:218) explains that music activates the left and right brain hemispheres, but the right hemisphere is more activated through music. It elicits emotional responses, receptive or

aggressive state that stimulates the limbic system. The limbic system and sub cortical regions are involved in engaging musical and emotional responses, but more important is that research has documented that the limbic brain is responsible for long-term memory. This means that if learning is imbued with music there is greater likelihood that the brain will encode it in the long-term memory.

However, traditional Class Music was phased out and has since been introduced as the learning area Arts and Culture, one of eight learning areas. A discussion document, Curriculum 2005 (DoE 1997b:166-167) was introduced, but a concern when studying the discussion document is that although the development of human resources is mentioned as *a crucial component* in the learning area of Arts and Culture, the significant role of music in developing learning potential has greatly been overlooked. It mainly addresses the past imbalances by transforming a European Arts and Culture curriculum to an African Arts and Culture curriculum. The document maintains that South Africa was historically dominated by Western/European Arts and Culture and states the following:

This institutionalized bias determined the value and acceptability of certain cultural practices over others. This in turn influenced which art forms and processes were acknowledged and promoted, and which were relegated to a lesser status (DoE 1997a:167).

The Draft Revised National Curriculum Statement for Grades R-9 (DoE 2001:60-61) was introduced and again emphasised that "*Arts and Culture in education have historically been made accessible to a privileged, selected few*" and the core issues are mainly related to the incorporation of culture into the arts.

It is against this backdrop of the Class Music environment that the next section will discuss the role and position of music in C2005.

3. ARTS AND CULTURE LEARNING AREA IN C2005

Class Music is included in the Arts and Culture learning area. The Arts and Culture learning area has an **interdisciplinary approach** which includes the following art forms - dance, drama, music, art technology, media and communication and the visual arts. Music has no specific outcomes, but shares its outcomes with the other art forms. This is a complete deviation from the provincial syllabi and schemes of work which educators followed under the

traditional curriculum. Music has no separate or distinct status in the learning area. Hauptfleisch (1998:13) warns however, that while the inclusive nature of the learning area impresses, the danger exists of invalid approaches to arts education where music is abandoned in favour of a "*potpourri or topical approach*".

The following specific outcomes are designed and developed for the Arts and Culture learning area (DoE 1996:168-171):

- ✓ Apply knowledge, techniques and skills to create and be critically involved in arts and culture processes and products - the skills are necessary for specialization in further education and training, those leaving formal education as well as adult basic education and training graduates. Learners from the general education and training certificate should also be engaged in various art and culture expressions.
- ✓ Use the creative processes of art and culture to develop and apply social and interactive skills - a unique forum for social development of learners.
- ✓ Reflect on and engage critically with arts experience and work - the examination or analysis of art processes or products should be viewed from the broad cultural context. Reflecting in and on arts must be encouraged.
- ✓ Demonstrate an understanding of the origins, functions and dynamic nature of culture - cultural expressions have similar intentions, but are expressed in unique and diverse ways.
- ✓ Experience and analyze the role of the mass media in popular culture and its impact on multiple forms of communication and the expressive arts - there are many different ways of communication. The mass media and popular culture have a strong impact on this learning area.
- ✓ Use art skills and cultural expressions to make an economic contribution to self and society - this outcome wants to redress past imbalances.
- ✓ Demonstrate the ability to access creative arts and cultural processes to develop self esteem and promote healing - it provides therapy for healing of traumatised learners and learners with special needs.

- ✓ Acknowledge, understand and promote historically marginalised arts and cultural forms and practices - the historical domination of Western or European art and culture must be redressed.

It must be mentioned here that C2005 is phased in according to a specific time frame and in the meantime the Draft Revised National Curriculum Statement for Grades R-9 was introduced and the specific outcomes were reduced to four only:

- ✓ The learner is able to create and present work in each of the art forms.
- ✓ The learner is able to reflect critically on artistic and cultural processes and products in past and present context.
- ✓ The learners are able to demonstrate personal and interpersonal skills through individual and group participation.
- ✓ The learner is able to analyze and use multiple forms of communication and expression in arts and culture.

Assessment standards for each outcome and each grade are supplied in the new document and the document warns that they should not be interpreted in a linear fashion, but rather repeated in a spiral development process (DoE 2001:42-43). The next section quotes from Curriculum 2005. Discussion document, which is mainly the same as the Draft Revised National Curriculum Statement for Grade R-9.

The following information is relevant for interpreting the specific outcomes designed for the learning area Arts and Culture. It is stated that "*embedded in all the specific outcomes is the element of redress for past inequities in Arts and Culture Education and Training*" (DoE 1997b:168). Areas of redress are the oral traditions, such as oral literature, praise poems and story telling. Multiple forms of communication, including mass media are mentioned in the document. **Communication** is also referred to as literacy - *visual literacy, spatial literacy, movement, aural literacy, oral literacy and kinaesthetic literacy*. Literature is viewed as a form of art and cultural expression and an integral part of arts such as drama. Arts offer unique ways of learning across the curriculum as an integrated art approach, as well as getting skilled in various art forms. It is reinforced that throughout this learning area work takes place within a broad context, ranging from individual to group experiences.

As mentioned (DoE 1997b:166-167) Arts and Culture education is about creative growth and development related to the needs of the learners and the community. The vast majority of learners were deprived of the meaningful experience and opportunities offered by Arts and Culture education. Although the deprived position of the learners and whole person development as part of life - the spiritual, material, intellectual and emotional aspects of human society - are mentioned, when analyzing the document there is no strong focus on this important aspect. It is a concern that the special role that music is able to play in the healing process and in developing the learning potential of all learners, especially the deprived learners, has greatly been overlooked. The Arts and Culture learning area focuses mainly on redressing the past imbalances and places strong emphasis on the **cultural aspect** of society. This study aims at extending class music to develop the learning potential of the learners and to play a meaningful role in the music and general learning environment. In summary, the opportunity to develop learning potential through music, has mostly been overlooked in the new Arts and Culture learning area.

4. AIM OF THE STUDY

The study has the following aim:

To investigate a non-traditional approach to music to develop the learning potential of the primary school learner in a postmodern learning environment.

The broad indication of what is to be attained through the study has been broken down into three sub-aims which are the following:

- 4.1 To explore the change from a modern to a postmodern paradigm, to identify the influence of the changing society on the learning environment and to map a profile of the learning needs of the primary school learner in a postmodern learning environment.
- 4.2 To describe the traditional and current position of music in the Arts and Culture Learning Area in the new curriculum proposed for the South African learning environment.
- 4.3 To investigate the potential of music to develop the learning potential of the primary

school learner. This will be done by exploring the multiple intelligence theory, the four-quadrant whole brain model and whole person development - intellectual, emotional, spiritual and psychomotor development.

5. RESEARCH METHODOLOGY AND RESEARCH DESIGN

The following is an overview of the research methodology and research design used in this study. Data of both a **quantitative** and **qualitative** nature were gathered in order to meet the aims of the study. The quantitative focus manifests itself in the numerical calculations associated with the responses from the questionnaires. The qualitative focus manifests itself in the responses to the open-ended questions of the questionnaires and the semi-structured interviews.

A survey was conducted within schools in the Gauteng region. The target population was music educators and primary school principals at the schools where music educators were employed. Two questionnaires were administered, one to the music educators and the other to the primary school principals. Semi-structured interviews were also conducted with a selected group of participants who did not complete the questionnaires. The guiding principle for choosing the questionnaire and semi-structured interview as the research tools was the importance of establishing a balanced study by using scientific techniques that produce quantitative conclusions, but also a qualitative approach to gain an in depth understanding of the individual's perception of his or her world. The interviews produced rich data through probing issues raised during the interviews. Enriching new data came to the fore while administering the semi-structured interviews. Interviews were recorded, transcribed and analyzed. More detail about the research design and methodology will be discussed in chapter 4.

6. SIGNIFICANCE OF THE RESEARCH

- ✓ The significance of this study is situated in the innovative perspective on the role of music for the primary school learner. The focus moved away from the traditional purpose and role of Class Music where music knowledge was mainly developed to a non-traditional approach where the learning potential of the learner is developed with knowledge being one of many elements. This study investigated a non-traditional approach to music to develop the learning potential of the learner through the lens of the whole person, whole brain and multiple intelligence view. It explored innovative

possibilities for the Arts and Culture curriculum.

- ✓ It provides much needed guidelines for planning music learning opportunities in the Arts and Culture learning area in C2005 with an aim of developing learning potential.
- ✓ It provides directions for the planning of learning potential development through music across the curriculum.
- ✓ The study proposed a conceptual framework which is a radical departure from content-based music curricula and the transmission model of teaching and learning which dominated traditional Class Music curricula.

The broader impact of the research study is the following:

- ✓ It is an innovative study, exploring whether and how the extended role of Class Music may influence the development of learning potential in the music and general learning environment. It transcends the border of the traditional role and function of Class Music to breed an awareness of entrepreneurial possibilities for the music educator.
- ✓ The research was undertaken collaboratively across two fields of study, namely Education and Music.

The potential of the study to redress past historical imbalances is as follows:

- ✓ The research study focused on the special role of Class Music in the personal healing process as one of the extended, non-traditional functions of music in the learning environment.

7. OVERVIEW OF THE STUDY

Chapter 1: Introduction, contextualization of the study, statements of the aims, the research methodology and research design and the significance of the study.

Chapter 2: Literature review on the change from the modern paradigm to the postmodern paradigm, the postmodern society, the general implications for the learning environment and the learning needs of the learner in a

postmodern learning environment.

Chapter 3: A non-traditional approach to music through the perspective of whole person development, the four-quadrant whole brain approach and multiple intelligence theory.

Chapter 4: A description of the research design and methodology - questionnaires and semi-structured interviews.

Chapter 5: The analysis of the data gathered and the interpretation of the data.

Chapter 6: Conclusion and recommendations.

CHAPTER 2

A CHANGING LEARNING ENVIRONMENT: MODERN TO POSTMODERN

1. INTRODUCTION

Chapter 2 describes the modern learning paradigm which laid the foundation for general education, but also music education for many years. It will also explore the postmodern paradigm and its profound influence on the learning environment, as well as the needs of the postmodern learners. The postmodern learners have to live and learn in the complex postmodern world and it is therefore crucial to develop the learning potential of all learners. Music may play an important role in achieving this aim, as it bears the unique quality of possessing the potential of developing the whole person - intellectual, emotional, spiritual and psychomotor.

Two of the perspectives or paradigms, which influenced education in the Western world, are the modern or Classic Scientific Paradigms and currently the postmodern or Future Paradigm. An understanding of the importance and influence of a certain paradigm is vital, because according to Kuhn (1970:85) a paradigm change is a reconstruction of the fields that change some of the most elementary, theoretical generalizations, as well as the methods and applications. It involves a different world-view, different assumptions made, questions asked, evidence taken and methodologies used. Kuhn (1970:175) states that a paradigm controls the "*methods, problems, and standards*" a community use, and it forms the broader "*constellation of beliefs, values, techniques*" of the people.

As mentioned before, the South African education paradigm of the past was influenced, as the rest of the world, by the Western Science Paradigm of the modern era. Although the postmodern paradigm is becoming a reality in education, the modern paradigm is still actively part of the mind set of most South African educators. Just as the people at the end of the Middle Ages and Renaissance did not know they were entering a new era, so too are the South African educators, at the end of the modern era. One often finds that teachers still hold a modern view, while learners grow up in a postmodern society with another set of basic beliefs. This creates confusion and misunderstanding for learners and educators.

Steyn and Hay (1999:122) claim in the words of Coulter:

*The teacher, standing at the front of classrooms, hold a modern view.
Students, sitting in their rows of desks, hold a postmodern view.*

We have reached the end of the modern era and are facing a **paradigm shift**. We will have to find new resources upon which to shape a new society and learning environment. Smart (1992:142) agrees that the very project upon which the hegemony of the West has been predicated is now in question in the debate over the possible closure or end of modernity. Kirsten (1987b:18) supports this perception as he maintains:

The propagated sentiment is that the modern person has exhausted its cultural, social and political resources and has reached the end of an era (translated).

It has become necessary to explore the postmodern paradigm to bring about an understanding of the current world the learner develops in. It is thus important to explore not only the learning environment of the learner, but also the postmodern society in which the learner lives. Before this can be done, it is necessary to understand the main trends of the modern paradigm.

2. OVERVIEW OF THE MODERN PARADIGM

The word modern comes from the Latin word *modernus* which refer to now or the contemporary age. Smart (1992:146) explains that Habermas contends that the term was initially used to distinguish an officially Christian present from a pagan past. The term *modern* was used to situate an existing epoch from the past antiquity. It implies that in some respects the present differs significantly from earlier times. It refers to a discontinuity between now and before. Cahoon (Rossouw 1995:4-5) claims that the most basic or primitive meaning of the word *modern* implies the following:

- ✓ A historical consciousness, which refers to an awareness of and a concern for historical change.
- ✓ A historical discontinuity, which implies some criterion of sameness and difference.

- ✓ The primitive meaning of the word may apply to one phenomenon or to many types of phenomena, but the phenomena exhibit the same common pattern or theme.
- ✓ What is *modern* may be evaluated positively or negatively.

A more complex meaning of the word *modern* according to Cahoon (Rossouw 1995:5) is the following:

- ✓ *Temporal* (between now and before) which refers to seeing our own age as different to all past ages of our culture.
- ✓ *Geo-social* (between us and all others) which means what distinguishes our present society or culture from all present or past versions of all other societies or cultures. Modern to all human history.

Cahoon (Rossouw 1995:7) maintains that this more complex meaning of the word *modern* is not relative to the culture of the user, but has been *universalized*, by that Europeans mean some set sociocultural traits of Europe. It disconnects with the traits of all previous European and all non-European societies and cultures, which implicates that modernity is not intrinsically or necessarily European. Lötter (Rossouw 1995:38) agrees that modernity is by no means monolithic, but should rather be seen as consisting of several components which are compatible with various, though not all, cultural lifestyles.

Modernity typically refers to the era accompanied by the industrial revolution in England, the political revolution in France and by the secularizing influence of scientific rationalism emerging from the Enlightenment in the sixteenth and seventeenth centuries. It refers to economic growth and capitalism (Kirsten 1987b:21-23).

Modernism is usually taken as a paradigm change in the arts towards the end of the nineteenth century. It is a rejection of bourgeois values through literature and different avant-garde movements such as the surrealists and the futurists. Söhnge and Arjun (1996:88) argue that ideas which originated from modernity attained -ism status. It developed into philosophical, scientific-technology schemes of thought and leads to a paradigm change.

Smart (1992:157) proposes Harvey's five broad phases in the development of modernism:

- ✓ The Enlightenment phase assumed the world could be controlled and rationally ordered. Rust (1991:613) quotes Habermas who claims that the Enlightenment can be divided into three autonomous spheres, namely "*objective science, universal morality and law and autonomous art according to inner logic*". This would lead to an understanding of the world and self, moral progress, the justice of institutions and the happiness of human beings. This hope began to fall apart in 1884 with the beginning of the second phase.
- ✓ The second phase is characterized by an accelerated industrialization, massive urbanization and political disagreement which gave rise to an increasing diversity of forms of experience, systems of thought and representation.
- ✓ The third phase is the transformation of forms of representation and knowledge, of literary text, art, music, linguistics and science derived from growing disenchantment with the Enlightenment.
- ✓ The next phase began after 1945 and led to *high* modernism.
- ✓ In the late 1960s the first traces of a turn to postmodernism could be detected. Rust (1991:611) states that it appears as if the current postmodern movement is perceived as either a periodization concept, referring to a period or era, distinctly from the modern period or as a period or era that does not represent a break from modern times, but another style of discourse and a theoretical orientation for explaining events in competition with other theoretical orientations that abound the modern world.

2.1 THREE PERSPECTIVES OF THE WESTERN SCIENCE PARADIGM

Doll (1986:10) distinguishes three broad paradigms or perspectives as typical of the western paradigm, namely:

- ✓ A Classic Christian Paradigm (Aristotle, Ptolemaeus and Thomas Aquinas).
- ✓ A Classic Scientific Paradigm (Copernicus, Descartes, Newton and Einstein).
- ✓ A Future Paradigm (Einstein, Sohr, Heissenberg and Prigogine).

Two of these paradigms, the Classic Scientific or Western Scientific Paradigm and the Future Paradigm, concern this study and will be discussed.

2.1.1 THE CLASSIC SCIENTIFIC PARADIGM

The Classic Scientific Paradigm is also known as the modern paradigm. During the sixteenth and seventeenth centuries the scientific paradigm slowly emerged (Enlightenment). Names like Copernicus, Descartes and Galilee are synonymous with the Classic Scientific Paradigm. Galilee maintained that the universe was written in the language of mathematics. Newton, in the late seventeenth century, described the universe in terms of principles. One of these principles was gravity, which determined the orbit of the planets as well as the falling apple to earth. The orbiting planets and the falling apple follow the same rules of a single uniformity that dominates the whole universe. The discovery of nature's laws were later seen as an attempt to gain control over nature (Doll 1993:23-26). It was believed that humans could control the universe, because nature is bound by rules. And control plays a very important role in this paradigm. Doll (1993:26) helps us understand the impact of this reasoning by quoting Descartes with the following:

*[There are] certain laws which God has so established in nature.....
That after sufficient reflection we cannot doubt that they are exactly
observed in all which exists or which happens in the world.*
(Discourse on Method, 1637/1995, p.27.)

The cosmos was viewed as simple, stable, organized, determined and a closed system. Doll (1993:57) explains that closed systems exchange energy, but does not exchange matter. An example is the mechanical devices of gears. There are a transference and concentration of energy, but no spontaneous development of energy nor any transformation of matter into energy (transmit and transfer).

The modern paradigm often gets described as objective, measurable, predictable and controllable. Measurement plays a very important role in the Classic Scientific Paradigm. A linear scale was introduced with an ideal at the top and a practical norm in the middle and all other positions are related to these two. Events, experiences and even intelligence could now be quantified (Doll 1993:35).

Another characteristic of the Classic Scientific Paradigm was the privileged position of

mathematics and the theoretical over the observational and the practical. Doll (1993:35) agrees that the individual's own sense of competence and experience got downgraded in favour of copying or applying the performances others had devised. The curriculum was set on this set-performance model and deviation is considered as *irrational*.

The concept of causality (cause-effect) was a Classic Scientific Paradigm invention, where for every effect there must be a prior cause. It was the natural way this paradigm looked at change and it also influenced the way problems were perceived. It was believed that change did not happen spontaneously and the same cause would have the same effect. It became modern science's guiding principle (Doll 1993:36).

This gave way to the industrial age and society got a technological cast. The benefits derived from science were believed to create wealth through industrial production. New demands were made on people, such as technical experience and a new breed of man developed. Slogans such as *save the minute* became a motto in American factories as well as the classroom. The concept of industrialization had an effect on the whole world. World War II was a demonstration of technology and science (Doll 1993:39-47).

A critical reflection on the modern paradigm indicates that this paradigm has promised and delivered a great deal to society, but also failed to provide solutions to a wide spectrum of problems. Lötter (Rossouw 1995:42) maintains that modernity promised faith in human progress with effects like new opportunities for all people, increased wealth, improved living conditions, social freedom, a happier life. Cahoone (Rossouw 1995:6-7) mentions positive developments such as technology, scientific practices, forms of industrial production and higher living standards. The problems mentioned by Dickens and Fontana (1994:3) are world wars, death camps and the nuclear devastation of Hiroshima and Nagasaki. Kirsten (1987b:18) declares:

It rather seems that as man's technocratic liberation improves, new opportunities and means for all kinds of sophisticated injustices, clinical dehumanization and subtle discipline are generated (translated).

The result is uncertainty, normative and ethical problems as well as political anarchy. The doubt includes all walks of life such as science, art, politics, religion, relationships between people and teaching and training (Söhnge 1994:5). The same dark picture is being sketched by Coetzer and Le Roux (1996:82) who claim that an evaluation of the modern world reveals

that technologically and scientific ingenuity has not prevented a sick world with pollution, overpopulation, poverty, famine, homelessness, affective neglect, discordant marital relations, hijacking, aids, crime, violence and war.

The fundamental problem which arose in the late twentieth century is that knowledge was not objective and absolute anymore, because science is practised within a theoretical framework which is influence by ideology (Söhnge 1994:5). Research by Kuhn (1970:103) clearly indicates that scientific knowledge is related to the contexts of a specific paradigm - it tells about the population and the population's behaviour.

It is clear when studying these suppositions that we cannot continue on the road of the Western Scientific Rationality Model, especially not in a complex political and multicultural society as South Africa. South African education needs a paradigm shift from a modern paradigm to a postmodern paradigm. Slattery (1995:233) maintains that the Newtonian physics has attempted to impose uniformity, which led to many of the problems experiencing in education today. He advocates a curriculum model based on a complex, multidimensional and a metaphoric system.

(i) MODERN SOCIETY

The Concise Oxford Dictionary (1995:1370) defines the word society as the sum of the human condition and the interdependent functioning of their activities. Cahoon (Rossouw 1995: 2) defines society very simply as what social members are and do. Both definitions focus on what people are and what they do. The modern paradigm had an influence on the human condition and what people do. The great influence of the modern paradigm on society becomes apparent when Lötter (Rossouw 1995:39) indicates the following:

- ✓ The emergence of modern science revolutionized our view of technological development and the world. Technology changed the way we perceive knowledge as Dickens and Fontana (1994:4) point out that new information technology has undermined traditional concepts of knowledge.
- ✓ Capitalist mode of production, which is a system of commodity production for competitive markets and centred upon the relation between private ownership of capital and propertyless wage labour.

- ✓ Modernity enabled industrialization. Capitalist mode of thinking and industrialization have several affect on society, such as the creation of several new environments, but unfortunately the destruction of natural and human environments, urbanization, mass communication and speeding up of the tempo of life.
- ✓ The development of nation-states, coupled with administrative control over specific geographical areas. The developing nation-states served to replace the values and believe of the people to individualise, faith in progress and other to make economies work.
- ✓ The development of liberal democracies premised on human rights.
- ✓ Violence.

A critical analysis of the modern paradigm, with its positive and negative influences can be interpreted in the following ways according to Cahoon (Rossouw 1995:12):

- ✓ Contemporary society and culture are intrinsically dynamic.
- ✓ Modern society is characterized by progress.
- ✓ The tendency of modern society is towards integration such as interdependence, homogenization, political centralization and unification.
- ✓ The tendency towards disintegration such as specification, fragmentation, pluralization and decontextualization (loss of tradition, community, a public sphere etcetera).
- ✓ Modern society is threatened by irrationality.
- ✓ The modern society and culture are characterized by deautonomization (erosion of individuality and autonomy).
- ✓ The modern society exhibit alienation (a loss of what is genuine, original or real in human life).

- ✓ Modernity exhibits increasing functionalization.

2.1.2 INFLUENCE OF THE MODERN PARADIGM ON THE LEARNING ENVIRONMENT

Since the times of the Enlightenment, the Classic Scientific Paradigm had a profound influence on education right through the world. Söhnge (1994:9) states that it is important to bear in mind that educators grew up and were trained in the Classic Scientific Paradigm. Their beliefs, standards, values etcetera were formed by the Classic Scientific Paradigm. This paradigm was regulated by an industrial society which viewed education as standardized, specialized, synchronized, concentrated, maximalised and centralized. Doll (1993:43) picks up this theme by stating that American public schools became dull, mechanical and repetitious. Teaching methods or assembly line approaches were used and were functional in its time. Actually it can be viewed as dehumanizing of the learners.

Education was practised as a closed system which was product driven and function in the manner of a machine. Doll (1993:2) claims that the future was seen as teaching machines, programmed learning and a teacher-proof curriculum. These mechanical metaphors set the foundation for modern science and the scientific curriculum that is being applied and is still applied in many cases. Doll (1993:28) extends this view by the following:

In this machine-oriented curriculum the goals lie outside, and are determined prior to, the instructional process; once firmly set they are "driven through" the curriculum. The teacher becomes the driver (often of someone else's vehicle); the student becomes at best a passenger, at worst the object being driven.

Education was a measurable process. Education was defined in terms of test scores. The intelligence quotient (IQ) was a central concept to many educators. Underlying was the behaviouristic principle of stimulus-response and simple repeated associationism which was seen as a vital method of learning. Hjelle and Ziegler (1981:229) explain that Skinner declared that behaviour is lawfully determined, predictable, and environmentally controlled. Results were measured in the light of fixed standards. Class work was memorized and reproduced. It was a concept found in the industrialized society.

Söhnge (1994:9) and Doll (1993:32-37) refer to the learning environment in modern times as a closed system with a hierarchical linear, subject-object relationship between the

educator (subject) and learners (object), the educator with normative authority, who transfers knowledge to the learner. Personal feelings, intuitions and experiences were not reckoned as a source of knowledge. Knowledge exists *outside*. It could be discovered, but not created. There is a gradualness to progress and a linear connectedness of development. It was believed that the curriculum must be organized in sequential steps with no gaps or breaks. It is clear when critically observing this practice of curriculum thought that it brought alienation between educator and learner.

Some of the characteristics of the modern learning environment can be listed as follows:

- ✓ Time was not seen as an active ingredient, necessary for developing the creative possibilities inherent in any situation. It was perceived as a restrictive agent. Time was perceived as linear and a *course to be run*. To save time by *doing as you are told* was part of the *standardization and being efficient* process introduced by the psychologist, Spencer.
- ✓ Curricula were separated into subjects or as some writers put it, fragmented. Curricula were considered as units arranged in a linear order. Learning is defined in the number of units covered and mastered.
- ✓ The fact that curriculum content had to be interpreted, was an indication that a hidden curriculum could be present.
- ✓ Encapsulation or isolating the learner from other influences.
- ✓ Some Calvinistic tone which assumes that humans have by nature deficits was propagated by Bobbit. He saw the curriculum as focusing on deficits. Here lays the origin of curriculum goals stated in precise, practical and measurable terms (Doll 1993:49).
- ✓ In the nineteenth century the focus was placed on the personal qualities the educator should possess. These qualities were virtue, sobriety, industry, frugality, chastity, moderation and temperance. This quality remained pervasive until the twentieth century and is still found in schools today (Doll 1993:47- 48).
- ✓ The Tyler curriculum model of the 1960s is a model with a linear ordering and a

separation of ends from means. It is a curriculum model with present goals, selection and direction of experiences and evaluation. The end is directed towards a purpose and in an industrial and capitalist society has taken the form of a job (Doll 1993:54).

Looking back on five hundred years, the influence of the Classic Scientific Paradigm is mostly being assessed as a paradigm which served a purpose for its time, but is viewed as redundant for the present era. The present era has different characteristics and its people have different needs. If these characteristics and needs of the present era are not accounted for, it may lead to negative effects. There were counter movements in the twentieth century against the negative influence of the modern paradigm, such as the humanistic movement. Hjelle and Ziegler (1981:361) claim that humanism has given rise to a radically different image of human nature, namely that persons are basically good, worthy of respect and that they will move to realization of their potentialities. A more child-centred approach to education was also proposed.

A paradigm change is apparent at the end of the twentieth century. The implications of modernity for the learning environment can be summarized in the words of Söhnge (1994:9):

According to that, education is determined by a prescribed structure, regulations, content and relations which is destined to eco the order of nature (and community) with the help of objective scientific knowledge and dogmas (translated).

3. THE POSTMODERN LEARNING ENVIRONMENT

3.1 INTRODUCTION

The postmodern concept was first introduced in art and literature. In 1870 an English painter, John Watkins Chapman, described a painting as postmodern. The same concept was used in literature in 1934 and again in 1942 to describe a related tendency in Hispanic poetry (Dickens and Fontana 1994:1-2). In the 1950s and 1960s postmodernism was used by Irving Howe and Harry Levin in literary criticism. The concept also penetrated the social sciences and in the 1970s it was widely used in architecture, art and film. In the mid 1970s it entered the philosophy circles in Europe by people such as Kristeva (1980), Lyotard (1997/1982), Habermas (1981a/1985a), Wellmer (1985) and Kirsten (1987a:405). A discussion on postmodernism in the social sciences reappeared later in the 1980s primarily under the

influence of French poststructuralist theory (Dickens and Fontana 1994:1-2).

Although postmodernism reappeared, it was not readily accepted. The most common complaint was that the language of postmodernism is obscured by words like deconstruction, meta narratives, essentialism, pastiche, intertextuality etcetera. Postmodern ideas were accused of being too remote from every day, contemporary life. It is easy though to demonstrate that postmodernism exists in practice, whether or not in theory. The contemporary worlds of architecture, literature, fashion, cinema, business management, market research and advertising are shot through with concepts from postmodernism (Stronach and MacLure 1995:15-16). An example of the existence of contemporary life is when actor Don Johnson of *Miami Vice* was chosen by the fashion magazine *Glamour* as man of the year, because he personified the *postmodern macho* personality (Kirsten 1987b:33).

A new paradigmatic frame is developing, but the changing of the paradigms present the education world with concerns. Aasen (1993:3) explores the different concerns by stating that problems and insufficiencies in the learning environment come from the changing society. Society has presented the school with new fundamental principles and tasks. This leads to visible and invisible stress factors for the educator, because schools are judged by very different and critical criteria. Another problem facing the learning environment is that some use modern principles, while the postmodern condition has been accepted and practiced by others in the field (Steyn and Hay 1999:122). Stronach and MacLure (1995:25) provide the example of Hargreaves as an indication of the dilemma for the educational world:

He posits a world moving from modernity to postmodernity. He then creates his analytical boundaries by labelling schools "modern", and society "postmodern", recommending that the former catch up by adopting the good bits of postmodernity (some forms of flexibility, flatter hierarchies etc.).

In exploring the postmodern paradigm an effort is being made to assist the educator in understanding the learning environment, where society or the general cultural background is not always supportive of the learning environment.

3.2 PROFILE AND CHARACTERISTICS OF THE POSTMODERN PARADIGM

3.2.1 CORE ELEMENTS OF THE POSTMODERN PARADIGM

(i) REALITY

The Classic Scientific Paradigm describes *reality* as rational, stable and predictable. In complete contrast, reality in the postmodern or future paradigm often gets described as complex, relative, multiple, temporal etcetera. Reality is also not viewed as a closed stable system, as in the modern paradigm, but as an open system. Doll (1993:57-58) explains an open system as a system which exchanges energy and matter, and needs fluxes, perturbations, anomalies and errors to tap the creative powers inherent in instability. These two qualities can be transformed into one another, eg. atomic explosions. This quality of openness is meaningful, because human beings are living systems, per se open systems. They need the continuous change, irregularity of behaviour and errors to exercise their full potential.

Reality is a complex, human creation which does not exist objectively *out there*. Human beings mould reality according to their own diverse needs, interests, prejudices and cultural traditions. They have diverse experiences and life stories, which postmodernists refer to as *own personal narratives*. Postmodernists reject the notion of one great meta narrative, for example the Enlightenment narrative, in favour of own experience.

(ii) RELATIONS AND PERSONHOOD

The modern paradigm envisaged personhood as an individual with a steadfast core with a stable personality and character. In the postmodern paradigm the view of the person with a steadfast core has been replaced by the perception of personhood as an ever-changing *self*. Parker (1997:150) compares the postmodern person with the symbol of Gemini (twins): The person with numerous selves in different contexts and an identity-switcher. Relationships play a very important role, because the individual is unknowable and non-existent except within a relationship. Steyn and Hay (1999:121-123) share this postmodern interpretation of personhood when they maintain that personhood reflects a plurality of interpretations and multiple truths. The person is described as *uncontrolled*, decentred (no central core, but a product of social construction), multiple (no fixed identity), transgressive (go beyond the limits), fragmented, incoherent, in a constant process of construction and deconstruction (ever changing, depending on the context of social position), and in a state of non equilibrium with a situational identity.

Multiculturalism is an important postmodern concept, in the acceptance that people belong

to different cultural groupings. Postmodernism is opposed to multiculturalism where sameness, universality and homogeneity are accentuated. Postmodernists believe that the self is strongly influenced by its surrounding culture and changes with culture. They neglect the individual in support of specific groups within larger culture, eg. ethnicity, gender and religion.

(iii) KNOWLEDGE

Rossouw (1995:77-78) defines rationality "*as the standard that a society requires for making intelligible and meaningful statements on reality*". Medieval society required that statements should be logically coherent and compatible with the Christian understanding of reality as defined by the church. The modern society rejected the medieval notion of rationality. It was believed that the modern paradigm had a superior potential to produce more sophisticated and universally valid knowledge. This notion of rationality stimulated the development of science and technology, which led to a sophistication of knowledge about the natural and social world as well as an unheard control over it. When strange new objects were discovered in the universe like quasars, pulsars, exploding galaxies and stars collapsing into black holes, a different realization about knowledge started to surface. Early in the twentieth century Heisenberg and other scientists disclosed that certainty and control cannot exist in the micro world of the subatomic. Later Gödel proofed that the foundation of mathematics could not be proven in terms of consistency and completeness (Doll 1993:60). Such pronouncements changed the modern conceptualization of knowledge.

The other dilemma that surfaced was that values, goals and meaning are essential for our survival, but the dominant rationality of our culture does not allow for it. A broader view of rationality is advocated by the postmodernists. Smart (1992:142) quotes Lyotard who claims that "*the status of knowledge is altered as societies enter what is known as the postindustrial age and cultures enter in what is known as the postmodern age*". Van der Walt (1988:194) claims that the Enlightenment rationality with preference for theory rather than praxis, is changing to a view where everyday experience is at the forefront. There is some growing consensus that human behaviour is not exclusively motivated by independent rational thinking. Other dimensions of life like socialization, culture, ideologies, beliefs, power, emotions, disposition etcetera plays an important role in the process of acquiring knowledge.

Postmodern thinkers maintain that we should not perceive ourselves as seeking to uncover a pre-existing reality, but we are part of the interactive process of knowledge creation. What

we *drive* at is autobiographical, an own *personal narrative* of an own particular site in the world. There is no objective, universal or autonomous body of knowledge, but rather guiding or enhancing of the capabilities for extracting information from an own environment. Doll (1993:61-62) reflects the same view when he states that the grand narrative of the past is being replaced by own experience or an own personal narrative. A personal narrative is achieved through dialogue and communication and it leads to a social vision where the right of others are honoured and respected. There is not only one right way, but multiple perspectives. It is an eclectic, yet local integration of subject/object, mind/body, curriculum/person, teacher/student, us/other. This process is not achieved through negotiating, it is not created or found, but it is achieved through living.

There is no centre when it comes to knowledge. There is an absence of anything at the centre or a core truth, thus an emphasis on the margins and a shift to the borders. Van Niekerk (1996:211) states:

Complete rational penetration of a phenomenon of the total reality is not possible. Certainty, in an absolute sense it is just not rationally possible (translated).

Rossouw (1995:86) feels that expertise must be enriched and informed by the experience of those on the receiving end of expert opinion. Western scholarly tradition and white, middle-class, male bias should not be seen as the centre to which other merely contribute. Rossouw (1995:86) claims that:

Postmodern culture insists that those with expert knowledge are not the only ones who should be listened to when making decisions.

Another postmodern concept which has an effect on the way knowledge is perceived, is called deconstruction. Deconstruction aims at demystifying a text by ripping it (everything - persons, events, institutions) apart and in doing so reveal arbitrary hierarchies and presuppositions. It examines what is left out, excluded, unnamed, concealed and what is repressed. An example of deconstruction in the postmodern society is for instance the numerous liberation movements, including ethnic groups, minority groups, neighbourhoods, alternative lifestyle groups, single-issue groups such as gay and lesbian rights, feminists, non a nuclear world, *right to life* legislation and religious revival in Europe and North America (Rust 1991:617).

Dickens and Fontana (1994:8) define deconstructionism as a method of revealing the radical contextuality of all systems of thought. Stronach and MacLure (1995:29) define a deconstructive approach as a more plural strategy, identifying a *field of metaphors* wherein multiple and dynamic possibilities for meaning may be generated.

3.2.2 POSTMODERN SOCIETY

The four aspects of the postmodern society under discussion in this study are the technological postmodern society, the visual postmodern society, marginalized and rejected groups in society and violence in the postmodern society.

(i) THE TECHNOLOGICAL POSTMODERN SOCIETY

The 1960s has been identified as the time when modernism and modernity began to falter and a new international era was taking form. What makes the new era so important is that an information society developed where technology plays an enormous important role. The implication is that the tempo and quality of life have changed completely. It is said that we live in a global village, because of the ubiquitous abundance availability of knowledge and information. Rust (1991:620) quotes Alvin Toffler, who claims that speed has become the most important element of the postmodern society, because it is a society where advanced technology, particularly electronics, speed up production and distribution time. Rust also mentions Charles Jencks who calls it "*an instantaneous, 24-hour information world*". As mentioned technology also changed the quality of life, making it more effective.

(ii) POPULARIZING OF MUSIC IN THE POSTMODERN SOCIETY

One of the most revolutionary results of the Western Scientific Age of the late twentieth century is the invention of the powerful technical means of mass music transmission, such as film, radio, recording and television. Music has become accessible to the whole of mankind and so changing the character of contemporary music culture, as well as the constructing of a new reality. The new reality changed the people's thoughts, perceptions and values. In terms of communication people live in a so called *global village* with rapid transportation of happenings all over the world. Popular music styles have prolific exposure, sell thousands of recordings and soon are replaced by some other popular idol, group or form (Hoffer 1976:38-39).

Our schools are administrators of high culture, but in the postmodern society popular culture has to be included in the curriculum as part of the learner's social environment. Postmodernist views the culture of every person as important. Rust (1991:624) discusses the difference between Americans who have always taken pride in their democratic life, which includes democratic art. In Europe popular culture is viewed as subversive or worse reflecting a trend towards Americanization. In the developing world the difference between traditional and high culture are changing rapidly. Spies (1997:62) argues that music as an art form (classical music) has lost its traditional dignified position in the postmodern society. It can also be perceived as a process of social transformation and be identified as a cultural revolution. In step with postmodern thoughts on scientific knowledge, music has lost its intrinsic qualities through *popularizing* it. In this process music has changed from an art form to a consumer item.

This opinion gets support from Rust (1991:624) who mentions Huyssen who recognizes:

.....a breaking away from the safe categories and established institutions and harbored art, including the academy, the museum, the art gallery and the concert hall to allow "a new freedom and a cultural liberation". However, the academic world faces the unsettling condition of having lost its ability to act as the definer and preserver of cultural standards, which have been synonymous with high culture.

The criticism against music as an art form (classical music) is that it is elitist and unaccessible to most people. Spies (1997:68) points out that this is not a new development, considering that the composer, Richard Wagner, wrote in *Das Kunstwerk der Zukunft* (1850) that music can only bestow its pleasures on people with an understanding of classical music which is only possible after a study of it which is far removed from daily live. Wagner was aware of the social conditions of the time, where classical music was also unaccessible to many people.

In the 18th century, the Esterhazy family asked Haydn to create music whenever they had a need for it. Only the wealthy were allowed to join the circle. Today recording of the music of Haydn is available to anyone to enrich the lives of many people.

This postmodern condition is an important change to society in the late twentieth century, which also influences education. Benner (1976:37) points out that:

Mass communication, travel and mobility, technological resources, shifting value systems, and changing life-styles lead to the recognition: (i) that there are many logically-valid and aesthetical-productive systems of sound and silence organization; (ii) that pluralistic societies accommodate variation and diversity in musical sources, forms, functions and styles; and (iii) that music is both divergent and convergent.

The music education environment will have to acknowledge the change away from art music (classical music) to a form of music that is part of the world the learners live in.

(iii) THE VISUAL POSTMODERN SOCIETY

In close relation to the technology world, is the visual world of film and television. Denzin (1991:vii) defines the visual world in the words of Baudrillard as a world with "*an intense preoccupation with the real and its representations*". He argues that this society only knows itself through the reflection that flow from the camera's eye. Other writers like Denzin (Dickens and Fontana 1994:184) feel the same and states that postmodernism refers to a new form of society that is radically transformed by film and television into a visual video world. Shopping malls with all its visual information and attractions, television soap operas, situation comedies, evening news, films and computer are the social worlds of the postmodern society.

(iv) THE MARGINALIZED AND SOCIALLY REJECTED PEOPLE IN THE POSTMODERN SOCIETY

Another important development of the postmodern society is the emphasis which switched to those who have been marginalised and socially rejected by modern society. Kanpol (1992:21) calls this phenomena in the postmodern society, *difference*, and feels that it has become indispensable to understand various groups' plights and their relationships to oppressive forces in society. Kanpol (1992:21) contends:

The world finds itself increasingly in a crisis of difference, and we can no longer sanctimoniously count on a harmonious society that simply embraces a dominant status quo and its values and norms.

He describes the current age of democratic revolution (East and West Germany and Russia)

and massive immigration (Ethiopians, Russians, and Asians) as an indication of hope that through revolution and immigration, it is possible to bring about a democratic society where individual and group oppression, subordination and alienation will be erased. Rust (1991:617-619) believes that we are witnessing a shift away from universal belief systems towards a plurality of belief systems. Never has it been so hard to reach consensus, because it is an indication that differences matter and that distinction can and ought to be fought over. He maintains that solidarity between groups can come through the participation of fringe groups. There is a possibility of the emergence of a type of direct democracy, a sense of a connectedness with life's events and decisions. A global context is developing with the breakdown of national boundaries, the creation of global markets, the emergence of world concern through local involvement. The demise of any attempt at rational policymaking is also developing.

(v) VIOLENCE IN THE POSTMODERN SOCIETY

Although South Africa is a country with a specific history of violence, violence is also a postmodern world problem. The postmodern society is characterized by violence, which forms part of our daily lives. People do not only encounter violence in their daily lives, but also in movies, on television, in literature and popular songs. This is exacerbated by the ready availability of drugs and weapons and has become an issue of immediate concern to South Africans and the whole world. As the news media detail the increasing amount of violence in the society, we respond with horror, but also in fear for our safety. It claims thousands of lives and annually costs millions of rands in medical care and loss of salaries.

3.3 PROFILE AND CHARACTERISTICS OF THE POSTMODERN LEARNING ENVIRONMENT

Postmodern curricularists believe that a transformational curriculum is needed for the postmodern learning environment. A transformative curriculum model is not the measured model characterized by rote learning, but a model that changes personal structures and ways of looking and dealing with the world. It is a model where the learner gets the opportunity to develop *understanding*. In this way curriculum is viewed as a passage of personal transformation.

The following transformational characteristics of the postmodern learning environment will be discussed. They are the democratic and dialogic learning environment, development of

the learners autobiographical information, hermeneutics and the postmodern learning environment and an active, learner-centred, integrated learning environment.

(i) DEMOCRATIC AND DIALOGIC POSTMODERN LEARNING ENVIRONMENT

When studying the available literature on the changing learning environment in the postmodern era, a striking semblance among different writers are the importance placed on dialogue. It is believed that a transformational curriculum model can be achieved by means of a democratic and dialogic learning environment.

Doll (1993:7) claims the following:

This open, interactive, communal conversation is key to a post-modern curriculum; it is the process by which transformation takes place. Such a conversation need not be a screen for a grand meta narrative.

Rust (1991:614-615) shares Doll's opinion that the story of the pluralistic contemporary postmodern society should be written by a number of narratives and rejects a meta narrative with universal standards. Meta narratives tend to universalize, instead of opening up the world to individuals. Each individual must be engaged in creating an own personal narrative in a democratic and dialogic learning environment.

Wood (1990:108) also reflects the view that the learner should get the opportunity to create an own personal narrative and reasons that it leads to a democratic learning environment. In a democratic learning environment learners are engaged in choices and have control over the most central elements of their school experience. Freedom of choice has the result of a feeling of power, which is needed in constructing an own identity. Educators should assist learners in cultivating the ability to think, take responsibility for own choices made and voice own (personal narrative) opinions. A dialogic and democratic learning environment prepare the learners for a democratic society with a diverse population.

Democracy in the learning environment should teach the learner to be sensitive to gender, racial and political division. Learners should experience that all belong in the society. Everyone counts and has a contribution to make. The issue of subordination creates inequities between different groups and differences in the learning environment and should not be an object of condemnation and oppression. The learning environment should be

linked to democracy as transformative and emancipatory. In a democratic and dialogic learning environment, the teacher and learner engage in respecting values, making insight available and compare notes with each other. In a successful learning environment the relationship between educator and learner change, because the educator is not an authoritarian dictator transferring knowledge. Slattery (1995:173) maintains the existing relations are the first change to take place in the postmodern learning environment. The teacher should develop a positive self-image as sensitive, knowledgeable, working in her or his own sites, interacting with others and learning from them, having something to gain and to offer, not merely applying. Beck (1993:10) feels that teachers that preach, impose and control does not have a postmodern attitude. Learners must be able to say what they think and so acquiring the skills, emotions and habits they need to react honestly. It is important in the democratic and dialogic classroom not to downplay or underestimate the role of the expert and the educator's motivational and facilitating roles. This opinion also reflects the view of Kantor (1990:72) who maintains that teaching and inquiry should respect the interplay between practical and theoretical knowledge.

The music learning environment is par excellence a domain to develop dialogue and democracy between learners and educators through sharing practical and theoretical knowledge. The music educator has attained a wealth of experience and expertise through own performing and music making. The sharing of experience between the learners and the music educator, leads to respect for each other and a democratic and dialogic relationship.

It is important to note that a dialogic learning environment must not lead to schooling being a mere pooling of ignorance. A way to avoid this problem may be done as follows:

- Invite the learners to discuss and share their experience on a specific topic. An example may be jazz singers.
- The next step is to read about and research the topic, by means of observations, interviews, journals, portfolios etcetera to tap the knowledge and opinions of others.
- Lastly to construct biographies or essays with music examples of the jazz singers, which get discussed by their peers.

The educator assesses the essay and determines if intellectual growth and insight have taken place in each individual.

(ii) DEVELOPMENT OF THE LEARNER'S AUTOBIOGRAPHICAL INFORMATION

Closely connected to the democratic and dialogic learning environment, is the autobiographical information of each learner. It is important, because it places the focus on the internal experience of the learner, rather than external objectives. Slattery (1995:57) argues that it should be done through the process of reconceptualization, where the learner develops the ability to move into the past and reconstitutes meaning to direct an own future.

Reconceptualization takes place in different stages. Slattery (1995:57) mentions Pinar's concept of four stages of autobiographical reflection, namely:

- ✓ Regressive - The first stage focus on a regressive step into a past educational experience, but with an eye on the present and the next step.
- ✓ Progressive - The second stage is an imagination of a future vision possibility and leads to the next step.
- ✓ Analytic - The third stage is an evaluation of the complexity of the past, present and future and its interrelations.
- ✓ Synthetical - The fourth stage put the three steps together to help inform the present.

By making use of autobiographical reconceptualizing methodologies, the learner is assisted in finding deeper meaning and understanding. It is a concern that the needs of learners are not always catered for in the traditional curriculum model. This occurs because learning content becomes decontextualized, with the result that deeper meaning and learning aren't achieved. Learning has no or little meaning for the learner. The learners abandon interest in learning, complain about boredom and optimum learning cannot take place. Autobiographical information develops the learning process. The learning situation could be improved by means of autobiographical information and so giving learners some divers, but integrated learning experience. Making use of journals, portfolios, creations of aesthetical pieces (prose, poetry, drawings), role-play, dance and inquiring into the changing self, the learner unfolds. The educator cannot remain a-historical, detached, impersonal and focused on behaviour objectives in a postmodern learning environment.

Einstein experienced similar difficulties as a young man with formal schooling. The problem developed, because his conceptualization of the world was beyond the modern Newtonian

model and world-view of his time. He questioned traditional understanding of time and space. He actually initiated the postmodern notion that time is not linear and chronological. If time is perceived as past, present and future, it removes autobiographical connection with the learner (Slattery 1995:40-41).

The music learning environment provides the learner with opportunities to express autobiographical experiences in every performance - coral singing, individual performances, playing instruments, dances or any creative work or activities. Music activities place the focus on the internal experiences of the learners.

The following is an example of the development of autobiographical information in the music learning environment (Wolverton 1989:32):

- Select the "Kyrrie" from the "Coronation Mass K.317" by Mozart. Explain that the piece of music was composed in Salzburg, probably for the coronation festivities of Leopold II. Archbishop Colloredo preferred dignified music suitable for the use of worshipping in the church. Although the text is formal and humble, Mozart's musical setting is indicative of the festive occasion for which it was used. The predominant emotions expressed is one of exultation.
- Ask learners to describe their feelings when listening to the music.
- Ask learners to remember experiences from their own lives during which they felt exultation. They are asked to share these experiences with the class.

(iii) HERMENEUTICS AND THE POSTMODERN LEARNING ENVIRONMENT

Knowledge in the postmodern paradigm is not so much about universally valid knowledge, but rather a broader view which includes own practical life experience. Adding to the broader view of knowledge. It may be called hermeneutical knowledge.

All teachers know that the same methodology is not always successful with two different classes. The changing emotions of individuals create an unique and perplexing change to every group of learners entering the classroom. Another agent of change is atmospheric change like a rainy day that can change the whole atmosphere of the learning environment. Knowledge to interpret different situations is thus necessary and is called hermeneutics. Slattery (1995:103) explains the phenomenon as follows:

Hermeneutic inquiry is thus concerned with the ambiguous nature of life itself.

The postmodern discourse is interpretative, because of the ambiguity of the human condition and the world. The postmodern educator should be aware of the ambiguous nature of life and therefore approach the learning environment with an understanding of the meaning of text, language, relationships, historical artifacts and schooling.

Hermeneutics are not an invention of the postmodern discourse. It can be traced back to Aristotle. Aristotle named one of his books *Peri Hermenia* and in early Christian communities hermeneutics referred to the interpretation of text to establish normative religious and legal community practices. The Greek god Hermes explained the decisions of the gods to the other gods and mortal humans. Hermes was a trickster and delivered the messages after interpreting it first. The content of the message changed as the circumstances changed (Slattery 1995:105).

It confirms the subjective understanding of knowledge. Postmodernism believes that the curriculum is not an objective, experimental project which attempts to verify hypotheses, but a community of interpreters working so that the curriculum is open to reflection and interpretation. Parker (1997:30-31) describes the reflective educator as someone who focuses on wider issues such as ethics, the rationale of methods used in the learning environment and the curricula, but also on the intimate relationship such as the immediate reality of the classroom practice. The reflective educator is concerned about improving the educational practice, fostering rationality and autonomy of the educator, as well as teaching in a democratic and liberal learning environment. Reflective teaching involves a willingness to engage in self-appraisal, which implies flexibility, rigorous analysis and social welfare.

Slattery (1995:117-118) uses the metaphor of Haggerson and Bownan of a running stream to explain the multiple viewpoints of hermeneutical enquiring. They explain it in the following way:

- ✓ Rational / theoretical paradigm: The researcher is on the edge of the stream. He makes general observations and predictions about the flow of the water.
- ✓ Mythological / practical: The researcher gets into the boat and experience the stream.

- ✓ Evaluation / transformational paradigm: This is an autobiographical method of research where the researcher writes a personal journal to get in touch with the self.
- ✓ Normative / critical paradigm: The researcher tries to identify all the hidden factors. These factors are the norms by which society function.

An example of hermeneutics is helping the learner to interpret text. In the learning environment the learner should recognise the power of text, as well as its interpretative qualities. For example Giroux (1991:28) mentions Scholes who claims that text should not be treated as a *"sacred vehicle for producing eternal truths"*. In the process of textual study the learner must read, interpret, criticise or reading upon and against text. The reader should identify cultural code that structures an author's work. It helps the student to analyze text within a *"network of relations with other text and institutional practices"*.

(iv) AN ACTIVE, INTEGRATED, LEARNER-CENTRED LEARNING ENVIRONMENT

Postmodern educationalists no longer accept that individual educational experience has necessarily to be governed or determined by rational laws or rules (Van der Walt 1988:194). In the past learners were trained to be passive receivers of knowledge by the dominating culture. Kirkby and Kuykendal (1991:207) maintain that such views of knowledge *"tend to favour linear thinking over recursive; Anglo over African-American, Latino, and Asian; masculine over feminine; rational over intuitive; deductive over inductive; and the teaching of knowledge as a canon, a body of revered text by a collection of sacred writers and thinkers"*. The postmodern paradigm proposes to change the learner into an active agent who creates knowledge. Moll and Slonimsky (1989:161) supports the claim that *despite "diversity among cognitive developmental theories, it is fair to say that activity is a primary category in the investigation of the growth of knowledge in a person"*. The postmodern view of perceiving reality as an own experience has a decisive influence on the learning environment. The emphasis is on the active learner and the learner-centred approach. The multiple vision of reality means that educators must give the learner the opportunity to explore various interpretations, positions and procedures to one problem. With the postmodern conceptualization of knowledge and reality as an own personal narrative and an own personal experience, there is no correct or incorrect way of experiencing, but only an honest way. This view is a complete deviation from the rational scientific model of learning. Van der Walt (1988:191) quotes Smith who claims that with the postmodern view of knowledge and reality, empiricism is again important for the learning environment:

The real world has regained its importance. Academic understanding lost some of its meaning to learning through experience (translated).

The learner must be assisted in creating or constructing and controlling own knowledge and learning. Different activities are done through interaction with peers and by solving given problems, to help learners to think critically. Critically thinking is a way to assist learners to be able to deal with the postmodern world and to realize that old knowledge is not enough to solve current and future problems. The educator and learner explore problems together. They make up their own problems, not using a text book. They reflect on the nature of the problem, the meaning, how it can be interpreted and they develop own variations of the problem. Two examples of such activities are the following:

- In the literature class learners are encouraged and trained to explore text (deconstruct) with all the richness of the different meanings of the text.
- With the emphasis on performing in the music learning environment, analyzing, evaluating and judging performances, develop critical thinking.

Kirkby and Kuykendal (1991:27) emphasize the importance of cooperative learning in the twenty-first century where problems are too complex for solo solutions as "*collaborative thinking is today's reality as well as tomorrows hope*". Kirkby and Kuykendal (1991:27) quote Sternberg who believes that learners should be taught to think for themselves, to be independent problem solvers, but they must also learn to be group problem solvers. Kirkby and Kuykendal (1991:29) warn that feelings of competition among learners are inimical to cooperative learning. Learners should not come to school with the inclination to compete, but rather to collaborate.

The following strategies (Jensen 1995:187-188) can be used to design an active learner-centred learning environment, by using various strategies and instruments (table 2.1).

A nurturing climate is crucial for intellectual development. It must be a warm, vibrant, trusting environment that encourages learners not just to soak up information, but to ponder and wonder and take risks (Kirkby and Kuykendal 1991:23).

Kirkby and Kuykendal (1991:36) quote Glasser's findings that students *tune out* when they

are not actively involved. The essence for intellectual development is to get the learners involved with stimulating challenges. Learners do not mind working hard, but they do mind being bored by rote learning, low-quality tasks which do not engage them fully. The best tasks leave plenty of room for choice by individual learners to capitalize on their own type of intelligence and thinking styles.

Table 2.1 Strategies for an active learner-centred learning environment

Music	Sculpture
Spiral learning - Come back with more depth	Debates
Storey telling	Personal quests/personal life - trace the history
Peer teaching	Presentations
Model making	Mind-mapping
Performance	Game design
Reflection Myths	Montage/collage
Integrative themes	Open discussions
Reporter interviews	Physical activities
Drawing	Multi-status - from more points of view
Journals	Apprenticeships

The postmodern learning environment is learner-centred. It can be summarized by Steyn and Hay (1999:124) as follows:

- ✓ Learners take control of their own learning, which leads to learner-centred and activity-centred approaches. The teacher is no longer the centre of activity, but the learner becomes the focal point. The teacher and learner are both in control, because learning is a process of negotiation, coordination and performance.
- ✓ Assessment is viewed as a process where learners *learn* the truth about themselves.
- ✓ Group activities are ideally suited to achieve these goals.

- ✓ Learning can hardly happen without learning content and resources. Such content need not be final and dominated by the teacher.
- ✓ The teacher takes a multiplicity role as manager or facilitator. The learning environment is an interactive process of negotiation, coordination and performance. The learning process is not preplanned, orderly and logical, but dialogic in the context of the learning situation.

The learner-centred approach leads according to Parker (1997:148) to a more assertive, robust, creative disposition. The postmodern learner's involvement puts him in control of the text (perceived as everything), to dismantle, to refashion, to reflect, to change etcetera. It gives the learner a weapon to empowerment, because knowledge can be controlled, and manipulated. It gives the learner the opportunity to reconceptualize his or her claim to knowledge.

3.4 GENERAL IMPLICATIONS FOR THE LEARNING ENVIRONMENT

Postmodern curricularists are in agreement that the implications for a paradigm change are enormous. It will not only affect society, but also the learning environment. It is not always clear what the change will entail, but there is agreement on a transformational curriculum. Postmodern reality is not simple and uniform as previously believed, but **complex** and multiple. The postmodern learner is part of the technology, visual and violent society with a diverse population. An educational model to fit this reality is necessary. A model suited for the postmodern conditions that a learner develops and grows up in, will have to be a transformative curriculum model. Doll (1993:3) believes that a new sense of educational order will emerge. The linear, sequential, easily quantifiable ordering system with a clear beginning and end, dominating education today, will be replaced by a more complex, pluralistic, unpredictable system. The system will always be in progress or transition. The control elements in the modernist curriculum model will become less ordered and controlled. It can be called a transformational curriculum.

The other important change will be the new **relation** between educator and learner. The educator will no any longer transfer knowledge to the student, but there will be an interacting and a mutual exploration of relevant issues. Aasen (1993:4-8) believes that educators are already dealing with the consequences of the new conception of knowledge. He explains that it leads to a different cultural concept of authority. Society in the past allowed schools to have

authority, but at present the cultural background does not support authority anymore. Authority in the past came from the knowledge that was imparted and perceived as absolute and necessary for man's future existence in society. At present, knowledge is easily available and assessable. Aasen (1993:7) clarifies the position as follows:

From being a relation of exchange, where students subjected themselves to some authority to acquire information which would increase their value on the labour market, the relation between teachers and students has increasingly become a moral relationship. Today the relationship between teachers and students is based on moral obligation.

He feels that the attitude of society is leading to discipline problems in the learning environment. Educators are concerned about the increasing disciplinarian problems and the loss of authority and respect from the learners.

Postmodernism has numerous implications for the creation of an identity. Aasen (1993:12) mentions three elements which have an influence on the personhood of the learner. These elements are reflexivity, everything is malleable and individualization. The learner, from an early age, is in touch with own inner feelings. Postmodern learners comment on themselves with a phrase like *"I am not motivated today"*. They know what they want and it seems to parents and educators as if they know everything already. Educators must recognize the reality of the world the learner lives in where everything has already been discovered and where the media unveils the secrets of adulthood. Young people meet life with a completed manuscript, who apparently cope with life without a problem. What parents and educators must realise is that their problem is not a lack of knowledge, but the anxiety to live up to the manuscript. Everything is malleable and the child has to perform in the ever-changing world. Identity must be recreated and is not just taken over. The problem is that life can become a series of crises where feelings of self-confidence are replaced by feelings of inferiority, emptiness and can lead to freedom but loneliness.

The postmodern culture does not emphasize moral values, but psychological values. The stress is on self-confidence, acceptance of self, senses of belonging and initiative in a constant changing world. The challenge for the learning environment is when previous stable patterns, such as traditions, patterns of meaning, beliefs and morals disappear. Cultural liberation influences all age groups, but it has a greater unsettling influence on the young people who has never known previous stability. The postmodern world is a wonderful world

with wonderful promises like personal transformation, power, pleasure, personal development, but also threatening with destruction (Aasen 1993:11-12).

In the past school was built on a basis for motivation and self-discipline. These values have lost their importance in the postmodern world. Values linked with the delaying of satisfaction and curtailing desire has diminished. We live in a consumer community with a pleasure principle or instant gratification of desires, lust, happiness, absence of repression. Aasen (1993:7-8) mentions the emphasis on the young people's world. The focus is on the young people and the adults try to find themselves in the young people's world. Youth emerges as the ideal for human existence. Youth fashions and the relations of young people become the norm. This cannot avoid affecting the learning environment and result in educators and parents losing their authority, but on the other hand equally without experience in the fast-moving world.

The visual reality learners experience every day influence the way the learner perceives himself or herself. This perception of the self is anchored in the media or visual representation of love, desire, youth and beauty. The problem with this perception is that popular culture can never deliver what it promises. Denzin (1991:152) lists several personal postmodern troubles that flow from this perception. The educators should take note of the existence of the following, namely homelessness, aids, racism, sexism, drug addiction, abortion and child and sexual abuse.

Critical studies alert us to the effect these complex social and cultural concerns have on the learning environment. The modern school system was structured for modern purposes. The schools served as universalized institutions, promoting unifying ideals and fostering notions of nationalism and civic pride. Postmodern education raises serious questions about such objectives. Schools must address the interest of subcultures and global tendencies. He points out that deconstruction manifests itself in the learning situation through parent associations and student rights groups demanding participation in school management and being part of the decision making process (Rust 1991:617-619).

The learning environment reflects the wider cultural contradictions and crises of a society. Wallace (1994:2) recorded the following implications of violence at home or the community on the development of social and academic growth in the child:

- ✓ Children traumatized by violence can have distorted memories and their cognitive

functions can be compromised.

- ✓ Children that have been victimized by or who have seen others victimized may develop social problems. They experience anger which is likely to be installed into their personality structure.
- ✓ Carrying an extra load of anger makes it difficult for them to control their anger which resorts to violent actions.
- ✓ Children cannot learn nonaggressive ways of interacting with other people, because their role models, including those in the media, use physical force to solve problems.
- ✓ Children living in violent environments repress their feelings. They become emotionally insensitive to others and careless with their own lives.
- ✓ Children being traumatized by violence may have difficulty seeing themselves in future meaningful roles. They have a hard time concentrating on learning at school.
- ✓ Children need to feel they can direct some part of their lives, but children who live with violence learn they have very little say in their lives, which leaves a feeling of helplessness.
- ✓ When children are under continual stress, they are in danger of remaining psychologically in an earlier stage of development.

To clarify the conceptual differences between the modern and postmodern era, the information is presented in a table format as follows (table 2.2)

4. THE NEEDS OF THE PRIMARY SCHOOL LEARNER IN A POSTMODERN LEARNING ENVIRONMENT

Crisis is not only part of the society we live in, but the learning environment also suffers from it. The recognition of crisis in schooling is virtually unanimous according to Slattery (1995:20):

Table 2.2 Comparing the modern and postmodern paradigm

Modern Paradigm Knowledge	Postmodern Paradigm Knowledge
<p>Objective scientific knowledge is the core of all knowledge. It gave way to unheard of control. Educators are transmitters of authoritative, unbiased knowledge, to learners without any knowledge.</p>	<p>Educators and learners are co-constructors of knowledge. Knowledge is seen as intimate and subjective.</p>
<p>The curriculum is divided into separate subjects. The natural science divides reality in manageable compartments. Curriculum content leads to encapsulation.</p>	<p>Although the curriculum varies from locality to locality, the following universal contemporary issues must be dealt with: career choice, creation of values, war and peace, nuclear age, ethics, sexual revolution, stereotyping violence, technology, free speech and censorship, and deception of corporate advertising.</p>
<p>Value The learner should be trained in universal values. Education should be <i>value-neutral</i>. The most important values are rationality and progress.</p>	<p>Value Education should assist learners to construct diverse and personally useful values of their cultures. Values are not <i>true</i> or <i>right</i> in any universal sense. Important values are: diversity, tolerance, freedom, creativity, emotions.</p>
<p>Culture A hidden curriculum persists with ideas that is obscured. This is an important instrument used by societies to reproduce their respective cultures from generation to generation. Culture is something pupils must learn about, but can also be a barrier to learning. Learners from diverse cultures must be trained in a shared language or medium of communication, before educators can transmit knowledge to them.</p>	<p>Culture All cultures are of equal value and constitute equally important realities. Minority students must be empowered to fight against Euro centric enculturation.</p>
<p>Personhood Human nature is stable and the self can be objectively known. Because of the stable nature of the human, they are tested eg. IQ tests. By giving a learner mastery over subject matter the teacher is enhancing the self-esteem. Educationalists help the individual to discover their identities.</p>	<p>Personhood Learners have no true self or innate essence. Selves are social-construct. Self-esteem is a pre-condition for learning. Education is a type of therapy. Education help learners to construct their own identities and not discover it. Society and people are empowered when they attain their own chosen goals.</p>
<p>System A closed system with universal laws. Education is an event or a process with principles such as: order, objectivity, is measurable and cause-effect. The classroom forms an enclosed space where a hierarchal, linier subject-object relations exist between the educator and learner. The educator has all the authority. The implication is that the pupil develops a subject-object relationship towards reality. The learner is separated from reality.</p>	<p>System An open system with no universally valid law from which the overall behaviour of the system can be deduced. The classroom is a destabilizing and self-organizing environment. The classroom is not a place of orderly progress (assembly line) in a neat and tidy setting. Education is a complex process of engaging, experiencing, choosing and acting. Dialogue and transformation is part of the system. The educator has an inviting relationship where the learner is invited to take part in the dialogue of creating new meaning. The educator and learner are both parts of the meaning-making process. Dialogue is the heart of a curriculum giving it authenticity.</p>

The postmodern worldview allows educators to envision a way out of turmoil of contemporary schooling that too often is characterized by violence, bureaucratic gridlock, curricular stagnation, depersonalizing evaluation, political conflict, economic crises, decaying infrastructure, emotional fatigue, demoralization of person, and hopelessness.

These examples, which Slattery confronts us with is a reflection of our inability as adults to create an environment wherein the learner can become the adult of tomorrow. Education in the postmodern society must therefore extend a **therapeutic attitude**. Educators with a therapeutic attitude can develop the type of nurturing understanding environment to establish trust and rapport with learners. It can act as an antidote to frustration and aggression and offer an environment conducive to learning.

The postmodern learner has specific needs, which the learning environment must recognize:

(i) ACTIVE INVOLVEMENT IN OWN LEARNING

Most learners are bored, uninterested and unmotivated by the non-relevant teaching methods and content of the modern learning environment. The postmodern learners need a transformational curriculum based on understanding. Understanding develops with active construction of own knowledge and a learner-centred approach (chapter 2, section 5.3 & 3.3). The music learning environment provides active participation and the construction of own knowledge.

(ii) INTERACTING RELATIONSHIP BETWEEN EDUCATOR AND LEARNER

The transformational curriculum of the postmodern learning environment calls for a different relationship between the learner and the educator - mutual interacting, not passive learners receiving knowledge from the educator.

(iii) THERAPEUTIC LEARNING ENVIRONMENT

The postmodern learners' reality has changed enormously in the past decades. Being an ever-changing world, it is very exiting and creative, but also stressful and causes anxiety in learners. Nothing is stable or stays the same for very long and learners need security to grow intellectually and emotionally. The learning environment must provide a shelter of

calmness and understanding. Music therapy can play an important role in providing the relaxing environment in the stressful circumstances (chapter 3, section 3.5).

(iv) DIALOGIC AND DEMOCRATIC LEARNING ENVIRONMENT

The postmodern learning environment must change to a dialogic and democratic environment, because the postmodern learner has the need to air own views and opinions. It has been mentioned in the study that the learners must be considered in choices of learning material, as well as opinions about relevant affairs (chapter 2, section 3.3).

(v) RECOGNITION OF DIVERSITY

It has been discussed in chapter 2, section 3.2.2 & 3.3 that the postmodern society and postmodern learning environment recognize the diversity of all people. The importance of recognizing the diversity of people has also been stressed in the policy documents of Curriculum 2005. The need exists in every learner to be accepted, and it is the task of the educators to develop the potential of each learner.

(vi) EMOTIONAL STABILITY, SECURITY AND SAFETY

Many learners in South Africa live in a society full of violence, anger and frustration. It leads to feelings of helplessness, which threaten intellectual and personal growth. Violence is one of the factors which cause an unstable world filled with anxiety and stress. Anger and frustration should be dealt with by teaching nonaggressive behaviour (chapter 2, section 3.2.2).

Stable family patterns are fast disappearing in the postmodern society. It is the responsibility of the school to assist the learner in the need to self-acceptance by developing self-understanding and self-confidence. The role of the media is damaging in the building of a positive self-concept. The learner acquires the impression from the media that only the perfect body is acceptable. The music learning environment has the innate potential to deal with these emotional issues.

Although the postmodern learner lives in a sophisticated visual world of shopping malls, television, film and computer, the personal need of security still exists. The learners need the security of a healthy relationship with parents and educators. It should be a relationship

of respect, of discipline, of understanding and love from adults and educators. Learners do not want to be controlled, but need understanding in this complex world.

5. DEVELOPING OF LEARNING POTENTIAL IN THE SOUTH AFRICAN LEARNING ENVIRONMENT: A POSTMODERN PERSPECTIVE

5.1 INTRODUCTION

Educationalists and psychologists hold different views and have developed different cognitive models of learning. Woolfolk (1980:282) defines cognitive learning as the human mind's active attempts to make sense of the world. The way people think about situations, along with beliefs, expectations and feelings, influence what and how they learn. Knowledge is the outcome of learning and the power of knowledge is the driving element in learning. Two cognitive models of learning, which lead to the developing of learning potential, will be discussed in this section of the study. The two models are: Gardner's multiple intelligence theory (MI theory) and Herrmann's four-quadrant whole brain model. These two models propose a postmodern view on learning. They are models of intellectual and personal transformation and the construction of own knowledge. These models have the potential to transform the South African learning environment into a twenty-first century postmodern learning environment, by making the learner aware of own learning potential through utilizing brain potential.

Byzan (1991:20) mentions that in the brain there has a minimum of 1 000 000 000 000 individual neurons and each of the neurons can interact with one to a hundred thousand other neurons in different permutations. A Russian scientist worked out that the number of connections that one brain cell could make, would be more than ten and a half million kilometres in length, if written out. The potential of the human brain is enormous. This makes brain-based learning the path of the twenty-first century:

What we are gathering from our efforts at the moment is knowledge that the mind is infinitely more subtle than we had previously thought and that everyone who has what is ironically called a "normal" mind has a much larger ability and potential than was previously believed (Byzan 1991:16).

A transformational curriculum for the South African learning environment where learners construct own knowledge will be discussed. This will be followed by exploring the two cognitive models of learning.

5.2 A TRANSFORMATIONAL CURRICULUM MODEL FOR SOUTH AFRICA

The traditional modern curriculum approach in South Africa, and all over the world, was to develop academically competent learners. The educator transferred pre-chosen academic subject content and learners were measured through tests and examination. It was an acceptable curriculum for the modern world in which the learners had to learn, but with the current paradigmatic change to a postmodern world, the abilities of the learners need to be developed to become competent future citizens. Doll (1993:59) argues that past and recent curriculum discourse has not paid attention to the complexity of the human mind. The potential and qualities human beings possess, have been downplayed or neglected. What the learner needs, is to develop learning potential through the use of a transformational curriculum model. Van der Horst and McDonald (1997:19) defines a transformational curriculum as a *“collaborative, flexible, trans-disciplinary, outcomes-based schooling system which is orientated towards empowering learners”*. Transformational outcomes-based education (OBE) focusses on future orientated, visionary, optimistic people interested in growth and success. It is about learners *becoming* and acquiring insight and is achieved through activities that develop or transform the abilities of the learner. Spady (1994: 63-66) explains a transformational curriculum by means of a metaphoric mountain. The top of the *Demonstration Mountain* is the complex form of learning outcomes which people face in reality. These complex forms of learning outcomes are called role performers or sometimes transformational outcomes and involve tasks like effective communication, investigative research, complex analysis, problem solving and decision making. These abilities that go beyond knowledge and skills.

Duckett (2000:1-2) and Van der Horst and McDonald (1997:20) list the following as a transformational outcomes-based curriculum:

- ✓ Defined by outcomes (school programmes, processes, credentialing and decision-making priorities),
- ✓ Expanded opportunities (it enables successful teaching and learning for all and goes beyond seat time as learning).

- ✓ Based on the success of performance outcomes (credit through accomplishment, using clear criteria, demonstrating success of priority outcomes, what learners should be able to know and do).
- ✓ Aided by instructional coaching (fostering successful performance for all learners on essential outcomes. Learners receive guidance by means of feedback and explanation).
- ✓ Integration of concepts (cross-curricular approaches to outcomes, curriculum structure, in structural delivery and assessment).
- ✓ Based on culminating achievement (end result approach to outcomes, curriculum design, instruction).
- ✓ Orientated to inclusive success (all can and must progress according to individual ability. Structure of curriculum cross-groupings, learning, assessment and credentialing opportunities).
- ✓ Characterised by cooperative learning (working together such as in group discussions and projects, to foster learning success for all).
- ✓ Confirmed by criterion validation (expectations or high-level performance on clearly defined outcomes and standards).
- ✓ Formed on collaborative structures (for curriculum planning, instructional delivery and learner learning).

It is interesting to note that human potential and the development of human potential actually are a modernistic vision. The concept was never fully developed and explored in the modern era. The Enlightenment had the vision that improvement, progress and betterment for all would come through technology and right reason. It is therefore important to rectify the problem in the postmodern learning environment by not only developing the human potential, but also including learning potential. There is a great need in South Africa to adopt a curriculum model to bring about insight and understanding in the complex postmodern world the learner has to learn in. Slabbert (1996:109) agrees that human potential has been grossly neglected in the past. The focus had been placed on the product and not on the

process (the how) of learning. Van der Horst and McDonald (1997:20) views transformational OBE as future orientated where learners become involved citizens by contributing to their own lives. Learners become self-directed towards achieving goals based on positive values and will become critical thinkers who solve problems.

Malcolm (Jansen1999:86) alerts South African educators that the word *transformational* has a different meaning for South Africans. In South Africa transformation is a goal for society moving away from apartheid, and "*transformational OBE might not be the route to the transformation that South Africa dreams off*". South Africa needs to develop the learning potential of each learner to reach transformational outcomes.

5.3 CONSTRUCTION OF LEARNING IN A SOUTH AFRICAN POSTMODERN PARADIGM

South Africa currently faces a complex academic position, which was inherited from the previous apartheid government as well as the Western Science Paradigm. Most of the learners in the country received an education with a primitive form of cognitive activity, which mainly consisted of rote learning and reproducing of knowledge. Von Glasersfeld (1995:181) feels that training, memorization and practice are not "*useless, but rote learning does not lead to what Kant called 'Enlightenment' or understanding*". In the postmodern learning environment it becomes increasingly important to be creative with knowledge, to create own knowledge and to be able to think in an abstract way. The problem according to Moll and Slomimsky (1989:160) is that those learning problems clearly have a history of social context. It is not a solution to make performance better or faster or stronger by determining whether a learner has the *requisite behaviour skill*, but educators have to tackle the real development or genetic question of the construction of learning in learners.

(i) DETERMINANTS IN THE CONSTRUCTION AND TRANSFORMATION OF LEARNING

Educators need to understand what determines the construction and transformation of learning in the learner. Moll and Slomimsky (1989:163) explain that cognitive developmental theories in general accept that a crucial developmental transformation in any human being is that from concrete forms of cognition to abstract forms of cognition. This transformation is structural and represents a developmental transition in which the cognitive structures of abstraction arise out of the less sophisticated structures of concrete thought. Moll and

Slonimsky (1989:163) quote Piaget who holds the view that formal operational thought (abstract thought which is characterized by operations such as identity, negation, reciprocity and correlation) is the pinnacle of human cognition and comes about as a consequence of the structures of concrete operational thought. It is recognised that socio-cultural conditions can inhibit optimum cognitive growth. Another example is Moll and Slonimsky (1989:163) who quote the argument of Bruner that the symbolic mode representation (analogous to abstract thought), arises developmentally out of the iconic (analogous to concrete thought). Lastly it is necessary to understand Vygotsky's notion that abstract cognition comes about in the communication of the learner with adults in the objective relation among objects, tools and language which have been laid down in the course of social history (Moll and Slonimsky 1989:164).

(ii) VYGOTSKY'S MODEL OF CONSTRUCTION OF KNOWLEDGE

Harvard (1999:38) states that Vygotsky has been referred to as *The Mozart* of psychology. He earned the title in recognition of his originality as a thinker, his untimely death at thirty-eight and his influence on others. When studying Vygotsky's theory of learning a complex transformation of human growth becomes visible. Human activity transforms both human nature and society. A central theme in Vygotsky's theory of learning is that a child's development cannot be understood without examining the external social world. The first element of Vygotsky's theory under discussion is the social construction of knowledge.

Vygotsky (1978:30 & 25) claims that from the first day of a child's development his activities acquire a meaning of its own in a system of social behaviour and is directed towards a definite purpose: "*The path from object to child and from child to object passes through another person*". But before mastering his own behaviour, he masters his surroundings with the help of speech. This process produces new relations with the environment in addition to the organizing of behaviour itself. These unique forms of behaviour later produces the intellect and becomes the basis for productive work. Vygotsky believed that a child's intellectual growth is determined by the intellectual climate of his environment. Boeyens (1989:6 & 14-15) clarifies Vygotsky's theory by explaining that a child's interaction with his parents facilitates a higher organisation of thought. Through communication with parents the child learns language and language contributes to reflecting on own thoughts, with the result of developing a higher degree of cognitive development through the process of internalization. Vygotsky does not agree with Piaget that it is a process of biological maturation, but the quality of learning opportunities results in cognitive development. The

individual benefits from instruction and the current ability of the individual assumes secondary importance. Human intelligence or abilities are not predetermined, but influenced by the environment. Vygotsky goes so far as to say that the learning brought about by the child's social experience is a prerequisite for mental development.

A second theme of Vygotsky's theory is the capacity for self-regulation. Through repeated experience, children learn mentally to plan their actions. They also make use of the assistance of other persons according to the requirements of the problem (Vygotsky 1978:29). The child learns to master and control own behaviour. When the child begins to use language not only to communicate, but to monitor activities, a vital developmental point is reached. The child is at first regulated by other people to organize the strategic aspects of tasks, but takes over the regulating function to become self-regulatory. The child reaches a level of development which he or she cannot reach on his or her own (Harvard 1999:39).

Two further keys to Vygotsky's theory are internalization and mediation. Vygotsky (1978:26) explains that children solve practical tasks with the help of speech, eyes and hands. The unity of perception, speech and action produce internalization. It is a transformation from an interpersonal to an intrapersonal process.

We call the internal reconstruction of an external operation internalization (Vygotsky 1978:56).

Mediation refers to the role that tools, language and other symbols of culture can play in learning and internalization.

The concept of the zone of proximal development (ZPD) has turned out to be Vygotsky's most influential idea to education. To Vygotsky (1978:73) development is not a slow accumulation of unitary changes, but a complex dialectical process characterized by periodicity, unevenness in the development of certain functions, qualitative transformation and intertwining of external and internal factors. Vygotsky adopted a different approach to assessing intelligence. Vygotsky (1978:89) claims that formerly it was believed that tests determine the mental development level with which education should reckon and the limits that it should not exceed. But *"this procedure orientated learning towards yesterday's development, towards developmental stages already completed"*. Vygotsky (Boeyens 1989:16-18) holds a postmodern view of human beings as open systems that are able to change and learn. To determine a child's learning potential the actual developmental level

that the child has reached (IQ tests) as well as the *potential developmental level* should be taken into account. The difference between these two levels is called the *zone of proximal development* (ZPD). Moll and Slonimsky (1989:164) explain the existence of ZPD as the distance between the actual developmental level as defined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. The ZPD is an indication of the improvement in ability that is demonstrated after intervention and the development of the learner's potential.

It can therefore be argued that the developmental theories provide the educator with an account of developmental patterns and the necessity of the mobilising of particular cognitive skills which are required to deal with abstract problems. The South African learning environment should be guided to assist the learners to become abstract thinkers and develop potential. Boeyens (1989:20) claims:

It can therefore be postulated that if an individual is exposed to an enriched environment the extent to which he will be able to benefit from this exposure will be determined by the size of his ZPD.

5.4 A CONSTRUCTIVIST POSTMODERN LEARNING ENVIRONMENT

(i) TYPES OF CONSTRUCTIVISM

There is more than one constructivist theory of learning. Woolfolk (1980:277-79) quotes the categories of Moshman, namely exogenous constructivism, endogenous constructivism and dialectical constructivism.

Exogenous constructivism focusses on "*the ways that individuals reconstruct outside reality by building accurate mental representations such as propositional networks, schemata, and condition-action production rules*". Direct teaching, feedback and explanation affect learning. It assumes that knowledge is accurate and that it reflects the outside world as it really is. Information processing is an example of exogenous constructivism. An information processing perspective implies that the human mind is regarded as a symbol-processing system that converts sensory input into symbol structures (images or schemata) and then process those symbol structures so that knowledge can be held in memory and retrieved. Learning takes place when the internal symbol structure gets modified during input from the

outside world, but the important work is what occurs inside the head (Woolfolk 1980:277).

Endogenous constructivism assumes that “*new knowledge is abstracted from old knowledge and is not shaped by accurately mapping the outside world*”. Knowledge is not a mirror of the outside world. Piaget’s theory of cognitive development is an example of an endogenous constructivist theory. Exploring and discovery is more important than teaching.

Dialectical constructivism believes that knowledge grows from interaction of internal (cognitive) and external (environmental and social factors). Knowledge reflects a filtered outside world, through culture, language, beliefs, interaction with others, direct teaching and modelling. Vygotsky holds this opinion, which can also be called situational learning.

Von Glasersfeld (1995:19 & 191) has a radical constructivist view, so called because it entails a rebuilding of the concepts of knowledge, truth, communication and understanding. Radical constructivists believe that although meaning and knowledge are socially constructed it is still a subjective construction, and therefore a radical construction.

There are also extreme constructivist perspectives which assume that the world is not knowable. What is true in one time and place becomes false in another time and place. They are not concerned with *true* representations of the world, but *useful* constructions. After classifying the different types of constructivism, the view of past educators on constructivism follows.

(ii) CONSTRUCTIVIST VIEWS OF LEARNING

The importance of recognizing the value of a constructivist learning approach is clear when different opinions of educators, philosophers and psychologists are explored. Jean-Jacques Rousseau (1762/1957) felt that the classical education of his time, which consisted of reading and memorizing, caused the learners to be passive, destructful, deceitful, selfish and stupid. He argued that education is boring and that the learner does not really learn. Dewey (1931/1970) objected against the content and methods of classical teaching, because it does not involve problem solving or reflective thinking. Bruner (1961) rejects the “*teacher-as-dispenser*” model of traditional education. Later, Freire (1974) described traditional education as an approach where there is no room for learner dialogue, so Sharan (1985) developed the cooperative learning programme where there is no teacher domination (Marlow and Page 1998:13-16).

Marlow and Page (1998:16-19) elaborate by explaining that active learning expands the brain and although these educators, philosophers and psychologists express their theories of learning in different terms, they all agree that learners learn more if they are actively involved in their own learning. By investigating, creating, discovering and interacting with the environment the learners build their own knowledge structures which lead to the very important critically thinking. The learners learn content and process at the same time. Piaget's contribution to this direction cannot be over-emphasized. According to Piaget learners construct their own knowledge *schemata* (knowledge structures/constructs and ways of perceiving, understanding and thinking about the world) and mental development (learning) is a process of equilibrium in response to external stimuli. Complementary components of the external world get assimilated into the current cognitive structures or *schemata*. Existing knowledge structures or *schemata* will be altered to accommodate new experiences that do not fit into existing knowledge *schemata*. The process of assimilation and accommodation create equilibrium. The implication is that learners need to construct their own knowledge for knowledge to be meaningful. Two other opinions are that of Bruner's theory which is based on discovery for really true learning to take place and Sharon feels that learners learn best through problem solving.

(iii) THE CONSTRUCTIVIST LEARNING ENVIRONMENT

The postmodern learning environment is characterized by diversity. Learners from different cultures, abilities, needs and interests provide a challenge to education. The learning environment in South Africa has changed drastically in the last years since the beginning of a democratic dispensation for the people of South Africa. The diversity of the learning environment has inspired an education system for the country to accommodate the diversity of the learners. Educators are concerned with how to meet the needs of the learners in a diverse society. The value of constructivism is that it respects and allows each learner to use their own knowledge and experience in the learning process to achieve transformation and understanding. Windschitl (1999:752) agrees that background knowledge has a profound effect on how learners interpret subject-matter and that learners learn best when they use their own knowledge to solve authentic problems in striving for deep understanding.

In a postmodern world where the focus is not on knowledge being transmitted, but transformation of learning through the intellectual activity of the learner, the constructivist learning approach is a challenge to accommodate the postmodern view on knowledge. Marlow and Page (1998:ix) support constructive learning as an active learning programme,

because it promotes elaborate knowledge construction, which encourages independent thinking and in-depth understanding. Constructivism means that the learner creates own knowledge:

.....learning means constructing, creating, inventing, and developing our own knowledge (Marlow and Page 1998:10).

In the constructivistic learning environment learners acquire information from different resources, such as books, magazines, pamphlets, videos, CD-ROMS etcetera to develop an understanding of the problem they negotiated with the educator and which they are going to solve. Receiving information or hearing it, does not mean that learning has taken place. Learning in constructivist terms is the process and the result of questioning, interpreting and analyzing information. It is problem-based learning. The learners are involved in dialogue with the educator, but also make and share meaning with their peers. As the information and thinking process develops, learners alter own meaning and as a result, understanding of concepts develops. The information gets integrated with past experiences and current knowledge on the subject. Marlow and Page (1998:25) reiterate that in learning programmes where learners construct own knowledge, critical independent thinking, deeper understanding of concepts and longer lasting learning take place. It leads to a different approach to assessment.

Windschitl (1999:754) confirms that there is a need for forms of assessment that gives the learner the opportunity to demonstrate what has been learnt and meet rigorous criteria of excellence. Learners are required to produce journals, research reports, physical models, performances, debates or artistic representations. The criteria for assessment will have to demonstrate that the learning outcome reflects the efficacy of the educator as a promoter of understanding. The learners will still have to demonstrate an understanding of key principles and concepts as well as critical thinking that are assessed on standard tests.

(iv) A PROFILE OF THE CONSTRUCTIVIST LEARNING ENVIRONMENT, EDUCATOR AND LEARNER

Becoming a constructivist educator requires a change in attitude about how learners learn, and the different roles of educators and learners. Personal philosophies about constructivism furnish underlying principles to justify choices. Table 2.3 supplies the educator with a checklist in a constructivist learning environment.

Table 2.3 List of constructivist elements in the learning environment

Learning environment language	Communication	Roles, activities and management
Co-operation Discover Explore Learn Learning experience Learning programme Learning task Facilitator Research Dialogue Choice Initiative Transform Create Activity Reflection	Learners are actively involved with own projects and are not passive listeners. Educators communicate through questions, but with no single-word answers. Learners communicate through dialogue with an educator. Learners' voices are heard as they ask questions and assist each other. All participating in the learning experience use normal voice, although the learning environment is noisier than the traditional learning environment.	It places a high demand on the educator's subject-matter understanding. The educator must be aware of the principles underlying a topic of study and the variety of ways in which the topic can be explored. The educator must be aware of the <i>correctness</i> of the learner's construction of knowledge. Educators encourage learners to find answers to their questions.
A physical classroom	Motivation	The educator must be aware of the <i>correctness</i> of the learner's construction of knowledge. Educators encourage learners to find answers to their questions. The educators have to use pedagogical skill to complement rather than dominate learners' thinking. Strategies such as scaffolding (reducing complexity), modelling (think aloud how to approach a problem), coaching, guiding and advising.
The classroom walls are filled with the learner's work.	Threads of punishment are avoided.	Learners have the role to make decisions and negotiate a problem to be solved which reflect their interest and abilities.
The furniture is moved around to accommodate the specific activity which is often group work.	Promising rewards are avoided.	Everyone is involved in the management and routine of the class.
The physical layout is of such a nature that the educator can get everyone's attention when needed.	Learners realize that they are responsible for own learning.	Behaviour concerns and problems are opportunities to discuss, solve problems.
Learners plan the layout of the classroom with the educator.	Learners are disappointed when an activity or period ends.	Learners leave the classroom, discussing the work.
Assessment	Learners stay after class to discuss their work.	Learners are rarely absent.
Meta learning takes place as learners construct a relationship with the content and own learning.	Learners leave the classroom, discussing the work.	Learners look forward to the learning activities.
Learners create assessment tools and criteria with the educator.	Learners are rarely absent.	The classroom is viewed as <i>our</i> classroom.
Learners believe assessment is an opportunity to learn.	Learners look forward to the learning activities.	
Educators must develop own ability to analyze problems which are not meaningless, complex enough, require critical thinking with the standards and principles necessary.	The classroom is viewed as <i>our</i> classroom.	

5.5 MULTIPLE INTELLIGENCE AS A POSTMODERN COGNITIVE MODEL FOR DEVELOPING LEARNING POTENTIAL

5.5.1 INTRODUCTION

At the turn of the century Binet (1904), a gifted psychologist, received a request from the educational authorities of France to develop an intelligence test. Some primary school learners were experiencing great difficulties with their scholastic assignments and help was needed in identifying these problematic learners, at an early point, to determine who will need special teaching. A process was set into action that soon proceeded in a very different way. By the 1920s and 1930s intelligence tests became established in America and the English-speaking world. Although many of these tests were well motivated, the tests often came to stigmatize, label and make judgements about limitations of people.

The intelligence test went hand in hand with the belief that intellectual strengths were largely inherited, that IQ tapped an inviolable feature of an individual and that intelligence is measurable (Gardner 1993:216-217). Bender (1992:119) agrees that the principle was accepted that all differences between people are measurable. One person can have *more or less* of a certain quality and the differences can be measured. What the psychologists did not consider was the complexity of measuring people's intelligence:

Most of what we can measure now, behaviourally, is neurologically immaterial on the optimal development of the brain (Jensen 1995:4).

Bender (1992:122-129) explains that different models or theories of intelligence were developed. He distinguishes among the psychometric models, developmental models, information processing models and the phenomenological pedagogic approach. The psychometric models are factor-analytic studies, which suggest that there are one general intelligence (g) that is used to perform mental tests, but each test also requires specific abilities in addition to general intelligence. What it means is that people do have special abilities, but people performing well in one factor, usually also perform high in other factors.

American psychologists chose to depict intelligence as a combination of multiple abilities with a positive correlation among the separate mental abilities. Thorndike (1913) identified three clusters of intelligence, namely social intelligence, concrete intelligence and abstract intelligence. Thurstone (1938) defined intelligence as different abilities and identified a few primary factors, such as verbal comprehension, memory, reasoning, ability to visualize

spatial relationships, numerical ability, word fluency and perceptual speed. These abilities do not function independently, but as an interconnected whole. Guilford (1950-1970) identified one hundred and twenty different factors which are used in a combination of different ways. The psychometric models thus define intelligence according to the correlation between intellectual abilities. It is a quantitative description of intelligence and the relevance of the IQ test score were rarely if ever questioned.

Bender (1992:132) further claims that the developmental models of intelligence have been revolutionized by the works of Hebb (1948) and Piaget (1950). They were interested in how the infant comes to perceive a world of objects independent of himself or how do children learn about the world. Piaget had a qualitative conception of intelligence as "*a particular instance of biological adaption*". Mental development facilitates learning. Intellectual development is determined by assimilation (incorporating new events into pre-existing cognitive structures), accommodation (existing structures change to accommodate the new information) and equilibrium (a balance between individual and environment or assimilation and accommodation). Although it is not a quantitative description of intelligence, it is predetermined and holds definite limitations to the development of intelligence.

The information processing models propose a concept of multiple cognitive abilities. Woolfolk (1980:116) states that performing a cognitive task is essentially a mental operation on some specific content to achieve a product. These psychologists believe that elementary information processing is the basis of behaviour. Sternberg (1985, 1990) developed a triarchic theory of intelligence. It is a cognitive process approach with three parts, namely analytic (mental process), creative (coping with new experiences) and practical (choosing an environment in which to succeed). Another information processing model is Gardner's model of seven intelligences. Gardner (1983) suggests that there are seven multiple intelligences or categories of human abilities. In some recent interview Gardner described an eighth intelligence, namely the naturalistic intelligence. Armstrong (1994:14) describes Gardner's multiple intelligence theory (MI theory) as a cognitive model that seeks to describe how individuals use their intelligence to solve problems or fashion products. The model is process orientated, because it is a model describing how the human mind operates on the contents of the world. The world in which the learners have to solve problems (think) and fashion products (create) is a postmodern world.

5.5.2 POSTMODERN VIEW ON INTELLIGENCE

The psychologists and educators were influenced and dominated by the Western Science

Paradigm of the modern era. It was a paradigm described as objective, measurable, limited and controllable. It is then understandable why Binet's successors believed that intelligence is a unitary construct, individuals differed in how intelligent they were and intelligence existed from early in life and could probably not be altered. The excitement about IQ tests, in true modernistic sense, was that intelligence seemed to be quantifiable, measurable and could be used to predict the future of a learner. According to this view, intelligence was also perceived as predetermined and limited from which there is no escape. Boeyens (1989:4) confirms this by stating that the scores of IQ tests are interpreted as if they reflect the ceiling of the learner's ability and fail to identify many learners in disadvantaged groups who have the potential to succeed. Past learning must be taken into account,

The postmodern concept of multiculturalism is an acceptance of the diversity of people who belong to different cultural groups. South Africa is par excellence a country of cultural diversity where most of the learners from certain cultural groups were not exposed to comparable educational opportunities with limited consequences. If then "*psychometric tests of cognitive ability largely assess the effect of previously educational exposure*" (Boeyens 1989:2) modern psychometric tests of cognitive ability (IQ tests) is not a reliable instrument to measure intelligence. The measurement of learning potential will be a more viable and postmodern approach to the prediction of future educational achievement and success in later life of the learner.

It is only the logical-mathematical intelligence and the linguistic intelligence that were traditionally recognised as intelligence. It is significant that the function of the right brain hemisphere (holistic-emotional) was completely ignored in the traditional view of intelligence. The learner did not get the opportunity to develop learning potential in terms of intelligences. It is significant that the right hemisphere is associated with more abilities or intelligences than the left brain hemisphere.

Gardner (1993: 218-219) revolutionised this view on intelligence when he explained that "*in my own work, I have spurned formal testing completely. Instead, I have sought to document the existence of different human intelligences*". Gardner believed it was necessary to develop *intelligence-fair* means of assessment: a method that looked directly at an intelligence rather than indirectly through the all-too-familiar lenses of linguistic and/or logical thinking. Byzan (1991:27) confirms this opinion by claiming that the IQ protagonists have been obsessed with the tests and the results and have neglected the real nature of the brain being tested. These tests do not test basic human ability, but untrained and undeveloped human performance. IQ tests were originally constructed to assess learners' capacity to

achieve academically and does provide some indication of ability to learn, but only a very general and incomplete indication (Boeyens 1989:11).

Gardner (1993:6-7) holds a postmodern view of diversity and plurality and rejects the one-dimensional view of intelligence. There are vast differences among individuals in their individual strengths and weaknesses as well as different cognitive strengths and contrasting cognitive styles. Individuals do develop different intellectual profiles, yet within each individual various intelligences interact with the result of a unique blend of mental abilities. To develop learning for each individual learner the learning environment must accommodate diversity of mind. The learners must be assisted in knowing own minds and capitalize upon the thinking and learning style they do best.

Tests should be abolished and instead there should be looked at more naturalistic sources of information about peoples around the world. People develop skills important to their way of life. A word for intelligence in a society of sailors would probably be navigational ability. Gardner (1993:7) defines intelligence as the following:

...the ability to solve problems or to fashion products, that are valued in one or more cultural or community settings.

Gardner (1998:26) admits that it is a contentious definition, because *"we can look at people's problem solving ability quite snappily, we cannot look so easily at whether they can actually do anything with it"*. Another problem is that intelligence is something that has to be recognized and valued in the specific community. Personal intelligences are for example very important in Japan.

Intelligence also has a historical context. Armstrong (1994:9) mentions that certain intelligences seem to have been more important in earlier times than today. When the majority of people lived in rural settings, doing physical hard work, bodily-kinesthetic intelligence was highly valued. In a postmodern world where people receive their information from films, television, videotapes and CD-ROM technology, the value placed on strong spatial intelligence may increase. It is necessary to develop a broader view to intelligence in the learning environment.

5.5.3 EDUCATING FOR MULTIPLE INTELLIGENCE IN A POSTMODERN LEARNING ENVIRONMENT

The concept of a transformational curriculum is to move away from the traditional view of sameness where all learners had to express their understanding in the same ways. Gardner (1998:34) feels that an educational system that treats everybody in the same way, should be abundant for an *individually orientated system*, in which we try to understand how the mind of each learner works and to accommodate the different ways of understanding, in a way comfortable for each learner. Jensen (1995:8) shares the view that the capacities of the learners were vastly underestimated. The learning environment should accommodate the potential of every individual learner, because learners learn differently and a learning environment climate should be created where every learner is respected and nourished.

The envisioned outcome for a transformational postmodern curriculum is competent future citizens. Gardner (1993:9-14) holds the view that IQ tests predict school performance with considerable accuracy, but is an indifferent predictor of performance in a profession after schooling. Woolfolk (1980:121) holds the same view: *"IQ scores and school achievement are not highly correlated with income and success in later life. Other factors like motivation, social skills, and luck may make the difference"*. It is the task of the school to develop intelligences and help learners reaching vocational and avocational goals that are appropriate to their particular spectrum of intelligences. Gardner (1993:26) explains that in the past it was believed that adult roles depended largely on a single intelligence. In fact, every adult role requires a combination of intelligences that interact and build upon one another. The combining of intelligences is apparent for example when playing a music instrument. Playing the violin transcends a reliance on musical intelligence only. Bodily-kinesthetic intelligence, intra-intelligence and inter-intelligence are also needed.

Gardner proposes seven different intelligences. The first two intelligences are mainly associated with the logical-analytic left hemisphere of the brain and the rest with the holistic-emotional right hemisphere of the brain.

Each of the seven different intelligences have certain core abilities to be recognized as an intelligence. The core abilities of each intelligence are the following:

- ✓ Raw pattern ability - abilities that appear universally it may appear at a heightened level in some population groups and it predominates during the first year of life.

- ✓ Symbol system - language is encountered through sentences and stories, music through song, spatial understanding through drawing, bodily-kinesthetic through

Table 2.4 Seven intelligences according to Gardner (1993)

Left brain hemisphere intelligences	Right brain hemisphere intelligences
<p>Logical-mathematical intelligence The capacity to use numbers effectively and to reason well.</p>	<p>Spatial intelligence The ability to perceive the visual-spatial world accurately and to perform transformations upon those perceptions.</p>
<p>Linguistic intelligence The capacity to use words effectively, whether orally or in writing.</p>	<p>Music intelligence The capacity to perceive, discriminate, transform and express musical forms.</p>
	<p>Bodily-Kinesthetic intelligence Expertise in using one's whole body to express feelings or using the hands to transform.</p>
	<p>Interpersonal intelligence The ability to perceive and make distinctions in mood, intentions, motivations and feelings of other people.</p>
	<p>Intrapersonal intelligence Self-knowledge and the ability to act adaptively on the basis of that knowledge.</p>

gesture or dance and so on.

- ✓ Notional System - mathematics, mapping, reading, music notation and so on.
- ✓ Vocational and avocational pursuits - logical mathematical intelligence begins as sheer pattern ability, develop through symbolic mastery and notions of school years and achieve mature expression in adulthood in such roles as an accountant, engineer and others.

Most learning material can be presented in many different ways providing opportunities for concept development in each intelligence and to develop the learning potential of each learner. The postmodern educator should be aware of the different intelligences in the choice of a learning experience. A music lesson can be presented by means of all seven intelligences as well as taking to account that the learner is a postmodern individual, learning for example through own dialogue and autobiographical information. Another way is by introducing some of the elements of multiple intelligence in the performance task.

In the linguistic intelligence domain the educator should provide opportunities to think about the text and to discuss and debate the content of the songs. By means of cooperative learning each group can have the opportunity to sing a musical phrase to decide which way reflects the text best. It will reinforce the integration between text and melody. Making use of vernacular language text can be exiting and a challenge to the linguistic intelligent learner.

The logical mathematic intelligence domain can be accommodated by decoding the notational and rhythmic system of music. Practice sight reading with the solfa syllables and analyze and construct own rhythm patterns. Critical thinking is part of this domain. Teach the learner to make use of meta cognition by carefully analyzing the errors and problems of a taped performance. Compare musical styles by making lists of the characteristics of the different styles. These learners favour a predictable classroom routine that is still flexible to allow change.

The visual-spatial intelligence is one of the least accessed intelligence and requires creativity from the educator to incorporate it into the learning programme. The use of pictures (visual information), imagination and metaphors are ways to develop spatial intelligence. Find pictures or make drawings to capture the mood of a song. Have learners imagine a story, while playing incidental music such as Mussorski's *Pictures on an exhibition*. Tone colours can be associated with different colours as well as marking or highlighting scores in different colours. Be aware of the visual aspects of the classroom.

The bodily-kinesthetic intelligence is an important part of the new Arts and Culture learning area. Dancing is a very important means of enhancing bodily-kinesthetic intelligence. Simple hand movements or movements to illustrate certain elements of music are a valuable way to incorporate the intelligence into the learning program.

The following are more examples of integration of other learning areas into the music curriculum (Armstrong 1994:77-78).

- ✓ Rhythm, songs, raps and chants - Take the essence of what is being taught and put it in a rhythmic format. At rote learning level spelling words may be sung using a simple rhythm. Invite learners to create songs, raps and chants that summarize, synthesize or apply meanings from other learning areas to music. It incorporates both

brain hemispheres. Enhance the learning experience by incorporating instruments.

- ✓ Discographies - The extended or non-traditional role of the music educator may be to supplement the school with lists of recorded musical selections to illustrate or amplify the learning content of the different grades. For the Human and Social Science learning area a collection of songs about the different wars may be collected and updated. Examples of such songs may be *When Johnny comes marching home again*, *The battle of the hymn of the republic* and many other. Music to illustrate Newton's first law of motion, the song *Something gotta give* may be added to the media centre's music collection to develop learning potential in learners.
- ✓ Super memory music - Learners can easily commit information to memory if they listened to the educator's instructions against the background of slow Baroque and classical music. Learners should be in a relaxed state, while the information is given to the learners in a rhythmical way, changing the level and dynamics of the voice.
- ✓ Musical concepts - Music can be a creative tool to express concepts. An example is the teaching of geometric forms in grade one by humming at a certain tone to express a certain geometrical form. Any other concept may be taught by means of sound and even movement. An example is when the learners choose a geometric form they would like to present to the class. After discussing the presentation they practice the necessary sound and movement.
- ✓ Mood music - Use music to create the appropriate atmosphere as part of the learning programme to deepen the understanding of concepts.

Gardner (1993:32-33) explains how to apply MI theory in the learning environment. Suppose a child is learning some mathematical principle, but is not skilled in logical-mathematical intelligence, the learner will experience difficulty in grasping the principle. There is a solution to the problem by finding another route to the mathematical content. Language, spatial modelling or even bodily-kinesthetics may be the solution to the problem. It must be stressed that the second route is only a metaphor of translation and at some point the learner must translate back into the original domain. As learning becomes more complex the likelihood of a successful translation may diminish. A word of warning comes from Kassel (1998:31-32) when she states that educators should be wary of pulling skills out of context and equating memorization with understanding. Discrete discipline skills (music and otherwise)

need thinking skills or higher order concepts that should rather be the integrative thread and not superficial MI links. Applying multiple intelligences in the postmodern learning area recognizes the diversity of the learners, but should not be seen as diluting the intelligences to applications of their lowest common denominator. Gardner (1998:33) echoes that a lot of uses of multiple intelligence may be well intended, but they tend to be superficial. It might turn out that there is an interesting organizing capacity in music that extends beyond itself.

5.5.4 EMOTIONAL INTELLIGENCE

It has been pointed out that postmodern thinkers realized that there is more to success than academic intelligence only, as postulated by the Western Science Paradigm. Emotional intelligence have to be included in the concept of intelligence. To be emotional intelligent means to be emotional literate. Learners have to learn to be intelligent about their emotions and apply the knowledge and skills learnt to daily life.

Goleman (1996:43) lists five categories of emotional intelligence and Wilks (1998:11-12) adds a sixth category. They are as follows:

- ✓ Knowing one's emotions - Self-awareness is the ability to recognize feelings when they happen and the events that evoked the feelings. It may be an uncomfortable emotion which does not fit the view of the self, but it is important to recognise the emotion and to be aware of experiencing the emotion. If the emotion can not be labelled, it is still important to know of the emotional state.
- ✓ Managing emotions - This relate to the uncomfortable emotions, once they are accepted. It means to develop an *inner mothering mode* to sooth when things are difficult, but also to push to greater heights when necessary. Emotional intelligent people can manage both themselves and other people better.
- ✓ Motivating oneself - Emotional self-control must be developed in learners. It is sometimes necessary to delay a certain emotional need and deal with the need later. A way to not only delay emotions, but to channel emotions into a positive direction is by entering the *flow* experience which enables outstanding performance. Csikszentmihalyi (1995:14) defines *flow* as a non academic word which describes a feeling of doing something that is so enjoyable that you want to keep on doing it.

- ✓ Recognising emotions in others - If a person is able to recognize his or her own emotions they will be able to sense emotions in other people. This develops in empathy and not sympathy, which can be a patronizing emotion.
- ✓ Handling relationships - Understanding other people's emotions give rise to the ability to motivate them. It is a quality that educators need.
- ✓ Transforming emotions - This study places great emphasis on transformation which leads to understanding. Transforming emotions means that negative emotions can be transformed into positive emotions. The effects are potentially far-reaching if we realize that everything in life is potentially transformative.

Music has the innate ability to increase the connection between the left and right brain hemisphere, because music works with the emotion and emotion is created by thought (Wilks 1989:21). Goleman (1996:9) confirms that the emotional and rational mind operates in tight harmony intertwining their different ways of knowing to guide us through the world. Thinking and learning can act as an interactive system, but requires the development of thinking and feeling. Emotional learning is to discover the reason why you feel as you do. Goleman (1996:40 & 41) claims that Gardner's description of personal intelligence reflects a more cognitive approach - a more awareness of one's mental processes - "*rather than on the full range of emotional abilities*". The learners get the opportunity in the music learning environment to learn to recognize emotions and to handle negative emotions. Wilks (1998:6) points out that learning to work with emotions can ultimately give birth to ourselves as whole human beings.

5.5.5 MUSICAL INTELLIGENCE

The importance and necessity of music as part of human intellectual development has been discussed as far back as ancient Greece in the 6th century BC. As research on the learning process continued, so did philosophical concerns about the importance of music to human development (Feierabend 1996:66).

Describing exactly what music intelligence is and determining how to measure it, have been debated for over a century. Various writers proposed different definitions of musical intelligence. Gardner suggests that music intelligence is a separate intelligence and equally deserving of development. Musical intelligence has nothing to do with formal music

education, but individuals with high music intelligence can *think music* with greater clarity and are affected more deeply by music in an aesthetic sense than people with less musical intelligence. Murphy (1999:40) describes musical intelligence as *a way of knowing*. It is the ability to think musically intelligent, whether a performer, composer or listener. Woodford (1996-1997:49-51) adds to the definition of musical intelligence by proclaiming that the concept of musical intelligence is usually associated with development, application and measurement of musical skills and abilities or with cognitive processes that manipulate sound internally. Such beliefs of musical intelligence are inadequate for the reason that social context is ignored. There is an abundance of social forces that ground and shape musical intelligence or musical thinking. The types of musical intelligence that really matters are the constructing of a musical self. Constructing musical intelligence is to exert conscious and purposeful control over own musical thinking and learning. Musical intelligence is sociocentric as society and cultural grouping determine how musical intelligence is acquired and by providing a social frame of reference and standard for making judgement to musical taste, preference and individuality.

As in the other domains, music has not escaped the preoccupation of the modern era, with measuring and testing. Numerous attempts to measure musical ability have been performed and debated. The developments of musical ability tests are concerned with measuring musical achievement, musical aptitude and musical knowledge. But the question proposed by Murphy (1999:41) is what does these tests tell us about musical intelligence? Does the testing of musical ability shed any light on musical intelligence? Murphy (1999:43-44) points out that various intellectuals have proposed different perspectives on music ability and musical intelligence. A group of intellectuals support the fact that tests on music ability, examine music intelligence. Musical abilities are conceived as part of general intelligence and claims that intelligence is what intelligence tests test - intelligence tests or musical ability tests address musical intelligence. It is reasoned by some of these intellectuals that musical ability tests involve no foreknowledge or test content. The tests are designed to test an individuals potential for skilled musical behaviour regardless of previous learning experience. Other intellectuals claim that it must be taken into consideration that there are differences in the developmental level of musical potential. Children differ widely in the underlying skills and sensitivities they possess. The skills are seen as the elements of music such as rhythm, pitch and timbre. Gardner (1984:104) claims that musical intelligence consists of more than certain elements like rhythm, pitch, timbre etcetera of music only. The affective aspect of music is part of music intelligence and should therefore be part of the test. It should also be

taken into account that musical intelligence is influenced by the other intelligences. Rhythm for instance is perceived as not an innate ability only, but mental activities are involved and can be trained. Murphy (1999:48) argues that another factor that should be taken into account is that the vast majority of musical ability tests are conceived in terms of Western tonality and environmental influences conducive to early musical behaviour. According to these information musical ability tests focus on a narrow group of skills only. The development of musical intelligence as a means to develop learning potential should concern the music educator in the music learning environment.

Feierabend (1996:67-68) explains that each of the different intelligences develops a network of neurological fibres, which allow for the processing of a specific type of intelligence. The network consists of cells and a fibre-like extension from those cells developed, called axons. The axons develop in more fibre-like extensions, which is called dendrites. The dendrites have to grow close enough to another set of dendrites to allow the electrical impulses of thought to leap from one set of dendrites to the next. These sections of dendrites are called synaptic connections. The density of the synapses increases sharply during the first months of life and reaches a maximum at the age of two. The density declines at the age of sixteen and then stays relatively constant until the age of seventy-two. The strength and efficiency of synaptic connection determines the speed and power with which the brain functions. It is clear from this information that optimal nurturing of a specific intelligence will result in the best opportunity to develop the intelligence to full potential. Musical intelligence is stimulated when the musical mind is engaged in early stimulation through hearing and responding to music. Activities such as listening, singing, movement and playing of instruments by ear, stimulate musical intelligence. It is vital when music educators wish to develop music intelligence to be aware of the fact that the activities should not be the reading of music, because then the logical-mathematical rather than musical intelligence is being developed. Neural pathways for musical thinking must be developed and it has to be done as early as possible. Learning an instrument first by ear and then later reading notation would be more likely in developing both skills successfully. Wise (1995:27) confirms that rather than demanding technical and theoretical principles out of context, music should be incorporated in music activities where the learners discover for themselves. The learners must be guided to become musically intelligent or to think intelligently in music. Woodford (1996-1997:52-57) defines musical thinkers as follows:

- ✓ Musical thinkers can think for themselves. They develop own musical thoughts and share own beliefs, ideas and practices. They feel morally and intellectually

empowered to think for themselves.

- ✓ Musical thinkers have an understanding and appreciation of the musical world.
- ✓ Musical thinkers think rationally.
- ✓ Musical thinkers exert personal and conscious control over own musical thinking and learning to be able to resist social pressure. They are aware of social force, but curious to know more about music.
- ✓ Musical thinkers do not impose their views on others. They engage in discourse to arrive at understanding and respect. There are values involved in musical beliefs.
- ✓ Musical thinkers are open-minded and flexible in own musical thinking and believe in diversity of thought.
- ✓ Musical thinkers belong to different groupings such as amateur groups, but also expert musical thinkers. They believe in multiple musical styles and associate with people of other domains such as visual and literature domains.
- ✓ Musical thinkers are part of the wider musical community of people committed to intellectual endeavour.
- ✓ Musical thinkers are sophisticated, knowledgeable and consistent in beliefs and flexible with musical diplomacy. Musical thinkers possess an ethos (guiding belief) of their own general beliefs about how knowledge should be acquired, organized, warranted and applied.

Musical intelligence is thus part of the multiple intelligence theory of learning and involves the concept of the postmodern era to develop the whole person.

5.5.6 CONCEPTUAL FRAMEWORK FOR A MULTIPLE INTELLIGENCE APPROACH IN THE MUSIC LEARNING ENVIRONMENT

The conceptual framework illustrates a multiple intelligence approach in the music learning environment

Figure 2.1 Conceptual framework of multiple intelligence

CONCEPTUAL FRAMEWORK OF MULTIPLE INTELLIGENCE

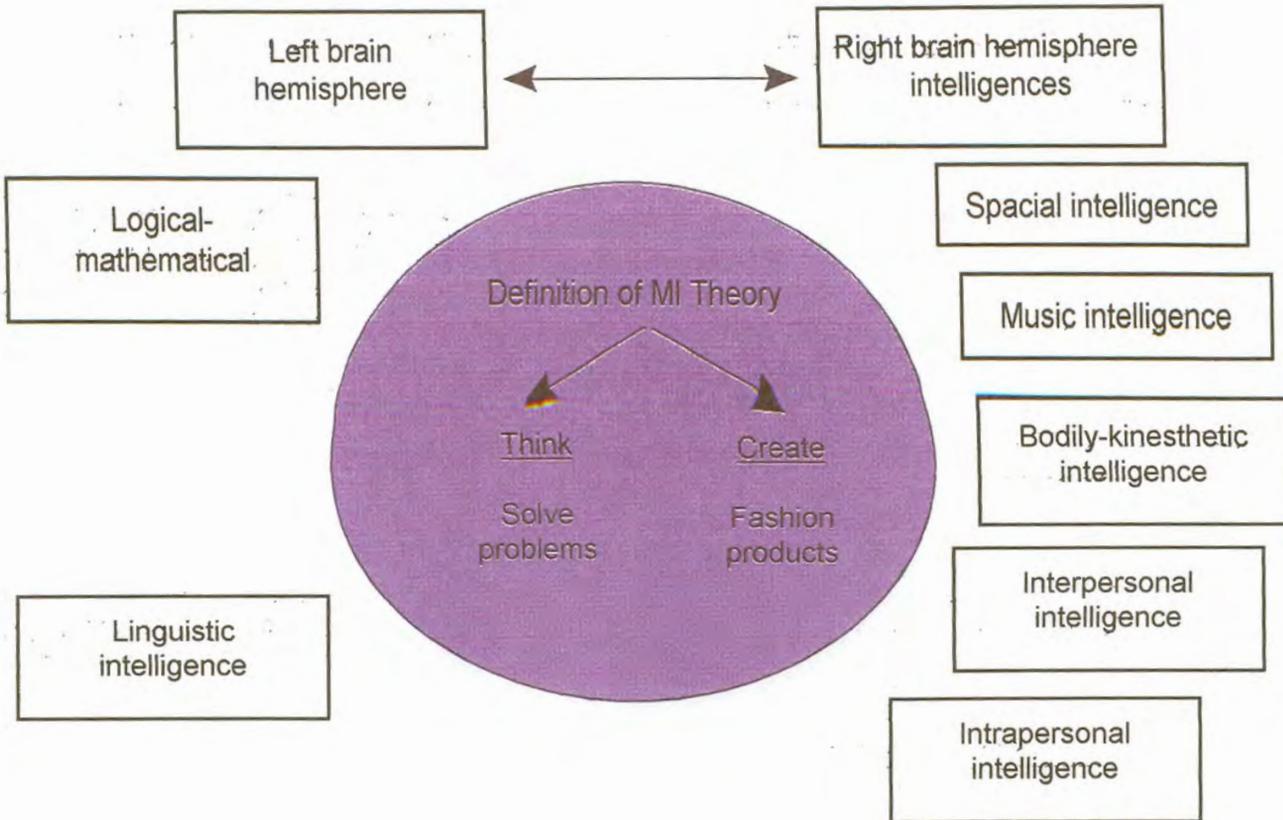


Table 2.5 gives a summary of the interconnected neurological systems.

Table 2.5 Interconnected neurological systems (Armstrong 1994:7)

Intelligence	Neurological systems
Linguistic	Left temporal and frontal lobes.
Logical-mathematical	Left parental lobes - right hemisphere.
Spatial	Posterior regions of right hemisphere.
Bodily-Kinesthetic	Cerebellum, basal ganglia, motor cortex.
Interpersonal	Frontal lobes, temporal lobes (esp. right hemisphere, limbic system).
Intrapersonal	Frontal lobes, parental lobes, limbic system.
Musical	Right temporal lobe.

5.6 WHOLE BRAIN THEORY

5.6.1 INTRODUCTION

For approximately the past one hundred and fifty years, neurologists have known that linguistic faculties are mainly located in the left hemisphere of the brain in the majority of individuals. Research scientist Sperry (1950) observed people with injuries on the right side of the brain and found that they were more likely to suffer loss of speech than people with injuries on the left side of the brain. Because speech and language are so closely linked to thinking, reasoning and higher mental functions, nineteenth century (modern) scientists called the left hemisphere the dominant hemisphere (Edwards 1986:27).

During the 1960s, further information on the function of the corpus callosum caused scientists to postulate a revised view of the two hemispheres. It was found that both hemispheres are involved in highly cognitive functioning with each of the brain specializing in a complementary fashion for different modes of thinking. The left hemisphere is verbal and analytic, while the right hemisphere is non verbal and global. The mode of processing in the right hemisphere is rapid, complex, holistic, spatial and perceptual. It was also found that the two modes of processing tend to interfere with each other by keeping knowledge from the other and preventing maximal performance. The two hemispheres can function together in a number of ways, but one of the hemispheres can also dominate (Edwards 1986:29-32).

Jensen (1995:16) later warns that it is an outdated notion that one side of the brain is exclusively logical and the other side creative. Researchers have found that musician's process music more in the left hemisphere and non-musicians process music more in the right hemisphere. Musicians analyze music more than non-musicians. Borchgrevink (1982:151) claims that one might hypothesize that speech and musical functions are likely to be situated in the same cerebral locations, but on the contrary current research shows that speech is controlled by the dominant or mostly left hemisphere and musical functions by the right or non-dominant brain hemisphere. In 1977 it was demonstrated by the selective anaesthesia of successive hemispheres that musical rhythm and the singing act were processed by the speech or left hemisphere and pitch and tonality is controlled by the right hemisphere. Musical rhythm and pitch/tonality are seen to be controlled by different cerebral hemispheres, singing and almost all musical performance implies extensive integration and cooperation between the hemispheres. Other sources of support are Ornstein and

Thomson's experiment to demonstrate that the brain of a normal person activates different hemispheres while thinking (1994:159-160). An EEG showed the sign of the selective activation and suppression of the two brain hemispheres. A student was fitted with EEG electrodes over the left and right temporal and parietal areas of the skull. He was then asked to perform verbal and spatial tasks, namely writing a letter and arranging a set of coloured blocks to match a given pattern. The findings indicated that while writing (presumably a left hemisphere task) he produced high-amplitude EEG alpha waves over the right hemisphere and much less amplitude over the left hemisphere. The pattern reversed while arranging the blocks and the alpha waves dominant over the left hemisphere. There was always a measure of activity in both brain hemispheres, but the dominant area was more active. The research on the left and right brain hemispheres brought to light an awareness of the specialised functions associated with the left and right hemisphere, listed in table 2.6.

The changed perception of the brain had important implications for the learning environment. The modern curriculum with the Western Science Paradigm was equipped to teach the left hemisphere with its logical-mathematical and linguistic preference. In the learning environment the learner progressed through grades in a linear fashion, studying verbal and numerical subjects, followed a time schedule, was seated in rows and learners were tested and measured. The right brain learner was lost in the modernist learning environment. Slowly new dimensions of thinking about the diversity of people emerged: their different brain hemisphere preferences and significant to the learning environment, the influence of brain hemisphere preferences on learning styles. Holistic learning aims to have the two brain hemispheres working together to use the full power of the brain.

Music is a domain that achieves the integration between the brain hemispheres. Clark (1986:6) confirms the need for integrative use of the brain functions. Using mostly only one hemisphere of the brain in the learning process is inefficient and wasteful of human talent and ability. Jensen (1995:17) supplies an example of achieving whole brain awareness in the learning environment. Be aware that the learners are whole brain learners. If an overhead transparency is used, provide learners with global overviews and steps that will be followed. Alternate the *big picture* and the details.

Table 2.6 Special functions of the two brain hemispheres (Edwards 1986:40)

Left hemisphere	Right hemisphere
<p>Verbal Using words to name, describe and define.</p>	<p>Nonverbal Awareness of things, but minimal connection with words.</p>
<p>Analytic Figuring things out step by step.</p>	<p>Synthetic Putting things together to form wholes.</p>
<p>Symbolic Using symbols that stand for something.</p>	<p>Concrete Relating to things as they are in the present moment.</p>
<p>Abstract Taking out a small bit of information and using it to represent the whole.</p>	<p>Analogic Understanding metaphoric relationships.</p>
<p>Temporal Keeping track of time, sequencing one thing after the other.</p>	<p>Non temporal Without a sense of time.</p>
<p>Rational Drawing conclusions based on reason and facts.</p>	<p>Non rational Not requiring a basis of reason or facts</p>
<p>Digital Using numbers as in counting.</p>	<p>Spatial Seeing things where they are in relation to other things and how parts go together to form a whole.</p>
<p>Logical Drawing conclusions based on logic.</p>	<p>Intuitive Making leaps of insight, often based on incomplete patterns, hunches, feelings or visual images.</p>
<p>Linear Thinking in terms of linked ideas, one thought directly following another.</p>	<p>Holistic Seeing whole things all at once, often leading to divergent conclusions.</p>

5.6.2 WHOLE BRAIN THEORY

Development on brain research almost exclusively focused on left and right hemisphere preference until the development of Maclean's (1970) Triune theory (figure 2.2). According to the theory the human brain is in reality three brains, each superimposed over the earlier in a pattern of brains within brains.

Ornstein and Thomson (1994:4) explain the development of the brain and its specialized functions ascribed to human evolution. The human brain developed from the brainstem. It is referred to as the reptilian brain, because it resembles the entire brain of a reptile. It is driven by instinct and warns the organism of important incoming information and handle basic bodily functions such as sensory motor imagery, breathing and heart rate. Accelerated learning addresses this non-verbal part of the brain. The mammalian brain contains the

limbic (emotion system). Ornstein and Thomson (1994:8) state that the limbic system (figure 2.3) is most highly developed in mammals and is often referred to as the mammalian brain. It turned into the neocortex, responsible for thinking, perceiving, speaking and acting as civilised beings.

Figure 2.2 Triune brain

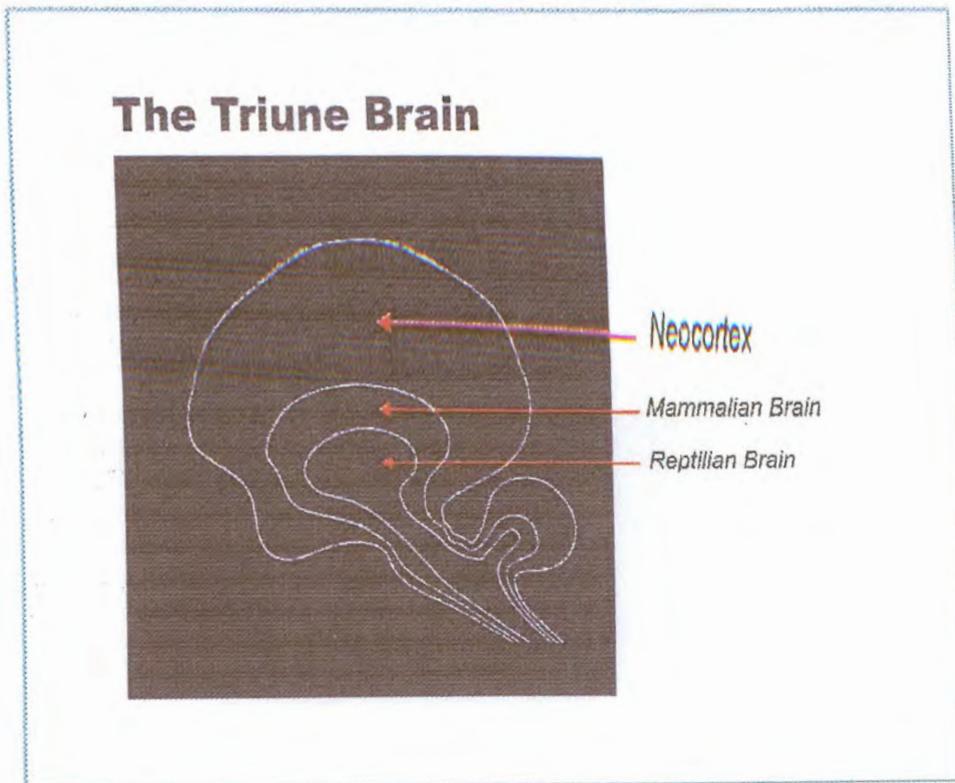
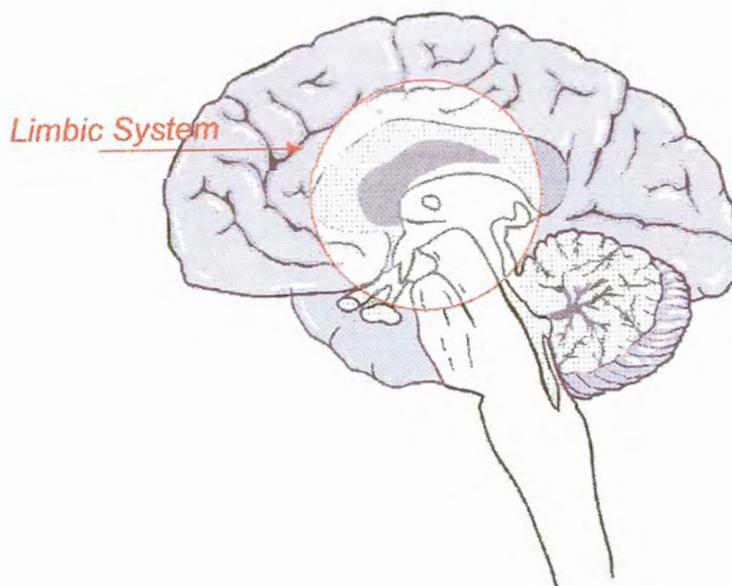
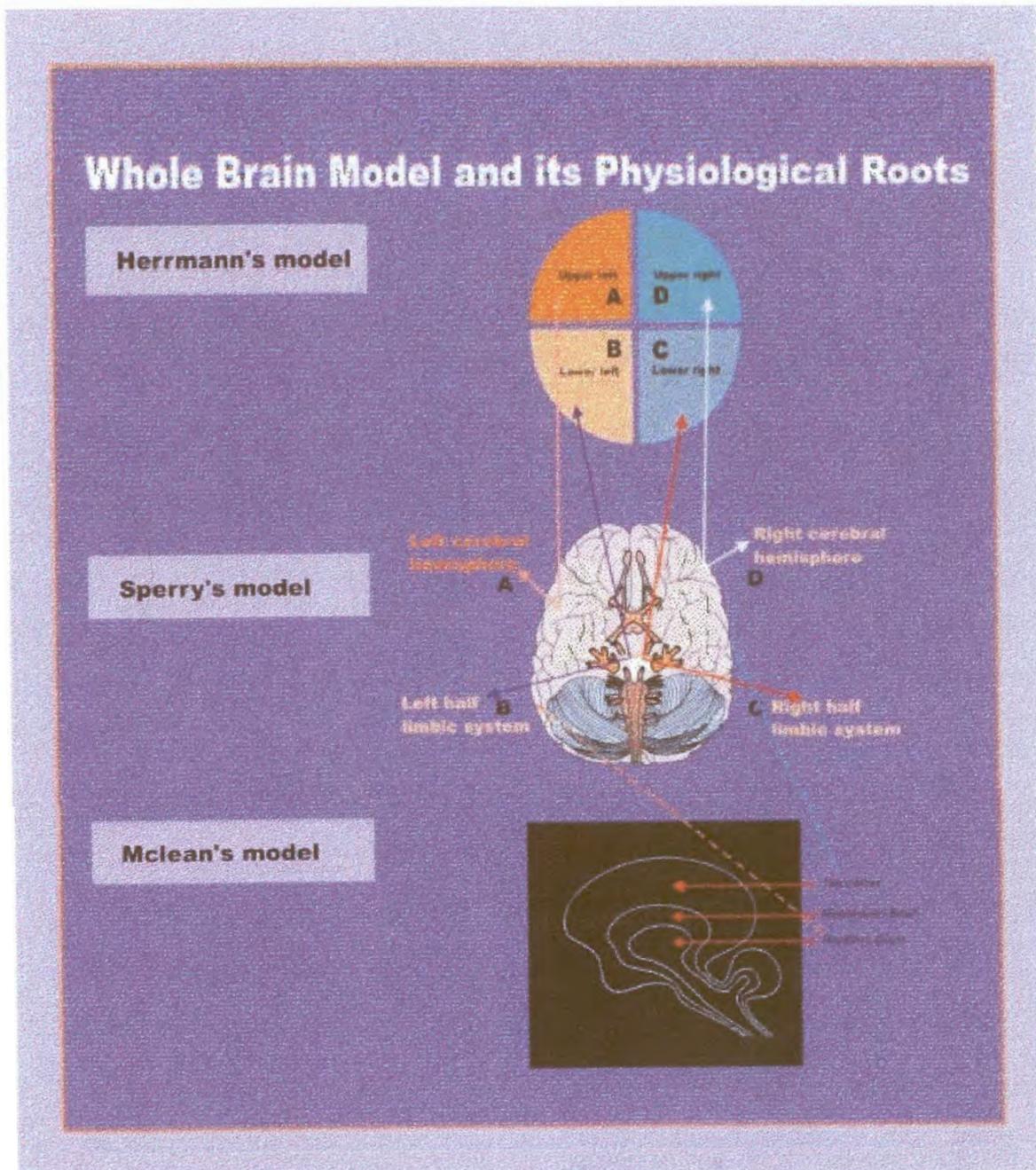


Figure 2.3 Limbic system



The role of the limbic system was either overlooked or ignored for a time. The limbic part of the brain is a small, complicated structure, divided into two interconnected halves within each of the cerebral hemispheres. It is not easily detectable and can only be viewed through computer modelling techniques. It is more primitive compared to the neocortex of the cerebral hemisphere, but also capable of thinking. With the help of the Maclean (1970) model, Herrmann (1996:13-16) combined elements of the Maclean and Sperry models into a four-part model representing the whole thinking brain and its psychological roots.

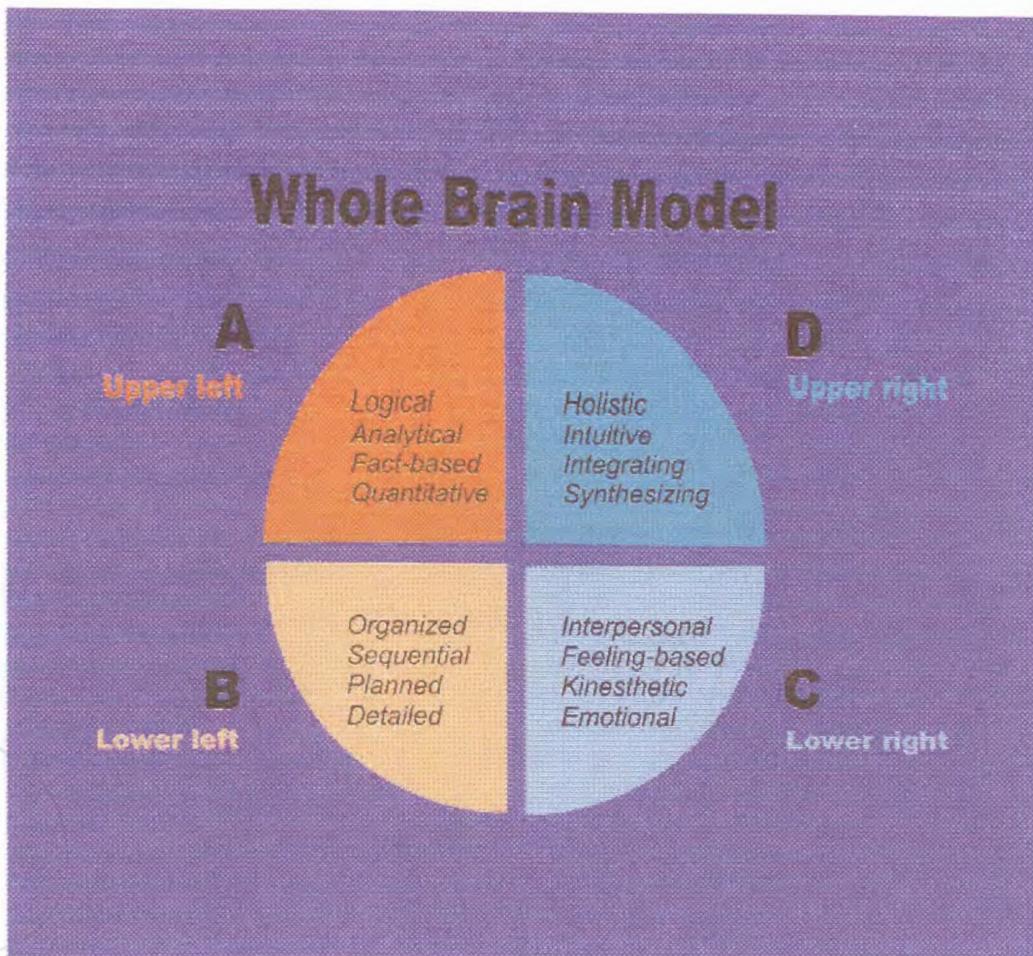
Figure 2.4 The whole brain model and its psychological roots



5.6.3 THE HERRMANN FOUR-QUADRANT WHOLE BRAIN MODEL

A four-part model was proposed representing the whole thinking brain.

Figure 2.5 The whole brain model



Four thinking styles, representing the two halves of the cerebral cortex and two halves of the limbic system. Each of the four thinking parts of the brain is specializing in a different way, but function together situationally and iteratively, making up a whole brain in which one or more parts becomes naturally dominant. The upper left A-quadrant is the focus of logical, analytic, fact-based and quantitative thinking. The lower left B-quadrant is the location for organized, sequential and detailed kinds of thinking. The lower right C-quadrant is the location for interpersonal, feeling-based kinesthetic and emotional processes. The upper right D-quadrant is the focus for holistic, intuitive integrating and synthesizing processes.

Herrmann (1996:16-18) believes that although the body is apparently symmetrical it is actually asymmetrical. There are differences between paired structures throughout the body, such as hands, feet, eyes etcetera. Most of the world's population exhibit a dominant

hand and arm. The same dominance occurs in the paired structures of the brain. One member of the pair develops a higher level, through increased use and due to preference, than the other. The development of preferences leads to the development of interests, competencies and influence choices people make. It is called thinking styles and Herrmann (1996:29) developed the Herrmann Brain Dominance Instrument (HBDI) to chart the location of thinking styles or mental preferences of people.

5.6.4 EDUCATING THE WHOLE BRAIN

Further research ascertained that each hemisphere contains many more of the other hemisphere's abilities and is capable of more subtle ranges of mental activities. Byzan (1991:18-19) discusses Einstein and other great scientists who seemed to be predominant left hemisphere dominant, but turned out to be whole brain dominated. Einstein numbered among his activities violin playing, art, sailing and imagination games. It was while daydreaming that he realized that the universe must be curved and gave way to the relativity theory. Artists wrote books full of detailed information (left-hemisphere activities) on how exactly they painted their works of art. The *great brains* were using both ranges of their capacity:

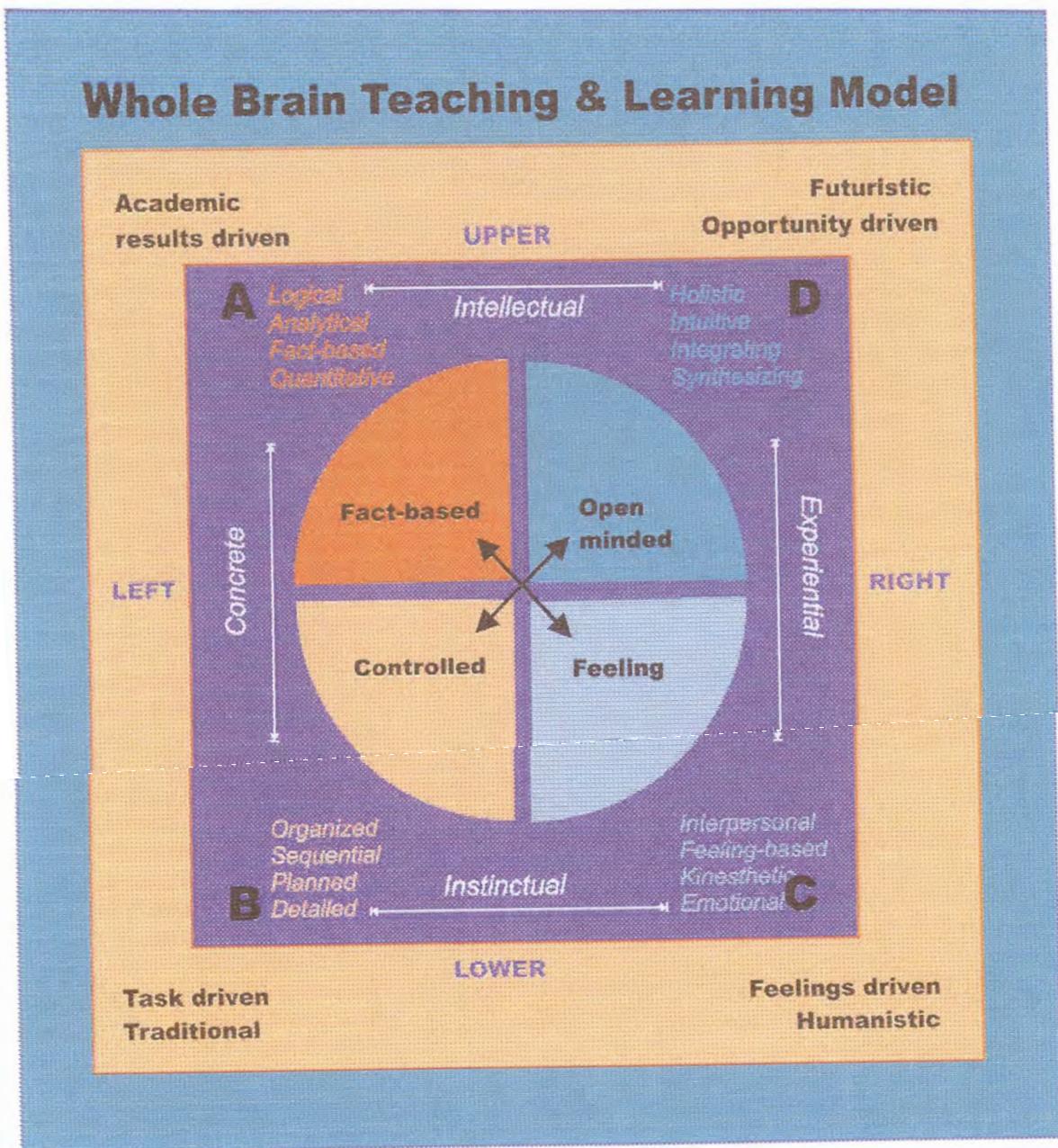
My research into the brain leads me to believe firmly that the grand design is to be whole; that the normal, ordinary, everyday brain is specialized and interconnected in ways that position it to develop as a balanced, multidominant brain capable of accessing and using all of its mental options (Herrmann 1996:35).

Effective learning takes place if the whole brain is involved in learning. Interpreted in terms of Herrmann's model this presupposes that all four brain quadrants should be included in teaching and learning activities. The cognitive functions of all four-quadrants should be taken into account when teaching and learning takes place. Cognitive functions should comply with the learner's preferred mode of thinking/learning. Educators should not conduct teaching and learning in own learning style preference. Educators should present the learner with a learning environment that stimulates the use of the whole brain to develop the potential of each learner. Herrmann (1996:155) proposes a whole brain teaching and learning model.

According to this whole brain teaching and learning model the teacher is represented in the centre. The arrows indicate the iterative nature of the activities as they correlate with the

psychology of the interconnected brain. The left mode deals with the logical, rational, quantitative activities, as well as the organized, sequential, procedural and methodical activities. The right mode is characterized by visual, conceptual, simultaneous, experimental activities as well as emotional, expressive, interpersonal and kinesthetic activities. Educational activities that implement all the modes of the model will ensure that the learners preferred thinking styles are accommodated, but less preferred learning styles are also utilised.

Figure 2.6 Whole brain teaching and learning model

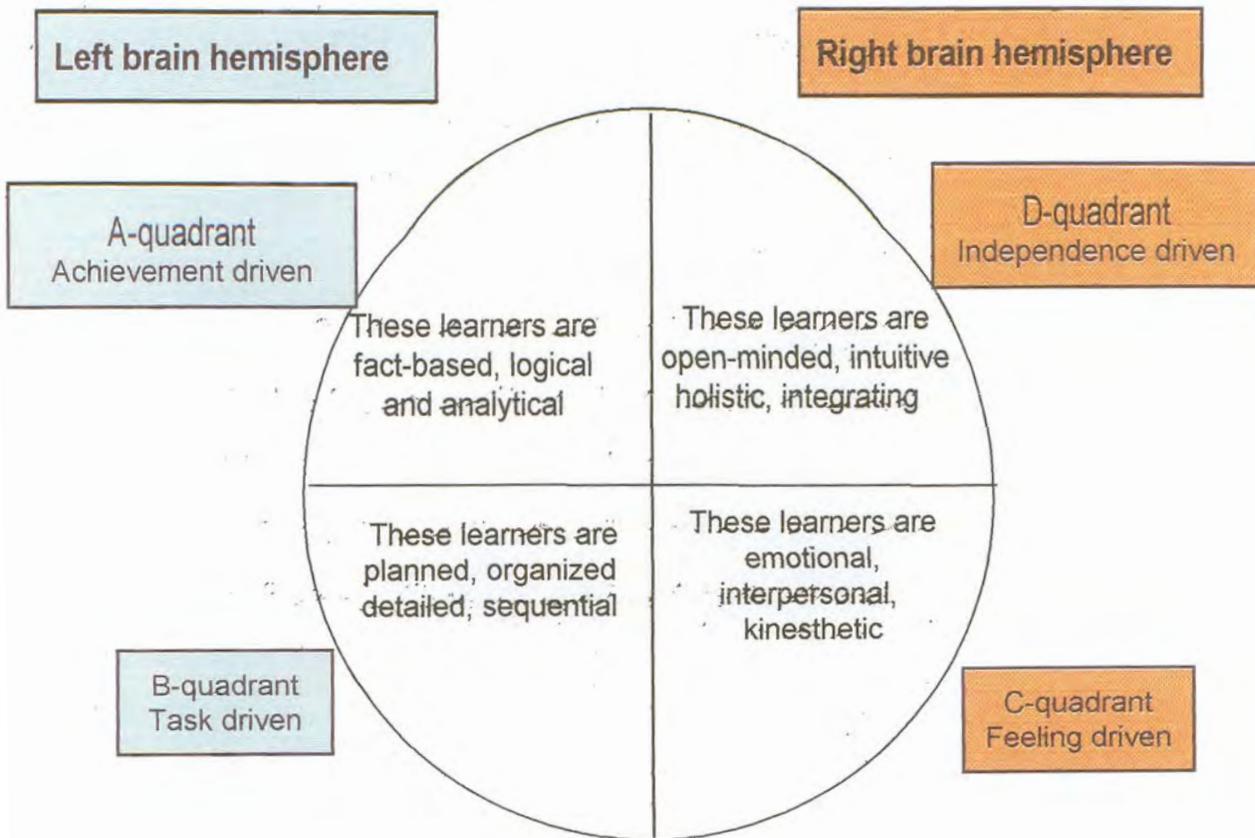


5.6.5 CONCEPTUAL FRAMEWORK FOR A FOUR-QUADRANT WHOLE BRAIN APPROACH IN THE MUSIC LEARNING ENVIRONMENT

The conceptual framework illustrates the four-quadrant whole brain model as proposed by Herrmann.

Figure 2.7 Four-quadrant whole brain conceptual framework

FOUR-QUADRANT WHOLE BRAIN CONCEPTUAL FRAMEWORK



5.6.6 INTERACTIVE USE OF MI THEORY AND WHOLE BRAIN APPROACH TO DEVELOP LEARNING POTENTIAL

When studying MI theory and the model of whole brain thinking preferences, it becomes clear that the two models complement each other. The learner with the logical-mathematical and linguistic intelligences are accommodated in the A-and B-quadrant of the whole brain model. The C-quadrant of the whole brain thinking style accommodates the interpersonal, intrapersonal, bodily-kinesthetic and musical intelligence, while spatial intelligence is to be found in the D-quadrant of the whole brain thinking.

Learners with the logical-mathematical and linguistic intelligence prefer formal academic

driven learning, with to the point lectures, case discussions, numbers, data and programmed learning. They also respond to task driven traditional learning which is organized, sequential, procedural and methodic.

The learner with the music-, kinesthetic-, interpersonal- and intrapersonal intelligences fall into the C-and whole brain thinking model. The C-quadrant thinking preference learners develop learning potential by feeling-based learning and respond best to sharing and expressing of ideas, activity based and group learning with emotional involvement.

The learners with spatial intelligence or the D-quadrant thinking preference respond best to futuristic opportunity driven activities such as visual information, conceptualizing and discovering and experimenting. Learning is developed with fun and spontaneity, playful approaches, a quick pace and variety in format.

The postmodern learning environment faces the challenge of a **diversity** of intelligence and dominant learning styles of various learners. In developing learning potential for each learner, educators face the challenge to structure learning programmes to accommodate the diversity of multiple intelligence in learners, with different dominant learning styles. As well as whole brain approach for a transformational curriculum for the twenty-first century.

One of the most promising developments of Curriculum 2005 as an outcomes-based education system, is the emphasis on the integration of different learning areas. The integrating approach indicates that the learner is viewed as a *whole* being. Bresciani (1974:80) feels that this is a very important development to educators interested in the influence of music on the learner, because in music education the learning environment is observed as a dynamic partner in the development of the *whole* learner. The learning environment, intellectual, emotional and psychomotor development is important to the overall development of the learner.

5.6.7 A MACRO LEVEL CONCEPTUAL FRAMEWORK OF AN INTEGRATED HOLISTIC APPROACH TO THE DEVELOPMENT OF THE WHOLE PERSON

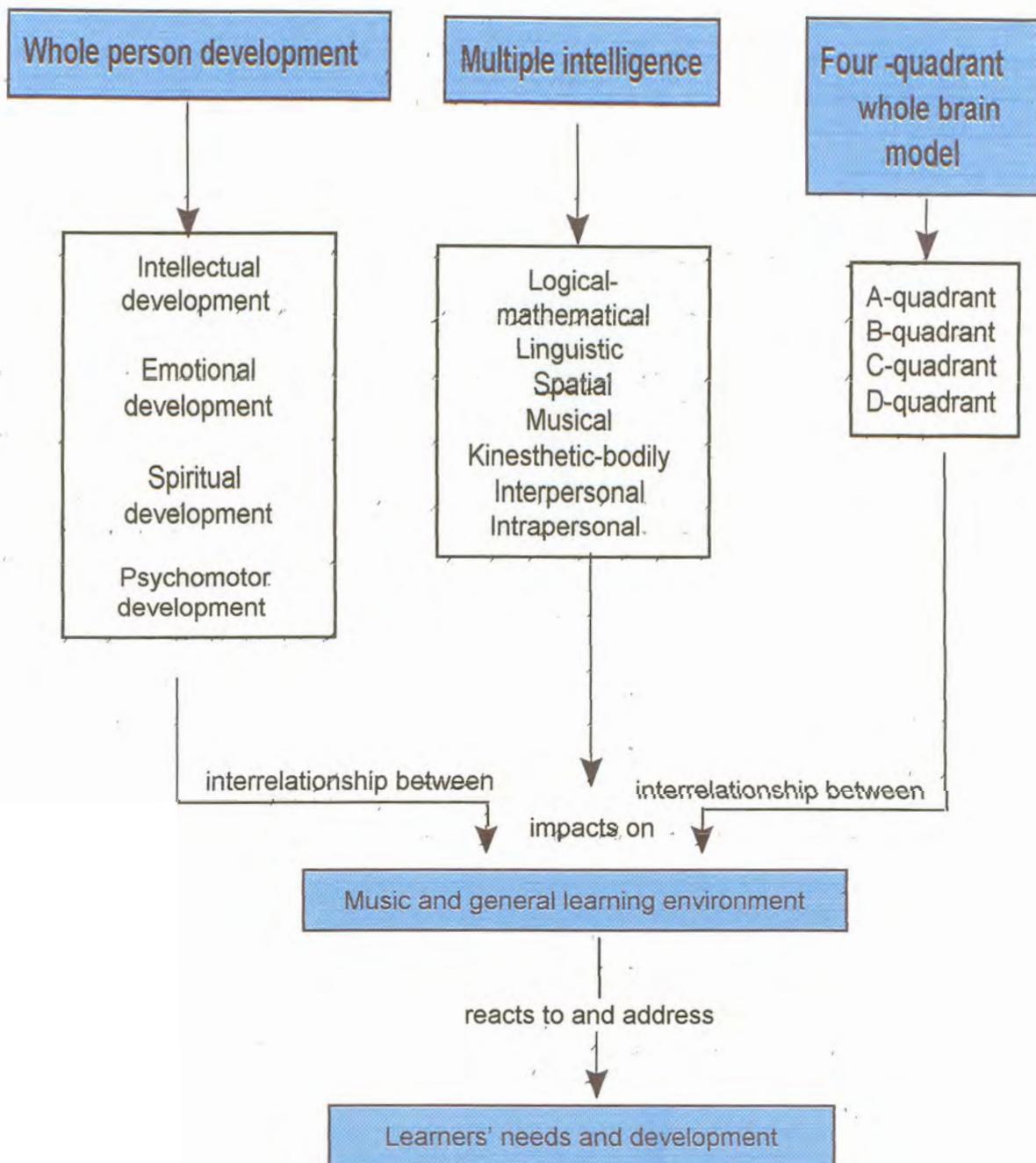
The conceptual framework illustrates an integrated holistic approach to develop the learning potential of the learner (figure 2.8).

5.3 CONCLUSION

The literature study explored the modern paradigm and its profound influence on the Western world, including the learning environment. The first traces of postmodernism could be detected, since the late 1960s. The changing postmodern society presents the learning environment with new fundamental principles and tasks. It is the task of the postmodern educator to address the different needs of learners in the changed world. Postmodern curricularists firmly believe that the best way to assist learners, is by means of a transformational curriculum. A transformational curriculum transforms learners to real and deep understanding for life role performance. A transformative postmodern curriculum acknowledges diversity of learners by utilizing the whole brain and the multiple intelligences of learners. It is clear from the previous discussion that the postmodern world has a significant influence on the learner and the learning environment. Educationalists need to do more than just help learners survive, they need to address the needs of the learners to such an extent that they develop their learning potential to shape and lead the society of the future.

Figure 2.8 Macro level elements of the integrated holistic conceptual framework to develop learning potential through music

MACRO LEVEL ELEMENTS OF THE INTEGRATED HOLISTIC CONCEPTUAL FRAMEWORK TO DEVELOP LEARNING POTENTIAL THROUGH MUSIC IN A POSTMODERN LEARNING ENVIRONMENT



CHAPTER 3

MUSIC AND WHOLE PERSON DEVELOPMENT: INTELLECTUAL, EMOTIONAL, PSYCHOMOTOR AND SPIRITUAL

1. MUSIC AND WHOLE PERSON DEVELOPMENT: INTELLECTUAL, EMOTIONAL, PSYCHOMOTOR AND SPIRITUAL

1.1 INTRODUCTION

The benefits of music in the lives of people at all ages, but especially in children, are a well-researched topic. The many claims which are made about music's value include intelligence and academic performance, emotional development, psychomotor development and in the last few decades spiritual development. In the journal *Teaching Music* (1999:33) it is mentioned that if Schackford's (the Suzuki educator) personal observations are correct that such qualities as self-esteem, leadership and high academic performance are learned behaviour, then music offers untold additional benefits and should be the birthright of every child, especially those born into less privileged and typically less stimulant environment. Seeing that South Africa is a country with a history of unequal learning opportunities, developing learning potential by means of music should be considered very carefully.

1.2 THE PRIMARY SCHOOL LEARNER

A number of important findings have been made about learning development, music and the primary school and young learners. These findings can be of great value to the South African education authorities, which are in a process of revamping the South African education system. The findings concerning the musical development of the primary school and young learner are as follows:

- ✓ Gardner (1973:188-189) maintains that most outstanding musicians are discovered at an early age, usually before six, and often as young as two or three years of age. Examples of musicians are Mozart and Nyireguházi (the Hungarian music

prodigy). Wise (1995:25) mentions Rubinstein, who as a toddler refused to talk, preferring to communicate by singing, he knew all the keys on the piano and was able to play by ear. By the age of three and a half his talent was so overpowering and fixated that his parents felt compelled to obtain formal music lessons for him. Gardner (1993:137) also later claims that in most areas of development children simply improve with age, but in the artistic spheres evidence suggests a surprisingly high level of competence in young children, followed by a possible decline during the years of middle childhood. This curve of development is evident in artistic production, but also manifest in selective areas of perception. Research has found that time spent in music increases the receptability of the brain in other areas and both intellectual capacity and emotional capacity is developed. Music has a general transfer effect on the integration of learning. The optimal phase for these general transferring qualities disappears at about thirteen years of age. Ornstein and Thomson (1994:38) confirm that transfer between the two brain hemispheres becomes less easy with age and Campbell (1997:192) confirms that it could be that after the fourth grade the basic pattern for sensory awareness is set and any other learning is remedial. It is thus the primary school learner who benefits most from involvement in the arts. Therefore, the Arts and Culture learning area should be explored to find the best possible means to develop learning during this developmental phase.

- ✓ Gardner (1993:137) mentions that preschool children acquire an enormous amount of knowledge about and competence in the arts. As in the case of language it occurs spontaneously without a lot of tutelage from parents. This stands in contrast to most traditional school subjects.
- ✓ It is a known fact that an individual's perceptual or comprehension capacity develops well in advance of productive capacities. In some domains comprehension lag behind performance or production capabilities and in these domains the young children must get the opportunity to learn by performing, making and doing, developing comprehension or understanding (Gardner 1993:138). Involving the young child in the active process of making music, provides the greatest benefits in developing of learning potential. The journal, *Teaching Music* (1999:31) claims that moving to music, dancing, playing instruments and experimentation with materials that make sounds are all beneficial in the development of young children. It is the *doing* in addition to the *listening* that offers the greatest positive benefits in all aspects of

learning, especially in music. Studies which revealed significant changes in children's spatial and cognitive development, almost all involve the child as actor, not a spectator. According to the journal, *Teaching Music* (1999:31), kindergarten classes of the school district of Kettle Moraine Wisconsin who received musical instruction, scored forty-eight percent higher on spatial-temporal skill tests than those who did not receive music training. Music instruction appears to have long-lasting benefits for children's spatial-temporal skills, skills that are needed for understanding proportions and ratios. The journal *Teaching Music* (1999:34) also mentions that after six months of piano lessons, preschool children had spatial-temporal IQ scores 34 percent higher than those who received computer training instead of music training. Bunt (1994:71) agrees and states when composing or playing an instrument all the cognitive processes are brought into music - cerebral processes involve motor control, feelings, cultural experience, social activity and intellectual activity. Bunt (1994:96) quotes the famous conductor and composer, Leonard Bernstein who said:

'Play' is the very stuff and activity of music; we play music on our instruments just as composers plays with notes in the act of inventing it. He juggles sound-formation, he toys with dynamics, he glides and skips and somersaults through rhythms and colours - in short, he indulges in what Stravinsky called 'Le Jeu de Notes'. The Games of Notes: a striking concept of what music is.

- ✓ Neuropsychological research indicates that specific areas of the cortex have particular cognitive foci and after early childhood there is a little plasticity in the representation of cognitive capacities in the nervous system (Gardner 1993:138). Although the cortex is responsible for the aural function, other brain areas are also stimulated when a person listens to music.

- ✓ Gardner (1993:29-31) explains that it is during the preschool and early, elementary years that children can discover something of their own peculiar interests and abilities. In the case of powerful talents they are likely to emerge in the domains of music and mathematics. It is important to notice that an exclusive focus on linguistic and logical skills in formal schooling can shortchange individuals with talents in other intelligences. Each child should have the whole spectrum of his or her intelligences stimulated every day.

- ✓ Although this study focuses on the primary school learner, even before birth the foetus is able to hear music. According to the journal *Teaching Music* (1999:23) Huffaker claims that clinically it is apparent that babies respond to sound stimuli by the third trimester of pregnancy. It can safely be argued that the influence of music on learning developing starts before birth. Bunt (1994:75) quotes research where Berendt mentions the similar shape of the embryo and the shape of the ear. The inner ear contains the organ known as the organ of Corti, which develops from the skin of the embryo. The organ of Corti is intrinsically linked to the early development of human beings. The ear develops within a few days of conception with the complete auditory system becoming fully functional at about thirty weeks. In the uterus there are sounds of the maternal heartbeat, blood circulation and other nearby sounds. Research is exploring how sound may reach the foetus and has an influence on the foetus. Gardner (1973:190) claims that in the first year of life children will alert to musical stimuli and within the first two years they will act on musical stimuli though dancing, rocking, marching etcetera. It is common for children to take a song or musical pattern and then alter various aspects of it. This kind of symbolic play in music is comparable to linguistic play in all children. It indicates musical stimuli are central to the child's perception. At about five years of age, musical stimuli activate the emotional perceptions in children.

- ✓ The numerous advantages of early involvement in music are recognized all over the world. According to *Teaching Music* (1999:29) young children are taught world-wide to appreciate Asian tonal structures or Corelli sonatas. The early involvement leads to an understanding of such music as well as other subjects later in life. The young child builds a basic *sound bank* from which sound can be drawn for the rest of his or her life. Bradman (1997:3) believes that the sound environment of children should include early modal music, baroque and early classical pieces, some romantic music and music of Impressionist composers such as Debussy and Ravel. Jazz and Latin American genres also provide interesting listening, while stimulating rhythmic appreciation and kinesthetic response (the brain's awareness of the position and movement of the body by means of sensory nerves in the muscles and joints). Ethnic music of various cultures stimulates dance and encourages young children to sing along and so increase a sense of happiness and well-being. Specialists have however found that loud music such as *heavy metal* should not be included in the young child's *sound bank*, because it has damaging influences on the body such as rapid heart beat, hypertension, deafens the listener and the stomach and the

intestines operate more slowly. Loud, blaring music does not have the positive attributes to develop tranquil, reflective learners who can develop and develop their learning potential.

- ✓ The journal *Teaching Music* (1999:31) mentions Sims who states that researchers have found that during preschool and the primary school years, children demonstrate very positive attitudes towards many kinds of music. Bunt (1994:73) also picks up this theme by emphasizing the importance of being aware of the curiosity and spontaneity to sound in most children, because it can lead to the unleashing of creative potential and so optimize learning potential in the learner:

Most children develop an insatiable curiosity for sounds and sound-making during early childhood that appears almost innate. Very few children seem not to derive any pleasure from singing and making music together (Bunt 1994:75).

2. INTELLECTUAL DEVELOPMENT

An inheritance of the modern era is the notion that the arts are primarily a domain of emotion, mystery, magic and intuition and, therefore do not qualify as part of the intellectual or Western Science Paradigm. The Western Science Paradigm of the modern era associated cognition with higher-order thinking such as found in mathematics and science. In the postmodern era the battle has largely been won and those questioning the intellectual dimensions of the arts are in the minority. The challenge is to explore the multiple intellectual possibilities of the arts, and in this study more specifically group music and critical thinking.

Woodford (1996:27) claims that much of the recent debate on critical thinking, revolves around whether critical thinking should be viewed as a set of general, context-free thinking that is transferable to other domains or as a diverse set of thinking, each operating within a particular domain or context-specific domain. There are however according to Ennis (1989:4-5) four different approaches, namely general (separate course where non-school problems are examined), infused (critical thinking in subject context), immersed (critical thinking is implicit, not explicit as in infusion), and combination (general critical thinking and in subject context).

Kirkby and Kuykendal (1991:8) hold the opinion that each specific discipline has its own way

of thinking and it should be taught from an early age. There are however context-free thinking that transcends subject-matter. Heuristics and general problem-solving strategies are given as examples of thinking that may be utilized in the learning environment to produce a general growth of thinking. Woodford (1996:28) adds to this opinion by stating that if the transferring of thinking skills and knowledge are possible, learners must be encouraged to apply these skills across a range of disciplines and a critical-thinking curriculum has to be implemented in the learning environment.

The versatility of music (singing, movement, playing instruments, listening, notation, performing) makes it possible for a combination approach to develop critical thinking in the music learning environment, but the thinking can be transferred to other learning areas, as well as to everyday life. In this section of the study accelerated learning by means of music, higher-order thinking in the music learning environment and the possibility of exploring the thinking process of artists to apply the strategies to the learning environment will also be investigated.

2.1 HOLISTIC LEARNING MODEL AND WHOLE PERSON DEVELOPMENT

The presentation of the work of Lozanov (1978) is especially apt and useful for the purpose of this study and what follows relies to a great extent on his important work. The Bulgarian doctor and psychiatrist, Lozanov, designed a holistic learning model involving the whole person. It is a holistic global way of learning, involving the right brain hemisphere and left brain hemisphere simultaneously as well as the whole person. With the Lozanov method the left brain achieves almost stupefying results, because the right brain, the body and the left brain are in harmony. Lozanov designed a method for the complex postmodern world where accelerated learning is a necessity (Oslander, Schoeder and Oslander 1979:3-12). Clark (1986:33) confirms the importance of the integration of mind and body. The integration takes place when relaxation techniques are learnt and applied. It happens when the body cooperates with the mind's energy. Different techniques are mentioned, namely autogenics, hypnotic suggestions, biofeedback, progressive relaxation, yoga breathing and meditation. Lozanov developed an own method of relaxation with music.

Oslander et al. (1979:15-16 & 26-27) explain that Lozanov had uncovered some biological secrets that lead to expanded potential. The system allows the body and mind to peak efficiently to develop superlearning. Music plays a key element in the learning system. Lozanov called his learning system *suggestopedia* which is a branch of *suggestology*.

Suggestology is a holistic *ology* that is used in psychotherapy to help people to open up their intuitive and extrasensory abilities. This is a way to open the reserves of the body, mind and intuition which are all holistically intertwined with learning, memory and the communication process. People do not only hear words, but also perceive on an intuitive level. The intuitive level can assist the learner in developing learning potential. It is a domain explored by Lazanov, although he was not the first and only psychologist to promote the importance of intuition in the learning environment. Clark (1986:161) quotes Jung (1933) who referred to intuition as one of the four basic human functions and Bruner (1960) who discussed intuition as an important part of education and encouraged its training. Lazanov's learning method is a method where the reserves of the body are opened up by making use of the relaxed or alpha state of the mind. There are four brain waves (table 3.1) common to all human beings. Early experiments revealed that all the brain waves are typically present at any given time, but vary greatly in terms of distribution of beta, alpha theta and delta waves. The creative process can be used as an example to illustrate the distribution of brain waves present during the creativity process (table 3.2). The creative process takes advantage of the four-quadrants or whole brain.

They are (Herrmann 1996:214-225):

Table 3.1 Brain waves of human beings

Beta	Aroused , alert state (13 Hertz - 30 Hertz)
Alpha	Calm, meditative, relaxed state (9 Hertz - 12 Hertz)
Theta	Open, free flow or creative state (5 Hertz - 8 Hertz)
Delta	Deep, dreamless sleep (0 Hertz - 4 Hertz)

Oslander et al. (1979:31-33 & 68-70) maintain that Lazanov believes that people learn faster than usual when they are in a slowed-down relaxed physical state. With body rhythms calmed, the mind grows more effective. Music is used to assist with the process. Slow classical Baroque music which has a steady beat of once per second, sixty beats per minute have the desirable effect on the body and mind. During this time body waves slow down to the alpha level and if the mind is opened up, the learning capacity is almost boundless. The opening up of the mind is done by means of rhythm. Data is chanted with different intonations (normal, soft whisper and loud commanding voice) in rhythm (ten-seconds intervals between items) in time to the music. The learner breathes rhythmically in a relaxed

state.

Table 3.2 The creative process and whole brain involvement

Interest	An alert consideration of problem (Beta state of mind)
Preparation	Gathering of information (Beta state of mind at higher level)
Incubation	Often when totally disengaged and relaxed (Alpha state of mind) Virtually unrecognized by educators
Illumination	The A-ha or eureka when ideas come to mind as solutions (Theta state of mind) Left hemisphere becoming aware of right hemisphere
Verification	Objective review of potential solution (Beta level of mind at high frequency) Deals with critical thinking
Application	Final stage of the process (Aroused Beta level)

Music by composers of the sixteenth and seventeenth centuries, written in the same tradition, has this relaxing influence on the brain. Bach composed most of his music to this relaxing simple meditative mode. Other Baroque composers are Vivaldi, Telemann, Corelli and Handel. The largo (slow) movements of the Baroque concertos with sixty beats a minute in 4/4 time have the desired effect. The music helps directing the focus of attention inward, instead of outward. The reverie state is highly ordered, because of the highly structured nature of the music with specific sound rhythm and harmonic patterns (Oslander et al. 1979:73-74).

Oslander et al. (1997:76) also mention that the Shamans of Central Asia, the Jajouka musicians of northern Morocco and certain Indian and Oriental musicians all knew the musical methods of mobilizing altered states of mind. Current research indicates that certain drumbeats can also have the effect. Other music with a similar effect is the Brahms' violin concerto in D Major, Tchaikovsky's piano concerto in B \flat minor and Beethoven's Emperor concerto for piano. Again the slow movements of the concertos should be used to achieve a relaxed state of mind.

Music is the bridge to awareness and when studying the hidden sources of music, it is discovered that the art of music was once an integrated part of the philosophy of life. It was tied to medicine. Ancient mathematicians believed that the different ratios and proportions of the universe are used in the sound of music and should resonate in architecture and enhance life. Music would be the link to the cosmos and these ideas were handed down to

Baroque composers. Musicians of that time were trained to make use of certain numbers and patterns for harmony, counterpoint, rhythm and tempo in their music. The *mathematical* Baroque music was supposed to affect people by aligning, harmonizing and synchronizing mind and bodies to more harmonious patterns (Osrandar et al. 1979:82-85).

The following is a list of music suitable for learning, study and creativity, by Lazonov (Merrit 1990:158-159):

Table 3.3 Lazonov's list of proposed music

J.S. Bach	Fantasy for Organ in G major Fantasy in C minor Prelude and Fugue in G major Fugue in E flat major for Organ
Beethoven	Concerto for Piano no. 5 in E flat major Concerto for Violin in D major
Brahms	Violin Concerto in D major
Corelli	Concerti Grossi op. 6, nrs. 2, 4, 5, 8, 9, 10, 11, 12 <i>Le Pamesse et L'Astree</i>
Couperin	Clavichord Sonati
Handel	Concerto for Organ in B flat major <i>Water Music</i>
Haydn	Concerto no. 1 in C major for Violin Concerto no.2 in G major for Violin Symphony in C major no.101 Symphony in C major no.94
Mozart	Concerto no. 5 in A major for Violin Symphony in A major Symphony no. 40 in G minor Concerto no. 18 for Piano Concerto no. 23 for Piano Symphony in D major

Rameau	Pieces de Clavecin no. 1.5
Tchaikovsky	Piano Concerto no. 1 in B flat minor Violin Concerto in D major
Vivaldi	Five Concerti for flute <i>The four seasons</i>

To be able to integrate the holistic learning model as part of the learning environment, the logical left brain hemisphere and Western Science Paradigm has to change to an open postmodern view of learning. Learners must be convinced that people's abilities can change and that holistic learning, involving the whole person, should be part of the postmodern learning environment where optimal learning must be achieved. It is a reachable goal for every learner in the school. Learners do not have a supposed norm or capacity and learners do not use the whole spectrum of their intellectual capacity. The responsibility of the educators is to build self-confidence and ensure that learners believe in their own ability to optimize their learning potential. Merrit (1990:5), president of the Merrit Learning System, claims that music seems to put people in touch with their full potential of their true nature by lowering stress, increasing memory retention, stimulating creativity and opening the mind to new perspectives. Learning need not be hard work, boring and unpleasant as was popularly experienced in the modern paradigm. The learner must be motivated to enjoy learning and therefore making it easier to achieve success in a complex postmodern world.

The non-verbal and bodily cues extended from the educator must be positive to ensure a positive rapport between learner and educator. The non-verbal elements enhance teaching awareness. These elements are found in young children with all their spontaneity, receptivity and ability to memorize.

2.2 WHOLE PERSON APPROACH TO THE COGNITIVE PROCESS OF THE ARTIST

The challenge for educators is to make the intellectual habits of artists more accessible to the learner and to borrow from it to develop own thinking. Gardner (1993:171) explains that recent studies found that creative individuals do not have mental operations at their disposal that is theirs alone, but they make use of the same cognitive processes as other people. The only difference is that they use them more efficient and flexible in service of goals that are ambitious and risky. Kirkby and Kuykendal (1991:95) believe that:

...thinking processes can indeed be transported from the context of the arts to other subjects. What must not be lost in transit is the power of the arts to make visible, audible, indeed palpable. It is the making we're after.

The following are intellectual and emotional habits of artists that are beneficial for the learning environment where the educator wants to develop learning:

- ✓ An important characteristic is the total engagement and passion about work that creative people exhibit. Creative people work from abundance. Kirkby and Kuykendal (1991:54) affirm that observation and sharpened perceptions lie at the core of all arts. Artists use the whole person, body and mind with total commitment repeating the same process over and over to achieve the correct result. They are intrinsically motivated and not extrinsically motivated.
- ✓ Artists speak of being open and tentative when they start working. They make one choice after the other as the creation grows, thinking critically (evaluating and judging) all the time.
- ✓ Edwards (1986:4-5) claims that artists seem to be in a different state of awareness. They feel alert and aware, yet relaxed and free of anxiety. They experience a pleasurable almost mystical activation of the mind. There are other activities that also produce the shift of consciousness or mind, such as reading, meditation, jogging, needlework, typing, listening to music and drawing. The learning environment should make it possible for the learners to achieve this state of awareness by creating conditions to enable the learner to make the mental shift to the right brain hemisphere thinking mode. Torrance and Safter (1990:ix) quote Clark who mentions the accessibility of energy fields, the ability to tap and release unconscious and preconscious thought.

2.3 HIGHER-ORDER THINKING IN THE LEARNING ENVIRONMENT

Seven critical outcomes (generic, cross-curricular outcomes) and five additional critical outcomes, have been adopted by the South African Qualifications Authority (SAQA). The critical outcomes form the rationale for each learning area, learning area outcomes and specific outcomes. The critical outcome that concerns this section of the study is the

following:

Identify and solve problems in which responses display that responsible decisions using critical and creative thinking have been made (DoE 1997c:24).

The education system aspires to educate all learners to display critical thinking, in the practices of their occupations as adults, in the conduct of their own lives and to the general problems of South Africa. If the educator has to incite a display of critical thinking in the learner, a clear understanding of the concept critical thinking is essential.

The term *critical thinking* supports a variety of definitions, different philosophical theories and terms used synonymously with terms such as reflective thinking, informal logic, problem solving, higher-order thinking, creative thinking, abstract thinking and other terms. Ornstein and Hunkins (1993:122) explain that the term critical thinking is today used for problem solving and related behaviour. It is an old idea under a new label.

Lipman (1991:115-116) explains that in the present day, the ancient concern for wisdom has been replaced by a concern for critical thinking. Wisdom is commonly viewed as *intelligent judgement*, *excellent judgement* and other phrases. Judgement is a crucial part of wisdom and therefore a principle characteristic of critical thinking. If the learner has to display critical thinking, knowledge and experience will have to be applied to perform good judgement. Pogonowski (1987:38-39) agrees that critical thinking is the result of experience, which embraces the cognitive and affective domain of the learner. If the learner has to come to understanding, experiences such as exploring, experimenting, improvising, composing and listening to music must be provided to engage the learner in critical thinking. The learner must also be provided with the opportunity to think about and discuss the outcome of their critical thinking.

Critical thinking can then be defined as thinking that facilitates judgement by relying on criteria, such as self-correcting and sensitiveness to context. Lipman (1988:40) explains the term "*criteria as a rule or principle utilized in the making of judgement*". A criterion is an instrument for judging and rational thinking. It must be well-founded, structured and reinforced thinking. Examples of criteria are standards, laws, specifications, norms, principles, ideals, tests, methods and others. Lipman (1988:41-42) mentions that standards and criteria are often used interchangeably, but however it should be noticed that standards

represent a vast subclass of criteria. Criteria specify general requirements and standards the degree to which these standards satisfy in particular instances. Self-correcting can be compared with inquiring, in that it aims to discover weaknesses and rectify where necessary. It is a reflecting process and includes meta cognition or the process of thinking about thinking. An example of self-correcting is when a learner acknowledges errors in own thinking. To be sensitive to context (domain) is to be sensitive to exceptional or irregular circumstances and conditions, to special limitations or constraints, overall arrangement, the possibility that evidence is atypical and the possibility that some meanings do not translate from one context to another.

To complicate the concept of critical thinking, it must be taken into account that critical thinking is a higher-order thinking structure. There are many different definitions for higher-order thinking, but according to Lipman (1991:20) the three traits of richness, coherence and inquisitiveness are significant to any definition of higher-order thinking. If these characteristics are missing, it is doubtful if it should be viewed as higher-order thinking. Lipman (1991:19) ascribes the following properties to higher-order thinking skills:

... in general what they seem to mean is thinking that is conceptually rich, coherently organized and persistently exploratory.

Lipman (1991:20 & 68) explains further that higher-order thinking is a fusion of critical thinking and creative thinking in which sound judgement is involved. Critical thinking involves creative judgement and creative thinking involves critical judgement.

Higher-order thinking is known to educators through Bloom's (1956) taxonomy or hierarchy of thinking skills. Bloom's approach consists of a fixed hierarchy of skills, regardless of context, with analysis, synthesis and evaluation at the crest of the pyramid. Lipman (1991:51) broadens this view by comparing the analytic and synthetic to critical and creative aspects of higher-order thinking. Evaluation is understood to be similar to judgement, and comprehension the same as understanding. Lipman (1988:40) explores the difference between ordinary thinking and critical thinking as follows:

Table 3.4 Comparing ordinary and critical thinking

Ordinary thinking	Critical thinking/reasoning
Guessing	Estimating
Preferring	Evaluating
Grouping	Classifying
Believing	Assuming
Inferring	Inferring logically
Associating concepts	Grasping principles
Noting relationships	Noting relationships among other relationships
Supposing	Hypothesizing
Offering opinions without reasons	Offering opinions with reasons
Making judgement without criteria	Making judgement with criteria

Bailin et al. (1999b:288) conceptualize critical thinking as thinking that encompasses different forms of general kinds of thinking tasks, such as problem solving, decision making, analysis and inquiry. It also includes creative thinking, where although something original is constructed, critical thinking is at the root of creative thinking.

The performing of critical thinking requires judgement and judgement can fulfil or fail to reach relevant standards of good thinking. The standard or effectiveness of critical thinking depends on the efficiency in helping learners to meet the standards of good thinking. The educational outcome must be to *“teach them to do tasks well by increasing their capacity and inclination to make judgements by reference to criteria and standards that distinguish thoughtful evaluation from sloppy ones....”* (Bailin et al. 1999a:279).

Critical thinking is frequently incorrectly conceptualized in terms of skills, processes, procedures and practice. Most educational literature refers to cognitive or thinking *skills* that can be improved through practice. Critical thinking is inaccurately perceived as such:

Critical thinking is seen to involve generic operations that can be learned in themselves, apart from any particular knowledge domains, and then transferred to or applied in different contexts (Bailin et al. 1999a:271).

Bailin et al. (1999a:269) admonish that critical thinking should not be perceived as skills to be taught separately in the different learning areas. It should rather be perceived as a global development of knowledge, understanding and attitudes. Lipman (1991:78 & 20) feels that philosophers have always been suspicious of the term *skills* and have insisted that *intelligent making, saying and doing* are not reducible to a set of skills. Higher-order thinking is not skills to be taught separately, but thinking that should be taught directly and immediately. The advantage of direct and immediate teaching of higher-order thinking, makes it meaningful and intrinsically rewarding for the learner and educator. Lipman (1991:29) also states that it is an enormous misconception to perceive a thinker as thinking in a linear series of simple steps. The human mind is capable of engaging in a considerable variety of thought processes simultaneously. Paul (1984:5) labels critical thinking as *skills*, but distinguish between two conceptions of critical thinking as in a weak sense and a strong sense. In the weak sense it is a set of thinking skills that can be applied to a multiple of learning areas and it is thinking that does not transform the cognitive and affective processes. The strong sense develops *emancipatory reason* in the form of dialogic thinking. It is a comprehensive critical thinking essential to a free, rational, autonomous mind.

Critical thinking is not a set of skills to be taught, neither certain *processes*. Processes are generally perceived as things like classifying, inferring, observing, synthesizing etcetera. There may be common features, but it is misleading to teach critical thinking as a process. Bailin et al. (1999a:275) argue that the most educators can do is to familiarize the learner with the concept of a valid argument, motivate the learner to make sure that the argument is valid and enable the learner to familiarize himself or herself where certain kinds of receptions are sought. Paul (1984:10) shares this view by stating that problem solving is often understood as a model of processes. It is for instance true of Dewey, who thought that problems could be approached with the following steps: identify the problem, establish facts, formulate hypotheses, test hypotheses and evaluate results. But thinking cannot be reduced to an operational procedure.

Another misconception is to view critical thinking as a *procedure*, in terms of steps, stages or phases. Some writers list eight general thinking procedures, namely concept formation, principle formation, comprehension, problem solving, decision making, research, composition and oral discourse. Each of these produces a different result. Two other different procedures which are mentioned in literature and favoured by psychologists are algorithms (step-by-step prescription - the method and in the extreme reasoning without judgement) and heuristics (discover by themselves - the result). They all characterize critical thinking as a set of

procedures to be carried out, but critical thinking is not a retrospective undertaking (Bailin et al. 1999a:276-278). Paul (1984:14) agrees that thinking is not a procedure, but governed by principles that are rational and comprehensive, thinking similarly to that in the law.

Bailin et al. (1999a:271-272) argue that it should firstly be stressed that background knowledge in the particular area (music) is a precondition for critical thinking to take place. A learner cannot analyze an instrumental piece of Orff music if he has never been involved with ensemble work or playing Orff instruments. The depth of knowledge, understanding and experience is a significant determinant for thinking critical in the specific area.

Secondly, to be a proficient critical thinker, involves the acquisition of operational knowledge of standards of good thinking. Each domain of human intelligence has its own practices, which determine the standards of critical assessment in the domain. These standards or principles of critical thinking are acquired by analyzing the practice critically. To a certain extent the standards or principles can be perceived as abstract and therefore cannot be applied in a mechanical fashion. The critical thinker has to exercise judgement in interpreting what is necessary in a specific case (Bailin et al. 1999a:292). The principles which determine the standard of critical assessment in the domain of group singing in the learning environment are attractive tone quality, aesthetically satisfying interpretation, careful intonation, a satisfactory vocal range, flexibility and agility, good breathing, control, a relaxed jaw and good diction. These principles are an integrated whole which cannot be applied in a mechanical fashion. Judgement and interpretation of criteria and standards are necessary to think critically in group singing.

Thirdly, it involves certain attitudes. It involves the willingness to be a good critical thinker. Bailin et al. (1999b:294) list qualities like respect for reason and truth, respect for high-quality products and performances, an inquiring attitude, an open mind, fair-mindedness, independent-mindedness, respect for others in group inquiry and deliberating, respect for legitimate intellectual authority and an intellectual work-ethic. The learning area, Arts and Culture, can fulfil the important role of setting the stage for intellectual challenges, through developing positive attitudes to critical thinking. The following is the operationalizing of critical thinking in the music learning environment:

(i) CRITICAL THINKING IN THE MUSIC LEARNING ENVIRONMENT

Music is about sound. Critical thinking in the music learning environment assists the learners

to understand how sound becomes music. Understanding takes place where learners are mindfully engaged in musical experience and, thereby controlling own musical thinking and learning. To be mindfully engaged leads to higher-order thinking. Reahm (1986:31) claims that thinking should be part of music education:

If music is an expression of reality by human thought, we should include the aspect of teaching the thinking process in our music classes.

To clarify the notion of critical thinking in music, the different activities of the learner must be considered. The learner listens, performs, evaluates and creates. The educator has an operational role to play by making these activities happen, by ensuring that the learners possess a good base of background knowledge, knowledge of different music criteria and a positive attitude to critical thinking. Other components of critical thinking to be considered in the music learning environment are judgement, decision making, analysis, synthesis, evaluation and inquiring.

(ii) DIALOGUE AND CRITICAL THINKING IN THE MUSIC LEARNING ENVIRONMENT

Dialogue between the educator and learner is essential in developing higher-order thinking. A way of accomplishing dialogue in classroom, is by means of asking questions that provoke higher-order thinking. A well-developed repertoire of questions to advance critical thinking, may be very valuable to the educator. Holliday (1993:33) explores the function of questions in music and comes to the conclusion that it helps with the transferring process of music knowledge to the different fields of music. Small (1987:37) covers another function of questions in music, by stipulating that questions should stimulate a deeper level of thinking, where the learner is invited to think through the process of thinking through a problem to reach a reasonable conclusion. An example of such a question is given - *"If Bach or Bernstein had attempted to compose an 1812 Overture, would either have been better equipped than Tchaikovsky to do so?"*. An appropriate response to the question is firstly to recall facts, but also to analyze the question in search of important issues and formulate a series of questions that will lead to the correct answer. Guided dialogue in the form of questions increases the learners' musical knowledge as well as critical thinking.

Pogonowski (1989b:37) cautions that the nature of the question is very important. Certain kinds of questions generate critical thinking while others do not. Narrow questions such as,

“When did the popular band perform the song for the first time?”, will not encourage critical thinking. It is a low-level recall question. Pogonowski (1989b) recommends seven strategies by Dillon to assist dialogue in the music learning environment. The rule is that when the dialogue is on its way, not to ask questions, but to use various alternative techniques. Too many questions may turn the dialogue into a recitation period.

Table 3.5 Critical thinking strategies in the music learning environment

Strategy	Example
Make a declarative statement	Calling this a Baroque composition is correct, but Vivaldi and Handel are also Baroque composers.
Make a reflective statement	I understand what you mean, because certain Baroque characteristics occur in the work, we can label the entire work as such.
Describe his or her state of mind	I am sorry I am not quite getting your point.
Invite learners to elaborate	I would like to hear more views on that.
Encourage learners to ask questions	Do you have a question? Any questions by any of you?
Maintaining deliberate silence	

(iii) COOPERATIVE LEARNING AND CRITICAL THINKING IN THE MUSIC LEARNING ENVIRONMENT

Cooperative learning is an important added dimension of critical thinking. It supplies learners with the opportunity to interact with each other, to think out loud and to hear how other learners think. The opinions of others are important in critical judgement, because it gives the opportunity to compare own judgement to those of others.

Cooperative learning is valuable to learners that are less practised in active participation. They feel freer to talk about music in small peer groups. The facilitator rotates among the groups, helping to solve problems and to get them thinking on higher levels.

(iv) EVALUATION AND CRITICAL THINKING IN THE MUSIC LEARNING ENVIRONMENT

Higher-order thinking as discussed, is perceived as critical and creative thinking, as well as analysis, synthesis and evaluation. DeTurk (Boardman 1989:22) refers to evaluation when he maintains that one of the primary outcomes of music is that of evaluation. The evaluation of music takes place by means of cognitive and affective criteria. To evaluate music is to understand the music (background knowledge), the knowledge of "*the merits of its parts in totality*" (principles and standards of critical thinking in the domain of music) as well as affective dimensions. This view corresponds with that of Bailin et al. (1999a) in that critical thinking involve background knowledge, knowledge of principles and standards of a specific domain and an open mind towards music.

Bunt (1994:46) states that the understanding of music relies on knowledge of the different elements of music. The different elements of music are the basic tools for the understanding or conceptualizing of music. It is an understanding of the basics of music on a very simple level that the learner needs to be able to evaluate and to think critically about music. It also involves the affective dimension of thinking (open mind). These elements are interrelated with each other. They will briefly be discussed as illustration of their significance in critical thinking in group music for the learner.

- ✓ Tone colour (or timbre) - Noticing different tone colours is the first apparent difference in sound to the untrained ear. A baby quickly learns to discriminate between the sound of a human voice and other significant sounds. After musical performances people comments on voices or instrument sounds that they liked. Tone colour has been associated with making an immediate and sensuous impression on the listener, adding meaning to sound (Bunt 1994:48).

- Learners become aware of the different sound qualities of different instruments and the human voice by getting involved with different activities in the classroom. In the foundation phase activities to discriminate between different sound qualities or tone colours of instruments may result in an activity by putting the sound of the instrument to the picture.

- Later more complicated cooperative activities may be performed, where groups sing a song and add chosen instruments to change the tone colour. After the presentation, the activity is evaluated and discussed critically.

- ✓ Dynamic level - The dynamic level of music is a basic perceptual attribute of sound. It covers a continuum from very soft to very loud sounds.

- One example of making the learners aware of dynamic level is by movement. In cooperative learning groups the learners get the opportunity to construct different body movements to express the emotive quality of the dynamic level.

- ✓ Pitch - Sounds can be described as low or high. It is organized in terms of scales made up of discrete steps. Pitch is directly associated with melody and harmony.
- ✓ Duration and time - Duration and time are concerned with the physical and measurable level of the length of time a sound last. Sounds of long duration create a slower tempo than sounds of quicker duration. Duration of sound has more to do with the quality of the time than the length of time.

Bunt (1994:57) explains that it is rather striking that the durations of our heartbeat and spontaneous and preferred tempi do seem to fall within the same range. Perhaps this explains the primary relationship between human beings and music. Rock music has an inner pulse that provides an uplifting and immediate appeal. Western classical music also seems to be in touch with this physical relationship. The relationship between human beings and music has been explored by Lazanov who used Baroque music to develop learning by way of a relaxed state of mind.

- ✓ Rhythm - Rhythm is linked to duration and beat. Without rhythm there would be no music. Rhythm is the basis of all neural activity and is seen as the cradle of being. Understanding rhythm does not solely relies on the auditory pathway and mechanisms. Beethoven is an example of a person with a hearing problem with a highly sophisticated rhythmic understanding (Bunt 1994:60).

Rhythm is closely related to motor function, with the nervous system playing a determining role in the organisation and control of rhythmic patterns. It is also associated with emotional response.

- An example of developing a sense of rhythm in the primary school learner, is by making use of the music of the twentieth-century composer, Gustav Holst (1874-1934). The composer composed a suite for the orchestra. Two musical techniques used by the composer in his work, "Mars", from "The Planets", is *col legno* (playing the violin by lapping the strings with the wooden part of the bow) and *rhythmic ostinato* (a repeating pattern that continues as other parts of the music change). These two techniques may be the point of departure in developing own ostinato rhythm patterns to be performed by a group of learners.

- ✓ Melody and interval - A child is aware of melody from a very early age, but the pitch of early childhood songs tends to wander a great deal. The rhythm and contour of the melody are used to keep within the formal structure, but the contour of the melody is replaced by different pitches. Gradually the melody and interval relationship of the prevailing musical culture becomes established in the child. Researchers agree that five years of age is the approximate markers for preserving a stable tonality within the song (Bunt 1994:64-65).

Some of the pitches in the western diatonic system seem to have a prime position when placed in a melodic sequence, but it is also an observable feature in most other cultures. When exploring this characteristic of melody, the focus is moved to information on the cognitive processes that underpin music. The octave is the first reference point. The falling minor third (G to E in *Mum-my*) is often used as a call for gaining attention. The interval of a fourth is common in children's play (G,E,A,G,E as in *I'm going to tell my mommy*) (Bunt 1994:66).

The different scale systems are responsible for the different emotional responses. The five-note scale, or pentatonic scale (C, D, E, G, A) appears in a variety of guises in music of many cultures. The absence of the discordant interval of the augmented fourth, minor second and major seventh makes it popular to work with. Tuned percussions can be set for the pentatonic scale and all members of the group can take part with satisfying results. Playing in this scale frees people from the confines of the western diatonic system (Bunt 1994:66-67).

There are also other scale systems, commonly known as the modes. Here each mode is made up of a particular order of semitones and tones and has a unique emotional quality. They are called by Greek names, namely: Dorian, Phrygian, Lydian, Mixolydian, Aeolian, Locrian and Ionian, which is the western mode (C to C)

(Bunt 1994: 67-68).

- ✓ Harmony - With harmony we are concerned about sound resulting in consonant or dissonant. Harmony is the most complex element of music and absolute central to music. At a very fundamental level harmony can be used as a drone or a small repeating pattern of simple chords, over which melodies can be supported or emerge (Bunt 1994:69).

Lastly, DeTurk (Boardman1989:11) agrees with Lipman and Pogonowski that musical experience is considered as an important yardstick for evaluating the affective and cognitive dimensions of music. Musical experience provides the background to critical thinking, as well as a deeper and broader internalization of musical knowledge. A high quality supply literature and sound material in the music learning environment can be of great assistance to enhance musical experience. In the music learning environment percussion instruments, as well as melodic instruments, are essential to provide the necessary performance experience.

(v) META COGNITION AND CRITICAL THINKING IN THE MUSIC LEARNING ENVIRONMENT

Flavell (1976) was one of the first writers to use the term *meta cognition* and it means one's own knowledge concerning one's cognitive processes and products. It refers to the active monitoring and regulating of those processes. Meta cognition applied to a learner may be called meta learning (Biggs and Telfer 1987:16). It can then be assumed that meta listening, meta singing, meta performing etcetera is possible in the music learning environment.

Learners can become strategic meta learners with knowledge about different types of knowledge. Pogonowski (1989a:15) says the three types of knowledge is declarative, procedural and conditional. The three types of knowledge are describes as follows:

- ✓ Declarative knowledge - Pogonowski (1989a:15) states that declarative knowledge has to do with facts (knowing-that). Learners need declarative knowledge before embarking on assignments and the new knowledge is added to existing knowledge. An example is a need of basic knowledge about different listening goals, before embarking on an assignment where it is expected of the learner to listen to a set of popular songs and then to list the characteristics of popular music. The learners should also know their limitations, to know which questions to pose to complete an

assignment. The educator can then monitor the meta cognitive process of the learner. Woolfolk (1980:282) claims that declarative knowledge develops when new information is integrated with existing understanding. The least effective way to install this is by rote learning. The best way to learn is to understand and it is the greatest challenge for the educator.

- ✓ Procedural knowledge - It comes from direct experience with a variety of musical materials and the elements of music. Music activities provide the learners with operational knowledge to practice an instrumental piece with the melodic and percussion instruments, but it should also provide the learners with the procedures to follow when help is required and where to find help (know-how).

- ✓ Conditional knowledge - Conditional knowledge exposes the learners to knowledge of certain strategies and the reasons why certain strategies are successful opposed to others. In music conditional knowledge may be achieved through active participation and developing judgement to enhance critical thinking and meta cognition. Questions to assist learners with own thinking and conditional knowledge may be, *"When are we going to introduce the percussion instruments to change the tone colour of the piece and why at that specific point?"*. The learner displays knowledge of the tone colour of percussion instruments, but on a meta cognition level own judgement has to be displayed through knowledge about strategies in percussion band playing.

A valuable way to engage learners in meta listening, according to Pogonowski (1989a:12), is to engage learners in listening to unfamiliar music for the purpose of generating musical information from inside themselves. They will be asked what have they heard and then share their perceptions of the music and appropriate music vocabulary can be installed. Learners should also be encouraged to listen to themselves in group singing and commenting on what they think about the performance. It is not only an opportunity for meta listening, but a display of music vocabulary and music principles. DeTurk (Boardman 1989:24) agrees that the learners should be exposed to familiar, but also unfamiliar music.

Meta cognition is important to evaluate and think critical about music. Pogonowski (1989a:9-11) states that meta cognition in the study of music involves awareness of own personal thinking. It is an active process, because the learners are designers of their own learning, rather than passive receivers of knowledge. When learners are invited to solve a musical

problem, individually or in a cooperative way, it enables them to actively reflect on own musical thought. The educator may assist by asking, "*Would you do anything differently in your next performance?*" and make them aware of own thinking. It can also involve collective meta cognitive thinking when the group shares thoughts for example about a performance in class with peers. Meta cognition is an important tool to make an informed and critical evaluation about music. Meta learning may be enhanced through the following techniques (Biggs and Telfer 1987:182):

- ✓ Think-aloud - Educator and learners think out loud explaining why certain choices have been made in a performance or music activity.
- ✓ Peer teaching - Interacting with peers in a group to perform a musical activity requires meta cognition about own thinking processes.
- ✓ Reflective teaching - It requires learners to peer teach so that they reflect on own thinking. One talented learner may teach peers how to play the melody of the song on the melodic instruments.
- ✓ Self-questioning - Learners should be taught to stop at critical phases and ask questions about directions, course, effectiveness to date, possible options etcetera.

The postmodern methodology, which claims that the learning environment should be democratic and dialogic, should be of great meaning for meta cognition as it encourages discussions of voice, instruments, themes, motives, rhythm etcetera. Reahm (1986:31) expresses the opinion that it provides the learner with a practice to make independent judgement.

DeTurk (Boardman1989:25) extends a warning that evaluation of higher- order thinking structures are not simple and is best accomplished by confronting the learners with evaluation tasks and observing the results. The learners should display their thought processes through assignments in which critical thinking, reflecting and conceptual knowledge should be evident. The evaluation criteria should be spelt out and understood by the learners. These need not be performances only, but must include written assignments on own thought and experiences.

(vi) THE EDUCATOR AS MODEL OF CRITICAL THINKING

Holliday (1993:34) claims that just as the learners are expected to think critically, the educator should model critical thinking to the learners. Pogonowski (1989b:37) shares the view by stating that for both learner and educator, music must become the medium that evokes critical reflection. Both have a shared commitment to critical thinking.

The modelling of questions that leads to higher levels of thinking should be displayed by the educator in own thinking. Small (1987:39) mentions the "*Who?, What?, Where?, When?, How? and Why?*" questions. **Who** is probably the popular band playing the song? **What** musical content, stylistic elements or tone quality of the band lend support for the opinion? An aural analysis of musical elements gradually leads to the identification of the band that plays the song and the learners had the opportunity of critical thinking.

Activities in the classroom often culminates in group performances or musical activities. The learners get the opportunity to perform own dances, rhythmic patterns, melodic and/or percussion instrumental pieces, songs and other music activities in smaller groups. While the smaller groups are preparing their performances the facilitator moves around, observing, listening to practising groups, advising and motivating the learners. The music educator is reflecting own training and personal insight from own experience of performing, analyzing, comparing and thinking about music. Critical thinking in the music environment is a process of reflecting upon, weighing, arguing and supporting alternative points of views. It is not focussed on picking out errors, but the search for the best alternative through logical thought, sound argument and perspective insight. By facilitating the learner experience that music symbols are on paper, but it has to be analyzed. The metric marking may be there but the relative tempo changes are left to own discretion. The tone colour produced by a performing group are not on paper, but a combination of the educator's sound preference and the playing or singing of the group. The learners learn that music is not isomorphic to its notation. The music educator owns it to the learner to exhibit own critical thinking by telling the learner what thoughts are going through the mind. An example of exhibiting own thinking as music educator, is when the group is preparing a song to be performed, an opinion and question may be posed such as, "*Children, when singing this song, diction must be very clear, because it is a humorous text, which we want the audience to enjoy. Any suggestions on possible ways?*" (Reahm 1986:30). As critical thinking develops the educator becomes more and more of a facilitator, by assisting the learners to construct own knowledge by thinking critically. The learners become active and involved in their own learning.

Holliday (1993:33) feels that the process of music making must at least be as important as the performance. The performance should not be viewed as the end, but another step in the process. What is important is that the learners must make the music their own, by exploring own interpretation and not just accept the interpretation of the educator. The educators facilitate, but the learners must make the final decision. The music educator should have a supportive approach to allow the learner the opportunity to experience that his or her ideas are meaningful and it is safe to take a risk. The learner should rather be helped to refine ideas by the flexible attitude of the educator and learner.

Attitudes are summations of experience and learning. These attitudes are sometimes positive, negative or indifferent. The music educator must be aware of own attitudes, perhaps bias attitudes, analyze them and decide if change or modification is necessary. Personal attitudes must not interfere with desired learning outcomes. There is a difference between music on a personal level and music suited for the learning environment. This kind of behaviour exhibits meta cognition to the learners (Pogonowski 1987:40).

(vii) A LEARNING ATMOSPHERE FOR INDUCING CRITICAL THINKING

Music has to a great extent to do with good judgement and evaluation. To make it happen a warm positive learning atmosphere is needed where the learners feel safe to offer an opinion. The music learning environment has the opportunity to engage the learner in critical thinking, while actively involved in music making. Critical thinking is not isolated abilities and dispositions, but initiating the learner in complex critical practices. The initiating of learners in critical thinking, begin long before they enter school. By the time they are in primary school they are already making critical judgements and offer arguments. Music educators must teach learners the important commitments and habits of mind that makes critical thinking possible (Bailin et al. 1999b:298). Lipman (1991:15) claims that these goals can be reached through converting the classroom into a *community of inquiring* in which the learners listen to one another with respect, build on one another's ideas, challenge one another to supply reasons for statements, assist one another in arriving at and seek to identify assumptions. The dialogic learning environment of the postmodern learning environment is essential to foster a learning environment of inquiring. The learner should be engaged in dealing with tasks that call for judgement or assessment, helping to develop intellectual resources to deal with these tasks and providing a learning environment where critical judgement is supported.

If the learning environment wants to produce musically sensitive consumers and performers

for the future, the learners should be helped to transfer critical thinking in the music learning environment to their daily lives. An unchallenged bias music learning environment, may result in little opportunity to think about performances of music, the effect of music and music itself (Small 1987:37). Reahm (1986:31) takes the point up by stating that critical thinking in the music learning environment serves a dual purpose, because it develops independent musicianship and also the wrestling with ambiguity in subject-matter where there is often not a single right answer. There are many answers to decide among in music. This practice of confronting equally viable alternatives will serve the learner well in making decisions outside of music throughout life. Woodford (1996:31) states that learners should be encouraged to think for themselves and to make their own informed judgements as to the quality of desirability of what is performed, composed or listened to.

2.4 CONCEPTUAL FRAMEWORK FOR THE INTELLECTUAL DEVELOPMENT OF THE LEARNER IN THE MUSIC LEARNING ENVIRONMENT

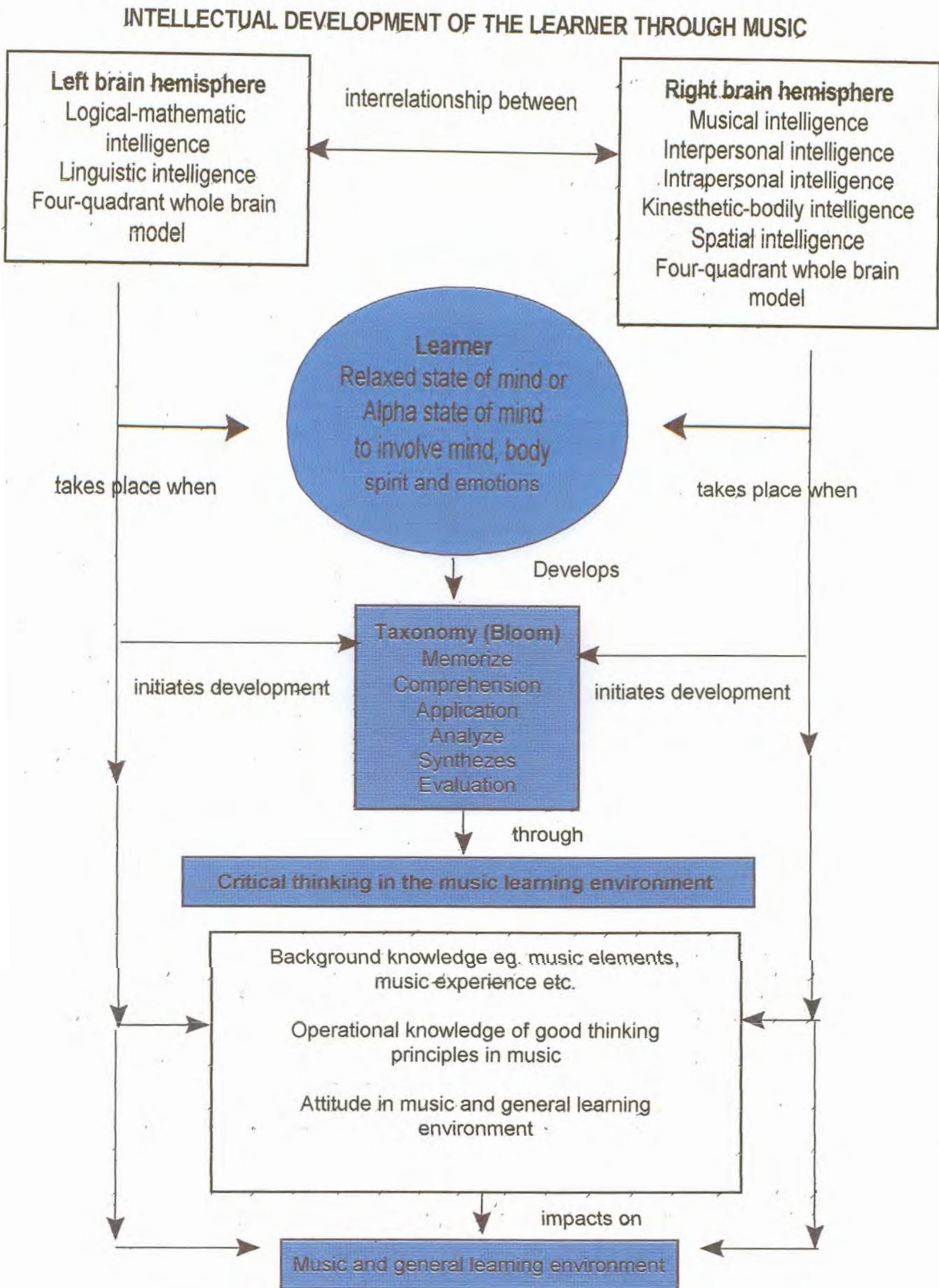
The conceptual framework illustrates the intellectual development of the learner in the music learning environment (figure 3.1).

3. EMOTIONAL DEVELOPMENT

3.1 INTRODUCTION

Jensen (1995:27) refers to the brain as a *box of feelings*, because in spite of all reason, logic, common sense and scientific evidence, information must be verified by own feeling before it is accepted. It gives an indication that emotions are important and powerful and the importance of emotions should be acknowledged in the learning environment. It is such a strong element that *"we do not feel that anything is true until our midbrain, the limbic portion, which deals with emotion, says that it is true"*. Upon learning about the importance of emotions, addressing only the intellectual development of the learner is limiting in the endeavour to develop learning potential. The open system of the postmodern learning environment includes the emotional aspect of learning. Emotions play a very important role in the holistic learning process, because positive emotions optimize learning and negative emotions serve as an emotional blockage. The language of the heart reaches areas of the brain, such as the right brain hemisphere of the cerebral cortex or the limbic system which do not respond to purely intellectual communication.

Figure 3.1 Intellectual development of the learner through music



Merrit (1990:146) confirms that *"music mobilizes latent memories and stimulates the emotions to create a powerful learning experience"*. To create a powerful learning experience educators have to be aware of the different levels of emotional outcomes to be reached.

3.2 EMOTIONAL DEVELOPMENT AND THE LEARNING ENVIRONMENT

Most educators are familiar with the cognitive taxonomy of Bloom, but fewer educators are familiar with Krathwohl's taxonomy of the affective domain. Music is closely linked to the emotional qualities in a person and the postmodern view of accommodating the emotions. It is therefore of utmost importance that music educators should be aware of the affective taxonomy of learning. Ornstein and Hunkins (1993:222) list Krathwohl's affective taxonomy, and illustrative examples in the music domain are supplied:

- ✓ Receiving - The learner's sensitivity to the existence of stimuli. This includes awareness, willingness to receive and selected attention. Example: In music education the learner becomes aware of the aesthetic qualities of different styles of music or becomes aware of the emotional content of a song.
- ✓ Responding - The learner's active attention to stimuli such as acquiescence, willingness to respond and feelings of satisfaction. Example: The learner shows an interest by bringing own examples of different styles of music to the music lesson or showing satisfaction and enjoyment in the music learning environment.
- ✓ Valuing - The learner's attitudes and beliefs of worth in acceptance, preference and commitment. Example: The learner shows an indication of the acceptance of different music styles of different people.
- ✓ Organization - Internalization of values and beliefs involving conceptualization of values and the organization of a value system. Example: The learner forms judgement about the acceptability of certain styles of music or lyrics of certain pop songs.
- ✓ Characterization - This is the highest level of internalization and it is a behaviour that reflects a generalized set of values and a philosophy of life. Example: The learner has ethical principles and won't participate in music activities that clash with these principles.

A word of warning from Ornstein and Hunkins (1993:22) is that although many educators find these categories useful there are educators and parents who view the taxonomy with concern. They feel that it is not the school's responsibility to handle the affective development of learners. Wolverton (1989:33) disagrees and believes that most schools provide intellectual and physical experience, but fail the learner when it comes to the emotional and intuitive aspects of life. Wolverton (1989:32) states that the music educator must assist the learner in achieving specific affective outcomes when for instance performing a song. Affective content of music involves emotions like joy, sorrow, fear, hate and love. Performers will not derive the same emotions from a song, but without guidance some learners will derive no affective satisfaction by performing the song. The learners have to be able to interpret the composer's intent and when the emotional content is understood by the performer the content will be communicated to the audience. Interpreting the musical text and studying the cultural context is valuable and necessary to communicate emotional qualities in songs.

The following provides an example of emotional or affective outcomes in the music learning environment by Wolverton (1989:33):

The composer, Holst, set a collection of folk songs to music. The text is a story of a young Englishwoman, Nancy, who is in an insane asylum, awaiting the return of her lover. As the young woman babbles about her misfortunes, the listener can only speculate on the reasons why the lover's parents have send the son off to sea. The text reveals how love can cause deep sorrow as well as joy. The affective outcomes are that all learners will be able to describe the emotions that they might feel if placed in the unfortunate position of Nancy (receiving level). Another affective outcome is that the learners will be able to cite differences between Victorian attitudes towards mental illness and those of today (valuing). It can be in the form of dialogues or written assignments.

This is also an example of a postmodern view on learning, seeing that it is dialogic and own emotional knowledge is created. To create emotional knowledge intrapersonal and interpersonal intelligence development need to be explored to find ways to develop learning through the emotional side of the learner.

3.3 INTRAPERSONAL AND INTERPERSONAL DEVELOPMENT THROUGH MUSIC

Interpersonal intelligence is the understanding of other people. It is a form of intelligence that is able to distinguish between feelings, emotions, values, opinions and other emotional

qualities. There are a multitude of opportunities to develop interpersonal intelligence in the music learning environment. An example of this specific intelligence in the music learning environment comes to the fore when learners have to agree on the interpretation of a piece of music to be performed. It involves interpersonal intelligence to gain understanding of the diversity of opinions and emotions of the different learners in the group. Music making is very often a cooperative activity in the music classroom.

Social communication and interaction feature very strongly in the music learning environment. The learning environment must make provision for the learner by means of appropriate opportunities to broaden his understanding of the social aspect of the reality. The learner needs activities to explore and discover his or herself in communicating with other learners.

Although the learners work in groups, the postmodern learner is a democratic learner with an own opinion. The music environment provides the perfect opportunity to voice an own idea or opinion. An example of active participating may be an assignment to practice a song in two parts, soprano's and alto's. The assessment criteria are the blending and matching of the voices. The learners work in a cooperative way with a unitary goal. Personal views on choice of songs to be sung and practice is important to get them actively involved in own learning. Feelings of trust and belonging to the group are installed, but also ways to mediate conflict that arises. Learners should learn to interact with peers in a positive way. Not only is this an exercise in developing interpersonal intelligence, but critical thinking and meta learning also takes place. It assists the learner to learn to communicate effectively in the process of making music. Music is par excellence a domain to develop the ability to understand other people, but also an understanding of the self.

Learners should also get the opportunity to develop intrapersonal intelligence and to respond to innate qualities in themselves. Gardner (1993:143) claims that:

Artistic learning does not merely entail the mastery of a set of skills or concepts. The arts are also deeply personal areas, where students encounter their own feelings as well as those of other individuals.

The arts, and in this case music, are a means through which the learner in the postmodern learning environment can be assisted with attaining personal understanding through introspection. The learner develops an acceptance for strong and weak qualities of the

personality. Learners should get the opportunity to work independently and privately to heighten self-concept. Personally useful values of their own culture, as well as values like diversity, tolerance, freedom and creativity, can be achieved in and through group music on primary school level.

Intrapersonal intelligence is a higher-order reasoning ability. According to Slabbert (1996:136-137) intrapersonal intelligence makes development of human potential possible, because it constitutes the interrelatedness of the intelligences manifested in the wholeness of the learner, which is embodied in meta learning.

The way to monitor intrapersonal intelligence development is by using the following strategies:

- ✓ A thinker's log - It consists of the learner's own collection of responses to own learning and class experiences. It can also be called meta cognition. It is the process of thinking about thinking. It gives the learner the opportunity to be aware of own thinking and to use this awareness in developing own learning. Kirkby and Kuykendal (1991:40) propose that the learners realize that they have mental repertoires and that they must see intelligence as a set of incremental abilities to be developed over time.
- ✓ A portfolio - The portfolio is to keep track of work done, the visible evidence of their minds' work. In the music learning environment the portfolio includes drawings of musical experiences, essays, recordings of own and group efforts, scores of own and group efforts, choreography of dances, performance planners etcetera. Holliday (1993:34) believes that the portfolio assists the learner in thoughtful reflection about what is being done in music education, about also his feelings on certain issues. The most important is that the learners learn to think critically.
- ✓ A working plan - This plan can be a map, drawings, list of steps etcetera. It is a way to accommodate different intelligences and thinking styles. The learners gets the opportunity to think before they proceed and to develop own learning. In music education a whole stage production which includes the different elements of music may serve as an example of working plans.
- ✓ Auditing - A report on progress.

- ✓ Reflecting - When portfolios are ready to be evaluated, reflection on completed work is most often missing in the process of getting the learners to think about their performance. It is an opportunity to develop learning by reflecting on different questions such as how the task was approached, what was easy and what was hard, when did they become most involved, what would they like to do more and what would they do differently next time. The postmodern world is an emotionally stressful world. It is an interesting creative world, but also an ever-changing world, which offers little security to the learner.

3.4 ANXIETY AND STRESS IN A POSTMODERN WORLD

According to the journal *Teaching Music* (1999:35) there is a growing evidence from music therapists and physicians that music can be used to manage the effects of anxiety and stress in the learner. Campbell (1997:69) informs that the Norwegian educator, Olav Skille, devised musical baths where learners with severe physical and mental disabilities were immersed in sound, and found that music reduced muscle tension and relaxed the learners. These methods spread to other parts of Europe. Environmental noise, ever present hammering rock music and grating commercials on the television, are the sound worlds most learners live in. Anxiety and stress can be reduced by taking control of an own preferred sound world.

Merrit (1990:84) explains that music has such a great influence on our lives, because *we are music*. The body responds unnoticed to many different sounds. These sounds resonate through us. The quantum physicists have found that matter is really energy and energy is vibration. People are in a constant state of becoming and so is music. Jensen (1995:218) confirms the statement and points out that researchers have found that music raises the molecular structure of the body. The body resonates at a stable molecular wavelength and music has its own frequency. The wavelengths may either resonate or conflict with the body's own rhythm. When both responds at the same frequency the learner learns more effectively and are better aware and alert. Educators should be aware of the symptoms of stress and anxiety and explore ways and methods to help learners relax. It will give the learner the opportunity to use the same methods in their private lives.

Fitzsimmons (1998:2) lists the stages of frustration, which leads to violent behaviour as well as solutions, as follows:

- ✓ Anxiety - Learners use nonverbal cues like sighing. The educator can respond by

active listening and non-judgmental talk.

- ✓ Stress - Learner exhibits minor behaviour problems. Educators can respond by boosting interests and providing assistance with assignments.
- ✓ Defensiveness - Learners argues and complaints. Educators can remind students of rules, use conflict resolutions and encourage learners to ask for help.
- ✓ Physical aggression - The learner has lost control and may bite, hit, kick and throw objects. Educators must escort the child from class, get help, restrain if necessary and protect safety of other children in class.
- ✓ Tension reduction - Learner releases tension through crying or verbal venting. The opposite can also happen when the learner becomes sullen and withdrawn. Educators can use supportive or punishment techniques and help the learner to gain insight into feelings and behaviour.

The learning environment has to assess and offer the learner alternative perceptions of themselves and skills for coping in a postmodern world. The school curriculum can offer a valuable contribution in the form of primary prevention. Robinson and Rotter (1991:2) proposes the following:

- ✓ The first level focus on developmental guidance with activities designed for all children to develop a sense of control, security and self-worth.
- ✓ The second level should focus on children of higher risk: Children who were exposed to traumatic events.
- ✓ The third level are those children who are experiencing a lack of effective coping regarding fear and anxiety.

An example of assisting learners in reducing stress by making use of active movement and music may be the following (Campbell 1997:70):

- For three minutes play music while the learners do stretching exercises. Spanish guitar music is excellent for this purpose.
- Now dance and move around to more active stimulating music.
- Finally, lie down to slower movement of a Mozart's string quartet or a Mozart symphony. The slower music helps the body to centre itself, feel refreshed and cool down.

Merrit (1990:126) points out that it is a misconception that music for stress management is only calm, soothing music. Releasing pent-up emotions is ultimately more relaxing. Learners need to air their anger. Musical suggestions are Beethoven's "*Egmond*" Overture, the Brahms's Piano Concerto no. 1 and Tchaikovsky's Symphony 5.

Postmodernism does not provide a complete solution to all problems, but an option for understanding the current crisis in education and society. Postmodern critics must be given the necessary recognition as western science has not come up with final answers to the many problems we face in the twenty-first century. The critics believe that a new paradigm is needed with a new way of looking at reality. We need fundamental change in our thoughts, perceptions and values. When learners listen to music they respond holistically - mind, body, emotions, which has an effect on the spirit (Merrit 1990:115-116).

3.5 MUSIC THERAPY

(i) INTRODUCTION

The postmodern world is a stressful world and the therapeutic qualities of the music learning environment is an option in developing the learning potential through touching the emotional side of the whole person. Music soothes, calms, heals and brings joy and beauty to people in the complex world. Learners may benefit from these qualities in the music learning environment - not to replace the music therapist, but to assist learners in recognizing and using the therapeutic qualities of music. The psychologist and phenomenologist, Rogers, views therapy as a method of learning to be utilized by curriculum workers and teachers. Positive human relationships enable people to grow. Interpersonal relations among learners are just as important as cognitive growth (Ornstein and Hunkins 1993:131).

It is notoriously difficult to find a definition for music therapy that will suit all people in all context. The following definition is from the Australian Association for Music Therapy (Bunt

1994:6):

Music therapy is the planned use of music to achieve therapeutic aims with children and adults who have special needs because of social, emotional, physical or intellectual problems

Bunt (1994:9) maintains that in the area of learning difficulties it became increasingly clear that music therapy could help maintain and develop such areas as physical skills, cognitive potential, motivation and others. Music therapy contributes more to some persons life than general enrichment only. It is not about occupying people for a short time with music or an entertaining activity. Many expressive-arts therapists, including music therapists, would agree that their work embraces such humanistic goals as *"helping individuals to realize their potentials"*. Another psychologist with views on realizing human potential is Carl Jung, who maintained that healthy personal and spiritual growths are dependant on the integration of the conscious and unconscious (Merrit 1990:161).

Merrit (1990:47) adds to the positive advantages of music therapy in the learning environment to develop learning potential. Music puts the learner in touch with own inner feelings, which can then be explored and expressed in different ways. Aggression and anger, when allowed to come to awareness and worked through, are less likely to cause disruptive behaviour. The inner process that takes place helps the learner to learn more effectively, because music has the capacity to reach non-verbal places. As learners listen to music in a relaxed receptive state of mind, it evokes positive emotions and blocks negative emotions.

(ii) THERAPEUTIC QUALITIES OF MUSIC IN THE LEARNING ENVIRONMENT

Music as a therapeutic means, must be considered seriously and incorporated into the curriculum of the learning environment. There are different ways of drawing upon the therapeutic qualities of music, namely:

- ✓ Beginning of the day - Merrit (1990:50 & 54-55) supplies the confirmation of a high school teacher who, experimenting with starting the school day with a few minutes of music, found that the learners were more receptive to learning. If the learners seem to be unenergetic, even in the morning, ask them to put their heads down on their desks, close their eyes and let their imagination follow the music. Play four minutes of *"The four Seasons - Spring"*, of Vivaldi. Let the learners briefly share their

imagery. Other compositions for waking up are Telemann's String Compositions, the Haydn String Quartets, Grieg's Peer Gynt Suite - "*Morning Mood*", Giuliani's Guitar Concertos, Mozart's Piano Concertos and Telemann's Flute Compositions.

- ✓ Background music - During activities in the classroom when silent desk work is being done, such as reading, story telling, art or written assignments, play one of the Brandenburg Concertos. When a story is read with music an open focused state is created, because the music allows large amounts of information to be absorbed because the listener's attention is not narrowly fixed on the task at hand. It has the relaxing, soothing qualities that provide structure, grounding and balance to improve concentration. It may also be used when learners have to move around outside the classroom, as on the school corridors or entering the school hall. Campbell (1997:178) uses the example of music being played on a school bus, which lessened inappropriate behaviour of the school children. It is also reported by researchers that light pop music, especially songs by the Beatles, reduced the rate of inappropriate behaviour. It may be valuable to increase positive behaviour and result in a calm relaxed learner. It is beneficial to study and memorize with Baroque music such as Pachelbel's Canon in D.
- ✓ Resting periods - During smooth transition from one activity to the next. Campbell(1997:179) claims that music allows the sensory integration to take place, necessary for long-term memory.
- ✓ Stimulating activities - For stimulating activities such as creative writing, it is a good idea to play Mozart's "*Eine Kleine Nachtmusik*". It opens the inner creative self. Merrit (1990:54) advises the following procedure: Have learners stand up and take deep breaths. Then have them shake the kinks out of their bodies. To focus their minds, make them bring to mind an image that relates to the topic at hand, while closing the eyes and listening to the music. When the music is over, play it again and make the learners write about the experience. Ask volunteers to come and share their adventure with the class.
- ✓ Relaxed concentration - The mathematics environment needs a state of relaxed concentration. Baroque music is suitable for structured stimulation.
- ✓ After breaks - After recess or outdoor activities learners may be over excited and

hyperactive. Ask the learners to lie down or put their heads down on the desk or table and listen to three or four minutes of calming music such as Pachelbel's Canon in D, the slow movement of a Vivaldi Flute Concerto or Massenet's *"Dimanche Soir"* from *Scenes Alsaciennes*. The music soothes and the structured beat makes them feel secure (Merrit 1990:49-50).

Other suitable compositions are Bach's *"Air on a G string"*, Bach's Sonata no. 4 for Flute and Harpsichord - *"Siciliano"*, Debussy's *"Clair de Lune"*, Haydn's Cello Concerto in C major (second movement), Mozart's Flute and Harp Concerto (second movement).

- ✓ End of day burnout - Use the fast movement of Vivaldi's *"Four Seasons"*.

(iii) CHOOSING THE MUSIC

Merrit (1990:61-62) claims that most therapists and brain scientists who have studied the effect of music on the brain, agree that classical music has the greatest therapeutic value and potential for enhancing self-knowledge and self-development. But, all classical music is not suitable for therapeutic activities. Campbell (1997:27 & 29) believes that Mozart's music has unique properties which elicit universal responses. Rhythms, melodies and higher frequency of Mozart's music stimulates the creative and motivational regions of the brain. Mozart embodied and transcended his era. Musically he stands between the Baroque era and the Romantic era. He lived in the Classical era and it was a time where Western societies were reorganising in fields like politics and religion with people like John Wesley, Voltaire, Thomas Jefferson, Mary Wollstonecraft and Goethe. It was a time of freedom of spirit and Mozart's music depicts elegance and deeply felt sympathy for the people of the time. His music is a symbol of *"the innocence, inventiveness, and promise of the birth of a new order of the ages"*.

Rock music cannot give the inspiration and spiritual connection that people need. Therapeutic qualities cannot emerge from chaotic, disturbing sounds, because they disrupt the rhythm of the body and mind. A centred, almost meditative state is necessary to slow down the physiological functions to access the deepest thoughts and insights of the human being. It is not the relaxing part that is important, but also the concentration and motivation. Merrit (1990:69 & 71) quotes Diamond who has found that some kinds of rock music have a debilitating effect on the system, because it has an anapaestic beat, in which the last beat

of the measure is stressed and there is a slight stop before the first beat begins again. The rhythm is counter to the body's natural organic rhythm. The body enters a state of alarm and it causes a great deal of stress, which leads to hyperactivity and restlessness. Other symptoms are loss of energy, negativity, depression, isolation, feelings of hopelessness and aggressive behaviour. The stress in the body causes the left and right brain hemispheres to be thrown off balance and the reptilian brain takes over, which serves the instinctive part of the brain which specialized in routine and ritual. Campbell (1997:33 & 34) helps us understand that sound creates physical forms and shapes which influence our health, consciousness and behaviour. Vibrating sounds form patterns and creates energy fields of resonance and movement which interact with matter and this has an influence on the cell, tissues and organs of the human body. Sound can bring about positive, but also a negative change. Rock concerts are among the worst threats to the health of young people.

The New Age music is an emerging genre that is used for relaxation and meditation. The themes are often cosmic, global, environmental and ethnic. It is simplistic in structure, which often lacks direction or a distinct melody line, and has spatial and open qualities useful for relaxing and meditating.

According to Merrit (1990:51 & 73 & 74) no hard and fast rules exist to which music to use. There are only guidelines, because the reaction and response of the learner are the measuring instruments. Baroque music (1600-1750) is structured and ordered. It is effective for kwhole brain integration. Classical music (1750-1820) has frequent changes in tone colour, with clarity and poise. It is effective for stimulating associations in the brain, trigger memories and creativity. The Romantic period (1820-1900) has an individualism and uniqueness and is highly personal music with strong emotional polarities. It helps for an outpour of feelings. The Impressionistic period (late nineteen and early twentieth centuries) has a dreamlike quality with subtle moods. It is very powerful in evoking images. Most modern music is not used for learning or self-exploration. The reaction and responses of the learners are the measuring instrument. The following is a list of general tendencies when choosing music for therapeutic use (Campbell 1997:78):

- ✓ Gregorian chants - The rhythm of general breathing is used to create a relaxed sense. Use for study and mediation or to reduce stress.
- ✓ Slower Baroque music - Imparts a sense of stability, order, predictability and safety. Use for stimulating environment for study or work.

- ✓ Classical music - It has a sense of clarity, elegance and transparency. Use to improve concentration, memory and spatial perception.
- ✓ Romantic music - Express feeling such as themes of individualism, nationalism and mysticism. Use to enhance sympathy, compassion and love.
- ✓ Impressionist music - Based on free-flowing musical moods, impressions and dreamlike images. Use for musical daydreaming when learners are engaged in visualizing activities, creative impulses when busy with creative work and to unlock the strength of the unconscious.
- ✓ Jazz - It is dance forms that came from expressive African heritage. Use to uplift, inspire release, deep joy, sadness, wit, irony and affirms common humanity. The emotional qualities of the learners are awakened with this music.
- ✓ South American dances - These are different dances with a lively beat like the samba, rhumba, maranga and macarena. Use to get the body moving. The samba has the rare ability to sooth and awakens at the same time.
- ✓ Pop music and country and western music - Inspires light to moderate movement, engages the emotions and creates a sense of well being. Use to relax learners.
- ✓ Rock music - Stimulates active movement, release tension, mask pain and reduce unpleasant environmental sound. It can also create tension, dissonance, stress and pain when we are not in the mood to be energetically entertained. Use to reduce The language of the heart reaches areas of the brain, such as the right brain hemisphere of the cerebral cortex or the limbic system which do not respond to purely intellectual communication stress and tension in learners.
- ✓ New Age music - Has no dominant rhythm. Use to elongate a sense of space and time. Induce a state of relaxed alertness.
- ✓ Heavy metal, punk, rap, hip hop and grunge - It excites the nervous system and leads to self expression and dynamic behaviour. Use to release self expression in the learner as well as inner turmoil.

- ✓ Religious and sacred music - Leads to a feeling of deep peace and spiritual awareness. Use to help learners to transcend.

Playing music in the learning environment helps to create a dynamic balance between the more logical left and the more intuitive right hemispheres of the brain. This interplay between the two brain hemispheres is thought to be the basis of creativity (Campbell 1997:66). The following are a variety of possibilities for the learning environment. The lists provide music for the hyperactive learner, but also for the general primary school learner.

Table 3.6 Music for the hyperactive learner (Merrit 1990:57-59)

J. S. Bach	Air on a G string Arioso from Cantata no. 156 The Brandenburg Concertos
Brahms	Violin Concerto (second movement) Lullaby
Haydn	Water Music
Mendelssohn	Cello Concerto in C major (second movement) On Wings of Songs
Mozart	Concerto for Flute and Harp
Pachelbel	Canon in D
Vivaldi	The Four Seasons

Table 3.7 Music for the primary school learner (Merrit 1990:58-59)

Beethoven	Romance no. 1 for Violin and Orchestra in G major
Handel	Water Music
Haydn	Symphony no. 82 in C major Symphony no. 101 in D major <i>The Clock</i>
Leopold Mozart	Children's symphony Peasant's Wedding A Musical Trip with a Sled
W.A. Mozart	Violin Concerto no. 5 in A major Eine Kleine Nachtmusik Piano Concerto in F major

Tchaikovsky	Violin Concerto in D major The Four Seasons Twelve Pieces for Piano
Vivaldi	The Four Seasons
Bizet	The Children's Games
Chopin	Piano Concerto no. 1
Debussy	The Children's Corner Golliwog's Cakewalk On Wings of Songs
Mendelssohn	Mother Goose Suite <i>The Empress of the Pagoda</i> and <i>The Fairy</i>
Ravel	<i>Garden</i>
Schumann	Scenes from Childhood <i>From Foreign Lands and Peoples</i> and <i>A Curious Story</i> Traumerei
Villa-Lobos	The Family Dolls

It is important to note that certain writers feel that other music besides classical music, such as New Age music, can also be of help to learners. The following is a list of New Age music suitable for the learning environment.

Table 3.8 New Age Music (Merrit 1990:77-78)

Patric Ball	Celtic Harp Secret Isles
Rusty Crutcher	Machu Piccu Impressions
Deuter	Nirvana Road Cicade
Steven Halpern	Zodiak Suite Lullabies
Janalea Hoffman	Music for Mello Minds
Japetus	The Great, Great Silence
Kitaro	Silk Road Suite

Daniel Kobialka	Kobialka Performs Path of Joy
Annie Lock	Memories
Carolyn Margrete	Emerald Season
Radhika Miller	Lotus Love Call
Enya	Paradise Island
Paul Winter	Wind Shadows Fairy Ring
Andreas Wollenweider	Tropic of Paradise
Georghe Zamfir	Spirit Wind
Zeno Okeanos	Watermark
Kim Robertson	Common Ground Canyon Suite
Mike Rowland	Icarus
Soundings of the Planet	Down to the Moon
Richard Warner	Classical Zamfir

3.6 CONCEPTUAL FRAMEWORK FOR THE EMOTIONAL DEVELOPMENT OF THE LEARNER IN THE MUSIC LEARNING ENVIRONMENT

The conceptual framework illustrates the development of learning through the emotional side of the learner in the music learning environment (figure 3.2).

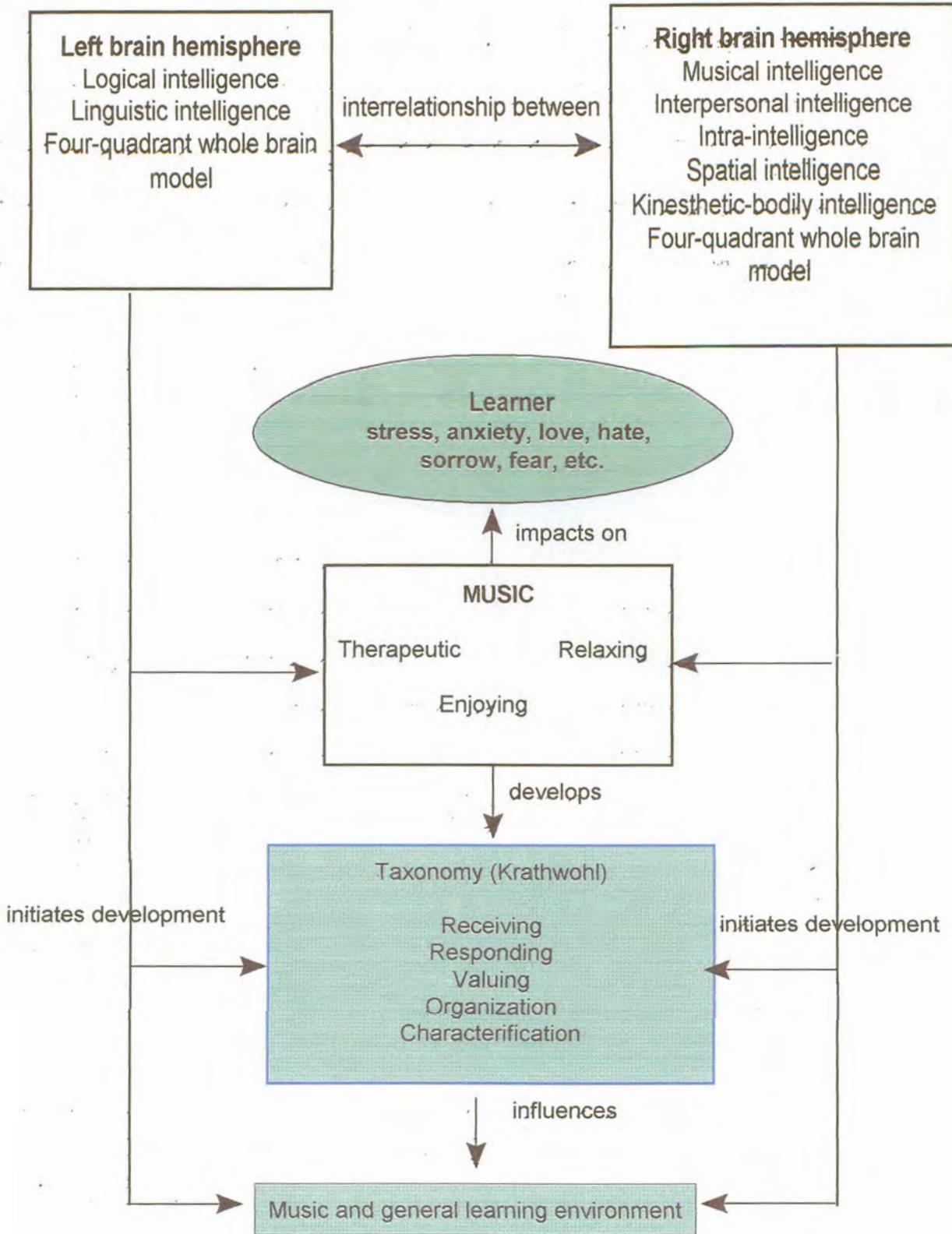
4. SPIRITUAL DEVELOPMENT

4.1 INTRODUCTION

To educators the inner or spiritual world is mostly a strange and often unaccepted world. Although people are world-wide entering a time when personal growth and spiritual transformation are slowly gaining recognition, it still is in transition:

Figure 3.2 Emotional development of the learner through music

EMOTIONAL DEVELOPMENT OF THE LEARNER THROUGH MUSIC



There is an inner reality. There is a valid world inside our minds that is as valid as, if not more valid than, the world outside us (Meritt 1990:2).

The left brain hemisphere focus of the modern era made people believe that what they cannot see, touch, manipulate or understand, is not significant to their lives. To function as a whole person a relaxed body is needed, a focused mind, and an unimpeded flow of emotions - the energy and perspective of our spiritual life.

The value of spiritual development in the postmodern learners are accelerated learning, higher levels of retention and recall, and higher levels of interest in learning content. Spiritual development in the music learning environment can be stimulated by relaxed conditions, silence, focused attention, receptive - non judgmental attitudes, an ability to utilize the whole brain, a stimulating learning environment and educators who encourage spiritual development. Because anxiety and stress are part of the postmodern world the learners life in, developing relaxed states in learners to develop learning potential is an essential achievement in the music learning environment. It is well known that music has a great influence on the spiritual life of people. The expressive arts will continue to be the means by which man transcends the restraints of a postmodern reality.

4.2 ANCIENT WISDOM OF THE PAST

Van der Walt (1995:47) explains that it is very interesting and important to move back into the past history of man, and to discover the remarkable insight ancient people had about the role music played in their lives and their society. To primitive man sound was an extremely stimulating experience and popular myth explains that an ancient god created the world from sound. The myth claims that everything that exists materialized into permanent form because of sound. Human beings, for example, were created by a god playing a flute or shell horn. It is believed that through the sound connection that exists between everything in the world, human beings can under the influence of music, utilize primitive power. All cultic activities, such as offerings to forefathers, adjuration of the powers of nature and animals originated here. In primitive cultures music intensified life experience and was a form of ecstasy to overcome the sublime.

In recent times, there has been renewed interest in the use of music. The ancient wisdom of the past about the use of music is being rediscovered. The role of group music in the learning

environment should be adjusted to realise its important role in the postmodern world.

4.3 INTUITION

People like Plato, Newton, Da Vinci, Einstein, Mozart and other great inventors, artists and philosophers were responsible for changing the culture, art, mathematics and science scene of the world. The interesting fact about these people, is that they all wrote about intuition in their great discoveries and creative contributions. Spiritual abilities were highly valued by these people, but the use of spiritual abilities is mostly ignored or inhibited in the learning environment (Clark 1986:160). Merrit (1990:165) confirms the importance by referring to Jung, who claimed that intuition, thinking, feeling and senses are normal functions of the human psyche. Ornstein and Hunkins (1993:127) agrees that intuitive thinking is not a new concept, but has been overlooked in the past. The reason may be that it does not rely on facts or rote learning and is difficult to define. Good thinkers not only have knowledge but also intuitive grasp of the subject.

Clark (1986:160-161) claims that according to neurobiologists the prefrontal cortex is the most unique area of the brain, because it is not part of the animal brain, but only part of the human brain. The function of this part of the brain includes the basis for intuitive thought. The intuitive process seems to be highly synthetic and dynamic, drawing from, and integrating all other brain functions. Intuition is the least discussed, researched and most ridiculed by other intelligences. Creativity is linked to intuition and it seems to be the same human ability as intuition. It is the expression of the highest level of human intelligence. Torrance and Safter (1990:5) feel that rational thinking, intuitive and creative thinking are necessary. Educators do not have to choose between them, but if forced to choose the intuitive and creative thinking represent mankind's highest thinking ability. Gardner (1998:28) mentions that he is in the process of pondering whether other intelligences should not be added to the list of seven intelligences. It is appropriate to add an eighth intelligence, namely naturalistic intelligences, and a spiritual intelligence is being considered. Spiritual intelligence is a deep human capacity that all people have, but which some people have in abundance.

Clark (1986:161) discusses three levels of intuition, namely:

- ✓ Rational intuition - This is a level of intuitive behaviour that adjusts known information in such a way that new insight emerges. It is not new information, but known facts, seen in a new light, for example to solve a problem. This area of intuition relies on the

synthetic characteristic of the intuitive process. It combines consciously known information and processed information that are no longer consciously available and new patterns seem to emerge.

- ✓ Predictive intuition - This level enlarges upon the rational intuition level by including new information into existing patterns. The unconscious information of unknown sources becomes an important part of the new insight. Some call this process creativity, but it is also called the *ah-ha* experience and it appears when the person is relaxed or involved in something entirely differently. At this level the mind perceives in a holistic fashion and not in a linear mode. Edwards (1986:35) explains that in the right hemisphere mode of information processing, intuition produces the leaps of insight without figuring it out in a logical order. The *ah-ha* response is what Archimedes experienced as a flash of insight while bathing. It enabled him to produce the principle of using the weight of displaced water to determine the weight of solid objects.

- ✓ Transformational intuition - This is the most fascinating and awesome process of all three intuitive levels. It seems as if the person using this information picks it up through means that has defied scientific understanding. It is a transcendental level of experience and can be observed in the brain as a change of the rate of correlation between brain waves and separate regions of the brain. Eastern mystics and other religions seek this state of knowledge.

A problem in the education systems of the western world, as opposed to education in the east, is that the concept of the supra-rational, where the consciousness transcends the boundaries of the rational and enters into an altered state of consciousness, namely a holistic state of awareness, is still not fully accepted. Torrance and Safter (1990:5) quote a famous Japanese neurosurgeon who uses the terms *logos* and *pathos* in the book *The Japanese Mind*. The two terms characterize the difference between the Japanese and Western mind. The Japanese culture stresses intuitive thinking over logical thinking. Torrance and Safter (1990:6) have become convinced that the future education requires a type of education that goes beyond the development of rational thinking. In Japan the *satori* describes excellent thinking which is similar to the Greek word *eureka* and our concept of a-ha. In a certain way it differs from *a-ha*, because it takes many years of training and the highest point available is *satori*, or a sudden flash of Enlightenment.

Bradman (1997:3) explains that in a meditative state the eyes are closed and the inner hearing takes precedence. Most religions exhort the believer to *hear* as in the quote from St. John in the New Testament “*everyone that is at the truth heareth my voice*”.

Music may be used to enhance intuition. Music is immediate and moves and changes all the time. It encourages the grasping of concepts instantly, without reason or analysis.

4.4 IMAGERY: NOT JUST VISUAL

Campbell (1997:156) explains that *imagery* is mostly perceived as visual, but the term embraces all the senses and kinds of sense memory. Recollections of a smell, a sound or a visual image are examples of *imagery*. Images elicit physiological and psychological responses. They set your blood racing, evoke memories, inspire visions and can transcend reality. Images are called archetypes when associated with abstract concepts such as goodness or mysteries of life. Powerful images are called *icons* such as a bust of the Virgin Mary. Many forms of prayer and meditation employ imagery as a tool to focus and concentrate energy.

Barrel (1983:45) claims that playing with ideas in the mind is the outgrowth of children's play and often results in novel ideas, new perspectives and the setting of hypotheses. It is called imaginative play and is an essential component of reflective thinking. The learning environment must learn to value imagination, intuition, emotion and playfulness. A definition for *imagination* is the following:

Imagination is the ability to transcend conventional and accepted ways of thinking and acting to transform facts, ideas, and concepts into novel combinations. It is the ability to form, manipulate freely, and react emotionally to images in the mind. In a very real sense, it is the foundation of all thinking ... (Barrel 1983:45).

Merrit (1990:149) mentions the names of Einstein and Leonardo da Vinci who did not rely completely on rational thinking, but turned to inner thinking for problem solving and to enrich their lives. Associated thinking and imagery are necessary for innovative and high-order thinking. Barrel (1983:45) claims that at the age of fifteen, Einstein visualized himself riding along a ray of light at 186,000 miles per hour. Ten years later his imaginary play ended in the theory of relativity. A characteristic of productive thinkers is flexibility of thoughts. It is very

valuable to place learners in a “*What if?*” situation, because not only academically strong learners, but also average learners are engaged in critical thinking. On the long term intellectual and emotional abilities are being developed (Barrel 1983:46-47).

Music enhances the power of imagery. Imagery play, with the help of music, can increase learning capacity, because the energy used for abstract thought and higher verbal skills is directed inward and connects with the emotions. Without the psychic energy emotions are vacuous and easily forgotten. Learners have to spend more time inside themselves in imaginative play (Merrit 1990:148).

Practising imaging skills may be done as follows:

- Ask the learners to make themselves comfortable.
- Explain that they should be aware of the images coming to the mind. Then ask the learners to imagine themselves in a favourite place outdoors. Turn Ravel's Introduction and Allegro or Debussy's *Prelude to the "Afternoon of a fawn"* on.
- After listening to the music write the different images that came to mind down without thinking (Merrit 1990:171).

The following activity is an example of the exploring of emotions through the use of instruments and imagery.

- Ask the learners to choose an instrument on which they want to play how they feel.
- Each learner gets the opportunity to play out his feelings, while peers listen and comments. The teacher picks up on some of these emotions that should especially be expressed - anger, depression, love etcetera.
- One emotion is picked and the learners are asked to imagine a time when they experienced this specific emotion. While visualizing the emotion, take the instrument and make sound.
- Expressing hidden feelings are very beneficial to learners.

The following is a list of music suitable for enhancing creative imagination (Merrit 1990:172, table 3.9):

Table 3.9 Music to enhance creative imagination

Beethoven	<i>Symphony no. 6 (Pastoral)</i>
Berlioz	<i>Harold in Italy</i>
Bloch	<i>Schelomo</i>
Britten	<i>Four Sea Interludes from Peter Grimes</i>
Copland	<i>Lincoln Portrait</i> <i>Quiet City</i> <i>Appalachian Spring</i>
Delius	<i>Florida Suite</i>
Dvorák	<i>Slavonic Dances</i>
Haydn	<i>Creation</i>
Hovanhess	<i>And God Created Great Whales</i>
Ravel	<i>Daphnis and Chloe, Suite no.2</i> <i>Mother Goose Suite, The Fairy Garden</i>
Sibelius	<i>The Bard</i>
Smetana	<i>The Moldau</i> <i>The High Castle</i>

4.5 CONCEPTUAL FRAMEWORK FOR THE SPIRITUAL DEVELOPMENT OF THE LEARNER IN THE MUSIC LEARNING ENVIRONMENT

The conceptual framework illustrates the spiritual development of the learner in the music learning environment (figure 3.3).

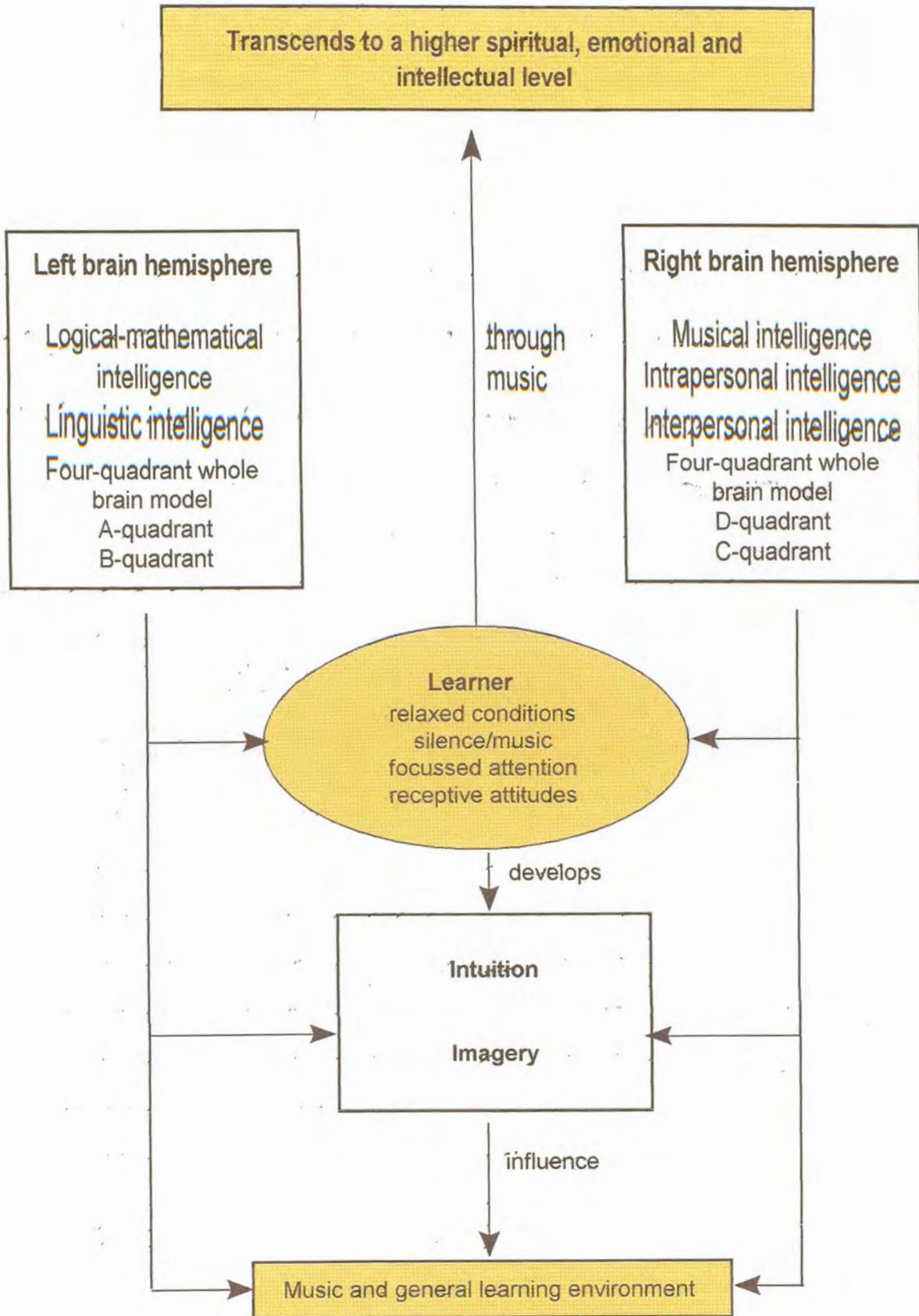
5. PSYCHOMOTOR DEVELOPMENT

5.1 INTRODUCTION

The Concise Oxford Dictionary (1995:1105) defines *psychomotor* as relating to the origination of movement in conscious mental activity. Van Walbeek (1998:30) extends the definition by adding that it is accurate, fast, flowing movements, which needs coordination and control of different muscles groups in the body. Another added dimension to the concept is that it involves cognitive and affective aspects. The development of psychomotor qualities in the learner therefore strengthens the holistic developmental approach. Shehan (1987:25-26)

Figure 3.3 Spiritual development of the learner through music

SPIRITUAL DEVELOPMENT OF THE LEARNER THROUGH MUSIC



explains how the different activities in the body make a musical performance possible. Sound production, using the human voice, the body or an instrument, is direct and exact movement of the performer. The brain channels messages in the form of electric impulses to certain nerves which send these codes to the muscles and the movements are performed. The performance skills are thus controlled by the brain and the motor system. The intricate motor tasks of the musician and the aural mechanism are responsible for the great accuracy needed in musical performance.

A child's movements are quite natural until entering primary school where the opportunity to move is usually restricted. An important factor to be aware of is that children learn through being physically active and it must therefore be a natural part of the learning environment. Clark (1986:34) confirms that the observation was made through brain research that physical movement is important to learning:

The purposeful change of place, position or posture as part of the learning process, and physical encoding - the learning process which uses the physical body to transfer information from the abstract or symbolic level to a more concrete level - are integral to movement, and can produce more precise learning with a higher rate of retention.

According to Van Walbeek (1998:29-30) movement develops various abilities in the learner: Listening ability where learners analyze sound and then react to it, intellectual development, emotional development where creative movement to music has the potential to develop affective qualities in the learner, social development, psychomotor development with cognitive, affective and an autonomous phase, somatic and creative expression.

Other educationalists agree on the importance of psychomotor development in various fields of education, including music - which entails a large component of motor abilities. Four music educationalists mentioned in this section of the study, developed learning models of movement and music. They are Dalcroze, Kodály, Carabo-Cone and Orff (Schulberg 1981:198). Wood (1987:35) claims that the motor process serves as an organizing function for perceiving, conceptualizing and understanding of music and is therefore a key element in the general music curriculum. The accomplishment of psychomotor development in the music learning environment, will now be discussed under the following headings: the psychomotor taxonomy, music and movement, music and dance.

5.2 TAXONOMY : THE PSYCHOMOTOR DOMAIN

Although Ornstein and Hunkins (1993:222) claim that the psychomotor domain has received much less emphasis than either the cognitive or emotional domain, different psychomotor taxonomies have been developed to accommodate the psychomotor domain. The value of the taxonomies is the support provided to educators to order knowledge, to initiate structured development and as a diagnostic tool. Psychomotor skills are not isolated within the organism, but interact with the intellectual and the emotional. Two of the psychomotor taxonomies under discussion in this section of the study are, Simpson's work, and Harrow's, which is a hierarchy of development. Peters and Miller (1982:162-170) discusses Simpson's psychomotor taxonomy which consists of five different levels with subdivision. The levels are as follows:

- ✓ Perception - The process of becoming aware of objects, qualities or relations by means of the sense organs, through sensory stimulation from the six sense organs. Music receives all the stimuli except perhaps smell and taste. Stimuli are received, selected to relate to the motor-skill to be executed and translated into meaning. Example: In playing the glockenspiel in group music the learner selects the auditory stimulus of the sound of the instrument he or she is playing. It is filtered to the domain that concerns the correct handling of the mallets and then translated into meaning to provide the correct dynamic touch when playing.
- ✓ Set - This involves mental set (knowledge that is a prerequisite for physical action), physical set (pre-condition to motor activity) and emotional set (attitude and emotional disposition). Example: The learners must know the starting pitch of the song, correct posture when singing and a willingness to sing. When playing the glockenspiel the learners must be acquainted with the instrument, correct posture when playing the instrument and willingness to play the instrument.
- ✓ Guided response - Imitation and trail and error play an important role in psychomotor activities. Example: Young learners imitate the sound quality of the choral instructor and practice a phrase repeatedly until it is satisfactory. The glockenspiel player imitates the educator and practice until playing it correctly and fluently.
- ✓ Mechanism - At this level of the taxonomy motor actions have become automatic. Example: Correct breathing for singers, holding the mallet for glockenspiel players.

- ✓ Complex overt response - This is the level of real musical performance. The response is made with the minimum expenditure of time and energy. It is related to emotional set on a higher level where the performer feels the task at hand is in his grasp. It depends on the performer's mental picture of the task and sequence in its entirety. It is finely a sophisticated muscular control. Example: The musician concentrates on the aesthetic elements of the performance.

Ornstein and Hunkins (1993:222) quotes Harrow who developed a psychomotor taxonomy with several categories. The taxonomy is arranged in a hierarchy where the levels increase in complexity. These taxonomies are useful to the music educator and should be kept in mind when planning learning outcomes.

- ✓ Reflex movement - It includes segmental reflexes and intersegmental reflections. Example: Contracting of a muscle when playing an instrument.
- ✓ Fundamental movement - Walking, running, jumping, pushing, pulling and manipulating. Example: The learner will react on a variety of music stimuli by walking, skipping, running galloping etcetera.
- ✓ Perceptual abilities - These abilities include kinesthetics, visual, auditory tactile and coordination abilities. Example: Dancing.
- ✓ Physical abilities - Endurance, strength, flexibility, agility, reaction-response time and dexterity. Example: The learners improve their flexibility through more complex body movements.
- ✓ Skilled movements - Games, sports, dances and arts. Example: dances.
- ✓ Non-descriptive communication - Expressive movements through posture, gesture, facial expression and creative movement. Example: Create own movement sequence and perform it to music.

Peters and Miller (1982:155-161) proposes five influences on the development of psychomotor skills which in turn may result in developing learning potential.

- ✓ Physical preparation and warm up - For the optimum development of motor skills, muscles must be operating at a functioning level. The advantage of this activity is the

enhancing of the coordination of mind and muscle prior to undertaking the motor task. Example: Before group singing start with low, slow and soft singing.

- ✓ Practice allocation and scheduling - The practising sessions should be distributed rather than one concentrated practice. Place instruments for easy accessibility and a practising schedule is essential.
- ✓ Feedback schedules - The learner must receive information concerning the physical act. Without feedback practising is almost a waste. It increases retention and the learning of psychomotor skills. Making use of a tape recorder or a video tape of the learner's performance is a positive way where learner and educator critically analyze the performance.
- ✓ Task analysis and sequencing - The series of tasks that compromise the motor skill have to be analyzed as well as the ordering of their complexity level. A movement or dancing sequence needs careful analyzing and sequencing.
- ✓ Learning environment - Practice area enables the learner to execute the task properly. For musical work a comfortable, well-lighted and quiet area is necessary or other facilities for group activities like eurhythmics and dancing.

Music is inseparable from movement. There are a variety of movements such as rhythmic movement, external gestures of the performer, internal rhythms of the brain and neuromuscular structure, mysterious movement within listeners such as changes of heartbeat, rate of breathing, attention arousal and deliberate movement to music in dance. Music has therefore to be taught as an activity with a variety of aspects.

5.3 MUSIC AND MOVEMENT

Shehan (1987:25) claims that:

The very basis of our profession and the foundation of music as pedagogy and performance is ultimately and intimately entwined with the physical self. Music the aural art is music the kinesthetic art.

Gardner (1973:190) states that a characteristic of the young child is the active involvement

with music. Movement is primarily a bodily-kinesthetic experience for the young child. Gardner's theory of multiple intelligences proposes kinesthetic-bodily intelligence as one of the intelligences of human beings. Kinesthetics is the brain's awareness of the position and movement of the body (Concise Oxford Dictionary 1995:746). Kleinman (Moody 1990:127) describes the kinesthetics as sense perception or a sense of space. Every experience is a kinesthetic act - an expression and comprehension of an idea. It includes components of general awareness, space awareness, actions and relationships. Important to this study is the interaction of the kinesthetic-bodily intelligence with other intelligences, such as musical intelligence. Musical intelligence includes kinesthetic, spatial visual and verbal intelligence. Shehan (1987:26) identifies other overlapping categories - the relationship of rhythmic aspects of music to physical responses, the application of movement as an instructional approach (including eurhythmics, clapping, walking and other natural rhythmic behaviours), the development of psychomotor skills and the expressive function of movement in choral and instrumental ensemble performances. Notwithstanding interrelations between different intelligences and overlapping categories of music and movement, rhythm is the underlying element of music and movement.

Rhythm is the most fundamental characteristic of music. The Harvard Dictionary of Music (1983:729) defines *rhythm* as in its primary sense the whole feeling of movement in music. *Rhythm* is movement in time as opposed to *motion* as movement in space (pitch). Shehan (1987:26) explains that the word *rhythm* comes from the Greek word *rhythmos* which means measure. Plato described it as the order in the movements of the body. Rhythmic responses may be intrinsic, but important to teaching and learning is the fact that it may be developed through instruction.

Jacques-Dalcroze employs the natural movements to teach specific concepts such as beat, metre, tempo, patterns and accent. Jacques-Dalcroze found that the body needs to develop with the mind at an early age. The primary appeal to children is rhythm and they respond to music comes naturally. It is physical and the body should be the child's *first instrument*. Jacques-Dalcroze's method is built on certain intrinsic characteristics of the pleasure of rhythmic movement, the confidence it gives, the abilities to hear, comprehend, to interpret music in movement and the invitations to learners to improve and develop individual own ideas. Music is vital and inseparable from eurhythmics and additional to its educational value is its therapeutic value (Schulberg 1981:199). Faber and Parker (1987:44) explain that eurhythmics and dancing have corresponding elements - both are physical training, concern the self in relation with the music, both depend on technique, knowledge and experience,

have a visual component, involve improvisation, composition and evaluation, but the difference is dance is that an art, while eurhythmics is a course of study.

An example of a eurhythmic activity (Faber and Parker 1987:44) is where the learner having to move in space uses certain guidelines.

- Music is improvised on the piano or a recording may be used while the learners shape their activities to fit the nature of the music. Tempo, dynamics, texture, style and other elements of music are expressed. A simple, but fundamental task for the young learner is to step to the beat of music. While walking they express different elements or qualities underlying the music such as legato and staccato.

The following is an example of an activity where eurhythmics may be used successfully. There is an abundance of suitable music, but in this example Bach's Gavotte 11 from the English Suite no. 6 are used as an example as a piece with an ABA form.

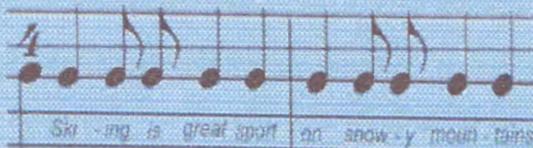
- Arrange the learners in two groups. After familiarizing the learners with the music, each group is asked to go outside and create own movements on their chosen section. After the practising section the groups return and the dance is done with the music. The learners have to conduct three mental actions. They have to remember their practised steps, concentrate on when to dance and concentrate on the music. The learner does not learn steps as in dancing, but learns to use his body to solve problems, to enact particular musical meanings in physical space and the challenge is deepened understanding and the ability to produce music (Faber and Parker 1987:45).

Orff (1895-1982) developed a system, the Orff Schulwerk training, where rhythm, raplike speech, gestures, movement and improvisation with playing simple percussion and melodic instruments are used. Wood (1987:36) claims that movement is fundamental in the Orff process. Feeling precedes intellectual understanding, because free movement is a natural part of a child growing up and should be incorporated into Class Music. The free movement exploration leads to more directed activities that reinforce musical elements. Movements are used in combination with other concepts or elements of music. An understanding of the different elements of music takes place through body movement such as clapping, stamping, finger snapping and patchen. It differs from the method of Jacques-Dalcroze in that it is a combination method of speech, movement and music, with above-mentioned activities.

An example of an echo patchen, stamping, clapping and finger snapping for the higher

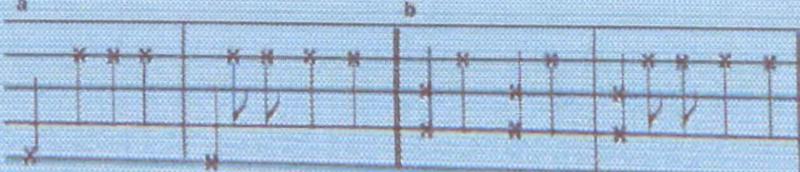
grades is the following (Wheeler & Raebeck 1979:14-15).

Skiing is great sport on snowy mountains



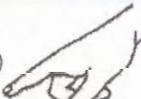
Ski - ing is great sport on snow - y moun - tains

Snap fingers
 Clap
 Patchen { left knee
 right knee
 Stamp



Kodály applied movement as a natural accompaniment to the singing of the young learner. Movement is used to help the singer understand the relationship of pitches to tonalities and movement is used to facilitate music reading. Movement is used in the form of hand signals (Van Walbeek 1978:28). An example of the hand signals as visual aid is the following (Wheeler and Raebeck 1979:xxv).

Chart of hand signals

	Do' or 1' (arm's length above head)		Fa or 4 (shoulder level)
	Ti or 7		Mi or 3 (even with chest)
	La or 6		Re or 2
	Sol or 5 (even with eyes)		Do or 1 (waist level)

5.4 MUSIC AND DANCE

In prehistoric times and in primitive cultures dance was primarily ritualistic. Dances were performed by the medicine man or a selected group of warriors. Women were only allowed to beat the drums. In other cultures such as Spain, Frisian and the American Indians some dances were performed by women only. The ancient Egyptians and Chinese had highly stylized ceremonies of dances and the Greeks developed dances into a form of art. Dance became an expression of beauty. In the last century of the pre-Christian era there appeared an influx of Oriental dances that were strongly erotic and frequently obscene. It became the occupation of prostitutes. Little is known about dancing in the Middle Ages, because the church opposed dancing very strongly. In the 14th century convulsive dances expressed the fright and despair of a population tortured by plague, fire, wars and religious scruples. In the 15th century dances were courtly entertainment and more than two hundred court dances from the 15th and 16th century were preserved. A large variety of dances reflect the 17th century - allemande, saraband, jig or gigue. The 18th century cultivated particularly the minuet and one of the most famous dances of all times, the waltz. Other dances of the time are mazurkas, polka and galops. These were often launched in Paris the city of entertainment. In the early twentieth century the Americans made their contribution to dancing with ragtime, jazz, conga, rumba, tango, samba and others (Harvard Dictionary of Music 1983:222-224).

Shehan (1987:26) claims that movement as a method of teaching is largely a twentieth century phenomenon. Physical activities and dance were initially perceived as diversion from academic study. Gradually motor activities have been accepted by music educators who recognized their potential in the development of rhythmic understanding. The Art and Culture learning area emphasizes music and movement as an essential part of the learning programme. It is mentioned that dance is part of the interdisciplinary approach and each cultural group has its own form of dancing and movement. Music and dance are closely related and often difficult to separate. Many different forms of dancing may be practised in the music learning environment, such as folk dancing, square dancing, social dancing, modern dancing, creative dancing and mirror dancing to mention a few. When the learners say, "Shall we dance?, Who leads?" the South African music educators had better know the step and tune to the new beat of the twenty- first century or postmodern music learning environment.

(i) MOVEMENT AS EXPRESSION AND ENTERTAINMENT

Movement need not only represent pedagogical devices, but may be used to enhance the performance of choral groups and add an interesting and enjoyable aspect to singing in the music learning environment. Movement may add to the expressiveness or entertainment of a musical work. There are two forms of musical expression in choral work, namely choralography and choreography. Choralography (Hylton 1987:34) is by definition subservient to the vocal presentation of the musical selection. When designing a movement sequence with a performance, the ultimate goal must always be the aesthetic aspect of a performance. The movement must serve this purpose and should not be too active. A choir or learners in the music environment, bowing their heads to indicate a pianissimo section in a choral performance can be highly effective and involves the learners mentally in the music.

A step beyond choralography is choreography. It uses larger movements, is more entertaining and the visual aspects of the performance become nearly equal to the aural aspect. Recent practice in music circles features a greater visual animation to complement the aural presentation of choir performances and again may be used with excellent results in the singing repertoires of the music learning environment. It offers the viewer a more complete theatrical experience. The significance of this practice is nonverbal communication with the viewer. This adds to the power of the choral performance. Choral groups use movement as an expressive device from subtle swaying to gestures that portray the text to song and dance presentations (Hylton 1987:34).

This can also be a valuable method in the music classroom to elicit desired musical responses to illustrate musical ideas, such as snapping, finger snapping, feet tapping or tapping on the shoulder of a neighbour. It provides motor activities to reinforce musical ideas and psychomotor development. An appropriate pose - seated or standing with no movement - may also be effective in slow ballads. The learner-centred approach in the music learning environment makes it possible to interact with the learners using their ideas or even employing a professional choreographer.

5.5 CONCEPTUAL FRAMEWORK FOR PSYCHOMOTOR DEVELOPMENT OF THE LEARNER IN THE MUSIC LEARNING ENVIRONMENT

The conceptual framework illustrates the development of the psychomotor skills of the

learner. In the music learning environment (figure 3.4)

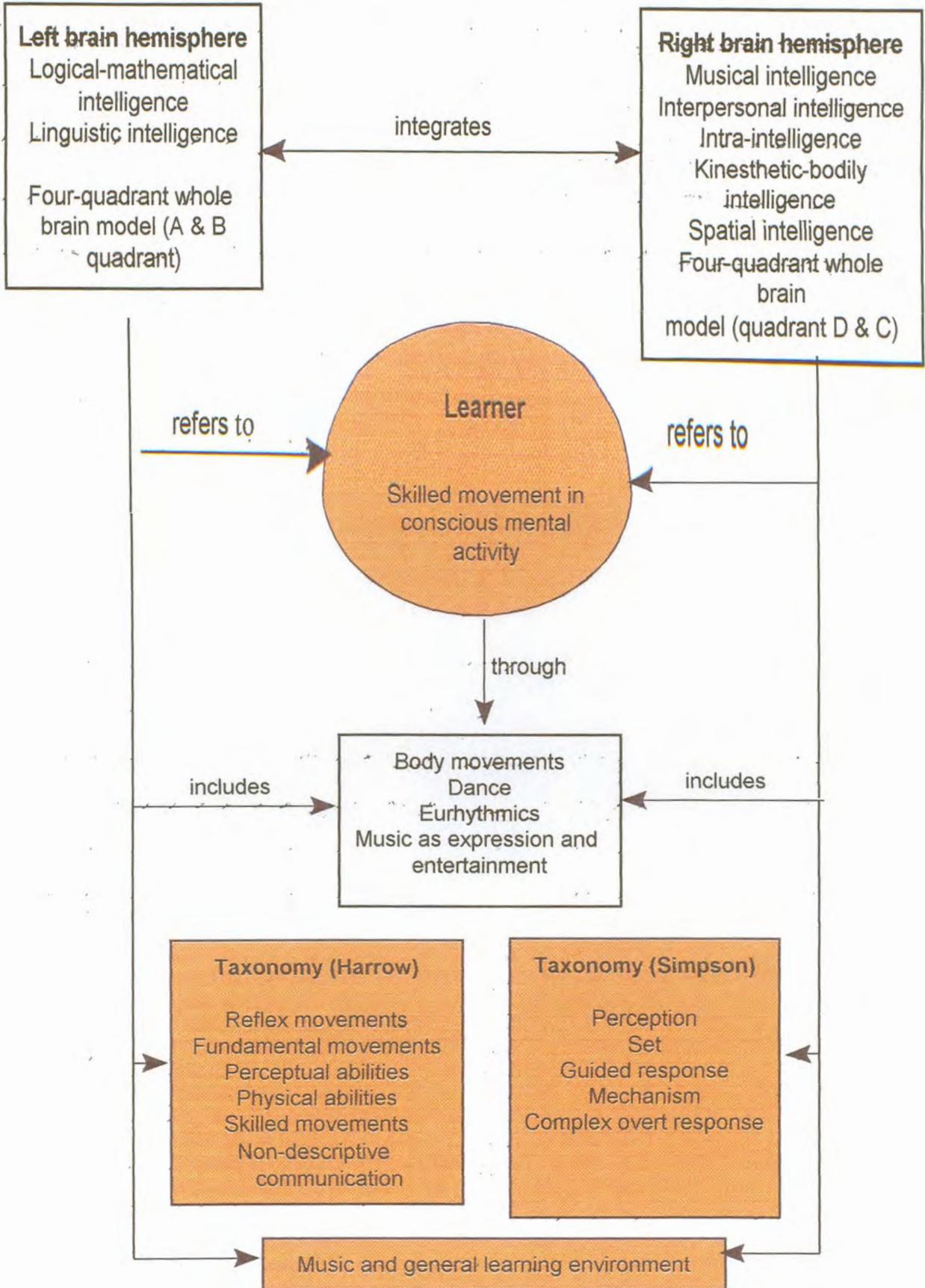
6. CONCLUSION

Music has the innate quality to develop both brain hemispheres, as well as also the whole person - intellectual, emotional , spiritual, and psychomotor. Chapter 2 and 3 form the background against which the rest of the study will be conducted.

Chapter 4 explains the research methodology chosen for the study, the research design, sampling procedure and the collecting of the data.

Figure 3.4 Psychomotor development of the learner through music

PSYCHOMOTOR DEVELOPMENT OF THE LEARNER THROUGH MUSIC



CHAPTER 4

RESEARCH METHODOLOGY USED TO INVESTIGATE A NON-TRADITIONAL APPROACH TO MUSIC TO DEVELOP LEARNING POTENTIAL

1. INTRODUCTION

As explained in chapter 1, the aim of the study is to investigate a non-traditional approach to music to develop the learning potential of the primary school learner in a postmodern learning environment. Chapter 2 explored the paradigm change from a modern to a postmodern paradigm, and included a profile and characteristics of a postmodern society, the implications for the learning environment, as well as the learning needs of the primary school learner in the postmodern learning environment. The developing of learning potential through music has been investigated from the perspective of the whole person development, whole brain model and the multiple intelligence theory in chapter 3. This chapter covers the research methodology adopted for this study, a mixed research approach: an explanation for selecting the descriptive (survey) research design, a description of the sampling procedure and the data collection instruments - questionnaires and semi-structured interviews.

2. THE MIXED RESEARCH METHODOLOGY APPROACH

2.1 RATIONALE FOR CHOOSING THE MIXED RESEARCH METHODOLOGY APPROACH

The research methodology chosen for this study can be described as the *mixed methodology design* which combines the **qualitative** and **quantitative** research methods. De Vos (1998:361) quotes Creswell who maintains that although this methodology adds complexity to a design, it also uses the advantages of both methods. Although the qualitative approach (interviews and open-ended questions) is the main instrument of the study, it has also been decided to employ the quantitative approach (questionnaires) to draw objective conclusions to support the subjective, personal opinions of the qualitative approach. The quantitative and qualitative approaches to the research are briefly described below to develop a general understanding of these approaches within the context of this study.

2.2. QUALITATIVE AND QUANTITATIVE APPROACH

2.2.1 QUALITATIVE APPROACH

The qualitative research methodology deals principally with verbal data which are collected by means of pictures or words (interviews) to describe, explain, explore and interpret social interaction. This research approach emphasizes subjectivity, by using participants' views and experiences as the principal data source. Schurink and Schurink (1998:240) defined the qualitative research method by quoting Denzin and Lincoln (1998) as follows:

..qualitative is defined as a multiperspective approach (utilising different qualitative techniques and data collection methods) to social interaction, aimed at describing, making sense of, interpreting or reconstructing this interaction in terms of meaning that the subjects attach to it.

Therefore, the data collection for this study took place by means of interviews and open-ended questions in the questionnaires to capture the subjective views of the respondents. The subjective opinions of the respondents gave way to a more in-depth understanding of the operationalization of music in the learning environment. The principal data sources were music educators and school principals. Data were collected on the premises and supplemented by the understanding gained on location, because qualitative researchers believe that human behaviour is influenced by the setting in which it occurs (Bogdan & Bilken 1992:29-30).

De Vos and Fouché (1998:71) quote Mouton and Marais (1998) who confirm that procedures for the qualitative research process are not strictly formalised. The scope is likely to be undefined and a more philosophical mode of operation is adopted. In the case of this study the researcher worked with semi-structured interviews, but flexible guidelines were followed. As the research developed new interpretations came to the fore and the research process was adapted to suite the new development. From the research process adopted for the interviews and open-ended questions the descriptive survey research design was selected and the boundaries for data collection identified. The interviews were recorded, transcribed and data analyzed and interpreted by means of categories.

2.2.2 QUANTITATIVE APPROACH

The quantitative research methodology deals principally with data from a representative, large

sample using a well-designed instrument, where the researcher aims at a detached objective view (Leedy 1997:106).

The data collection for this study also took place by means of two questionnaires aiming at a detached objective view. After designing the questionnaires for the music educator and primary school principal the participants were identified and selected. The data were collected, converted to numerical indices, analyzed and interpreted. A deductive approach was adopted for the quantitative research. It moved from the general to the specific so that certain deductions could be made from the data. The statistical results were reported and communicated by means of frequency tables, graphical presentations and descriptions.

3. RESEARCH DESIGN

3.1 RATIONALE FOR CHOOSING THE DESCRIPTIVE (SURVEY) RESEARCH DESIGN

De Vos and Fouché (1998:77) quote Thyer (1998) who defines a research plan as a *blueprint or detailed plan for how a research study is to be conducted*. The research design has an influence on all other aspects of the research - sampling, data collection, research tool, measurement and the analyses and interpretation of data. There are various classifications of designs and the descriptive (survey) research design was chosen for this study. Leedy (1997:190) defines the descriptive survey as:

The method of research that looks with intense accuracy at the phenomena of the moment and then describes precisely what the researcher sees is called the descriptive survey.

Leedy (1997:190) explains the meaning of the word *survey*, by dividing the word into two meaningful parts. *Sur-* means *above, over or beyond* and *-vey* to *look or to see*. A *survey* thus means *to look or see over or beyond*. He goes further following the same procedure with the word *descriptive*. *De-* means *from* and *-scribe* to *write*. When employing this method researchers do two things. They observe the population bounded by the research parameters with close scrutiny and make a careful record of what they observe. To observe is not used in the restricted way of the physical eye only, but with different meanings such as looking at achievements, attitude, believes by means of questionnaires and interviews.

The descriptive (survey) design suited both the quantitative and qualitative nature of this study,

as well as the sample size. The survey allowed for the qualitative approach, using the interview and open-ended questions of the questionnaire for gathering data and to describe the observations. The quantitative approach, using the questionnaire as instrument to gather data, were employed to make deductions and to describe the observations.

4. SAMPLING PROCEDURE

The aim of the participant sample was to obtain information from a representative selection of the population and to draw conclusions from that sample. For the purpose of this study it was decided to draw the sample from educators from the Arts and Culture learning area and primary school principals from the Gauteng province as the representative population.

4.1 IDENTIFYING AND SELECTING OF PARTICIPANTS FOR QUESTIONNAIRES

The participants had been selected after consulting with the Gauteng Education Department (addendum A). After telephonic enquiry a letter of approval for the research project was sent to the GED on 17 November 2000. After three weeks no response was received and after enquiring the comment was that *"things like this take time"*. It was recommended to wait until 15 January 2001. Until now, March 2001, no further response had been received and the researcher decided to continue with the research project.

The Gauteng province consists of eighteen districts - which have a prefix C for central, N for north and S for south. The districts are the following: C1 to C 6; N1 to N7 and S1 to S5. The districts include public, independent, ordinary and special schools. Since this study concerns the primary school learner, only independent primary schools, independent combined schools, public primary schools, public combined schools and public primary farm schools were selected as the target population.

It must be added here that the Gauteng Department of Education was in the process of restructuring, while this study was in progress. The new arrangements for the districts were later announced. The districts now consist of twelve districts - D1 to D12 - with district offices for each district. The participant sample for this study was not taken from the restructured districts.

The following table indicates the number of schools from which the participants were selected:

Table 4.1 The number of schools from which participants were selected

Central district	Northern district (N-D)	Southern district (S-D)
C1 - 108 schools	N1 - 88 schools	S1 - 85 schools
C2 - 93 schools	N2 - 66 schools	S2 - 91 schools
C3 - 155 schools	N3 - 95 schools	S3 - 90 schools
C4 - 86 schools	N4 - 83 schools	S4 - 112 schools
C5 - 93 schools	N5 - 96 schools	S5 - 74 schools
C6 - 83 schools	N6 - 74 schools	
	N7 - 55 schools	
618 schools	557 schools	452 schools

A stratified random sampling was done on each district and 300 representative primary schools were chosen, from the following districts:

Table 4.2 Stratified random sampling for each district

District	Schools
Central district	114 schools
Northern district	101 schools
Southern district	85 schools
Total:	300

After identifying the schools through a simple random sampling process, careful consideration was paid to the suitability of these schools, seeing that most of the schools were former disadvantaged schools with a curriculum that did not include Class Music. It was also not certain whether the learning area Arts and Culture were phased in by the disadvantaged schools. It stands to reason that the choice of research sites should be guided by the specification of the specific aim the researcher wanted to address, and therefore the main criterion in the selection of a site was reviewed and primary schools which accommodated traditional Class Music and were in the process of phasing in the new learning area Arts and Culture were selected from the original number.

A further selection was then made, by randomly selecting suitable schools from the eighteen districts. Only thirty schools were selected as these were schools known to the researcher as schools with a reputation of an active involvement in the music milieu, which would ensure a

positive and trustworthy response. Considering the fact that the main focus was on the interviews, a small sample size was chosen to fit the approach and research plan of the study. The questionnaires with a cover letter (addendum B) were mailed to the selected schools.

4.2 IDENTIFYING AND SELECTING PARTICIPANTS FOR INTERVIEWS

Five schools were selected from the Gauteng province for participating in the interviews. Respondents were selected purposefully. As mentioned previously the guiding principle was schools with a curriculum that included Class Music that was in the process of phasing in the learning area Arts and Culture. No attempt was made to randomize the process so to gain the best responses. Another consideration was to select a music educator and primary school principal from the same school to correlate the experiences and information offered.

The next step was to approach the schools to enquire whether the selected schools were willing to participate in the research project. A letter to partake in the research project was sent to selected schools (addendum C). Only two replies were received after two weeks and the researcher visited the remaining schools personally to request their participation. Again the response was not very encouraging. One of the schools rejected the request, indicating their workload as the reason, and again no response was received from the other two remaining schools.

A further attempt was made and two other schools were selected and contacted. The one school responded in a very positive way and an interview with the music educator was set up, but again, no reply was received from the other school. On the day of the interview however, the music educator failed to make an appearance and it was established later that she had taken ill. After a telephonic conversation with the music educator a date was set for an interview. Also an aid class teacher from one of the schools already taking part in the study, offered to share her experience with the researcher.

5. DATA COLLECTION

5.1 RATIONALE FOR CHOOSING THE QUESTIONNAIRE AND SEMI-STRUCTURED INTERVIEW

It was reasoned that both the questionnaire and interview had a descriptive nature which suited the research design of the study. The questionnaires consisted of two types of question, closed

questions which delivered a quantitative response and open-ended questions which delivered a qualitative response. The closed questions had less scope for bias and were an **impersonal survey**.

On the other hand, it was important to capture the honest and **personal** opinions and attitudes of the music educator and the primary school principal by means of interviews, which delivered a qualitative response. The interviews also made it possible to obtain results of greater depth and seeing that the sample size was small, it was an important criterion to consider. Moore (1987:31) confirms that the interview is more **personal** than a questionnaire and tends to produce better response rates. The researcher was also able to prompt and probe the respondent to explain or clarify in depth, to offer personal experiences and opinions.

5.2 DESIGNING THE QUESTIONNAIRES AND INTERVIEW SCHEDULES

5.2.1 DESIGNING THE QUESTIONNAIRES

The questionnaire attempted to investigate how and to which extent music is used in primary schools to develop the learning potential of the learners. The questionnaire (Questionnaire A - addendum D) was divided into various sections that correlated with the aims of this study.

- ✓ **Demographic data:** Demographic data, such as the respondent's position at the school, involvement and experience in the music and general learning environment. The information served as background knowledge in the quest for gaining insight into the world of the music educators, but also to compare data and make deductions.

- ✓ **Information concerning the influence of a changing society on the school and the needs of the learner:** This section of the questionnaire provided information regarding the first sub-aim of the study. It was established through the literature study (chapter 2, section 2.1.1) that a paradigm change was evident: modern - to postmodern paradigm and that these changes had certain implications for the learning environment (chapter 2, section 3.4). Ten different elements from the postmodern paradigm were identified and investigated in this part of the questionnaire. The postmodern elements were: a multicultural learning environment, discipline problems, a dialogic learning environment, a lack of perseverance among learners, learners' active involvement in class, a democratic learning environment, the technological postmodern world - knowledge of

international pop music trends and popularized classical music, the music taste of music educators and learners and aggressive behaviour among the learners. The aim of these questions was twofold: to establish whether the postmodern elements were present in the music learning environment and to gain insight into the learning needs of the learners. It was argued that the gathered information might prove valuable in future to enhance the learning experience of the learners.

- ✓ **Information concerning the music educator and an integrated holistic approach to music in the learning environment:** The third sub-aim of this study investigated the potential of an integrated holistic approach in the music and learning environment to develop the learning potential of the primary school learner. The development of the whole person (chapter 3), multiple intelligence theory (chapter 2, section 5.5.3) and the whole brain theory (chapter 2, section 5.6) were explored. This section of the questionnaire wanted to establish whether and how (open-ended questions) music educators employ an integrated holistic approach to music education as a means of developing learning potential and not merely the traditional approach to music (chapter 1).

- ✓ **Information concerning the non-traditional approach to music to develop the learning potential of the primary school learner:** This section of the questionnaire for music educators was designed to establish whether the present role of the Arts and Culture educators included the development of the learning potential of the primary school learner. It also wanted to establish whether music educators would be interested in extending their role to include a performance task to develop learning potential.

It must be noted that the questionnaire for the primary school principals did not include information concerning the influence of the changing society on the learning environment and information concerning the music educator and her/his holistic approach to music because they worked on a daily basis with learners at a micro level. These two questions were specifically aimed at the music educator.

The questionnaire (Questionnaire B - addendum E) proposed to the primary school principal focused on the following information:

- ✓ **Demographic data:** Demographic information was included in the questionnaire to be able to gain entrance into the participant's working environment and to make certain

comparisons useful to the study.

- ✓ **Information concerning a non-traditional approach to music to develop the learning potential of the primary school learner:** This section was included in the questionnaire of the primary school principal, mainly to establish the headmaster's involvement in and perceptions on a non-traditional approach to music in the learning environment. Secondly it aimed at comparing the opinions of the music educator and the headmaster of the school so that certain deductions could be made.

After establishing which information was necessary to meet the aim of the study, Questionnaire A and Questionnaire B were designed. Designing the questionnaires went through different designing processes, where questions were evaluated by the researcher and another experienced music educator (table 4.3). It was then discussed with two research specialists from the University of Pretoria and went through another refining process before it was accepted in the final form. Questionnaire A consists of four sections: section one deals with demographic information of the respondents; section two has twelve questions, closed and open-ended questions; section three has seven questions, closed and open-ended questions. Questionnaire B consists of section one dealing with demographic information; section two has eleven questions, closed and open-ended questions. Responses were collected by means of a five-point Likert-type scale, as well as open-ended questions. Low numbers on the scale indicate low degrees of experiencing or feeling. The checklist summarizes the procedures followed in designing the questionnaires (table 4.3).

5.2.2 DESIGNING THE INTERVIEW SCHEDULE

The interviews were guided by main categories which were similar to those used for the questionnaires. A relaxed atmosphere was encouraged where the educators could discuss and respond in a loose unstructured way, if desired. The categories used shared the same research aim and therefore would not be discussed again (chapter 4, section 5.2.1). Each educator and school principal were interviewed and each interviewed recorded.

(i) INTERVIEW WITH THE MUSIC EDUCATOR

- ✓ **Demographic data of the music educator,** such as the respondent's position at the school, involvement and experience in the music and general learning environment, as well as any personal information which was supplied by the individual.

Table 4.3 Procedures followed for designing the two questionnaires (Nel 1995:100-101; Berdie & Anderson 1974; Moore 1987)

Characteristics of questionnaire	Definition or description	Purpose with the questionnaire
1. Choice of questions Question selection Question rousing interest Question rousing enthusiasm Question contemplation	Select questions of value for the solution of the aim of the study. Select questions that awaken curiosity and interest of respondents. Evoke enthusiasm to motivate respondents to complete questionnaire. Study the research field to find the essential content to be converted into questions to collect necessary data.	
2. Formulation of the questions Question presentation Question meaning Question precision	Transfer essential content of the study to the questionnaire in a simple and uncomplicated way. Clarify the meaning of the question to be unambiguous and self-explanatory. Give the respondent the opportunity to be able to give an accurate answer. Formulate the meaning of each word in the question exact and precise.	Questions were formulated that lead to easy and clear interpretation, to simplify the analyses of data and increase the response rate.
Characteristics of questionnaire	Definition or description	Meaning of questionnaire to establish a non-traditional approach to music to develop learning potential
3. Question reduction Question clarification Question reality or concreteness Question detail Question purification Question operationalizing	Break each question down, if possible, into shorter questions. Formulate questions that really concern the aim of the study. Focus each question on a single aspect of the study. Avoid introducing bias into the question. Rewrite questions in terms of perceptibilities	Each question was reduced into simple constituents to elicit the intended information about the change of paradigms, the whole person, whole brain and multiple intelligence theory and an extended role for the music educator.
4. Question classification Order of questions Purpose of the question	Group relevant questions together. Group questions to elicit the aim of the study	Relevant questions were grouped together to elicit the aim of the study.

5. Question evaluation Testing of questions	Evaluate each question according to their reliability and validity.	Questions were tested for reliability, seeing that the questionnaires were to be completed by a variety of music educators and principals. Validity of the questions was tested by an experienced music educator to ensure content-validity.
6. Question structure	Structure questions to elicit logical, systematic, unambiguous responses.	Questions were structured to follow a logical, systematic order.
7. Application	Employ sampling techniques, acquiring from respondents the relevant information and willing participants.	Simple random sampling was performed upon the schools in Gauteng and their music educators.

- ✓ **Information concerning the influence of the changing society on the learning environment and the needs of the learners:** The reason for including this section was mainly the same as for Questionnaire A and would therefore not be discussed in detail again.
- ✓ **Information concerning the music educator and an integrated holistic approach to Class Music:** The reasons for including this section are the same as the questionnaire and will not be discussed again.
- ✓ **Information concerning a non-traditional approach to music to develop the learning potential of the primary school learner:** The rationale for including this section has been covered in Questionnaire A.

(ii) **INTERVIEW SCHEDULE FOR THE PRIMARY SCHOOL PRINCIPAL**

- ✓ **Demographic data:** such as the respondent's experience as primary school principal, involvement in music in the learning and personal environment. It was also necessary to include this section to make certain comparisons useful for the study.
- ✓ **Information concerning a non-traditional approach to music to develop the learning potential of the primary school learner:** (covered in Questionnaire B).

Leedy (1997:199-200) and Moore (1987:29-36) supply guidelines for conducting an interview which were used in the following manner in this research:

- ✓ Assure respondents of absolute confidentiality before beginning the interview.
- ✓ Build a rapport by engaging in small talk before beginning the interview. An important consideration when conducting an interview is trust. Moore (1987:29) claims that it is almost essential to build up trust in order to arrive at the truth of the matter.
- ✓ Explain the potential benefits and purpose of the study.
- ✓ Ask permission to tape the interview.
- ✓ Put the respondent at ease with the first questions which are general and simple. Thought was given to how the questions will sound when spoke.
- ✓ Plan simple probes to use when appropriate, eg. "*Can you tell me more?*"
- ✓ Prompting is an attempt to ensure that the respondent has considered all the Possibilities (Moore 1987:28). The researcher had a prompting interview schedule ready with questions such as : "*Have you ever considered any of these? Can you give a reason? Can you give some more information on this point?*". A list of alternatives was then read to the respondent and discussed.
- ✓ When the researcher experienced that the respondent felt threatened by the question another direction of questioning was taken. The researcher tried to return to the question, formulated differently, later in the interview.
- ✓ The researcher tried to avoid contradicting or cross-examining the respondent.
- ✓ To check whether all questions were asked a signing-off paragraph - asking the respondent if he or she has any questions - were asked.

5.3 VALIDITY AND RELIABILITY OF RESEARCH INSTRUMENTS

Verma and Beard (1981: 85) point out that the success with which measurement is undertaken, is generally evaluated by the concepts of reliability and validity. Berdie and Anderson (1974:13) explain that reliability is usually concerned with stability over time. A reliable questionnaire item is an item that **consistently** conveys the same meaning. The reliability of Questionnaire A and

Questionnaire B were assured by using a set design procedure (table 4.4) to assure that the questions consistently conveyed the same meaning and would proof sound over time.

The validity of a questionnaire means that it measures the **concept** in question and **measures it accurately**. This was done by acquiring the help of two experienced and well-informed music educators to assess the accuracy of the questionnaires. To test the reliability and validity the questionnaires and interview schedule were submitted to pilot testing.

5.3.1 PILOT TESTING

Two experienced, well-informed music educators were selected to pilot test the questionnaires. The aims of the study were explained, before they studied the questionnaires. Both indicated possible problems and made recommendations. Only one music educator was selected to pilot test the questionnaire again as the other music educator was not available at the time. The pilot music educators were not included as participants to complete the questionnaire to try and ensure objectivity. The interview schedule had not been submitted to pilot testing as it corresponds with the questions asked in the questionnaires.

5.3.2 COVER LETTER

The questionnaires and interview schedule were supplied with a carefully constructed cover letter explaining the important and valuable role of the respondent to the Arts and Culture learning environment (addendum F & G). It was important to address the concerns that participants might have had - the importance of the study to music educators and the school - and not the selfish interests of the researcher. The anonymity of the participants was confirmed.

6. OVERVIEW

Chapter 4 described the methodology chosen for the study. The mixed research methodology suited the study with its quantitative and qualitative nature. The research design that could best accommodate this approach was the descriptive survey. It gave the researcher the opportunity to use questionnaires with an objective look at the music and general learning environment, but also gained information on the subjective opinions of the music educators and headmasters of the primary schools. The data were collected and will be analyzed in chapter 5.

CHAPTER 5

ANALYSIS AND INTERPRETATION OF DATA FROM QUESTIONNAIRES AND INTERVIEWS

1. INTRODUCTION

Chapter 4 covered the methodology, research design, sampling procedures and the collecting of data. Chapter 5 analyzes, interprets and describes the data of the two questionnaires and five interviews. Tables and graphic presentation were employed to **organize and describe** the quantitative data and different categories were employed to analyze and interpret the interviews.

2. ANALYSIS AND INTERPRETATION OF QUESTIONNAIRES

The sample size for Questionnaire A (Arts and Culture educators) was 30 and 14 questionnaires were completed. The sample size for Questionnaire B (primary school principals) was 30 and 14 questionnaires were completed. The statistical package, SAS Version 8, was used to analyze the data. The responses to the questions were analyzed and summarized, in order to have a clear understanding of the views of the respondents. Questionnaire A (N=14), completed by the Arts and Culture educators, was analyzed and interpreted first and Questionnaire B, completed by the school principals there after. It should be noted that some of the frequencies are missing due to the fact that it was indicated on the questionnaire not to indicate a preference when in doubt. The frequency of certain characteristics will therefore not necessarily add up to the total number of respondents that comprise the sample. The five point scale which was used should be interpreted as 1 - to no extent, 2 - seldom, 3 - to some extent, 4 - almost always and 5 - always. The questions were phrased in the same format as in the questionnaires. Finally, general conclusions to the questionnaires complete this section of chapter four. The term Class Music refers to the learning area Arts and Culture.

2.1 QUESTIONNAIRE A - ARTS AND CULTURE EDUCATORS

One-way frequency distribution tests were run.

✓ **DEMOGRAPHIC DATA**

Gender: Male or Female.

Table 5.1 Gender of Class Music educators

Gender of Class Music educators	Frequency
Male	1
Female	13

Discussion: A total of 14 respondents completed the question of which 13 (92.9%) were female. Only 1 respondent indicated male. This was expected seeing that Class Music is mainly female dominated.

Which of the following best describes your teaching position at the school?

- **Class Music or Arts and Culture.**
- **Class Music or Arts and Culture and other subjects or learning areas.**

Table 5.2 Learning area involvement of Class Music educators

Learning area involvement of Class Music educators	Frequency
Teach Class Music or Arts and Culture	4
Teach Class Music or Arts and Culture and other subjects or learning area	10

Discussion: A total of 14 respondents completed the question of which 10 (71.4%) indicated that they teach Class Music or Arts and Culture and other subjects or learning areas. The majority of music educators were also involved in other learning areas which could be interpreted as an objective response to the questionnaires, seeing that they were not involved in music education only.

I am involved in the following phases.

- **Junior primary phase or foundation phase.**
- **Senior primary phase or intermediate phase.**

- Senior secondary phase or senior phase.

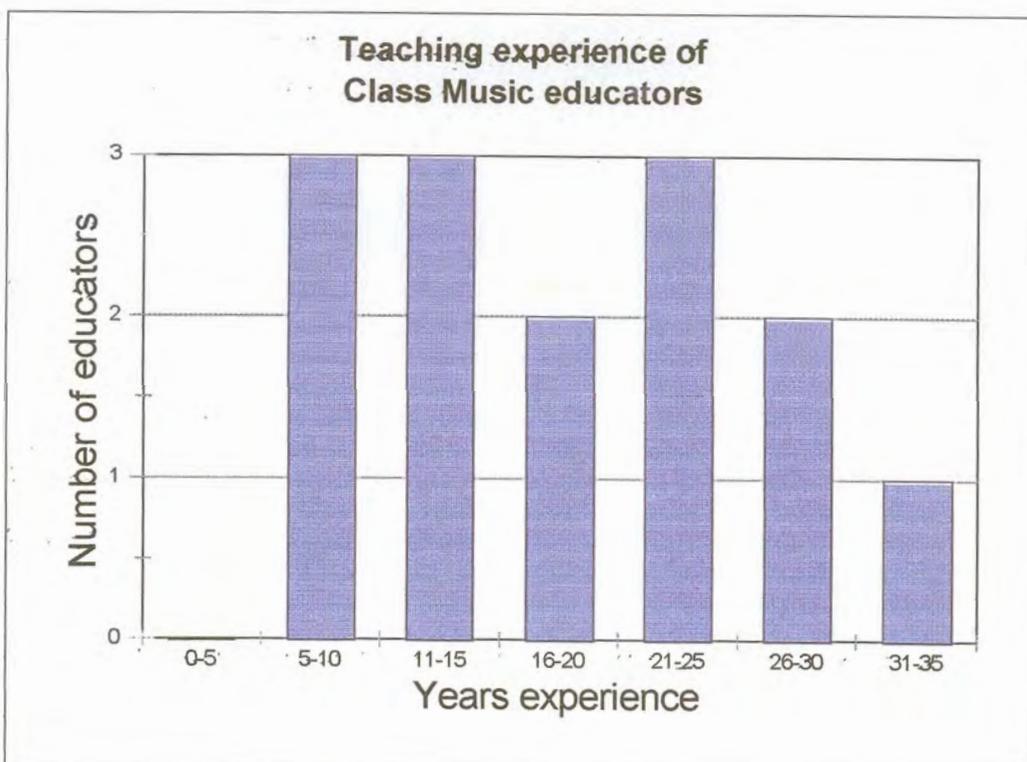
Table 5.3 Learning area level involvement of Class Music educators

Learning area level involvement of Class Music educators	Frequency
Junior primary phase or foundation phase	7
Senior primary phase or intermediate phase	12
Senior secondary phase or senior phase	2

Discussion: A total of 14 respondents completed the question. 7 respondents indicated that they were involved with the junior or foundation phase, the majority, namely 12 responses indicated the senior primary or intermediate phase and 2 responses indicated the senior secondary or senior phase. It showed that music educators teach across learning phases.

How many years of teaching experience do you have?

Figure 5.1 Teaching experience of Class Music educators

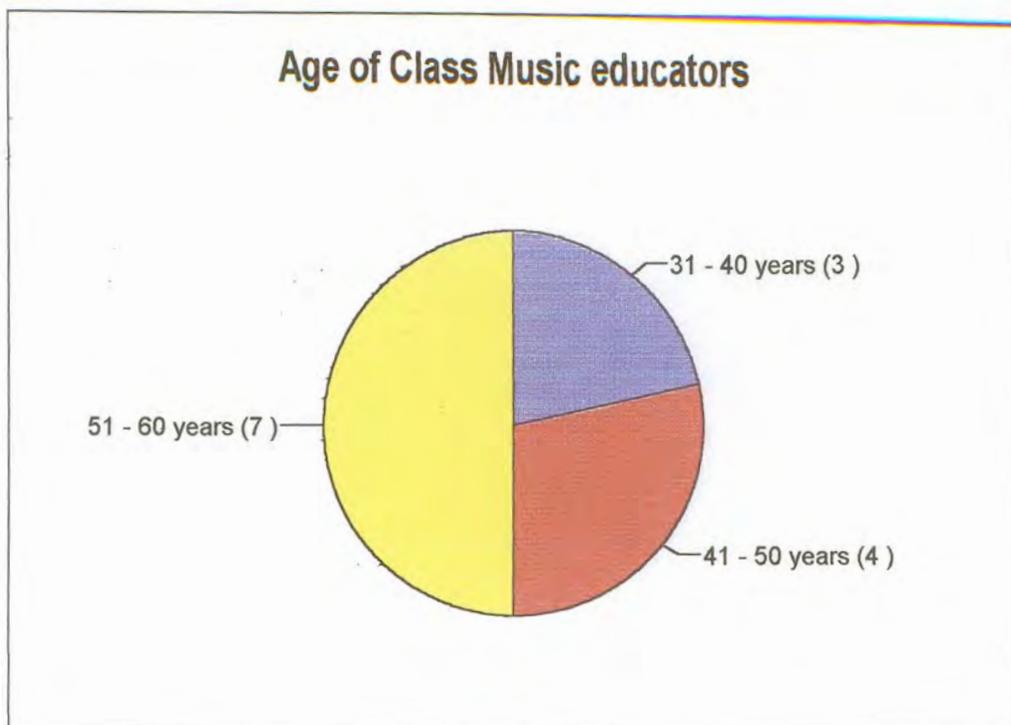


Discussion: The majority of Class Music educators were experienced educators. There were no educators with less than seven years experience.

3 educators fell in the 5-10 years category, 3 in the 11-15 years category, 2 in the 16 -20 years category, 3 in the 21-25 year's category and 1 in the 31-35 years category. This was significant because the majority of respondents were experienced educators, with a wealth of experience among them.

Age of Class Music educators

Figure 5.2 Age of Class Music educators



Discussion: A great effort goes into making learners aware of the positive contribution, such as thinking skills, exploring creative abilities, to understand interrelationships, to develop the capacity to communicate and all the other advantages of Class Music which are more likely to be achieved by experienced educators (chapter 2, section 3.3). The ages of the respondents varied from 3 in the category 33 to 40 years, 4 in the category 41 to 50 years and 7 in the category 51 to 60 year's of age.

- ✓ **QUESTION 1: INFORMATION CONCERNING THE INFLUENCE OF A CHANGING SOCIETY ON THE SCHOOL AND THE NEEDS OF THE LEARNERS.**

Question 1.1 I teach multicultural groups of learners in Class Music.

Table 5.4 Multicultural groups of learners in Class Music

Type of response to multicultural groups of learners	Frequency
To no extent	1
Seldom	2
Sometimes	0
Almost always	2
Always	9

Discussion: The literature study (chapter 2, section 3.2.2) pointed out that there was a shift away from universal belief systems towards plurality of belief systems in the postmodern world. A multicultural society is part of the plurality of beliefs. A total of 14 respondents completed the question. 13 (92.9%) stated that they teach multicultural groups of learners.

Question 1.2 I experience discipline problems in Class Music.

Table 5.5 Discipline problems in Class Music as experienced by music educators

Type of response to discipline problems	Frequency
To no extent	1
Seldom	7
Sometimes	4
Almost always	2
Always	0

Discussion: The literature study (chapter 2, section 3.4) indicated that the new conception of knowledge in the postmodern era, leads to a society which did not support authority anymore, which in its turn, might lead to discipline problems. The response of this group of Class Music educators did not confirm discipline problems as a threat to the learning environment. A total of 14 educators responded to the question, but not one indicated that discipline problems always occur. Only 1 respondent denied the presence of discipline problems. On the whole 13 (92,9%) do experience problems varying from seldom to almost always.

Question 1.3 I experience the following discipline problems.

- Disobedience.
- Verbal disruption.
- Behaviour problems.
- Not task oriented.

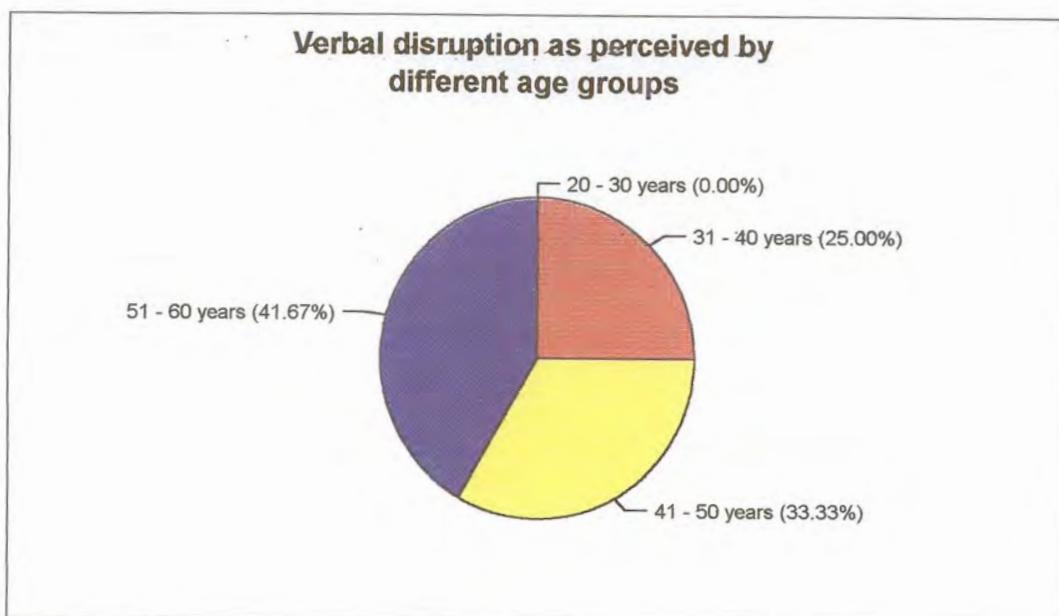
Table 5.6 Different types of discipline problems experienced by music educators

Type of discipline problems	Frequency
Disobedience	9
Verbal disruption	11
Behaviour problems	10
Not task oriented	10

Discussion: 9 music educators found disobedience a problem, 11 verbal disruption, 10 experienced behaviour problems and 10 found learners were not task oriented.

Figure 5.3 indicates that verbal disruption received the highest score. There was a relation between the age of the music educator and the response to the type of discipline problem perceived as a problem by the music educators.

Figure 5.3 Verbal disruption as perceived by different age groups



Discussion: 5 music educators in the 51-60 age group mentioned verbal disruption as a problem, while 4 in the age group 41- 50 and only 3 in the age group 31 - 40 found verbal disruption a problem. It seemed as if the younger generation viewed the verbal disruption in a different light.

Question 1.4 I find that learners need to discuss their own experiences and stories in Class Music.

Table 5.7 The need of learners to discuss own experiences in Class Music

Type of response to learners' need to discuss experiences	Frequency
To no extent	0
Seldom	2
Sometimes	5
Almost always	5
Always	1

Discussion: It had been pointed out by the literature study (chapter 2, section 3.3) that learners needed to voice their own experiences. The postmodern learning environment is a dialogic environment where learners learn by sharing through communicating. A total of 13 respondents responded to the question. Only 2 (15,4%) respondents seldom experienced the need of learners to interact by means of discussing their own experiences. 11 (84.6%) indicated that learners sometimes to always wanted to discuss their own experiences or share their own stories with the educator.

Question 1.5 I find a lack of perseverance among learners in completing activities in Class Music.

Table 5.8 Lack of perseverance among learners in Class Music

Type of response to the lack of perseverance among learners	Frequency
To no extent	3
Seldom	5
Sometimes	4
Almost always	1
Always	1

Discussion: The literature study (chapter 2, section 3.4) indicated that a culture of instant gratification existed in the postmodern consumers community. In contrast, perseverance had always been perceived as an important component of the modern learning environment. 14 respondents completed the question. 8 (57.1%) indicated that a lack of perseverance was not experienced (to no extent to seldom). Only 2 (14,3%) out of a total of 14 educators experienced it as a problem which almost always to always existed and 4 (28.6%) respondents indicated that it sometimes

occurred.

Question 1.6 I find that learners enjoy being physically and mentally actively involved in Class Music.

Table 5.9 The need of learners to be actively involved in Class Music

Type of response to the need of learners to be actively involved	Frequency
Almost always	7
Always	7

Discussion: This question received a meaningful response. All the respondents, 14 (100.0%) indicated in degrees, varying from almost always too always, experienced that learners wanted to be actively involved in class. These responses corresponded with the literature study (chapter 2, section 3.3) which showed that the postmodern learner needed to be actively involved in their own learning. The transferring of knowledge was part of the modernistic view of learning, while the postmodern view emphasises the involvement of the learner in his or her own learning.

Question 1.7 I find that learners need to be involved in selecting classroom activities.

Table 5.10 The need of learners to be involved in selecting classroom activities

Type of response to the need of learners to select own activities	Frequency
To no extent	2
Seldom	5
Sometimes	4
Almost always	0
Always	3

Discussion: The postmodern learner has a need to select own activities in a democratic and dialogic learning environment (chapter 2, section 3.3). Only 2 (14.3%) responded with a "to no extent", while 10 (71,4%) respondents, varying from seldom to always, confirmed the notion that learners need a voice in selecting activities in the classroom.

Question 1.8 I find that learners are informed about international pop music trends.

Table 5.11 Teachers' perception of learners' knowledge of international pop music

Type of response of music educators to knowledge of learners about international pop music trends	Frequency
To no extent	0
Seldom	0
Sometimes	5
Almost always	6
Always	3

Discussion: A total of 14 responded to the question. The question had been included in the questionnaire to find out whether the music educators found that the technological postmodern world with its easy access to information, influenced the learners' choice of music, seeing that they have exposure to international music through technology. Contrary to expectations only 3 (21.4%) indicated that learners were always informed about international pop trends, but adding the group who indicated "almost always" to this number, increased the total to 9 (64,3%), which is still not according to expectations. The learners taught by this group of music educators were, contrary to expectations, not well informed about international pop music trends.

Question 1.9 I find that learners enjoy the popularizing of classical music (Pavarotti and friends, classical music in TV-commercials etcetera).

Table 5.12 Appreciativeness of learners towards popularized classical music

Types of responses to learners appreciating popularized classical music	Frequency
To no extent	0
Seldom	1
Sometimes	8
Almost always	4
Always	1

Discussion: This question had been included to investigate whether traditional classical music - *high culture* had been replaced by a popular culture as cited in chapter two, section 3.2.2. According to the reaction of this group of music educators it was not evident in the learning environment. 8 (57,1%) respondents experienced

that learners sometimes enjoy popularized classical music. Interestingly enough only 5 (35.7%) indicated “almost always” to “always”.

Question 1.10 **My music taste differs from that of the learners in Class Music.**

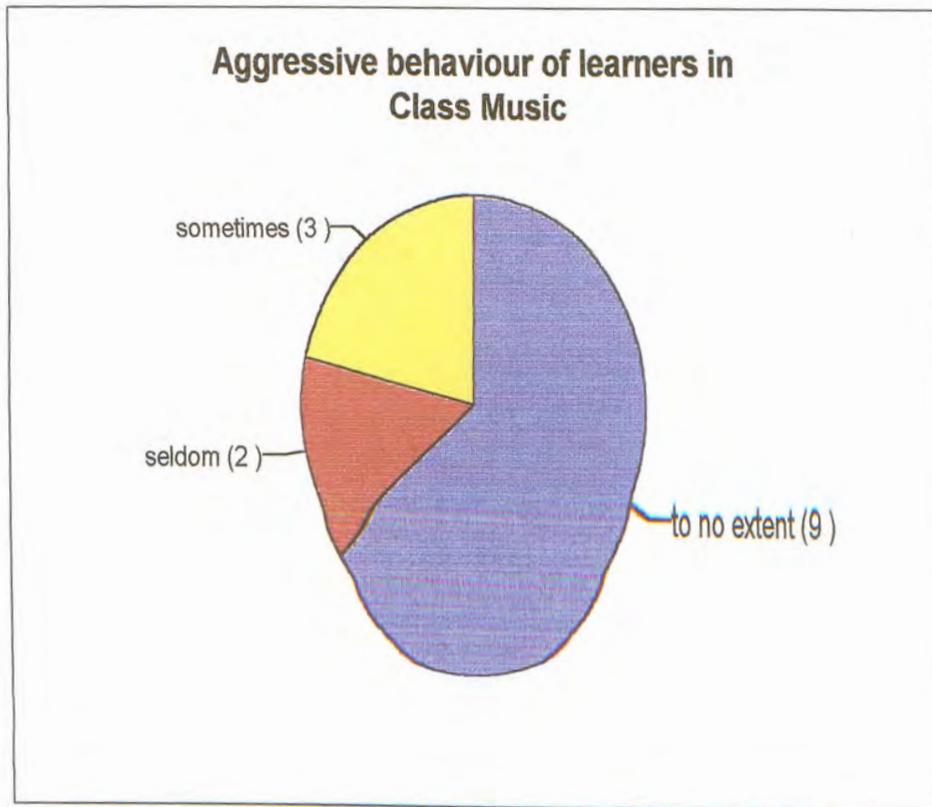
Table 5.13 Difference in music taste of learners versus music educators

Type of response to the difference in music taste of music educators and learners	Frequency
To no extent	0
Seldom	2
Sometimes	6
Almost always	3
Always	3

Discussion: The literature study indicated that there may be a difference in the way music educators and learners perceived the world. Music educators grew up and were trained in the modern times and learners in the postmodern times. The question was asked to determine whether the teacher still entertained a modern view, while the learners had a postmodern view (chapter 2, section 1). The response confirmed the reaction from question 1.9. The music educators and learners shared, to a great extent, the same music taste - 6 (42,9%) indicated “almost always ” to “always”, while 6 (42,9%) indicated “sometimes”. This was an unexpected response seeing that it was a mature group of music educators who completed the questionnaire.

Question 1.11 **I experience aggressive behaviour in Class Music.**

Figure 5.4 Aggressive behaviour of learners in Class Music



Discussion: This question was included in the questionnaire to establish whether the music educators encountered aggressive behaviour in Class Music classrooms. Chapter 2, section 3.2.2 discussed South Africa as a country with a history of violence, but violence is also a postmodern problem. A total of 14 respondents completed the question. 9 (64.3%) indicated that they experienced no aggressive behaviour, while only 3 (21.4%) sometimes experienced aggressive behaviour.

Question 1.12 **I experience the following aggressive behaviour.**

Verbal aggression.

Physical aggression.

Table 5.14 Aggressive behaviour in Class Music

Type of aggressive behaviour	Frequency
Verbal aggression	4
Physical aggression	4

Discussion: Chapter 2 indicated that the postmodern society was characterized by violence, which forms part of our daily lives. The questionnaire focused on verbal and physical aggression. 4 Respondents completed the question and in both cases, 4 (100.0%), indicated that verbal aggression and physical aggression were experienced in the music class room. It was interesting to note that a small

percentage (4 out of a possible 14 respondents) of music educators completed the question.

2.1.1 SUMMARY ON FINDINGS CONCERNING THE INFLUENCE OF A CHANGING SOCIETY ON THE SCHOOL AND THE NEEDS OF THE LEARNERS AS PERCEIVED BY MUSIC EDUCATORS

The following may be deduced from the data investigated in question one on the influence of a changing society on the learning environment and the needs of the learners. The information will be summarized by means of a table.

Table 5.15 Summary of postmodern elements present in the music learning environment as perceived by music educators

Postmodern elements in music learning environment	Frequency results
Multicultural groups of learners	13 (92.9%)
Discipline problems	13 (92.9%)
Dialogic learning environment	11 (84.6%)
Perseverance of learners	6 (42.9%)
Learners actively involved in own learning	14 (100.0%)
Democratic learning environment	10 (71.4%)
Learners informed about international pop music trends	6 (42.9%)
Educator and learner share the same music taste	9 (64.3%)
Popularizing of classical music	8 (57.1%)
Aggressive behaviour	3 (21.4%)

The investigation indicated that all the postmodern elements investigated by Questionnaire A, question one, were present in varying degrees in the music learning environment.

✓ QUESTION 2: INFORMATION CONCERNING THE MUSIC EDUCATORS AND A HOLISTIC APPROACH TO CLASS MUSIC.

Question 2.1 **In Class Music I give the learners the opportunity to express their opinions about music.**

Table 5.16 Opportunities offered to learners to express their own opinions in Class Music

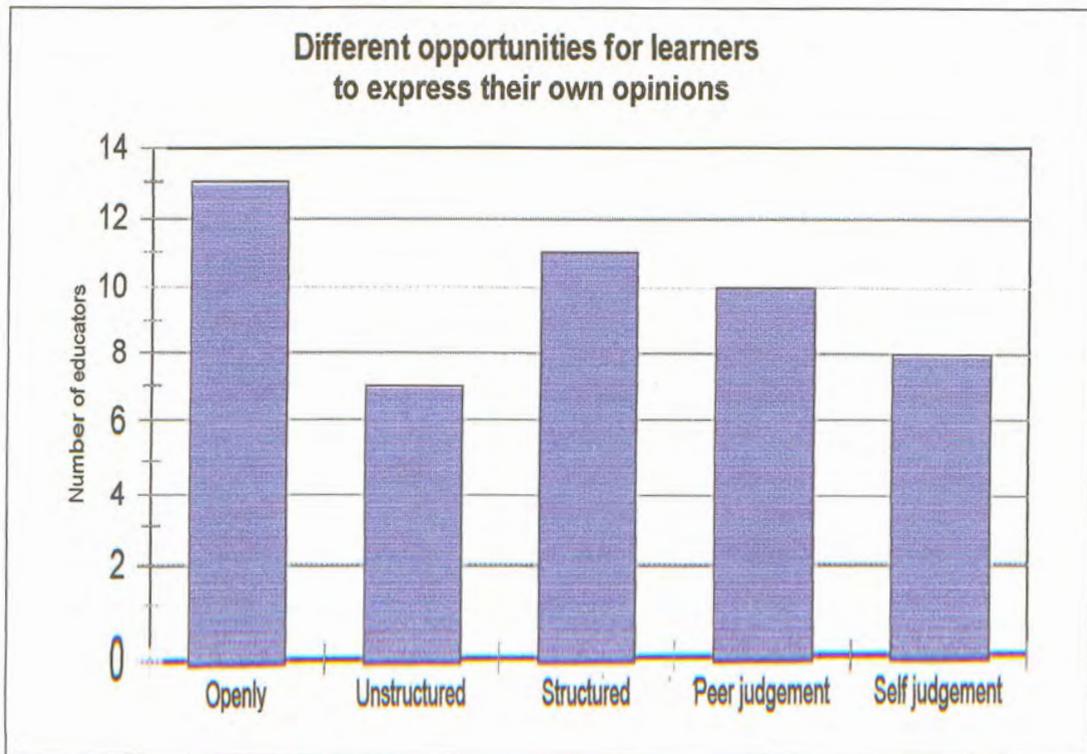
Type of response to the expression of own opinions	Frequency
To no extent	1
Seldom	1
Sometimes	4
Almost always	4
Always	4

Discussion: This study aimed at developing the learning potential of the learner by developing the whole person. The first section of question 2 investigated the intellectual development of the learners in Class Music. Chapter 2 indicated that when learners were offered the opportunity to be mindfully involved in music experiences, for example, by expressing opinions on different aspects of music, the intellectual side of the learners were developed, because critical thinking takes place, which leads to higher-order thinking (chapter 3, section 2.3.). This question investigated whether learners were given the opportunity to express opinions in the music learning environment. Only 2 (14.3%) indicated that learners did not or seldom got the opportunity to express their opinions in the Class Music class. On the whole, 12 (85.7%) responded that learners got the opportunity to express their opinions.

Question 2.2 **The learners express their opinions in the following ways.**

- **Openly and freely.**
- **Unstructured debates.**
- **Structured debates.**
- **Judgement of peer performances.**
- **Self judgement of own performance**

Figure 5.5 Different opportunities for learners to express their own opinions



Discussion: 13 (100.0%) educators indicated that learners expressed opinions openly and freely, 7 (58.3%) gave learners the opportunity to take part in unstructured debates, 11 (91.7%) used structured debates, 10 (83.3%) gave learners the opportunity to judge peer performances and 8 (61.5%) made learners comment on own performances. It appeared as if learners got the opportunity to develop their intellectual abilities.

Question 2.3 **Thinking skills taught in Class Music are**

- Transferable to other subjects or learning areas.
- Specific to Class Music.

Table 5.17 Transferability of thinking skills from Class Music to other learning areas

Type of response to the transferring of thinking skills in Class Music to other learning areas	Frequency
Sometimes	5
Almost always	4
Always	4

Discussion: Chapter 2, section 2 researched the transferability of thinking skills from one domain to another. It was concluded that thinking skills in the music learning environment were transferable from music to other learning areas. A total of 13

respondents responded to the question. All of the respondents felt that thinking skills taught in Class Music were transferable to other learning areas.

Question 2.4 I include activities in Class Music that stimulate left brain hemisphere activities (mathematical/science and language activities).

Table 5.18 Left brain hemisphere activities in Class Music

Type of response to left brain activities'	Frequency
To no extent	0
Seldom	2
Sometimes	3
Almost always	3
Always	5

Discussion: Music is normally associated with right brain hemisphere activities. The literature study investigated the multiple intelligence theory and whole brain approach to learning, which embrace the right and left brain hemisphere activities. A total of 13 music educators responded to the question. 8 (61.5%) indicated that they almost always to always include activities to stimulate the left brain hemisphere in Class Music. A total of 5 (38.5%) included left brain hemisphere activities ranging from "seldom" to "sometimes". This could be interpreted that the music educators were aware of the extended qualities of music in the learning environment.

Question 2.5 I discuss the emotional content of songs (hate, joy, love etcetera) with the learners in Class Music.

Table 5.19 Response of music educators to the discussion of emotional content of songs with learners

Type of response to discussion of emotional content of songs	Frequency
To no extent	0
Seldom	0
Sometimes	4
Almost always	3
Always	7

Discussion: To develop the whole person in Class Music, the music educator had to

assist learners to develop specific affective outcomes (chapter 3, section 3.2). The response to this question was expected. All the respondents were aware of emotional qualities in the music learning environment and included them in activities in the classroom.

Question 2.6 and question 2.7

Learners express inner personal feelings in Class Music.

Learners are given the opportunity to reflect on learning experiences by means of the following:

- **Verbal assessment.**
- **Portfolios.**
- **Reflective writing.**

Table 5.20 Type of reflective thinking employed by music educators

Type of reflective thinking	Frequency
Verbal (13 respondents)	Almost always
Portfolio (8 respondents)	Sometimes
Reflective writing (9 respondents)	Almost always

Discussion: Question 2.6 indicated that all 14 respondents gave learners the opportunity to express own inner feelings to develop the emotional side of the learners. Question 2.7 requested the type of reflective thinking employed by music educators and 13 respondents indicated verbal assessment, 8 portfolio assessment and 9 reflective thinking. The highest values were verbal assessment which was almost always done, portfolio assessment done to some extent and reflective writing almost always done. It appeared as if this group of music educators were aware of reflective thinking, but verbal assessment was still the most popular way of assessing inner feelings in the music learning environment.

Question 2.8 **The learners perform activities in Class Music to create a relaxed state of mind.**

Table 5.21 Activities to create a relaxed state of mind in Class Music

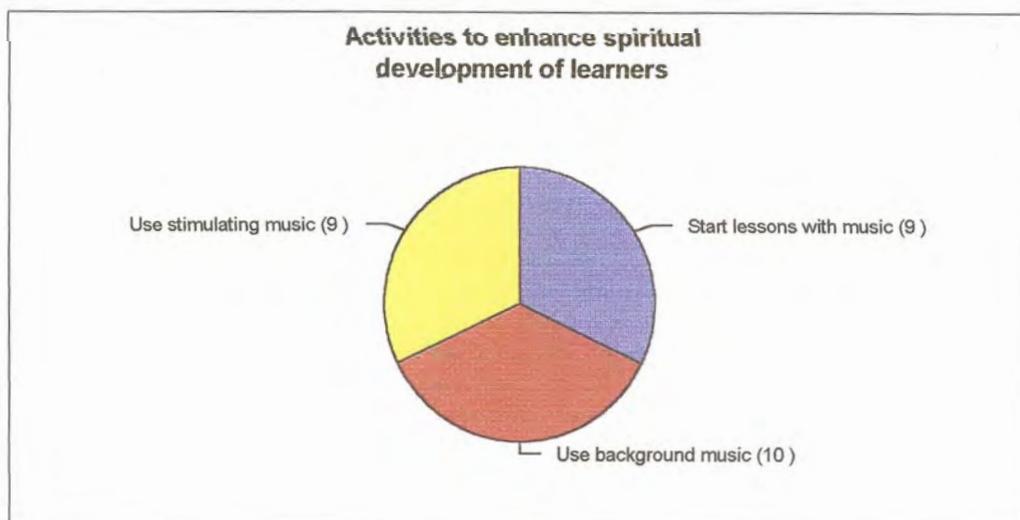
Type of response to creating a relaxed state of mind	Frequency
To no extent	0
Seldom	2
Sometimes	4
Almost always	6
Always	2

Discussion: One of the important areas in this study is the creation of a relaxed state of mind in learners to open-up the reserves of the brain to develop learning potential (chapter 3, section 3.5). This question was included to determine the awareness of music educators to the spiritual development of the learners. A total of 14 educators responded to question 2.8 and 8 (57.1%) indicated that they almost always to always include activities to create a relaxed state of mind.

Question 2.9 The activities used to create a relaxed state of mind are the following:

- I start the lesson with suitable, planned music to get the learners focused.
- I make use of background music to get learners focused.
- I play stimulating music while learners are busy with creative work.

Figure 5.6 Activities to enhance spiritual development of learners



Discussion: Question 2.9 posed the question on different activities to enhance spiritual development. 9 responded that they almost always start lessons with suitable music, 10 made use of background music in varying degrees from seldom to always and 9 employed stimulating music with creative work "to some extent" to "always". According to this data most of the educators were aware of the spiritual development of learners and made use of music to develop the spiritual side of the learners.

Question 2.10 **I teach musical concepts (beat, metre, tempo etcetera) by means of:**

- **Clapping, clicking etcetera.**
- **Body movement.**
- **Creative movements.**

Table 5.22 Different psychomotor activities in Class Music

Clapping	Frequency
Sometimes	1
Almost always	7
Always	5
Body movements	Frequency
Sometimes	2
Almost always	6
Always	5
Creative movements	Frequency
Seldom	1
Sometimes	2
Almost always	5
Always	5

Discussion: The literature study (chapter 3, section 5.3) pointed out that the development of psychomotor qualities in learners strengthens the holistic approach: it includes cognitive, emotional and psychomotor development. The next questions were included in the questionnaire to establish whether music educators included psychomotor activities in the music learning environment to develop the whole person. 13 of the group of music educators responded to the question and 5 always used clapping and clicking, 5 always used body movements and 5 always used creative movements. There were no music educators who indicated that they did not develop the psychomotor side of the learners.

Question 2.11 **I include dance activities in Class Music.**

Table 5.23 Dance activities in Class Music

Type of response to dance activities	Frequency
To no extent	2
Seldom	3
Sometimes	1
Almost always	5
Always	3

Discussion: A total of 14 music educators completed this question, of which 9 (64.3%) included dance activities from some extent to always in the music curriculum. 5 (35.7%) did not include dance activities in the music curriculum.

Question 2.12 **I teach dancing in the following ways:**

- Free movements.
- Structured dances.
- Own creative dances.
- Dances from different countries.

Table 5.24 Two-way frequency distribution table on structured dances and the age of respondents

Type of response to structured dances	Age: 33-49 Frequency	Age 50-57 Frequency	Total
To no extent	0	1	1
Seldom	0	1	1
Sometimes	1	0	1
Almost always	2	1	3
Always	1	3	4
Total	4	6	

Discussion: This question was included to establish whether age group played a role in choosing the type of dancing activity. Structured dances were the most popular choice of the more mature age group. In the age group 33-49, 4 respondents indicated structured dances and in the age group 50-57, 6 indicated that they prefer structured dances to creative dances. There was a relationship of 4 to 6 among the two age groups. An interesting response is that the more mature music educators preferred the structured dances.

2.1.2 SUMMARY ON FINDINGS CONCERNING A HOLISTIC APPROACH TO CLASS MUSIC BY MUSIC EDUCATORS

The following may be deduced from the information received from the music educators concerning the development of the whole person, whole brain and multiple intelligences of the learners.

Table 5.25 Summary of information concerning the music educator and the development of the whole person, whole brain and multiple intelligences in Class Music

Holistic approach to Class Music	Frequency results
Music educators offered learners the opportunity to express opinions	12 (85.7%)
Thinking skills taught in Class Music were transferable to other learning areas	13 (100.0%)
Music educators included activities to stimulate the left and right brain hemisphere	8 (61.5%)
Music educators discussed emotional content of songs	14 (100.0%)
Music educators included activities to create a relaxed state of mind in learners	8 (57.1%)
Music educators included psychomotor activities in Class Music	13 (100.0%)

The investigation indicated that music educators were aware and included activities to develop the whole person, whole brain and multiple intelligence. Two areas investigated in

question 2 received a lower response - the development of the left and right brain hemispheres and the creation of a relaxed state of mind in learners (chapter 3, section 3.5).

✓ **QUESTION 3: INFORMATION CONCERNING THE EDUCATORS EXTRA-CURRICULAR PROGRAMME.**

Question 3.1: I am primarily involved in music activities as part of my extracurricular duties at school.

Table 5.26 Extracurricular involvement of Class Music educators

Type of response to involvement in extracurricular activities	Frequency
To no extent	1
Seldom	1
Sometimes	1
Almost always	2
Always	9

Discussion: The majority of music educators 11(78.6%) were almost always to always involved with music activities as part of their extracurricular activities. 3 (21.4%) were not only involved in music activities.

Question 3.2 I prefer being involved with music activities only (choir, band, music evenings etcetera).

Table 5.27 Involvement of music educators in music activities at school

Type of response to preference of involvement in music activities	Frequency
To no extent	2
Seldom	1
Sometimes	0
Almost always	3
Always	8

Discussion: 11(78.5%) music educators preferred being involved - "*almost always to always*" - with music activities only. Question 3.1 and 3.2 confirmed that music educators were, as they preferred, mostly involved with music activities as part of their extra- curricular involvement.

Question 3.3 I would like to be involved in the extended use of music as an extra-curricular activity (music and study methods, music and therapeutic

help etcetera).

Table 5.28 Involvement of music educators in the extended use of music as part of their extracurricular activities

Type of response to the involvement in the extended use of music as part of their extracurricular programme	Frequency
To no extent	1
Seldom	3
Sometimes	0
Almost always	1
Always	8

Discussion: This question had been posed to determine whether music educators were interested in the extended use of music with a non-traditional approach to develop learning potential of the learner. 13 educators completed the question and only 1 (7.7%) music educator was not interested in the extended use of music to develop learning potential. This could be interpreted that there was an overwhelming response, 12 (92.3%), to extend the role of the music educator.

Question 3.4 **I feel that learners may benefit from the involvement in an extended music programme (music and study methods, therapeutic help etcetera).**

Table 5.29 The benefits of involvement in an extended music programme by the learners

Type of response to the benefits of an extended music programme	Frequency
To no extent	0
Seldom	1
Sometimes	3
Almost always	1
Always	9

Discussion: Not one respondent indicated that an extended music programme to develop the learning potential of the learner would not benefit the learners. 13 (92.9%) felt that it should benefit learners varying from "seldom" to "always", but the majority, 9 (64.3%), pointed out that it would always benefit the learners.

Question 3.5 **The school uses music in an extended context.**

Table 5.30 Music used in an extended context in the learning environment

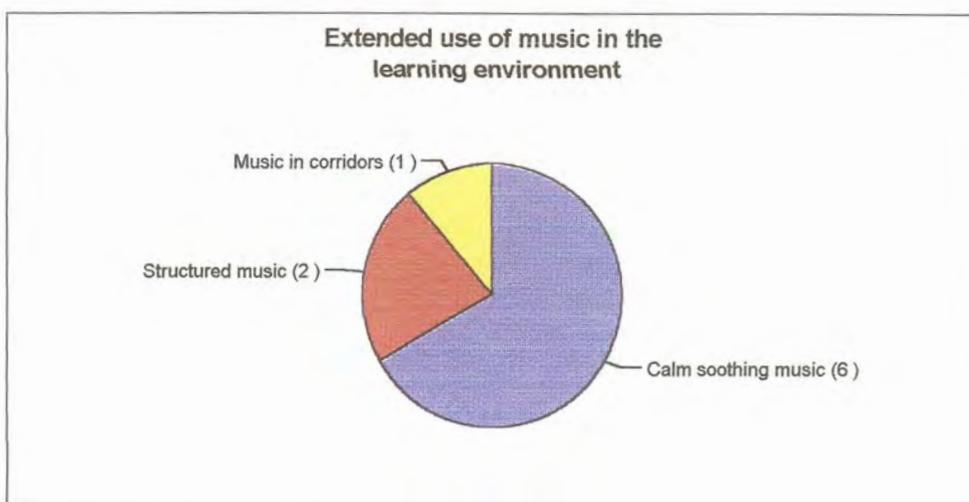
Type of response to an extended use of music	Frequency
To no extent	3
Seldom	4
Sometimes	1
Almost always	3
Always	1

Discussion: The literature study (chapter 3, section 1.2) explored the benefits of music in the lives of primary school learners. An example of these benefits was that learners who received instruction in music, scored forty-eight percent higher on spatial-temporal skills tests than those who did not receive music training. Question 3.5 investigated whether music was employed to develop learning potential in the music - and general learning environment. A total of 12 respondents indicated that the school made use of music in an extended way. 7 (58.3%) indicated "to no extent" to "seldom", while 1 (8.3%) responded to "sometimes" and 4 (33.3%) indicated "almost always" to "always".

Question 3.6: **The school uses music in the following extended ways:**

- Calm soothing music while learners enter the school hall.
- Structured music (Baroque music etcetera).
- Music in corridors.

Figure 5.7 Extended use of music in the learning environment



Discussion: Question 3.6 provided the music educator with examples of possible applications of music used in an extended way in the learning environment. Only 2 indicated that the school “almost always” to “always” employed structured music, 1 indicated music in the corridors and 6 indicated calm and soothing music. It was an open-ended question and music educators had the opportunity to mention other activities which they employ at their school. Respondents indicated music during tuition, sport and as background music in the Foundation Phase. Another respondent indicated music at breaks and on playgrounds. The assumption based on this information was that music was not employed to its full capacity to develop learning potential.

Question 3.7 The school has a music centre where individual learners receive instruction in various instruments.

Table 5.31 Music centres at schools

Music centres at schools	Frequency
Do not have a music centre at school	5
Individual learners seldom receive instruction	1
Individual learners almost always receive instruction	1
Individual learners receive instruction	6

Discussion: A total of 13 respondents indicated that the school had a music centre where learners received instruction in various instruments. It may then be a feasible idea to explore the concept of extending the music centre with activities where learners do not receive individual instruction only, but where music is used in a non-traditional way to develop the learning potential of the learners.

2.1.3 SUMMARY ON FINDINGS CONCERNING AN EXTENDED USE OF MUSIC TO DEVELOP THE LEARNING POTENTIAL OF THE LEARNERS

It may be deduced from the data received on question three that music educators were in favour of extending the role of music to include a non-traditional approach to develop learning potential of learners. The questions also indicated that music educators agreed that

music had the quality to develop learning potential. The following table gives a picture of the captured data.

Table 5.32 Summary of music educators' involvement in activities at school

Extracurricular involvement of the music educator	Frequency results
Music educator primarily involved with music	11 (78.6%)
Music educator preferred being involved with music activities	11 (78.6%)
Music educator would enjoy involvement in an extended music programme at school	12 (92.3%)
An extended music programme to develop learning potential will benefit learners	13 (92.9%)
The school already used music in an extended way	14 (100.0%)
The school had a music centre	13 (100.0%)

2.2 QUESTIONNAIRE B - PRIMARY SCHOOL PRINCIPALS

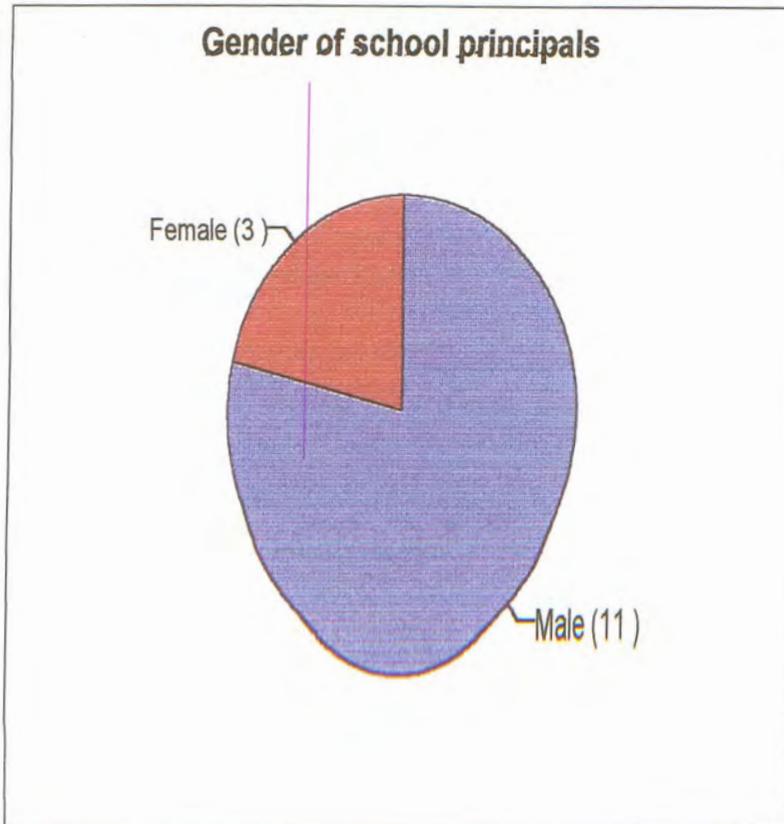
Questionnaire B, completed by the primary school principals will be analyzed and interpreted in the following section of the study (N=14). The five point scale which has been used should be interpreted as 1 - to no extent, 2 - seldom, 3 - to some extent, 4 - almost always and 5 - always.

✓ DEMOGRAPHIC DATA

One-way frequency distribution tests were run.

Gender: Male or Female

Figure 5.8 Gender of primary school principals



Discussion: Only 3 (21.5%) respondents were female. The majority of primary school principals were male. This was expected as the majority of primary school principals are male.

How many years of experience do you have?

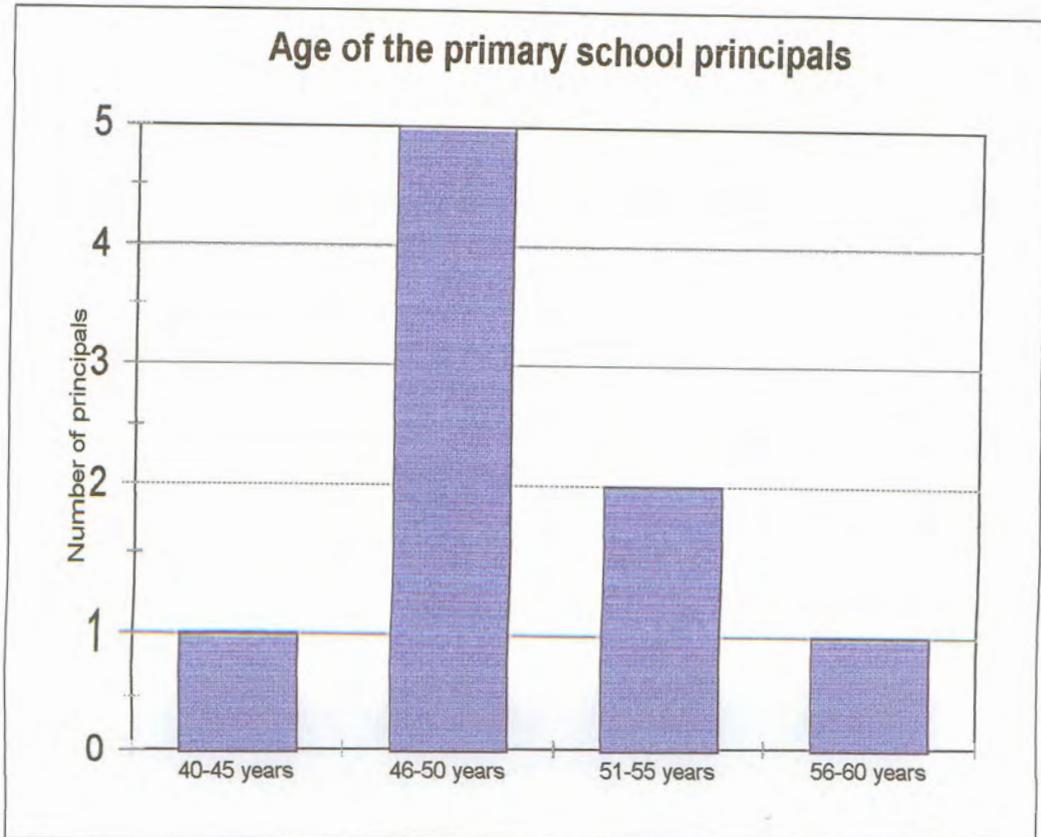
Table 5.33 Experience of the primary school principals

Years of experience	Frequency
1 year	2
4 years	2
7 years	2
8 years	1
11 years	1
13 years	1
15 years	1
16 years	2
24 years	2

Discussion: The years of experience of the primary school principals varied from 2 (14.3%) respondents with only one year experience to 2 (14.3%) respondents with twenty-four years experience.

Age of primary school principals

Figure 5.9 Age of the primary school principals



Discussion: The primary school principals' age ranged from 40 years of age (1 respondent) to 59 years of age (1 respondent). The age group 40-45 years had 5 (35.7%) respondents and the age group 56-60 had 2 (14.3%) respondents.

✓ **QUESTION 1: INFORMATION CONCERNING A NON-TRADITIONAL APPROACH TO MUSIC IN THE LEARNING ENVIRONMENT TO DEVELOP THE LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER.**

Question 1.1 **Do you think that Class Music or the learning area Arts and Culture still has a role to play in education today?**

Table 5.34 The role of music in the learning environment

Type of response to the role of music in the learning environment	Frequency
To no extent	0
Seldom	1
Sometimes	1
Almost always	3
Always	9

Discussion: This question was included in the questionnaire to inquire into the attitude of headmasters towards music in the learning environment. Only one respondent disagreed that Class Music still had a role to play in the learning environment. 13 (92.9%) agreed that music had a role to play varying from respondents who responded with "to some extent" to "always". 9 (64.3%) indicated that music always had a role to play in the learning environment. A two-way frequency distribution on the two age groups 40-49 years of age and 50-59 years of age were performed and indicated a relationship of 8 (57.14%) to 6 (42.86%). It would appear as if the younger primary school principals were more in favour of music in the learning environment.

Question 1.2 **Besides Class Music as a school subject the school also offers music in an extended context.**

Table 5.35 Music in an extended context at school

Type of response to music in an extended context	Frequency
To no extent	3
Seldom	1
Sometimes	3
Almost always	2
Always	4

Discussion: The following two questions were included to establish whether the schools offered music in an extended way with a non-traditional approach to develop the learning potential of the learners. A total of 13 school principals responded to question 1.2 of which 4 (30.8%) indicated that music was not, or seldom, used in an extended way and 9 (69.2%) indicated that they did use music in an extended way at the school.

Question 1.3: **The school uses music in the following extended ways:**

- **Calm soothing music while learners enter the school hall.**
- **Structured music (Baroque music etcetera) while writing tests.**
- **Music in corridors.**
- **Music in administrative buildings.**

Table 5.36 Extended use of music in the learning environment

Type of response to an extended use of music	Frequency (always
Calm and soothing music when learners enter the hall	9
Baroque music	1
Music on corridors	1
Music in administrative buildings	6

Discussion: Question 1.3 targeted the specific extended use of music and the majority of respondents 9 (69.2%) indicated that music was employed to create a calm soothing effect when learners enter the school hall. This support the data received from the music educators. Only 1 (10.0%) respondent responded to the use of Baroque music in the learning environment. 1(10.0%) indicated music on corridors and 4 (30.8%) employed music in the administrative buildings. The above data supported the view of the music educators in Questionnaire A.

Question 1.4 **In my opinion it may be of help to the learners if they were taught how to study more effectively with the help of music.**

Table 5.37 Benefits of studying with music for the learners

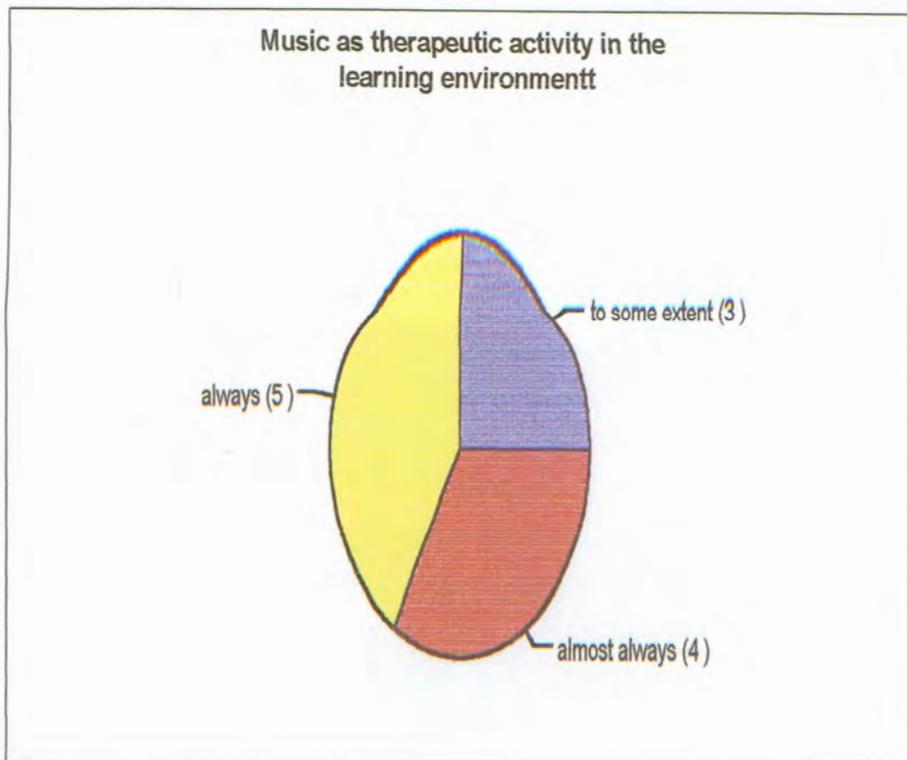
Type of response to benefit to study with music	Frequency
To no extent	1
Seldom	3
Sometimes	7
Almost always	1
Always	1

Discussion: The positive results of studying with structured music are a well-researched topic (chapter 2 section 6.3.1). 9 (69.2%) respondents felt that it may "*sometimes*" to "*always*" help learners to study with music. 4 (30.8%) respondents felt that it would not help. A possible explanation might be that the headmasters were not informed about the value of music and learning. It confirmed the opinion that structured music, to open

the mind's capacities, were not employed to its fullest to develop learning potential of learners in schools.

Question 1.5 **I believe that music may be used as a therapeutic activity (relax pupils, enjoyment etcetera) in the school**

Figure 5.10 Music as therapeutic activity in the learning environment



Discussion: The majority of headmasters 9 (64.3%) agreed on the positive qualities of music as a therapeutic activity at school.

Question 1.6 **I think that the extended use of music may contribute to a positive teaching and learning image at the school.**

Table 5.38 Response of headmasters to music creating a positive learning image at the school

Type of response to music creating a positive learning image	Frequency
To no extent	1
Seldom	3
Sometimes	2
Almost always	4
Always	3

Discussion: The innate quality of music is often undervalued in the learning environment. The reason might be a lack of knowledge (chapter 3). This question was included in the questionnaire to establish the headmasters view on the role of music and the image of the school. 13 headmasters responded to the question and 7 (53.9%) indicated with almost always to always that it would contribute to a positive image in the learning environment.

Question 1.7 **The image of the school will benefit in the following ways:**

- It indicates that the school is serious about learning.
- The school is concerned about each learner.
- It will attract more pupils to the school.
- The school will be perceived as an innovative and progressive school.

Table 5.39 Extended use of music and the image of the school

An extended use of music and the image of school	Positive	Negative
Showed that the school was serious about learning.	9	3
Showed that the school was concerned about learners.	9	3
Could attract learners to the school.	4	8
Showed that the school was innovative.	9	3

Discussion: This question received a positive response from the primary school principals. An interesting response was that the majority of 8 headmasters did not feel that an extended music programme at the school would attract more learners to the school.

Question 1.8 **I encourage new ideas that will be of benefit to the school.**

Table 5.40 Two-way frequency table on the encouragement of new ideas by the headmaster to benefit the school

Type of response	40-49 years of age	50-59 years of age	Total
Seldom	0	1	1
Sometimes	0	2	2
Almost always	7	1	8
Always	1	2	3

Discussion: This question investigated the headmasters' innovative approach to the music learning environment by asking whether the school principal encouraged new ideas to benefit the learners and the school. A two-way frequency distribution indicated that the younger principals were more perceptive to the idea. 8 (57.14%) from the age group 40-49 encouraged new ideas at the school, while 6 (42.86%) did not. 1 (7.1%) indicated that he seldom encouraged new ideas.

Question 1.9 I am prepared to encourage training of the music educator to develop an extended music programme for the school.

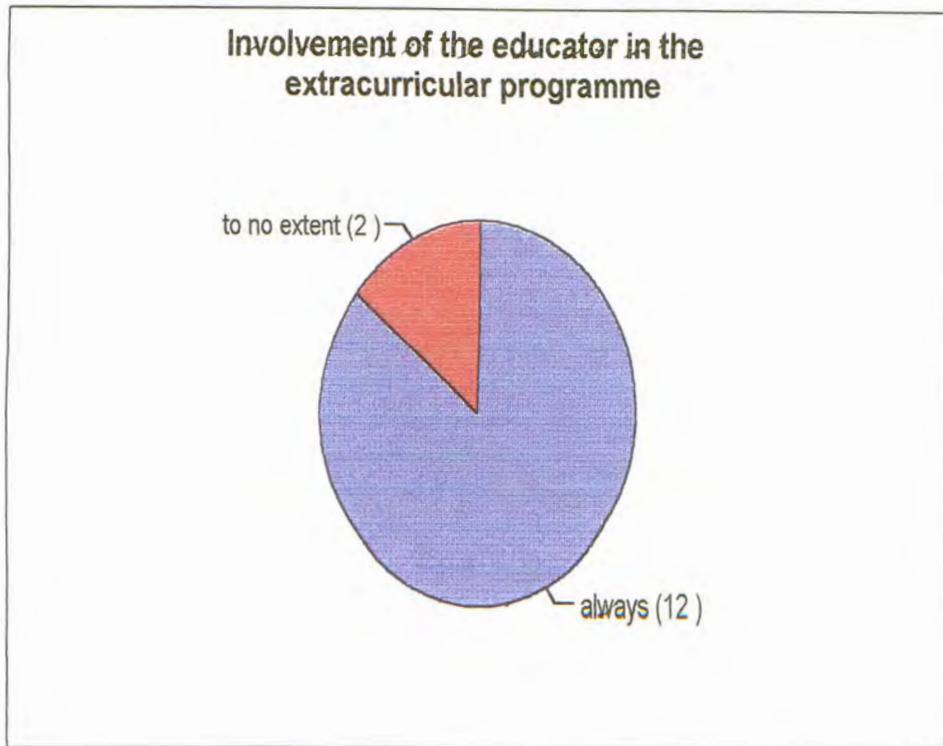
Table 5.41 Training of the music educator to develop an extended music programme for the school

Type of response to developing of music programme	Frequency
Seldom	1
Sometimes	2
Almost always	6
Always	4

Discussion: The headmasters of the school reported that they were prepared to train the music educator to develop an extended music programme for the school. 12 (92.3%) indicated sometimes to always and only 1 (7.7%) indicated seldom.

Question 1.10 The Class Music educator is primarily involved in music activities as part of her/his extracurricular programme.

Figure 5.11 Involvement of the educator in the extracurricular programme



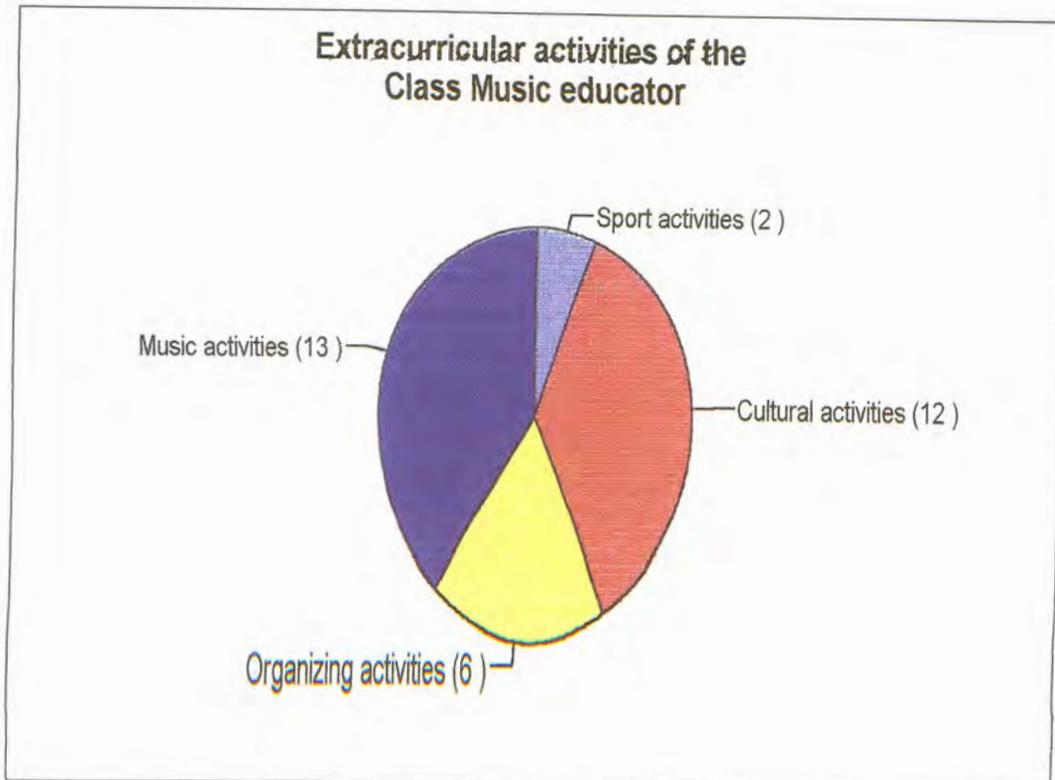
Discussion: It seemed as if the music educators were primarily involved with music activities at school. 12 (85.7%) respondents indicated that the music educator was involved with music only and 2 (14.3%) indicated that the music educator was not primarily involved with music activities.

Question 1.11

The extracurricular activities of the Class Music educator includes the following:

- Sport activities.
- Cultural activities.
- Organizing functions.
- Music activities.

Figure 5.12 Extracurricular activities of the Class Music educator



Discussion: Corresponding with the previous question the headmasters indicated that music educators were primarily involved in music activities. 2 (22.2%) indicated the involvement in sport, 12 (100,0%), showed involvement in cultural activities, 6 (75%) indicated involvement in organizing school activities and 13 (100.0%) involvement in music activities at the school.

2.2.1 SUMMARY ON FINDINGS CONCERNING AN EXTENDED USE OF MUSIC WITH A NON-TRADITIONAL APPROACH TO DEVELOP THE LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER AS PERCEIVED BY THE PRIMARY SCHOOL PRINCIPALS

A summary of this section will be given by means of a table.

Table 5.42 Summary of information on an extended use of music to develop the learning potential of the primary school learner as perceived by primary school principals

An extended use of music in the learning environment	Frequency results
Music had a role to play in the learning environment	13 (92.9%)
Music was used in an extended way to develop learning potential	9 (69.2%)
Music might help learners to study more effectively	7 (53.8%)
Music had therapeutic value	9 (64.3%)
An extended music programme might contribute to a positive image of the school	3 (21.4%)
Headmaster was positive about training the music educator to develop an extended music programme for the school	12 (92.3%)
Music educators were primarily involved with music activities	12 (85.7%)
Extracurricular activity of music educator	12 (100.0%)

2.3 DISCUSSION OF QUESTIONNAIRE RESULTS: QUESTIONNAIRE A AND QUESTIONNAIRE B

The study aimed at investigating a non-traditional approach to music in the learning environment to develop learning potential of the primary school learner. This was done by exploring a holistic approach to learning: whole person and whole brain development, as well as the multiple intelligence theory, against the background of the postmodern world.

- ✓ The literature study (chapter 2, section 2.1.2) pointed out that the modern paradigm had been replaced by the postmodern paradigm with implications for the learning environment and the needs of the learners. Postmodern elements were identified through the literature study and Questionnaire A confirmed, with the exception of discipline problems and aggressive behaviour, the presence of these identified postmodern elements in the learning environment. The literature study claimed that the postmodern world was a violent world which might lead to aggression and discipline problems in the learning environment. The response indicated that no serious discipline problem or aggressive behaviour was present in the learning environment. Two unexpected responses were that the music educators and learners shared, to some extent, the same music taste. It was an unexpected response, because according to the literature study, people are influenced by the paradigm they grow up in. The music educators were more mature and grew up and were influenced by the modern paradigm, while the learners are growing up in the postmodern paradigm. The second interesting response was that although learners had access to information by means of modern technology, such as the Internet and television, they were not, as expected, informed about international pop music trends.

- ✓ It was confirmed by Questionnaire A that the respondents implemented an integrated, holistic approach to Class Music. Intellectual, emotional, spiritual and psychomotor (whole person) development were implemented on varying levels of development. A few outstanding responses will be referred to in this section and conclusions to these responses offered in chapter 6.

According to Questionnaire A the music educators developed the intellectual side of the learners. 12(85.7%), offered the learners the opportunity to express their own opinions to provoke higher-order thinking. The open-ended question in this section of Questionnaire A was not completed by the respondents (chapter 6).

All music educators valued the emotional development of the learners. To explore the level of emotional development, a question was posed which referred to the way in which learners expressed their personal feelings. The researcher wanted to find out whether the more intrapersonal, in-depth methods like portfolio assessment and reflective writing were employed by the music educators. 7 respondents indicated that learners reflect verbally, 3 respondents indicated reflection by means of portfolio activities and 3 reflected through writing. It was apparent that music educators focused

mainly on a verbal reflection, and not the more in-depth assessment methods (chapter 6).

Chapter 3, section 4.1 pointed out that the spiritual world was mostly an unknown and often unaccepted world to educators. The responses of the music educators confirmed this perception and 6 (42.8%) indicated that they never or seldom included activities to develop the spiritual intelligence of the learners. This section of the questionnaire included an open-ended question, but no other activities were mentioned by the music educators. It seemed an undeveloped area in music education (chapter 6).

In the modern era, physical activities were often perceived as a diversion from academic study. Gradually music educators recognized the potential of using physical activities to enhance learning and to develop the learner holistically. Psychomotor development involves the intellect, emotions and body (chapter 3, section 5.1). All music educators included psychomotor activities in the music curriculum. Again the researcher was interested in the level of psychomotor development taking place in the music learning environment. Contrary to the open-ended question on emotional development, two responses were received in this section. It may be an indication that the music educators implemented a greater variety of psychomotor activities than activities to develop the emotional side of the learners. One respondent mentioned the use of revues to develop the psychomotor side of the learners and the other respondent mentioned the use of questionnaires to reflect on psychomotor activities.

Questionnaire A also investigated an integrated approach to Class Music - the development of both brain hemispheres (whole brain and multiple intelligence). Chapter 2 explored the integration of the two brain hemispheres to develop the learning potential of the learner. Lazanov's (1978) learning model was used as an example that an integrated approach, using music, can open up the reserves of the mind. A question was posed to explore whether this approach was employed in the classroom. An interesting response 8 (61.5%) confirmed that they almost always to always employed activities to develop both brain hemispheres.

- ✓ Questionnaire A and Questionnaire B explored a non-traditional approach to music to develop learning potential of the primary school learner. It might be deduced from the information received from the music educators and primary school principals, that music educators were primarily involved with music activities as part of their extracurricular

programme. 12 (92.3%) music educators indicated that they would like to be involved in an extended role to develop learning potential at the school. 13 (92.9%) music educators and 12 (92.3%) headmasters agreed that a non-traditional approach to music was beneficial to the learners. 13 (100.0%) music educators responded that the school already had a music centre and it may be used to house an extended or extracurricular music programme at the school.

The study will now describe the qualitative information collected by means of the interviews.

3. ANALYSIS AND INTERPRETATION OF INTERVIEWS

3.1 INTRODUCTION

The interviews collected descriptive data from the respondents in their own words and gained insight into the respondent's world. These interviews were recorded, transcribed and the data analyzed by searching and arranging the transcript to increase the researcher's understanding. A coding system was employed, similar to the main categories used for the questionnaires (chapter 4). The procedure followed was a discussion after each interview and after the completion of all the interviews, a general overview on results of the questionnaires and interviews. It was decided to deal with final conclusions and recommendation in chapter 6.

Pseudonyms were used to protect the respondent's identities. The first school's principal and music educator will be referred to as Mr and Ms Glockenspiel, the second school's principal and music educator as Mr and Ms Xylophone and the remaining individuals as Ms Triangle and Ms Tambourine.

3.2 INTERVIEW WITH MR GLOCKENSPIEL

✓ DEMOGRAPHIC DATA OF PRIMARY SCHOOL PRINCIPAL

The aim of the interview with the primary school principal was to attain the principal's views on music education and the extended use of music in education. It was also of interest to explore his perception on an extended use of music by means of an extracurricular programme.

An interview was conducted with Mr Glockenspiel during February 2001. Mr Glockenspiel is the headmaster of the school for the last four years. It had been a period in which the school had been remodelled - from a Model-C School (white advantaged learners) to a multicultural set-up. The interview provided rich data.

The interview started off on a very high note with Mr Glockenspiel sharing his positive view towards a non-traditional approach to music in the learning environment. Mr Glockenspiel remarked that this was an issue of such importance to him that he felt it should actually also be discussed with the governing body of the school. This was a matter that had been scheduled for development at the school for some time, but a lack of knowledge delayed exploring the matter.

Mr Glockenspiel referred to his personal life where he became aware of the powerful connection between his own mood and personal choice of music. He experienced that music could change your mood completely, which directed his thoughts to the influence music could have on the learners in the learning environment. He offered an example. He had a discussion with a minister from his church. The minister explained that he organized *get together* functions for the youth of his ministry twenty years ago. It was not received favourably in his church at that time, because in those days popular church music or gospel music was not tolerated by his church. He carried on with his mission and realized that if you want to influence the lives of the youth, music can be a very powerful tool. Music touches not only the brain, but also the emotions and spirit of people. The minister testified to the results of music and the emotional and spiritual side of the young people. This conversation had an influence on Mr Glockenspiel to develop an intense interest in this topic.

✓ **FINDINGS CONCERNING MUSIC AND A NON-TRADITIONAL APPROACH TO MUSIC TO DEVELOP THE LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER**

There was no doubt in Mr Glockenspiel's mind that music had an important role to play in the learning environment. As the headmaster of the school his music experience mainly stems from own personal experience, hymn practice and assembly at school. He was involved with hymn practice and assembly at the school and had encountered the positive effect, such as happy relaxed learners after hymn practice.

The school offered the learning area Arts and Culture, had a school choir and offered school

concerts, revues and participation in eisteddfods to learners, but also offered music in an extended way postulated by this research. The extended use of music at this school was a special hymn practice, which was called *Lofprysing (Praise and Song)*. The researcher had been invited to attend a hymn practice at the school. The hymn practice started with one of the educators playing popular or gospel hymns while the learners entered the school hall. A mood of anticipation could be perceived and the researcher could sense that the learners were looking forward to hymn practice. A sound system with tapes and CD's was used, but one of the educators also accompanied the song *Shout to the Lord* on the piano. The researcher realized that this performance was different from what was usually experienced at schools where learners sing with tapes and CD's. This performance was led by an educator who used *signing*. It is the American version of sign language for the deaf. The educator and learners signed while they sang the songs with tapes and CD's. The learners took part with enthusiasm and left the school hall after the session in a raucous and boisterous fashion.

The interview spontaneously (not scheduled for discussion) turned to the postmodern society and Mr Glockenspiel mentioned what he perceives as a lack of norms and values. The literature study pointed out that education should assist learners to construct diverse and personally useful values of their own cultures. Values are not true or right in any universal sense. In Mr Glockenspiel's opinion the hymn practice at his school was a powerful tool to install norms and values and should receive much more attention in the postmodern learning environment. He motivated the importance of values and norms in the learning environment by pointing out that in the past the basis of the values and norms in the Afrikaner community came from Afrikaans nationalism and the Bible. Times had changed and according to him, different ways were needed to establish these values in a postmodern world. Living in the postmodern era, new ways should be attained in teaching these truths. In his opinion the hymn practice at his school was a powerful tool to install some norms and values. To install norms and values in the postmodern learning environment was also mentioned by the music educator, Ms Glockenspiel, in the next section of the study.

The comment that related directly to the development of learning potential was when he said that it would be of great help if learners were taught how to study more effectively with the help of music. He was willing to send one or more staff members for training in this domain.

3.2.1 DISCUSSION: MR GLOCKENSPIEL'S INTERVIEW

- ✓ It was clear that Mr Glockenspiel encourages new ideas that benefit the school and learners. A non-traditional approach to music was a priority at the school and it was demonstrated when the researcher was invited to start an academy to develop learning potential through music at the school.
- ✓ Living in the postmodern era, new ways should be attained to teach new truths suitable for the twenty-first century. In Mr Glockenspiel's opinion the hymn practice at his school was a powerful tool to reinstall some norms and values. From this interview it could be said that Mr Glockenspiel tried to confront it with hymn practice, employing popular spiritual music and involving learners actively.
- ✓ A recommendation: The *Praise and Song* assemblies of the school might be utilized to extend the role of music in the learning environment. A holistic approach to develop learning potential by means of music, could be achieved. When analyzing the learning experience of the *Praise and Song* assembly, the learners had an intellectual experience (memorising the words of the songs and learning the signing), an emotional and spiritual experience and a psychomotor experience by doing the signing while singing. It was an integrated and holistic learning experience. It could be recommended to structure the session by starting with music to fit the mood of the learners, leading to the emotional and spiritual experience and ending with calm soothing songs to put the children into the correct frame of mind to continue their activities in class.

The next interview was conducted with a music educator who used to teach Class Music, but who was now involved with the learning area Language, Literacy and Communication at the school due to the phasing out of Class Music.

3.3 INTERVIEW WITH MS GLOCKENSPIEL

✓ DEMOGRAPHIC DATA OF THE MUSIC OR ARTS AND CULTURE EDUCATOR

An interview was completed with Ms Glockenspiel in February 2001. She was very helpful and various qualitative responses by her could be documented. The following is a summary of the main issues which arose from the interview.

Ms Glockenspiel was an experienced educator who had been involved with Class Music for seven years, grades 1 to standard 7 (grade 1 to grade 9), but also on tertiary level at the University of the North. At present she does not teach Class Music and is not involved in the learning area Arts and Culture.

✓ **FINDINGS CONCERNING THE INFLUENCE OF A CHANGING SOCIETY ON THE SCHOOL AND THE NEEDS OF THE LEARNERS**

The purpose of including this section of the interview was to establish whether the respondent experienced the effect of a changing society on the learning environment. It was also important to establish whether the music educator was aware of the needs of the learners in a changing postmodern society.

A multicultural learning environment was identified through the literature study as one of the postmodern elements investigated in this study. Ms Glockenspiel taught multicultural groups of learners. The current position at their school was 40% white learners and 60% learners of colour.

The school encountered discipline problems in a variety of ways. Disobedience and verbal disruption, even brutality, was a major concern at the school, but Ms Glockenspiel's personal concern was vandalism (damaging physical property of the school and other learners) in the learning environment. She felt that vandalism was part of the general attitude of not only breaking down of physical property, but it lead to the collapse of norms and values she treasured. She pointed out that the collapse of norms and values were clearly seen in the music environment where learners, school principals, parents and colleagues preferred the so called *light music* or *popular music* in favour of serious, intellectual or classical music. The strong emphasis on rhythm in popular music was destructive and more could be achieved through employing melody which involved both brain hemispheres. Ms Glockenspiel experienced the abandoning of a formal choir at school, as well as tapes and CD's of popular and gospel hymns being adopted at hymn practice to accompany the learners in place of the traditional piano accompaniment. The prolific exposure of popular music styles clearly had an influence on the school.

Ms Glockenspiel did not experience that learners need to verbalize own personal experiences and stories during Class Music, but added that she usually gave ample time at the beginning of Class Music periods to talk about their personal experiences.

The recognition of intellectual diversity (multiple intelligence) is a postmodern way of viewing intelligence. Music had the innate qualities to develop multiple intelligence (chapter 3). This postmodern belief was visible in the opinion of Ms Glockenspiel when she argued that being actively involved in own learning did not necessarily mean that all children wanted a *hands on* learning experience in the music learning environment. Ms Glockenspiel mentioned that some children preferred to be more passive. She felt that the child that was socially inclined enjoys being actively involved and the quiet and, according to her often the more intelligent children, with the intrapersonal personality, enjoyed working silently on her or his own. While teaching Class Music, she usually focused on developing both the interpersonal and intrapersonal intelligence.

The interview turned to the important concept of democracy in the postmodern learning environment. Ms Glockenspiel recalled the well-known response among learners:

Yes, but Mam, it's unfair. Why may he and I may not? (translated).

She interpreted the remark as the need of the learners to make choices and feel that they had the right to choose. Educators had to develop the openness and sensitivity to accept the opinions and choices of learners. She felt that openness and sensitivity concerning the opinions and choices of other people improve the relationship between the educator and the learners.

Learners were informed about international pop music trends and enjoyed the popularizing of classical music. This aspect might be turned to the music educator's advantage or as a positive influence by exposing the learners to classical music. Ms Glockenspiel pointed out that when learners mentioned popularized classical music melodies, she made an effort to introduce the original version to the learners which they normally enjoyed very much.

Although Ms Glockenspiel encountered vandalism (damaging property) in the learning environment, she would not describe it as aggressive behaviour. She did not experience aggressive behaviour, but did sometimes experience a lack of respect from the learners towards each other and teachers. She indicated that she recognizes a new development among the learners in the last few years where they verbalised and showed their dissatisfaction with educators.

✓ FINDINGS CONCERNING THE MUSIC EDUCATOR AND AN INTEGRATED HOLISTIC APPROACH TO CLASS MUSIC

The aim of this section of the interview was to establish whether a non-traditional approach to develop learning potential by means of a holistic approach received the attention of music educators and how did they employ it in their music learning environment.

The intellectual dimension of the whole person in the music environment was discussed first. Ms Glockenspiel indicated that the learners were given the opportunity to express their own opinions in an unstructured way and were encouraged to think critically in the music learning environment. She illustrated her understanding of critical thinking in the music learning environment with the following example. She would provide the learners with music of a specific period, for example Baroque music, as well as the relevant background on the political, social and art scenes of the corresponding period. It was not necessarily the so called *cool music* which the learners prefer, but the educational value laid in the fact that learners experience intellectual or classical music. Afterwards learners responded with their own opinions of intellectual or classical music. The only restriction placed upon the learners was that their opinions had to be motivated and they had to adhere to the criteria laid down for the discussion. She would then respond by comparing the period music with popular music, discussing the lyrics, form and instruments. Very often the learners realized that classical music and popular music had corresponding elements, but the one element that differed was the rhythm of popular music. Ms Glockenspiel reacted very positively to the question whether thinking skills were transferable from Class Music to other learning areas.

Ms Glockenspiel mentioned that the emotional side of the holistic development of the learners were attended to in her music teaching. She believed in a balance between the intellect and the emotional side of the learner. She explained that she drew upon music from the Romantic period, such as music from the "*Peer Gynt Suites*" by Ipsen, Tshalkovsky's "*1820 Overture*" and even folk songs - music that conveys emotions such as love for the country, joy, hate etcetera. She made use of questionnaires to elicit the emotional responses from the learners.

It had been confirmed by Ms Glockenspiel that music had an effect on the spirit of the learners, because learners responded holistically to music - not only with mind and emotion, but also with the spirit and body. The spiritual side was discussed first. Ms Glockenspiel supplied an example of the value of music in creating a relaxed state of mind in the learners.

After she once devoted a lesson to Baroque music, one of her colleagues later remarked:

The pupils were like angels. Don't you always want to play that music?
(translated).

She agreed that this was an undiscovered and underutilised field where the music learning environment had to play a far greater role.

For psychomotor development Ms Glockenspiel made use of body movements when teaching certain aspects of music. An example was the three part form, sonata form or the rondo form, where the learners had to show an understanding of the changing of the form with different body movements.

✓ FINDINGS CONCERNING A NON-TRADITIONAL APPROACH TO MUSIC TO DEVELOP THE LEARNING POTENTIAL OF THE LEARNER

The interview turned to the last section, which aimed at gaining information on a non-traditional approach to music to develop learning potential and to determine whether the music educator felt that the extended use of music should rather reside in an extracurricular programme. Ms Glockenspiel explained that the learner profile of the school changed dramatically over the past years. The school changed to a multicultural school which included previously disadvantaged learners. She felt that the learners, especially the disadvantaged learners may gain from extending the role of music to develop their learning potential more fully.

3.3.1 DISCUSSION: MS GLOCKENSPIEL'S INTERVIEW

- ✓ The following postmodern indicators had been identified during the interview, concerning the presence of a postmodern society and the different needs of the learners. The presence of a multicultural learning environment, discipline problems, collapse of norms and values, levelling of high art and popular art, influence of technology on the lives of people, diversity and democracy in the learning environment (chapter 2, section 3.2.2).
- ✓ Ms Glockenspiel felt that music had lost its dignified position in the learning environment. She noticed a superficial attitude towards Class Music and even the

learners "*look down upon the subject*". She argues that "*music of the brain is dead*". Ms Glockenspiel argued that melody was the intellectual side of music and the over emphasis of rhythm in popular music stimulated the primitive side of the person and not the brain. Popular music had a role to play, but not as the overpowering role of the postmodern world.

- ✓ It is clear that Ms Glockenspiel had a holistic approach to learning in the music learning environment. She made the observation, after the concepts of the whole person, whole brain and multiple intelligence had been explored during the interview, that she discovered that it was the way she always taught Class Music, but was not aware of the fact.

3.4 INTERVIEW WITH MR XYLOPHONE

The second school's interviewee will be referred to as Mr and Ms Xylophone and followed in the next section of the chapter.

✓ DEMOGRAPHIC DATA OF THE PRIMARY SCHOOL PRINCIPAL

This interview was conducted in March 2001. Qualitative responses, relevant to the aim of the interview, had been documented. Some responses were surprising, but most were predictable, well-known opinions of many primary school principals. The researcher encountered examples of corresponding views from various headmasters while actively involved with the primary school learning environment.

The headmaster of the school had fourteen years experience as a primary school principal. In the past he had also been involved with secondary schools. Mr Xylophone had an exceptional love and involvement in music as he explained that music forms a considerable part of his daily life. He listened to a great variety of music styles - alternative to classical music - depending on the time of the day and his mood. He had seven years experience as a choir master and played an active role in all the music activities at the school.

✓ FINDINGS CONCERNING A NON-TRADITIONAL APPROACH TO MUSIC TO DEVELOP THE LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER

Class Music is included in the learning area Arts and Culture with an interdisciplinary

approach, which includes dance, drama, music, art technology, media and communication and the visual art forms. There are not specific outcomes for Class Music. Mr Xylophone reacted very strongly about the important role of music in the learning environment, and although he stated that he was an ardent believer in positive change, he felt that an interdisciplinary approach was not conducive to the special role of music in the learning environment. He described the new learning area, Arts and Culture, as “*a watering down of everything*” (translated) .

The school's approach to music was to include all the learners in group music (Arts and Culture) and to offer all learners the opportunity to perform on stage hosting school productions such as school concerts, revues, Christmas plays, etcetera. Mr Xylophone strongly believed that all learners had to participate and enjoy music. It was the reason why he was not in favour of special facilities to accommodate only certain members of the school. He used the traditional music centres as an example to prove his point and argued that an effort had been made to extend the role of music in the learning environment with music centres, but claimed that it proved to be a poor effort:

A solution, but a bad solution like a school hostel that does not replace home
(translated).

He maintained that it was not the role of the primary school to specialize, but to provide *tools* and to *open doors* to the future of all learners. The *tools* were the opportunity to mass participation at primary school level. At this stage the interview turned to the extended role of music to develop learning potential. The scene had by then already been set by previous remarks from the school principal.

The school did not employ music in any specific extended way. Mr Xylophone explained that each educator held their own views concerning music and had the privilege to employ it as they wish. Calm and soothing music was not played when learners entered the school hall for assembly, but piano accompaniment was used when leading out. Mr Xylophone claimed that they did not make use of background music, because it lead to chaos with one thousand four hundred learners in the school. He was also cautious to the manipulative and indoctrinative qualities of music. The educators had experienced the results of these qualities in music at sport and other school activities such as field trips and leader champs. Mr Xylophone compared the manipulative qualities of music with a hidden curriculum, which did not lead to a holistic approach to teaching and learning. Although no special effort was

made to employ music in an extended way, he agreed that music might enhance learning and had therapeutic qualities. Mr Xylophone maintained that he encouraged new innovative ideas at the school, but did not feel that an extended music programme, as part of the extracurricular activities of the school, was a good idea. He maintained that music as an extended extracurricular activity was against his quest to involve all learners.

3.4.1 DISCUSSION: MR XYLOPHONE'S INTERVIEW

- ✓ Mr Xylophone claimed that Class Music had been robbed of its meaningful role with the introduction of the learning area Arts and Culture.
- ✓ He believed in group involvement of all learners by means of traditional extracurricular activities, such as revues and musical activities. Mr Xylophone did not agree with a non-traditional approach to music to develop the learning potential of the learner by extending the role of music with the intention of introduction of a music programme as an extracurricular activity.

3.5 INTERVIEW WITH MS XYLOPHONE

✓ DEMOGRAPHIC DATA OF CLASS MUSIC OR ARTS AND CULTURE EDUCATOR

Ms Xylophone's interview had been conducted straight after the interview with the school principal and some interesting comparisons could be made. She was trained as instrumental and Class Music educator at the Pretoria College of Education. She had eleven years experience, mainly as Class Music educator and for the last year as Arts and Culture educator. Her field of experience was largely primary schools.

✓ FINDINGS CONCERNING THE INFLUENCE OF A CHANGING SOCIETY ON THE SCHOOL AND THE NEEDS OF THE LEARNERS

It is true of most societies that the learning environment reflects the general society. South Africa bears testimony of a learning environment which did not in the past, reflect the social reality of the country. After the change of government, a multicultural society and learning environment had been put in place. The interviews with the music educator and school principal of the first school, undoubtedly indicated the changing society and its influence on the learning environment. Surprisingly the opposite was true of this school.

The first very interesting discovery was the absence of a multicultural learning environment. The school enrolls very few learners of colour and most learners come from an Afrikaans background. Ms Xylophone pointed out that there were many classes in the school with white learners only.

The school did not experience discipline problems. She emphasised that the principal and top managing team of the school insisted on good behaviour, which they believed, lead to positive learning results. The learners were encouraged to greet other people, to walk in rows and no back chatting was allowed. The educators were encouraged to plan, organize and manage their classes well. The learners were asked to leave the room and re-enter if they entered in a noisy fashion. The learners were task oriented and a lack of discipline was not tolerated.

It had been discussed in chapter 2, section 3.2.1 that knowledge in the postmodern paradigm was not about universally valid knowledge, but rather a broader view which includes own practical experience or the subjective understanding of knowledge. Surprisingly, Ms Xylophone did not find that learners had a need to discuss their own experiences to establish an understanding of the world they live in. She felt that these learners came from stable backgrounds where they communicated their own experiences and knowledge to their parents. The divorce rate at the school was low in comparison to figures released for the average South African household. She estimated the divorce figure not higher than approximately 3%, with a relatively small percentage of 18% to 19% comprising single parents.

Parents at the school valued competitiveness, which lead to a competitive atmosphere in the learning environment. It had an influence on the learners, which sometimes lead to a lack of perseverance when learners learnt that they could not live up to set standards. These learners had to go to one of the demanding, competitive high schools in the area and Ms Xylophone offered it as a possible reason for the competitive atmosphere at the school. The motto "*only the fittest survives*" forms part of their learning environment.

The postmodern learning paradigm proposes to change the learner into an active agent who creates own knowledge. Learners have to be taught to think for themselves by being problem solvers - either in a group or individually. The question on the active involvement of learners had been met with an answer from Ms Xylophone that the learners enjoyed being actively involved, because it was something new in education. She experienced problems

with group work. Only the hardworking learners were actively involved in creating knowledge, while the rest of the group remained passive. This was a concern to Ms Xylophone.

The postmodern learning environment is a democratic environment based on own choice and Ms Xylophone experienced that learners liked to choose their own activities. The learners were well informed when it came to international pop music trends. She was not in favour of the popularizing of classical music. She made an effort to introduce learners to more popular classical music such as "*The Great March*" from *Aida* by Verdi and others, because she believed that if learners were exposed to original versions, it would breed a love for classical music which she valued.

✓ FINDINGS CONCERNING THE MUSIC EDUCATOR AND AN INTEGRATED HOLISTIC APPROACH TO CLASS MUSIC

The interview turned to a discussion regarding an integrated holistic approach to Class Music. She had not really considered the fact that music was a way of enhancing intellectual development of the learner. She confirmed that the learners completed listening exercises and questionnaires where they had to express opinions and reflect on melody, rhythm and other elements of music. Ms Xylophone had never considered developing the left brain hemisphere in Class Music or Art and Culture. After discussing the intellectual development of learners, she agreed that thinking skills could very easily be taught through Arts and Culture.

The next question covered the emotional development of the learner in a holistic approach to education and learning. Music was closely linked to the emotional qualities in a person and it was an important task of the music educator to develop the affective range of the learners' experiences to the highest level of internalizing behaviour that reflected a set of values and a philosophy of life. Ms Xylophone confirmed that she discussed the emotional content of music with the learners, but not in an intensive planned manner.

When it came to the spiritual development of the learners, Ms Xylophone agreed that Baroque music had a definite influence on the behaviour of the learners. She used Baroque music in her classroom to create a relaxed atmosphere and while performing creative tasks

Ms Xylophone involved the body when teaching music concepts, but mentioned that although she was fully aware of psychomotor development of learners, she did not include

it in the music curriculum as a conscious effort to an integrated, holistic approach to teaching and learning to develop learning potential. The next example sufficed as an example of a psychomotor activity that she employed. The learners were presented with information on African music, whereafter they were encouraged to create own African music instruments and then performed in groups by dancing, singing and playing their own instruments.

✓ FINDINGS CONCERNING A NON-TRADITIONAL APPROACH TO MUSIC TO DEVELOP THE LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER

Ms Xylophone's extracurricular involvement included music activities, such as revues, Christmas plays and school concerts, but also wherever she was needed. She would enjoy being primarily involved with music activities as part of her extracurricular activities at school. She certainly would enjoy extending her role as music educator to develop the learning potential of learners. Ms Xylophone reiterated the opinion of other people interviewed for this study that information was needed on the aspect of employing music to developing learning potential in the learning environment. She even proposed several ideas on the topic.

3.5.1 DISCUSSION: MS XYLOPHONE'S INTERVIEW

- ✓ The school did not reflect the general multicultural society of South Africa, but there were indications that postmodern elements were present at the school. Increased competitiveness, enjoyment of being actively involved in learning, a democratic learning environment and the *global village* syndrome were reflected through learners who were well informed on international pop music trends.
- ✓ Both the music educator and the headmaster agreed that Class Music had been robbed of its meaningful role, but the headmaster failed to understand that music could develop learning potential that music was a way to increase the meaningful role of music in the learning environment.
- ✓ Contrary to expectations it was also indicated by this music educator that aggression was not evident in the learning environment. The reason for the response might be that music educators had not given this issue enough thought. It had been discussed in chapter 3, section 3.5 that the response to noise pollution, such as hammering rock music and television sounds etcetera were sometimes unnoticed, but might lead to discipline problems and verbal aggression. Ms Xylophone did not experience physical

aggressive behaviour, but rather verbal aggression among the learners.

- ✓ Group work was mentioned in the interview as a concern to Ms Xylophone as she experienced that all learners did not pull their weight. It could be recommended that Ms Xylophone could structure the assignment in such a way that each individual learner had a task and responsibility to complete the assignment successfully.
- ✓ When analyzing the information on this section of the interview, the conclusion was that the potential of this dedicated educator could be enhanced by presenting the music educator and school with a conceptual framework to develop learning potential through music.
- ✓ When analyzing the information offered by the school principal and the music educator similarities, as well as differences, were detected. They were both committed to education, but failed to appreciate the important postmodern concept of an *open mind*. The headmaster used the word *tools* to explain that the role of the primary school was to provide the *tools* (such as mass participation in music events at the school) for the high school to specialize in concepts such as development of learning potential. Yet the postmodern thinkers had a different view on the *tools* that the learners need. Postmodern experts on education believed that a transformational curriculum that lead to real understanding was what the learners needed. Real understanding was achieved through a flexible approach and learners *becoming* by means of extended opportunities.

The following interview had been conducted with Ms Triangle, an aid class educator.

3.6 INTERVIEW WITH MS TRIANGLE

✓ DEMOGRAPHIC INFORMATION OF THE AID CLASS EDUCATOR

Ms Triangle was an experienced educator with thirty-nine years experience, of which twenty-one years were in an aid class. Although she was not a music educator, she experienced the influence of music on the learners in her class.

✓ **FINDINGS CONCERNING THE INFLUENCE OF A CHANGING SOCIETY ON THE SCHOOL AND THE NEEDS OF THE LEARNERS**

Ms Triangle taught at a multicultural school. It had been one of the first schools to transform completely to a multicultural learning environment. Ms Triangle explained that the most dramatic event of her teaching career had been the transformation of the South African education system from an exclusive to an inclusive education system.

Ms Triangle did not experience severe discipline problems in her class, but explained the reason as having fifteen learners only. She was aware of discipline problems in the general learning environment. What she experienced was verbal disruption, fiddling and to some extent a lack of concentration among learners. Ms Triangle also pointed out that an unhealthy competitive character was visible in the way parents pressurize learners to do better than their friends. This led to negative character traits among the learners such as jealousy, negative comments and even spitefulness.

✓ **FINDINGS CONCERNING THE INFLUENCE OF A NON-TRADITIONAL APPROACH TO MUSIC TO DEVELOP THE LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER**

This section of the interview had to be adapted, seeing that Ms Triangle was not a music educator. Only questions relevant to the situation were included. Ms Triangle was always of the opinion that the role of music in the learning environment was underestimated. She always incorporated music in almost all the learning activities in her class.

Ms Triangle explained that effective learning takes place when the whole brain was involved in learning. The left brain hemisphere dealt with the logical, rational and linguistic activities, while the right brain hemisphere was stimulated by the use of music. Ms Triangle presented the learners with a learning environment that stimulated the whole brain. She played structured slow Baroque music in the background when the learners memorized English and Afrikaans poems and according to her the learners accomplished the task in considerable less time with the help of music. The music also captured the interest of the learners more effectively. Music was also being employed while learners did Mathematics. She used soothing, relaxed music while they were busy with written work. The aid class usually accommodated a fair amount of hyperactive learners. Ms Triangle discovered years ago that *Vivaldi-music* (her own term) had a calming effect on the learners. She experimented with

popular Afrikaans songs, but it did not deliver the same response. The learners listened to the words being sung and failed to focus on their activities. Ms Triangle also discovered that playing music while occupied with art activities had a very noisy response. She started using music from Mozart this year with positive results - task oriented learners.

The interview took an interesting turn when Ms Triangle mentioned an incident the previous year, where the "Vivaldi - music " failed to accomplish a positive effect on the group of learners. In desperation she one day discovered that Gheorghe Zamfir's pan flute (Classical Zamfir) music had a relaxing effect on the learners. It confirmed what had been discussed in chapter 3, section 3.5 that no hard and fast rules existed to the type of music to be employed. The response and reaction of the learners were the measuring instrument. Gheorghe Zamfir's music was classified as New Age Music which is an emerging genre used for relaxation and meditation. The music is cosmic, global, simple with little direction or a distinct melody line. The sound quality of the pan flute may also contribute to the relaxing response.

3.6.1 DISCUSSION: MS TRIANGLE'S INTERVIEW

- ✓ Postmodern elements were identified which had an influence on the learner. Multicultural learning environment, verbal disruption, discipline problems, fiddling, lack of concentration and competitive demands from parents. Ms Triangle's interview supported the view of a changing society with its influence on the learning environment. She felt that learners needed security to grow intellectually and emotionally.
- ✓ Ms Triangle confirmed, as an experienced educator, that serious consideration should be paid to music in developing learning potential, not only in the music environment, but also in the general learning environment.

The final respondent, Ms Tambourine, had been chosen to participate in this study because it made sense to conclude this section of chapter four with a music educator with an imaginative, integrated, holistic approach to teaching and learning. The interview was conducted in her classroom.

3.7 INTERVIEW WITH MS TAMBOURINE

✓ DEMOGRAPHIC DATA OF THE CLASS MUSIC OR ARTS AND CULTURE EDUCATOR

Ms Tambourine was a veteran educator who started her teaching career in 1966. She had always been involved with music education, but preferred combining it with teaching other subjects such as English. She received her training at the Pretoria College of Education, completed a teacher's licentiate and also underwent further training in Japan where she studied the methodology of individual piano tuition in a group context. Ms Tambourine had taught at primary schools, secondary schools and tertiary institutions.

✓ FINDINGS CONCERNING THE INFLUENCE OF A CHANGING SOCIETY ON THE SCHOOL AND THE NEEDS OF THE LEARNERS

This section of the study needed to establish whether postmodern elements were evident in this learning environment. Ms Tambourine described the school as a multicultural school. Discipline problems were one of the problems the school faced. She experienced severe discipline problems at the school. Surprisingly the discipline problems were not part of the music learning environment, but according to her, was only to be found in the general learning environment. She found a complete lack of respect for educators with a high degree of verbal aggression directed towards the educators.

Ms Tambourine responded to the question on the need of learners to select own learning activities. She did not compromise when it came to the choice of music in the learning programme. She commented that she was very strict and the learners did not have a choice in learning activities or music preferences. She firmly believed that they will learn to like, as she called it, *good* music if it was often repeated. "*Repetition breeds' love*" was her motto. Pop music was not used in her learning programmes and she explained that she told the learners that "*pop music is like popcorn. It pops up in the air and is gone, while classical music lasts forever*".

✓ FINDINGS CONCERNING THE MUSIC EDUCATOR AND AN INTEGRATED HOLISTIC APPROACH TO CLASS MUSIC

Ms Tambourine believed that the current Arts and Culture curriculum placed too much

emphasis on the African culture and ignored, to a great extent, the richness of other cultures. Through the years she found that learners were fascinated by different cultures and the learning experience should include the African culture as well as all other cultures. She acknowledged the interrelated character of the Arts and Culture curriculum as a very positive development in music education and added that she had always integrated the different disciplines of art, dancing and drama in her learning programmes. She illustrated the point by taking the researcher to her *dress-up cupboard* and explained that the learners call it "*Mam's magic cupboard*". Ms Tambourine explained that she travelled extensively. Travelling was to her an endless process of finding new material across the world to change her classroom into "*fantasy experiences with an element of surprise in each lesson*". Her view of teaching corresponded with Dewey (1900-1902) who championed the idea that schooling need not be tedious and boring. This concept of teaching implies the need for educators' use of their own imaginative and intuition capacities to interact with learners to engage them in truly enjoyable, relevant learning (Jagla 1994:4). An example of the integrated approach was the following: Ms Tambourine chose a programme organizer such as Spain. She welcomed the learners at the door, dressed-up in a costume representing Spain, with music playing. Each learner received a simple costume, sometimes only a hat or scarf, changed into the costume and entered the class dancing with the music. This learning programme was then explored by means of songs, instrumental work, creative and written work, dances and drama. Integration across different learning areas also took place. The Human and Social Sciences learning area were explored by discussing the country, the people, the history and geography of the country and often the food of the country was incorporated in the lesson. She mentioned that the learning area Language, Literacy and Communication were covered by means of questionnaires, worksheets and reflective writing.

The interview turned to the intellectual development of the learners. Ms Tambourine stated that she did not allow the learners to contribute to the learning situation by expressing own opinions. Ms Tambourine did not employ strategies such as open and free discussions or even structured debates. She developed the intellectual side of the learners with an imaginative approach to learning. Her learning programmes were based on intuition and imagination. Jagla (1994:32-33) claims that there is a strong link between imagination and intelligence although there are many *intelligent* people who are not extremely imaginative. Creative thinkers throughout the ages had been thought of as intelligent.

The emotional development received attention through discussions of emotions, drawings and questionnaires such as "*What are you feeling?*". Ms Tambourine mentioned that a very

successful learning programme to explore and develop emotional qualities in learners was the song *"Another day in paradise"* by Phil Collins. Ms Tambourine related the lyrics of the song to a personal level through questions about street children, beggars and children from divorced homes. She referred to the emotional experiences of the learners and explored the imaginative capacities of the learners by asking questions such as *"How would you react"* or *"Imagine if you were*".

The spiritual side of the learners was developed by capturing the imaginative capacities of the learners by reading stories of different composers' childhood experiences to the learners. Webster's Ninth New Collegiate Dictionary (1987:600) describes imagination as the act or power to form a mental image of something not present. She explained that the learners had to form mental images of the childhood experiences of the composers. They also identified with these composers and acquired a love for classical music for the rest of their lives.

The psychomotor development was illustrated by the next example. Ms Tambourine made use of the full spectrum of instruments, from self-made to sophisticated instruments. She explained that she also employed a drum-set, and while one learner played the drum the other learners did body percussion. The psychomotor development was extended through the use of the recorder. She plays *Symphony no. 6 in F major ("Pastoral Symphony")* by Ludwig von Beethoven and while they walk outside in the garden they used the back part of the recorder to create own bird-like sounds and creative bird-like movements (own creative dances).

✓ FINDINGS CONCERNING A NON-TRADITIONAL APPROACH TO MUSIC TO DEVELOP THE LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER

Ms Tambourine was primarily involved with music activities at the school, but also enjoyed other activities. The school had a music centre where she was a recorder tutor and she agreed that the music centre could be extended to house a music programme to develop the learning potential of learners.

Ms Tambourine extended the use of music by devising a certain project to each grade each year. Examples are learners' projects on Biblical instruments, the symphony orchestra and the African instruments. These projects needed research and careful planning and are normally executed by two learners working together on their project. The learners received prizes for their projects which were handed out at assembly. These projects were exhibited

at public institutions where outside people got the opportunity to view the projects.

To the question whether she, as other music educators, sometimes felt unappreciated she answered that she experiences it very intensively at parents evenings when parents passed the music teacher by, because the Arts and Culture learning area was not "*important to their children*". It would be a very positive development in the education field of South Africa if the role of the music educator could be extended to develop learning potential.

3.7.1 DISCUSSION: MS TAMBOURINE'S INTERVIEW

- ✓ This study investigated the notion that the developing of learning potential of the primary school learner involved the whole person (intellectual, emotional, psychomotor and spiritual, whole brain and multiple intelligence, through the construction of own knowledge. The final interview illustrated the holistic, integrated approach postulated by this study. The interview was also an example of the integration of the right brain hemisphere and the left brain hemisphere. The right brain hemisphere with its imaginary and intuition abilities motivates the left brain hemisphere to activate these higher levels of thinking.
- ✓ Although Ms Tambourine had in some ways a more modernistic approach to teaching by not allowing the learners to choose activities or music they preferred and not allowing the learners to raise their own opinions, her teaching was never boring. Her teaching embraced elements of fantasy and surprise, which created interesting and relevant teaching.
- ✓ Ms Tambourine approved of the integrated approach of the learning area Arts and Culture, but found that the African culture was overemphasised in the new curriculum.

4. GENERAL OVERVIEW ON RESULTS OF QUESTIONNAIRES AND INTERVIEWS

What is left to explore at this stage of chapter 5, is the similarities and dissimilarities of the quantitative inquiry, the questionnaires and the qualitative inquiry, the interviews and open-ended questions in the questionnaires.

4.1 FINDINGS CONCERNING A POSTMODERN SOCIETY, POSTMODERN LEARNING ENVIRONMENT AND THE CHANGING NEEDS OF THE LEARNERS

- ✓ The interviews and questionnaires confirmed, in varying degrees, that the modern paradigm had been replaced by the postmodern paradigm. It was confirmed that the postmodern learners had different learning and emotional needs. With the exception of one interview, it seemed as if music educators were teaching in a multicultural learning environment. The music educators (questionnaires and interviews) experienced the learning environment as democratic in the sense that learners preferred and were allowed to select their own activities. The interviews and questionnaires, mostly confirmed, except in one case, that learners desired to be actively (physically and mentally) involved in their own learning process.
- ✓ The interviewed music educators agreed that the learners were well informed about international pop music trends, which could be an indication of the *global village* and the technological world with its access to information. Surprisingly, the questionnaires did not support this opinion. Only 6 (42.9%) confirmed that learners were informed about international pop music trends. It may be speculated that the educators might not be as fully aware and informed about the music knowledge of their learners as expected.
- ✓ The literature study chapter 2, section 1, revealed that although the postmodern paradigm is becoming a reality the modern paradigm is still part of the mind set of most South African educators: It was showed that this was the case with the music educators interviewed, but not those completing the questionnaires. The music educators interviewed felt that their music taste differed from that of the learners, while the questionnaires, 9(64%), indicated almost similar music taste.
- ✓ Another contradiction between the questionnaires and the interviews were the perception of discipline problems. According to the literature study (chapter 2, section 3.4), discipline problems were supposed to be part of the postmodern era. The music educators interviewed verbalised discipline problems as verbal disruption, brutality and vandalism. It was experienced by the educators as the collapse of norms they valued. The questionnaires indicated that discipline problems did exist, 13 (92.9%), but it was not viewed as serious.
- ✓ Contrary to information from the literature study (chapter 2, section 3.4) questionnaires,

3 (2.4%), and interviews indicated that aggressive behaviour was not part of the learning environment.

The aim of the mixed methodology approach was to elicit the personal opinions of the music educators and the primary school principals. The above-mentioned information shows clearly that the interviews captured perceptions that the questionnaires did not.

4.2 FINDINGS CONCERNING THE MUSIC EDUCATOR AND AN INTEGRATED HOLISTIC APPROACH TO CLASS MUSIC

- ✓ According to Questionnaire A the educators implemented an integrated holistic approach in the music learning environment (chapter 5, table 5.25). However, a different picture emerged when the information was analyzed to determine whether activities were included to develop the whole person, and more important to this study, the level of implementation of these activities. It must be mentioned that the questions on the integrated holistic development of the learners were structured to enable the respondents to supply their own activities by means of open-ended questions as evidence of their own integrated holistic approach in the classroom. It also gave an indication of the level of implementation that took place. Questionnaire A delivered low response rates. It stands to argue that the open-ended questions were not completed because all aspects of the whole person, whole brain and multiple intelligence were not fully implemented in the classroom (chapter 5 and 6). According to Questionnaire A, intellectual development, 12 (85,7%), was offered on levels to provoke higher-order thinking. Although, the emotional development of learners were valued by the music educators, in-depth or higher level activities did not realise in the classroom. The spiritual development of the learners seemed to be an undeveloped area in music education, while psychomotor development was implemented with higher levels of development. Contrary to apparent indications, when analyzed, an integrated holistic approach was not altogether apparent in the music learning environment.

The interviews delivered more direct responses. One music educator admitted to the implementation of an integrated holistic approach to music education, but confirmed that she was not aware of it. It may be argued that the level of development could be influenced by the lack of knowledge. Another music educator was not aware of a holistic approach to music education and additionally the conclusion may again be reached that the level of development may be at stake. The last music educator

interviewed did not mention an integrated holistic approach in the music learning environment, but it was clear from the observations by the researcher that an integrated holistic approach was taking place on higher levels of implementation - imagination and intuition - than the previous two candidates.

4.3 FINDINGS CONCERNING A NON-TRADITIONAL APPROACH TO MUSIC TO DEVELOP THE LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER

- ✓ The primary school principals and music educators (Questionnaire A and Questionnaire B) formed part of this section. The questionnaires had a twofold aim: to establish what were the music educators' and school principals' opinions on a non-traditional role of music to develop learning potential at their schools and whether there was an interest in extending the use of music with an extracurricular programme. Questionnaire B indicated that 7 (53.8%) school principals felt that music might help learners to study more effectively, but interestingly enough only 3 (21.4%) believed that an extended music programme will benefit the image of the school. The music educators responded with 13 (92.9%) who would enjoy being involved in an extended programme to develop learning potential at school. The interviews indicated that all the music educators felt that an integrated holistic approach to music might develop learning potential. They also agreed that they would like to be involved in an extended extracurricular programme at school. Although the school principals responded that music might enhance the learning process, they had opposite views on an extended programme at school. While one of the headmasters was very positive towards such a programme as part of the extracurricular activities at the school, the other headmaster had doubts about an extended music programme at the school.
- ✓ Questionnaire A and Questionnaire B indicated that the music educators were primarily involved with music activities as part of their extracurricular programme. The interview with one of the headmasters delivered an interesting response when the headmaster announced that he used his staff wherever he needed them and did not employ the music educator for music activities only.

5. OVERVIEW

Chapter 4 collected, analyzed and interpreted the data from the questionnaires and interviews. It may be concluded that definite signs of a postmodern learning environment

was evident in the learning environment. Secondly, music educators were aware of the holistic development, but doubts arose to the level of implementation and will be discussed in detail in chapter 6. Lastly the conclusion had been reached that a non-traditional role to music was feasible, but the music educators and primary school principals needed guidance on implementing such a programme at their schools.

CHAPTER 6

FINAL CONCLUSIONS AND RECOMMENDATIONS

1. INTRODUCTION

Professor Kader Asmal claims (The South African Music Teacher 2000:13) that the education system has yet to take full advantage of the potential role of music. The same vision is shared by the researcher and it lead to the research addressed in this study. The argument rests on the conceptual framework described in chapter 2 and 3, which stated that a non-traditional approach to music can impact and develop the generic learning competencies, as well as higher-order learning competencies. The innate nature and structure of music resonate with the whole person, multiple intelligence and the whole brain approaches to learning and learning potential development. Chapter 4 covered the research methodology, the research design, the sampling procedures and the data collecting instruments. Chapter 5 analyzed and interpreted the data gathered from the questionnaires and interviews. In this final chapter conclusions to the preceding study are drawn in the light of the research aim stated in chapter 1. Furthermore, the limitations of the study are covered and recommendations made.

2. FINAL CONCLUSIONS

The final conclusions to this study are formulated on the basis of the aim and sub-aims that were presented in chapter 1. Final conclusions related to the sub-aims, namely the postmodern elements in the learning environment and the changing needs of the learners, the traditional and current position of music in the Arts and Culture learning environment, an investigation into music to develop the learning potential of the learners and the extracurricular involvement of the music educator, will now be addressed. The extracurricular involvement of the music educators emerged while conducting the investigation.

2.1 THE PARADIGM CHANGE, POSTMODERN ELEMENTS PRESENT IN THE LEARNING ENVIRONMENT AND THE NEEDS OF THE PRIMARY SCHOOL LEARNER

The literature study (chapter 2, section 2.1) indicated that the modern paradigm is in a process of being replaced by the postmodern paradigm. Postmodern elements were identified and discussed throughout the literature study. Questionnaire A and the interviews investigated and confirmed the presence of these elements in the learning environment that consequently pointed to the changed learning needs of learners, and particularly primary school learners (chapter 5). What needs to be addressed at this stage, are the final conclusions regarding the paradigm change, the postmodern elements present in the learning environment and the learning needs of the learners.

- ✓ The postmodern society is a **multicultural society** (chapter 2, section 3.2.2). With the exception of one school, Questionnaire A and interviews supported the literature study by indicating that the majority of music educators taught multicultural groups of learners. The learners came from different cultural backgrounds, life experiences, traditions, life styles and had different needs. Accordingly, the learning environment has to accommodate the multicultural diversity and unique needs of learners, with curricula and learning programmes which reflect the diversity of the learners.
- ✓ The literature study (chapter 2, section 3.3) revealed that it became increasingly important in the complex postmodern era to change the school curriculum to a **transformational curriculum** where information is no longer transferred (teacher-centred), but rather constructed by the learner (learner-centred). Such transformative activities, *inter alia*, include active, *hands on* experiences where learners learn by sharing and communicating with each other, and the learning facilitator. The empirical data were gathered from the target population which focused on educators' and principals' perceptions. 14 (100.0%) of the educators who completed Questionnaire A, as well as the educators who were interviewed felt that learners wanted to be actively involved when learning. It means that the innate, activity-centred nature of Class Music resonates with the characteristics of a transformational curriculum. Teaching and learning is a process of sharing and communicating by all participants. The learners get

the opportunity to construct knowledge, while the music educator gets the opportunity to develop the learning potential of the learners through sharing his or her own practical and theoretical knowledge with the learners.

- ✓ The literature study (chapter 2, section 3.3) exposed that the own **autobiographical information** of the learner forms part of the learning process, because subjective understanding advances true understanding. Chapter 2, section 5.4 pointed out that although knowledge is socially constructed it is a subjective rebuilding of concepts of knowledge, truth, communication and understanding. Questionnaire A supported the literature study with the finding that learners needed to express their own opinions in a dialogic and democratic learning environment. 11 (84.6%) of the music educators indicated that learners needed a dialogic learning environment and 10 (71.4%) indicated that learners needed a democratic learning environment. All, except one music educator interviewed, agreed that the postmodern learners wish to select their own learning activities when given the opportunity and they want to share the responsibility for learning with the educator. Kantor (1990:73) contributes to the importance of autobiographical information in the learning environment by stating:

Autobiography, then, becomes a key to understanding of the self, of the times and places in which we have lived, and thereby of the nature of the curriculum.

Hence, it is apparent through the literature study that education in the postmodern learning environment, is a process of engaging, experiencing, choosing and acting. It is a complex learning environment that demands insight and flexibility from educators. Chapter 2, section 3.4 confirmed that the postmodern curriculum model is complex, pluralistic and an unpredictable system. It is a system that is always in progress or transition. Teaching and learning cannot be handled in a modernistic fashion. The implications of a democratic, dialogic and active learning environment pilot an **open democratic relationship** between the educator and learner.

- ✓ It was clearly pointed out by the literature study (chapter 2, section 3.2.1) that there is no longer a single fixed authoritative body of **knowledge** for subjects as perceived in the

modern times. Other dimensions of life play a role in the acquisition of knowledge and therefore the establishment of a body of knowledge that is not static, but fluid and emerging in the postmodern world. This was however partly refuted by Questionnaire A as 6 (42.9%) of the music educators indicated that learners were not informed about international pop music trends, which means that they did not acquire knowledge from other sources than the school music environment. A surprising contradiction was the data received from the music educators interviewed. They found that the opposite was true and perceived learners as informed about international pop music trends. Two deductions can be made from these sources. First, learners should be encouraged to explore other than the customary sources of information in the postmodern world with the abundant availability of information. Second, this finding stresses the importance of the music educators and learners as co-creators of knowledge. Kirkby and Kuykendal (1991:23) elaborate by explaining that the role of the educator is to provide a long term, open assignment to encourage higher-order thinking skills. There must be a climate of ongoing inquiring and knowledge making that leads to real transformation of the learners. Educators cannot and should no longer provide learners with all information available, but should rather play a strong **managerial** and **motivational** role when facilitating the process of knowledge construction.

- ✓ It was reported in chapter 2, section 3.2.2 that the postmodern society is a technologically driven society which impacts on the **tempo** and **quality of life styles** of people. This often results in parents and their children not having time for quality communication. In the interviews educators reported that the technological postmodern society had an influence on the tempo of the lives of learners. Four of the educators interviewed pointed out that parents in general did not spend adequate time with their children. Consequently educators have to fill this learner need by spending more time to listen to *personal stories* of learners. One could argue that a predictable consequence for a lack of quality communication between parents and children may be the perceived collapse of norms and values expressed by music educators and school principals. Hence, the role of the educator will have to include not only fulfilling the learning needs, but also the emotional needs of learners. Chapter 3, section 3 pointed out that social communication and interaction features very strongly in the music learning environment. The non-traditional role of music may be instrumental in providing opportunities to fulfil

the emotional and learning needs of the learner through communication and interaction with peers and the music educator.

- ✓ Spies (1997:58) claims that postmodernism has a direct impact on music. The technological developments of the postmodern world make it possible to **popularize music** to be more assessable to a wider group of people. Technology makes it possible to process music by employing methods like fragmentation, shortening, synthesising and adjusting rhythm with the use of percussion instruments. The literature study (chapter 2, section 3.2.2) study showed that classical music which was traditionally perceived as *high culture* has lost its privileged position in the postmodern society. The interviews indicated that Class Music has lost its dignified position in the postmodern learning environment. This state of affairs was condemned by music educators. One music educator explained that she attempted to develop an appreciation for classical music by referring to popular music as *“pop corn which pops up in the air and is gone forever, but classical music lasts forever”*. Questionnaire A did not completely support this view and indicated that only 8 (57.1%) of the music educators felt that learners enjoyed the popularizing of classical music. Music educators have to recognize the changing needs and preferences of the learners. Music educators have to develop the right brain hemisphere with popular music and its more rhythmic and emotional qualities, as well as the left brain hemisphere with classical music and its more intellectual qualities. The music educator also has to focus on **varied music** and **world issues** which can be addressed through popular music and classical music.

2.2 THE TRADITIONAL AND CURRENT POSITION OF MUSIC IN THE ARTS AND CULTURE LEARNING ENVIRONMENT

When studying the Syllabus for Class Music for Primary Schools of 1978 (chapter 1, section 2.3) it was apparent that the traditional role of music was mainly a left brain hemisphere activity where learners had to learn to read music by the transferring of knowledge. It was mentioned in chapter 1, section 2.3 that learners had to read music at the earliest possible stage. When analyzing Study Guide no. 9 of 1889 (chapter 1, section 2.3) a change of focus from a teacher-centred to a learner-centred approach, where the diversity of learners is recognized was apparent. Additional changes appeared after the 1994 elections with amendments to the

existing syllabi. In 1997 a complete new education system was announced which also included the music and arts. Class Music was included in the learning area Arts and Culture with an interdisciplinary approach. This is a complete deviation from the previous curriculum.

It was found through the literature study that music could play a more pronounced role in the learning area, Arts and Culture. Music should be operationalized, not only to develop the learning potential of the learners, but also to extend the role of the music educator in the learning environment. Although OBE is an approach to fit the postmodern conditions of the twenty-first century, the innate quality of music to enhance the learning potential of the learner has largely been overlooked. It was also found that music could be very valuable to narrow the gap between advantaged and disadvantaged learners. Chapter 3, section 3.5 pointed out that music therapy is one of the options to assist the learners to develop their learning potential. Music soothes, calms, heals and brings joy and beauty to people. Music puts the learner in touch with his or her own inner feelings and has the capacity to reach nonverbal places. Chapter 3, section 2.1 confirmed that music helps directing the focus of attention inwardly, instead of outwardly. The reverie state is highly ordered, because of the structured nature of the music with its specific sound rhythm and harmonic patterns.

Questionnaire B, completed by the primary school principals pointed out that 13 (92.%) felt that music has a role to play in the learning environment. The interviews supported this point, but the respondents felt that music had been robbed of its meaningful role with the introduction of the integrated approach of the Arts and Culture learning area. One school principal called the Arts and Culture learning area “a *watering down of everything*”.

13 (92.9%) of the music educators responded that an extended programme to develop learning potential will benefit the learners. The school principals who completed Questionnaire B were not as confident about the potential of music to help learners to study more effectively. 7 (53.8%) of the school principals felt that learners may study more effectively with the help of music. The interviews delivered similar responses. One of the school principals, as well as all the music educators, expressed the belief that it is an obtainable idea to extend the position of music and role of the music educator to accommodate a non-traditional approach to music. Another school principal was not in favour of an extended programme to develop learning potential. He claimed that extracurricular activities that did not involve all the learners of the

school is against his school's policy.

It was mentioned that one way to develop learning potential is through music therapy. One of the music educators interviewed, commented on the relaxed mood of the learners whenever Baroque music featured in the learning experience. She felt that the therapeutic qualities of music in the music learning environment were an undiscovered and underutilised field. Music as therapeutic means is considered as a field with an abundance of enrichment potential for the learning environment.

Consequently, the DLP-Conceptual Framework for Music was designed and presented as the primary recommendation to the study. The conceptual framework will be termed the DLP-Conceptual Framework for Music. The acronym, DLP, represents the words, development of learning potential. This conceptual framework addresses the needs of music educators and primary school principals (chapter 6, section 3).

2.3 AN INVESTIGATION INTO MUSIC TO DEVELOP LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER THROUGH AN INTEGRATED HOLISTIC APPROACH IN THE MUSIC LEARNING ENVIRONMENT

The innovation of this research is situated in the perspective of developing learning potential through the lens of the whole person, whole brain and multiple intelligence development through music. There are different levels through which learners must progress to achieve the highest levels of intellectual, emotional, spiritual and psychomotor performance, as well as higher levels of whole brain and multiple intelligence levels. Music educators are in the position to guide learners to achieve high levels of learning performance. The conceptual framework (chapter 2 and 3) demonstrates the various levels of Bloom's taxonomy of intellectual development, Krathwohl's taxonomy of emotional development, the levels of spiritual development, as well as the psychomotor taxonomies by Harrow and Simpson. Bloom's intellectual taxonomy ranges from memorization to the highest intellectual level of evaluation, while Krathwohl's emotional taxonomy ranges from merely being aware to characterification or the achieving of an own philosophy of life. The spiritual development of learners includes the development of intuition and imagery, while the highest level of psychomotor development, according to Harrow is non-descriptive communication and according to Simpson, complex overt responses. The researcher was therefore not only

interested in whether music educators were aware of an integrated holistic approach in the music classroom, but of more importance, their current level of implementation and depth of performance. Open-ended questions were included in Questionnaire A, to give the music educators the opportunity to display their own, not necessarily the questionnaires' examples of activities of an integrated holistic approach, in their classrooms. At the same time their examples could be analyzed and interpreted as an indication of the extent to which an integrated holistic approach was implemented in their classrooms. The response to the open-ended questions was very low and it may be interpreted that the majority of music educators did not supply examples, because they did not implement an integrated holistic approach to the levels proposed in this study. The interviews however, could probe deeper into the levels of implementation in the classroom.

A considerable amount of literature on the **intellectual development**, as well as different methods of application of these skills in the music learning environment had been explored for this research. The literature study (chapter 3, section 2.3) pointed out that most educators were familiar with Bloom's taxonomy to develop the intellect of the learners, but other techniques such as guided dialogue, meta thinking, a learning atmosphere of critical thinking and the music educator as a model of critical thinking, are also useful methods to develop the intellect of the learner. These methods are proposed by this study, and are attainable methods to stimulate deeper levels of thinking applicable to music education. A deeper level of thought - critical thinking - can be generated by well-planned questions. It could be applied to an individual learner or posed to the whole group. Opinions of other learners and the music educator add a deeper level to critical thinking, learners interact, compare and evaluate. Evaluation is one of the primary outcomes of music education according to the literature study. Chapter 3, section 3.2 argued that music is par excellence a domain to develop critical thinking, because evaluation is one of the primary outcomes of music. The evaluation of music takes place by means of cognitive and affective criteria. It includes the evaluation of own and peer performances, as well as written assignments on own thoughts and experiences. The music educator is encouraged to develop a repertoire of questions to advance critical thinking. Structured debates do not encourage the development of critical thinking to its fullest. Pogonowski (1989b:37) goes further by emphasising when dialogue is in process the educator should not ask questions, but rather makes use of alternative strategies such as, declarative statements, reflective statements, invite the learner to elaborate and other strategies. The results from Questionnaire A indicated that 12 (61.5%) of the music educators developed the intellectual side of the learners by providing opportunities to learners to express their own opinions through

dialogue to stimulate critical thinking and not merely structured debates. 8 (61.5%) of the music educators indicated that they included left brain hemisphere activities in the music classroom. The interviews provided further insight into what the educators perceived as *intellectual development*. The first three levels of Bloom's intellectual taxonomy (memorization, comprehension and application) were mostly implemented by the music educators through structured debates, questionnaires and worksheets. One music educator implemented higher levels of intellectual development (analysis, synthesis and evaluation) through reflective writing. One of the interviewed music educators supplied an example of what she interpreted as *intellectual development*. She did not grant the opportunity for open debates or discussions. She rather employed structured debates or discussions with specifically laid down criteria and all opinions had to be well motivated. Another example from an interviewed music educator was that learners were given the opportunity of completing listening exercises (application) to reflect on rhythm, melody and other elements of music. One music educator confessed that she was not aware that left brain hemisphere activities could be included in the learning experience of the learners. The conclusion may be reached that the current implementation of intellectual development in the music classroom was on lower levels of performance. Very few indications of the **higher levels of intellectual performance** were mentioned by the music educators and it could be argued that a lack of knowledge may be the reason. Music has the innate potential to assist learners to think for themselves and to develop higher-order learning competencies. Educators should not only be aware of the intellectual development of music education, but actively implement it on higher levels of analysis, synthesis and evaluation in an integrated holistic way.

Emotional development of learners was discussed in chapter 3, section 3. Krathwohl's and other affective taxonomies illustrated the different levels of emotional development. Krathwohl's affective taxonomy consists of the following levels, namely receiving, responding, valuing, organization and characterization. Chapter 2, section 3.4 affirmed those previous stable patterns such as tradition, patterns of meaning, beliefs and morals disappeared. It resulted in learners that need emotional support. The investigation found that the lower levels of the affective taxonomy were mostly practised by music educators. Questionnaire A indicated that all music educators valued the emotional development of the learners, with verbal reflection on emotional content of songs receiving the highest score. The open-ended question was ignored. The interviews sustained the perception of an awareness of emotional development of learners, but the implementation was mainly on lower levels (receiving, responding and valuing) of emotional development. Emotional

development on the third level, valuing, was mentioned by one interviewed educator who related the lyrics of songs to a personal level through questions about divorced parents, beggars and street children. The conclusion reached is that higher levels of emotional development are mostly absent from the music learning environment. It may be suggested that it could be of value to learners if music educators aimed at achieving the fourth level, judgement, and the highest level of emotional development, securing ethical principles.

The contribution of this study is prominently displayed by the development of the **spiritual intelligence** of the learners (chapter 3, section 4). The literature study pointed out that spiritual intelligence is an integration of the emotional and intellectual side of the learner. Two components of spiritual intelligence covered by this study were intuition and imaging. Intuition does not rely on facts and rote learning. Good thinkers not only have knowledge, but also an intuitive grasp of subjects. Music enhances intuition, because it encourages the grasping of concepts instantly, without reason or analysis. Imaging enhances inner thinking necessary for problem solving and higher-order thinking. 8 (57.1%) of the music educators who completed Questionnaire A, reported that they included activities in the classroom to create a relaxed state of mind to enhance effective learning. The open-ended questions were left uncompleted and the conclusion was reached that this may be an unexplored field in music education. The interviews supplied more in-depth information. It was confirmed that Baroque music was employed to calm learners down - in the classroom as well as in the school hall. One educator showed that she implemented spiritual development on higher levels and offered examples of how she developed imagination in learners. She explored the imagination of the learners by reading stories of the composers' childhood lives, asking questions like "*imagined if*" and she took learners outside into the garden to create own imaginative sound pictures with their recorders. The conclusion was reached that the music learning environment was the ideal environment to develop the spiritual side of the learners, because music enhances the integration of the spiritual, emotional and intellectual development of the learners. One can conclude that education should go beyond the development of the rational thinker. Music educators should be aware and informed about the learning possibilities embedded in developing the spiritual intelligence of learners. It is essential for music educators to develop higher levels of spiritual intelligence in learners, because music has the innate potential to assist learners to make use of this deep human capacity which all people have.

The **psychomotor development** of learners integrates all the facets of the whole person. It makes sense that the value of psychomotor development should be recognised and

implemented in the music learning environment. Two psychomotor taxonomies mentioned in this study were those by Peters and Harrow. Peters places perception on the lowest level of the taxonomy and complex covert responses as the highest level of performance. Harrow's first level is reflex movement and non-descriptive communication the highest form of performance (chapter 3, section 5.2). Responses from the music educators confirmed what the literature study advocated. The music educators implement psychomotor activities in the music learning environment on a high level of performance. 13 (100.0%) of the respondents indicated that they included psychomotor activities in the music learning environment. Creative dances were implemented as a form of psychomotor activity in the music learning environment. Creative dances form part of Peters' (chapter 3, section 5.4) highest level of psychomotor taxonomy. The open-ended questions supplied examples of their work in the music learning environment and in one case the music educator interviewed reported the performance of creative African dances with the accompaniment of African instruments produced by the learners. The conclusion is therefore that this section of the study was well implemented on all levels proposed by the psychomotor model of this study.

Chapter 2 explored the use of the whole brain and postulated a multiple intelligence approach in the music learning environment. The literature study (chapter 2, section 5.5.2) disclosed that the postmodern view of intelligence was one that supported diversity, plurality and learners with different intellectual profiles. All **four brain quadrants** and **different intelligences**, should as far as possible, be cultivated in the learning environment to achieve a fully integrated and holistic development of the learning potential of a learner. The music environment is traditionally associated with right brain involvement and therefore Questionnaire A question 2.4 investigated the use of left brain hemisphere activities in the music learning environment. The impression gathered from Questionnaire A was that both brain hemispheres were developed in the music learning environment. The interviews with the music educators contradicted this opinion. Only one example suffices as a case of the operationalization of multiple intelligence in the music learning environment. One respondent mentioned intuitive awareness with fantasy experiences where learners dressed up (imagination, right brain hemisphere), danced, sang, dramatized (psychomotor, emotional and right brain hemisphere) and carried out creative and written work (intellectual and left brain hemisphere). The other music educators were either unaware or aware, but did not implement an integrated holistic approach. Implementation took place on lower levels. A possible speculation of the researcher is that the music educators were not well informed about an integrated holistic development which included whole person, whole brain and multiple intelligence. It was therefore decided that the primary recommendation to the study

will be the DLP-Conceptual Framework for Music to assist the educator in planning for developing the whole person, whole brain and multiple intelligence through music to enhance the development of learning potential of learners.

2.4 EXTRACURRICULAR INVOLVEMENT OF THE MUSIC EDUCATOR TO EXTEND THE USE OF MUSIC IN THE LEARNING ENVIRONMENT

The innovation of this study is also situated in the novel idea voiced in this section where an extended use of music in the learning environment to develop learning potential is advocated. An extended use of music incorporates the whole person, whole brain and multiple intelligences and is not merely aimed at making music. 12 (92.3%) of music educators who completed Questionnaire A claimed that they would enjoy being involved in music as an extended activity at school to develop the learning potential of learners. Although only 3 (21.4%) school principals felt that music as an extended activity at the school would contribute to a positive image of the school, the school principals supported the music educators and felt that music had a role to play in the school. One school principal interviewed agreed that music had a role to play in the learning environment, but not through music activities to develop learning potential. The interviewed music educators and one of the school principals mentioned the need for information on the aspects of music education to develop the learning potential of learners. The music educators felt that the South African learning environment with its previously disadvantaged learners could gain immensely by such a programme. Simultaneously, the role of the Arts and Culture educator will be addressed, which is often perceived, according to the respondents, by society and colleagues as not as valuable and meaningful to the learner as other learning areas such as Mathematics, Science and Computer Studies. They agreed that music has a significant role to play in the learning environment.

It was established through this study that a practical way to assist music educators in the learning environment was to present a conceptual framework as an example to develop learning potential through music. The recommendation in the form of the DLP-Conceptual Framework for Music and other recommendations will be dealt within the following section.

3. RECOMMENDATIONS

In the light of the above findings, the following recommendations are made. The primary recommendations will be dealt with by means of the DLP-Conceptual Framework for Music

in the learning environment. Other secondary recommendations will also be dealt within this section of chapter 6. Recommendations regarding the methodology used for this study will be dealt within chapter 6, section 4. Figure 6.2 is a diagrammatic representation to conceptualize the micro and macro level of the DLP-Conceptual Framework for Music.

3.1 THE DLP-CONCEPTUAL FRAMEWORK FOR MUSIC IN THE LEARNING ENVIRONMENT

3.1.1 RATIONALE FOR DESIGNING AN INTEGRATED HOLISTIC CONCEPTUAL FRAMEWORK TO DEVELOP LEARNING POTENTIAL THROUGH MUSIC

The inspiration for designing the conceptual framework have presented itself while interviewing the music educators and primary school principals and while analyzing the questionnaires. There seemed to be a need for additional knowledge on the aspects of an integrated holistic approach to learning in the music learning environment. The higher levels of development illustrated by the different taxonomies on intellectual, emotional, psychomotor and spiritual development were not always accomplished. When it was accomplished it was very superficial and by chance. It was not purposeful and planned. The information produced by the literature study (chapter 2 and chapter 3) was that music can play a more significant role in the learning environment and learning potential can be developed by implementing an integrated holistic approach in the music learning environment.

One of the aims for designing this particular conceptual framework, DLP-Conceptual Framework for Music, is to extend the role of music in the learning environment to include a non-traditional approach to develop learning potential. It became clear through the questionnaire and interviews that the music educators also recognized the value of music in the learning and development of especially primary school learners (chapter 5). The extended role of music provides the music educator with a more relevant position in education.

Another reason for designing the conceptual framework lies in the intrinsic value of music to all people. Music is inherently valuable for people, because of its **uplifting qualities**. Music offers the learner the necessary conditions for achieving self growth, self-knowledge, optimal experience and musical enjoyment. Because music education provides learners with a fundamental part of life, it should be the birthright of the child not only to receive music

education, but to experience music as a broad extension of human development. This conceptual framework aims at providing the learner with a deepened and enriched experience of life.

The macro level of the DLP- Conceptual Framework for Music has been dealt within chapter 2 and 3. The micro level functions on a more direct way of developing learning potential by means of a performance task based on the construction of own learning by the learner in the music learning environment. The principles of the conceptual framework will now be discussed.

3.1.2 PRINCIPLES WHICH GUIDED THE DESIGN OF AN INTEGRATED HOLISTIC CONCEPTUAL FRAMEWORK TO DEVELOP LEARNING POTENTIAL THROUGH MUSIC

The DLP-Conceptual Framework for Music is underpinned by six broad principles. These principles encapsulate the fundamental ideas on which the conceptual framework is founded. The principles provide the platform for personal growth and development of learning potential of the primary school learner in the music learning environment and the general learning environment. The key principles of the conceptual framework are the following:

(i) AN INTEGRATED HOLISTIC APPROACH TO MUSIC IN THE LEARNING ENVIRONMENT

The idea of cross-curriculum integration as opposed to fragmentation in teaching and learning is not a new idea, but has taken on a complex variety of meanings. Integration features in the new education system of South Africa. The Learning Area Integration Participants' Manual (Gauteng Education Department [GED] 1999:3-6) described it as adding parts together to make a whole. In the context of teaching and learning, integration is about the whole person and learners making sense of their lives. It is about treating the curriculum as a whole. Integration is a fundamental part of the new outcomes-based education system of South Africa. It starts with the critical outcomes that serve as an integrating feature of the curriculum, the learning areas are a form of integration as they integrate related subject disciplines and give a broader focus and the specific outcomes integrate the learning area. Integration takes place in the learning area, across selected learning areas and across the curriculum.

This conceptual framework aims at taking integration a step further as it holds a postmodern, integrated and holistic view to learning. It includes the integration of the whole brain - both brain hemispheres as in the theory of multiple intelligence and the four-quadrant whole brain model, as well as a holistic view of the whole person. This conceptual framework postulates the view that music is a way of achieving a holistic way of learning by integrating mind, body and emotions. The conceptual framework aims at cultivating all these human dimensions if the learning potential needs to be developed.

(ii) KNOWLEDGE-MAKING TO DEVELOP LEARNING POTENTIAL IN THE LEARNING ENVIRONMENT

The principle of knowledge-making and not the transfer of knowledge to the learner is a Vygotskian perspective valued by this model. Vygotsky believed that learning does not happen in an unmediated fashion, but is essentially socially constructed. Vygotsky also postulated the zone of proximal development (actual level of development and potential level of development). To achieve and extend the potential level of development the learner should be exposed to an enriched environment (chapter 2, section 5.3).

The music learning environment offers the enriched environment to develop the learning potential of each learner. The DLP-Conceptual Framework for Music, is based on the fundamental believe that learning potential is developed through the construction of knowledge. The construction of knowledge takes place by means of a performance task presented at the beginning of the learning programme. The performance task is flexible so that the learners can take initiative, choose between diverse activities, use technology in an own time frame to reach appropriate outcomes. Windschitl (1999:752-753) explains that intellectual transformation occurs when learners reconcile formal instruction experiences with existing knowledge and then mediate understanding.

A constructivistic approach to learning is not a set of isolated instructional methods crafted on traditional methods. It is a set of beliefs, norms and practices that underpin the learning environment. The demands on the music educator in this conceptual framework are very high, because the music educator is not, as in the traditional approach to Class Music, mainly on an end product, but rather on a non-traditional approach where learners construct deep understanding from the learning experience (chapter 2, section 5.4).

(iii) PROMOTION OF INTELLECTUAL AND PERSONAL GROWTH THROUGH MUSIC IN THE LEARNING ENVIRONMENT

As stated in chapter 2, section 3.2.1, an open system is characterized by change, irregularities and errors. In the postmodern world the learner is perceived as a decentred, self-organizing, open system. These less rigid and unpredictable conditions are also present in the classroom and curricula and are believed to enhance creativeness, intellectual and personal growth. The changing environment is a challenge to creative thinking and personal growth.

The emotional and spiritual side of the learners are often overlooked in favour of intellectual development. The music learning environment empowers the learner to deal with these postmodern conditions by also focusing on emotional and spiritual development. Although the unstable postmodern world has the potential to stimulate creativeness, it may on the other hand also induce anxiety and stress in the learners. Music plays a non-traditional role in the integrated, holistic conceptual framework for music with a therapeutic role to ensure personal growth, by putting the learner in touch with own personal feelings (chapter 3, section 3.5).

(iv) DEMOCRATIC AND DIALOGIC MUSIC LEARNING ENVIRONMENT

As discussed in chapter 2, section 3.3, the postmodern thinkers are in agreement on the importance of a learning environment where the learner expresses own opinions and thoughts. This was also confirmed through the completion of the questionnaires and interview by the music educators. The postmodern world is perceived as a world where there is not only one meta narrative with universal truths and standards, but each learner has an own narrative for his or her life. This also refers to the autobiographical information of the learner, which forms part of the learner's dialogue with the world and leads to a better understanding of the world. The democratic music learning environment supports freedom of choice where learners have a choice about certain elements of the music experience. It is a way of complementing instead of dominating learner thinking.

A democratic and dialogic music environment is, inter alia, dependent on the relationship between the music educator and the learner. The relationship must be a positive interaction between the music educator and the learner. It is not an authoritarian relationship where learning content is transferred to the learner. On the other hand the learner must be taught

to appreciate the expert opinion of the music educator. Instead of transferring learning content the role of the music educator is to cultivate the ability to think and to assist in challenging learners to take responsibility for own choices. The music educator should strive at nurturing honesty of thoughts and feelings, but also to develop respect for the opinion of other people. It was discussed in chapter 3, section 2 and confirmed through the interviews and questionnaires that thinking processes can indeed be transported from the context of the arts to other learning areas.

(v) HEALTHY SENSE OF THE SELF THROUGH MUSIC IN THE LEARNING ENVIRONMENT

The postmodern world has a definite influence on the personhood of the learner. The learner is an individual and entitled to own feelings and opinions. Psychological values such as self-confidence, acceptance of self, sense of belonging and initiative is stressed. A reality of the postmodern world is that self-discipline has lost its importance. The learner is part of a consumer community with a pleasure principle and instant gratification. The learners have to be motivated to keep the end product or the completion of the performance task in mind.

The role of music educator is to assist the learners to develop self-confidence and a sense of belonging to the music learning environment. It is done by presenting learners with a safe music learning environment, which is a centre of creativity and understanding. Learners are safe, but free to express and explore. It is an environment where the learners enjoy their activities and are motivated to complete the learning task with satisfaction of a task well done.

(vi) SENSITIVITY AND UNDERSTANDING OF THE DIVERSITY IN THE MUSIC LEARNING ENVIRONMENT

The concept of diversity has been addressed to a large extent in chapter 2, section 3.2.2 & 3.3. The acceptance and promoting of diversity in all its multiple forms are a fundamental element of postmodern thinking. It is especially important to take cognisance of the richness of cultures and diversity in South Africa. The music educator must sustain and nurture understanding for diversity among people. A diverse learning environment includes diversity of culture, values, learning styles, intelligences, gender, racial and political division. The concept of diversity is a prominent feature of the integrated holistic conceptual framework for music as it focuses on the aspect of multiple intelligence and whole brain development.

The postmodern educationalists and psychologists recognize the multiple dimension of human intelligence and brain dominance. This conceptual framework focus on an individually orientated system that does not treat all learners the same, but accommodate diversity among learners.

Musical intelligence is one of the multiple intelligences and of importance to this conceptual framework. Musical intelligence is influenced by intellectual, affective as well as the other intelligences. By stimulating musical intelligence the other intelligences are also developed.

The brain is recognized as a whole, interconnected and specialized, but should be developed to use all four-quadrants. Effective learning takes place if the whole brain is involved in learning and learning programmes should accommodate multiple intelligence and whole brain development to develop learning potential.

Music has the potential to redress past historical imbalances and assist in the healing process of the South African learning environment. It has the ability to transform and help learners to recognize the beauty of cultural diversity by introducing an openness to music styles, music instruments and diverse music practices to the learning environment.

3.1.3 THE MICRO LEVEL OF THE INTEGRATED HOLISTIC CONCEPTUAL FRAMEWORK TO DEVELOP LEARNING POTENTIAL THROUGH MUSIC

As explained before, the integrated, holistic model for music in the postmodern learning environment, functions on a macro and micro level, where the macro level underpins the micro level. The macro level has been discussed in chapter 2 and 3. The micro level will be discussed in the next section of chapter 6 (figure 6.1).

The conceptual framework proposes four premises to ensure effective functioning of the micro level. These are not principles, but guidelines necessary for the practical functioning of the micro level of the conceptual framework.

3.1.4 PREMISES GUIDING THE OPERATIONALIZATION OF THE MICRO LEVEL OF THE CONCEPTUAL FRAMEWORK

(i) TIME

Time is viewed as an active ingredient, necessary for development and growth. The learning experience may last from one period to as long as it may take to complete the music performance task. Time is not a restriction factor in this conceptual framework, but an aid to help the learner to develop learning potential. The postmodern learning environment is concerned about the best way for the learner to learn and not content to be taught or time schedules in which to complete a learning programme. This corresponds with the characteristics of outcomes-based education which claims that "*each learner is provided the time and assistance to realise his/her potential*" (DoE 1997c:18).

(ii) ORGANIZATIONAL STRUCTURE

This level of the conceptual framework proposes an organizational structure consisting of the learning task where learners construct and reconstruct own knowledge. Two examples of the designing of the music performance task are included for clarity. The music performance task focuses on the concept and content which will be covered. The core activity is the music performance task. An example for a grade five music performance task may be "*What makes it ticks?*" It is a broad music performance task to accommodate music concepts and concepts of other learning areas. The music performance task should evoke the music educator, and the learner's enthusiasm worthy to spend extensive time on it, as well as to make material and resources available for application to complete the music performance task successfully.

(iii) FACILITATOR

The role of the music educator is that of a facilitator and not merely a presenter of knowledge. The facilitator acts as a mentor who advises learners on their learning experience critical thinking is developed with questions and dialogue, creative thoughts are stimulated etcetera. Van der Horst and McDonald (1997:233) describe the facilitator as a mentor to learners. The word mentor is derived from the Greek mythology. A mentor was a counsellor to Telemachus and the main role of the mentor is that of a wise counsellor. Characteristics of a mentor are: a role model, a guide, a supporter, an experienced person, an adviser, a leader, a friend, mutual respect and accessibility. The facilitator is directly involved with the learners on the micro level of the conceptual framework. As mentioned before, within the macro level the involvement is not as direct as on the micro level. The awareness of the music educator of the potential of music to develop learning potential in the music and general learning environment links up with above-mentioned characteristics of the

mentor.

(iv) ARTS AND CULTURE LEARNING AREA

Keeping in mind that the conceptual framework may be implemented as an inter- or extracurricular set-up the conceptual framework has been designed against the backdrop of the Arts and Culture learning area. The music performance task makes use of the learning outcomes and assessment standards of the learning area Arts and Culture.

3.1.5 THE LEARNING TASK OF THE MICRO LEVEL OF THE CONCEPTUAL FRAMEWORK

The micro level carries the holistic, integrated principle proposed by the conceptual framework. It integrates the activities in the learning area Arts and Culture (internal integration) - singing, movement, listening, notation and instrumental work, art, drama and dance. It also links with other learning areas (chapter 2, section 5.5.3).

It will become clear when studying the micro level of the conceptual framework that it aims at a non-traditional music role - developing learning potential - and not necessarily aiming at an end product related to music only. The music educator designs a music performance task which addresses the learning outcome(s) to be demonstrated. The music performance task gives the learners the opportunity to demonstrate a product or performance to an audience by constructing own knowledge with the continuous focus of reaching the assessment standards.

The following section explains the learning task where learners construct and reconstruct knowledge. Two examples are included to demonstrate the designing of the music performance task. It must be noted that it is not a linear procedure, but a constant comparison with other ideas. The planning sheet may be viewed as a descriptive tool to assist the music educator in planning to engage the learners in a demonstration of the music performance task, including outcomes, assessment standards, organizing questions, key competencies, key concepts/content of the music performance task, orientation, and reflection on performance.

(i) ORIENTATION

The music performance task begins with an orientation phase which aims at getting a learner into a relaxed frame of mind. The spiritual development of the learner is a very important element of the learning process and forms part of this phase. Research confirms the importance of music for opening up the mind to assist the learner in reaching optimal learning potential (chapter 3, section 2). Although the music performance task may take a term to complete, every lesson starts with the development of the spiritual side of the learner. Music plays a fundamental role in all the phases of the learning programme to maintain relaxed alert state of minds. An example of the first stage of the orientation phase is the following (Meritt 1990:53):

- The learners are asked to make themselves comfortable. They are instructed to tense and relax muscles, taking them through the sequence from toes to head.
- They are asked to imagine their favourite place in their garden. Tell them to imagine that they are there. Notice what the air feels like. Let the music come into this scene. A good choice may be "*Prelude of the Afternoon Faun*" by Debussy. The music is light and impressionistic and evokes imagery.
- Emphasize that the music can take you wherever you want to go.
- After the end of the music, discuss imaginations, draw the impressions or write about them in your journal. Reflect on different questions to evoke higher levels of Krathwohl's emotional taxonomy.
- They are now in the right frame of mind to start the period. The choice of music is important to reach a creative or relaxed frame of mind while learners work. The music may also be used while working on music performance tasks.

After a relaxed learning atmosphere has been created, the music educator explains the music performance task, basic information needed and the outcomes of the music performance task to the learners. Although this conceptual framework is based on the principle of knowledge-making to develop learning potential, it will be a misconception to assume that learners do not need basic information to make the learning experience an optimal experience.

(ii) PRESENTATION OF THE MUSIC PERFORMANCE TASK

The music performance task needs very careful planning to include a learning experience which embodies all concepts, content and competencies to be taught. It may be a science concept, mathematics concept or any other desirable concept (integration across selected learning areas) and competencies such as observation, listen, identify, select etcetera. This study does not intent to give a detailed list of the information learners should know, but rather presents the essential idea of the music performance task the learners should demonstrate at the end of the learning experience.

The operationalization of the music performance task employs the learning outcomes and assessment standards of the learning area Arts and Culture. The educator selects the critical outcomes and assessment criteria from the Arts and Culture learning area to the development of the music performance task. A key organizing question addresses a specific focus or outcome(s) to be achieved. The question serves as a focusing point to focus on the concept and content and competencies required for the music performance task. The key competencies specify what the learners need to do and the key concept and content what learners need to know.

The learning opportunity has a socio-constructivistic approach to learning, which means that the learners are actively at work in a cooperative way. It must be noted that although the learners work in groups, each learner has an individual task to fulfill. The optimal participation of each group member assures the success of the performance of the music performance task.

There is a host of cooperative learning techniques to choose from, such as buzz groups, snowballing, brainstorming, jigsaw, role play, peer tutoring and others which will not be discussed here, but the cooperative learning technique important to this music performance task is multiple intelligence as a cooperative grouping technique. It is advised to form a group of at least five learners with the following dominant intelligences (table 6.1). The following is an example of employing multiple intelligence cooperative learning groups in the music learning environment.

Table 6.1 The multiple intelligence cooperative learning groups

- The music performance task expects the learners to create an own piece of music, making use of music notation, lyrics, instruments, movement and the presentation of a concert programme.	
- Each member has an own task to perform, but is also responsible for the success of the whole group.	
Logical-mathematical intelligence	- Control the accurate music notation.
Linguistic intelligence	- Write the lyrics.
Musical intelligence	- Compose the song with the help of the logical-mathematical intelligent learner.
Kinesthetic-bodily intelligence	- Organize the dance.
Interpersonal intelligence	- The leader of the group. Coordinate and design the programme.

This is an integrated holistic approach between the left and right brain hemispheres and the four-quadrants of the whole brain, whole person development and multiple intelligences. It also includes the principle of a democratic and dialogic music learning environment, as the learners get the opportunity to express thoughts and make choices.

(iii) CONSTRUCTING AND RECONSTRUCTING OF IDEAS

The next phase is the constructing and reconstructing of ideas. This phase includes a number of different aspects - clarification and exchange, exposure to conflict situations, construction of new ideas and evaluation. The groups discuss and plan their activities, pool resources and organize the task of each group member. The necessary research for the learning task is also done in this phase.

Although the learners develop social and interacting skills, conflict management is part of this phase. The role of the music educator is that of a facilitator and who acts in the following ways: higher-order thinking is developed by asking questions, monitoring learners' progress, allowing learners to discover, positive reinforcement, encouragement, motivation and instilling confidence in each learner. They construct their own knowledge and evaluate their activities or performance. All six fundamental principles are represented in this phase of the music performance task.

(iv) APPLICATION OF IDEAS

The next phase is the application of the new ideas into a presentable presentation or performance. By extending the context, the concept is consolidated and reinforced. The premise of time management proposed in chapter 6, section 3.2.1 is significant in this phase of the music performance task. Time is needed to practice the activities, but in the given time frame and in a constructive way.

The application of ideas embodies the principles of a healthy self and a positive self-concept and a dialogic and democratic learning environment. The groups present their music performance task and peer members get the opportunity to discuss the performance and to evaluate. This is a very important phase in the music class, because it assists the development of higher levels of intellectual development by critical thinking as discussed in chapter 3. Critical thinking is transferable to the general learning environment.

(v) REFLECTING ON PERFORMANCE OR PRESENTATION

The last phase is the reflective thinking phase, but should also be done throughout the process, not only at the end. The learners discuss their performances and self-evaluation takes place. The learner has constructed own knowledge based on direct experience with the music world and informal social interactions with music educator and peers.

The following is a basic example of a democratic and dialogic music learning environment which includes reflection of learning or meta learning:

- In Arts and Culture the learners may listen to musical examples and match the examples to the pictures of famous works of art.
- A discussion follows where learners and music educator get the opportunity to develop opinions and gather information on the topic.
- After the topic has been researched to find comparisons between mood and colour, textures and instrumentation, tempo and lines and other elements, the assignment may be completed with a dance, illustrating one of the art works.
- Again either a discussion follows with a meta cognitive approach, or the learners get the choice of noting their own learning experience in a journal or an own creative way.

This is an example where spoken and written dialogue have taken place. It helps the learner to use own autobiographical information, but the educator also provides the learner with a solid foundation.

3.1.6 DEMONSTRATION OF MUSIC PERFORMANCE TASK

Two music performance tasks have been prepared to demonstrate micro level involvement of the integrated, holistic conceptual framework for music in the postmodern learning environment. It will be demonstrated by means of the preparation sheet for the music performance task, but also a detailed description of the learning task to be followed.

Table 6.2 Planning sheet: Music performance task for grade 5 (adapted from Burz & Marshall 1999:13).

Outcomes: Learning outcome 1	Assessment standards: Dance: Demonstrate concentration and accurate listening. Music: sing own/group songs with accompaniment using music instruments Visual arts: Create art work that demonstrate planning and skilful use of design elements. Drama: Create drama based on own ideas.
Organizing question: How to develop ways of memorizing key concepts in other learning areas through music?	

Key competencies: Research Brainstorm Select Construct/reconstruct ideas Practise Present/perform Interactive skills	Key concepts/content Focus on applying knowledge to create ways of memorizing learning content through music.
Music performance task: Select a process of events in the learning area Natural Science that you need to remember. It may be the water cycle, the life-cycle of the butterfly or any science concept. Choose three different ways, using music, to memorize the content and present it to the class. Start by researching the science concept of your choice, brainstorm different ways of memorizing the content with the help of music, select the best ideas, construct and reconstruct ideas while practising and present the music performance task to the class.	
Orientation: Relaxing breathing exercise.	Reflecting on performance: Write a paragraph for your portfolio evaluating your performance, the response of the group and discuss the level of non-verbal communication while you were dancing.

What follows is a detailed description of the above diagrammatic presentation of the music performance task (DoE 2001:45-47):

Learning Outcome 1: The learner is able to create and present work in each of the art forms.

Assessment Standards: Dance: Demonstrate concentration and accurate listening: recognizes, repeats and creates rhythm and poly-rhythms, using clapping, stamping, movement, body percussion and natural instruments (eg. cans, sticks, stones).

Drama: Creates dramas based on own ideas and adaption of well-known stories: In the making: Develop story line and points of interest. Select appropriate actions to highlight key moments. Develop credible characters.

Music: Sings own/group songs with accompaniment using musical instruments from the immediate culture.

Visual Arts: Creates art works which demonstrates:

Planning and skilful use of design elements in presenting personal experiences, observations and responses. Use of geometric shapes and form in combination with natural forms.

Music performance task: Select a process or sequence of events you need to remember. It may be the water cycle, the life-cycle of the butterfly or any other science concept. Start by researching the concept you want to present. Brainstorm different ways of memorizing the science concept, select the best ideas, construct and reconstruct ideas while practising and present the music performance task to the class.

The music performance task:

(i) ORIENTATION:

The orientation phase starts with a rhythmic breath control exercise to slow down the body and mind rhythms. Osrandar et al. (1979:106-107) supply the following breathing exercise.

- Ask the learners to sit comfortably in their chairs. Relax the bodies by closing the eyes and take slow deep breaths through the nose. Inhale as much air as you can hold comfortably. Try to take in a little more air. Now exhale slowly. Feel a sense of relaxation as you exhale. Practice for a few moments. Now try and make the breathing rhythmic.

- Inhale to a count of four. Hold for a count of four. Exhale for a count of four. Pause for a count of four.

Inhale 2 3 4
Hold 2 3 4
Exhale 2 3 4
Pause 2 3 4

- Repeat four of this cadences of this rhythmic pattern. Try and slow down the cadenced breathing even up to eight counts.

Inhale 2 3 4 5 6 7 8
Hold 2 3 4 5 6 7 8
Exhale 2 3 4 5 6 7 8
Pause 2 3 4 5 6 7 8

- Explain to the learners that this breathing exercise can be done daily to slow down the body/ mind rhythms to their most efficient levels.

(ii) PRESENTATION OF THE MUSIC PERFORMANCE TASK:

The learning outcomes and assessment standards are explained. It is very important to make sure that the learners know exactly what the assessment standards are. They are given their music performance task and the learners are divided into smaller groups according to the multiple intelligence cooperative learning technique explained earlier.

The music educator discusses an example of some science concepts, namely the water cycle with the learners. It is done by asking the learners to write down all the important stages of their concept in short phrases. Vary the number of syllabi for each phrase.

Phrase one may be *hot air rise*. The next phrase *water evaporates*. After that *condensation* and *rain* with one syllable. Practice by saying the phrases in a steady beat of four beats. Sometimes some of the syllables will be faster to fit into the steady beat.

Refresh the minds of the learners by discussing the effects of tempo and dynamic level. Discussions with the learners are necessary to elucidate their knowledge of how to write rap songs and the application of the elements of music (chapter 3, section 2.3).

The learners are divided into appropriate groups for the preparation of the music performance task.

(iii) CONSTRUCTION AND RECONSTRUCTION OF IDEAS:

The learners move into their groups, decide on individual tasks and start working, constructing own knowledge. Although each learner has an individual task, the end performance must be an integrated performance including all the members of the group.

An example of a multiple intelligence cooperative group may be the following:

Logical-mathematical intelligent learners	Research
Linguistic intelligence	Write lyrics
Musical intelligence	Orchestration
Interpersonal intelligence	Leader and presenter
Kinesthetic-bodily intelligence	Mime and music

(iv) APPLICATION OF IDEAS:

The different groups get the opportunity to perform. The evaluation takes place by applying the assessment standards.

(V) REFLECTING ON PERFORMANCE OR PRESENTATION:

The learners are asked to write a short paragraph for the portfolio, evaluating the performance, analyzing the response of the group and discussing the level of nonverbal communication. This is an example of a holistic, integrated, constructivist approach to learning. The learners were intellectually stimulated by researching and designing the performance, as well as critical thinking in evaluating the different performances. They were emotionally involved by interacting with the group members and handling conflict. Spiritually they experience and practice relaxed breathing which will be of value to them throughout their lives. Psychomotor stimulation has been the body movements or miming. The different intelligence groups and the four-quadrants of the whole brain were stimulated by individual tasks for the dominant intelligence of each learner.

The following is another example of a music performance task demonstrating the incorporation of the micro level of the conceptual framework:

Table 6.3 Planning sheet: Music performance task for grade 6

Outcomes: Learning Outcome 4	Assessment standards: Dance: Communicate own ideas. Drama: Effectively using external forms of expression. Music: Listens to a recorded piece and identifies at which word, on an unmarked vocal score, a certain expression is used. Visual Arts: Identifies and practically demonstrates how various artworks convey messages about society.
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Organizing question: How do the tone colour of the different families of instruments in the symphony orchestra differ?	
Key competencies: Select Research Design Develop Present Reflect	Key concepts/content: The symphony orchestra with different families of instrument, each with a unique tone colour.
Music performance task: Create visual images to portray the different sounds of a symphony orchestra. Links the images up with the society you live in eg. a bird in your garden to imitate the flute. Choose instruments from each family group of orchestral instruments to portray the different tone colours of the instruments. Design music images to accompany the visual images, as well as body movements to portray the different tone colours of each family of instruments.	
Orientation: The effect of music on people exploring own emotions.	Reflecting on performance: Oral reflection in class on the work of the different groups, showing acceptance or rejection of the different sections of the work. All opinions have to be well motivated and have to reflect critical thinking.

The following is a detailed description of the music performance task (DoE 2001:55).

Learning Outcome 4: The learner is able to analyze and use multiple forms of communication and expression in Arts and Culture.

Assessment standards: Dance: Communicate own ideas.

Drama: Effectively using external forms of expression in a drama (eg. puppets, masks, props).

Music: Listens to a recorded piece and identifies at which word, on an unmarked vocal score, a certain expression is used (eg. accelerando, ritardando, crescendo, diminuendo).

Visual Arts: Identifies and practically demonstrates how various artworks convey messages about society - focus on:

Viewers

Styles

Appropriate techniques

Use of technological resources.

Music performance task: Create visual images to portray the different instruments of a symphony orchestra, eg. a bird from your garden to imitate a flute. Use different media to create the visual images. Choose one instrument from each family group of orchestral instruments to portray the different tone colours of the visual images. Also use creative body movements to reinforce the visual and music images. The research component has to be presented as a portfolio. It has to be a well performed task which meets the assessment standards.

The music performance task:

(i) **ORIENTATION:**

The music learning environment provides the learner with the opportunity to come to understand and promote intellectual and personal growth. Merrit (1990:128-129) presents an example of an activity to exercise emotions and personal growth.

- The learners are asked to make themselves comfortable. Select a piece of music to suit the general mood of the learners. If feeling depressed, start with a quiet piece of music such as one of the Bach's Brandenburg concertos, if feeling joyful choose, "*The Four Seasons*" by Vivaldi or if feelings of stress are experienced, choose the "*Pachelbel Canon*".
- Listen to the music and note any changes of moods or feelings which may occur. Ask learners to keep a record in journals of the different music and the effect of the music. In time each learner will have the knowledge of how to get in touch with own emotions and practice the activities at home.
- Choose music to stimulate creative imagination. It is an activity that stimulates the left and right brain hemisphere. Different listening material is chosen for the start of every lesson, although the music performance task may last the whole term or longer.
- A list of listening material to inspire creativity or music with a calming effect is the following:
 - Symphony no. 6 (*The Pastoral Symphony*) by Beethoven
 - "*Music for Mellows Minds*" by Janelea Hoffman
 - "*Air on G String*" by Bach
 - "*Four Seasons*" by Vivaldi

(ii) PRESENTATION OF MUSIC PERFORMANCE TASK:

Discuss the music performance task with learners. The learners must be aware of the opportunity to use different ways of creating the visuals. The postmodern learning environment is dialogic and democratic and learners have the opportunity to discuss and choose different creative visuals to represent the tone colours of the instrument. The logical-mathematic intelligence group may like to use the computer, while the kinesthetic-bodily intelligent learners may prefer creative body movements. The interpersonal intelligent or linguistic intelligent learner may perhaps prefer to choose music and write own words, while the musical intelligent learner may use instruments. It is a music performance task which will be done in groups and every learner has to fulfill a certain function in the group. A group work sheet must be handed in to indicate the function of each learner's involvement and it forms part of the assessment of the music performance task. The presentations are scheduled in an organized manner for the different groups on different music periods.

All the different intelligences are involved in the activity as well as the whole person of the learner - intellectual, emotional, and psychomotor.

Explain the learning outcome and assessment standards to the learners.

(iii) CONSTRUCTION AND RECONSTRUCTION OF IDEAS:

The different groups discuss their activity and function of each member of the group. They compare ideas and research, and compare ideas with previous ideas. They evaluate own activity and make the necessary changes to their presentation. Interpersonal intelligence is stimulated through cooperative or group learning. This phase of the music performance task carries on until the learners have completed their music performance task.

(iv) APPLICATION OF IDEAS:

The learners present their activity and the activity is discussed and evaluated by peer class members. This is an important phase as it involves higher-order thinking, because the learners have to evaluate. Critical or higher-order thinking involves the emotional or affective or right and left brain hemispheres.

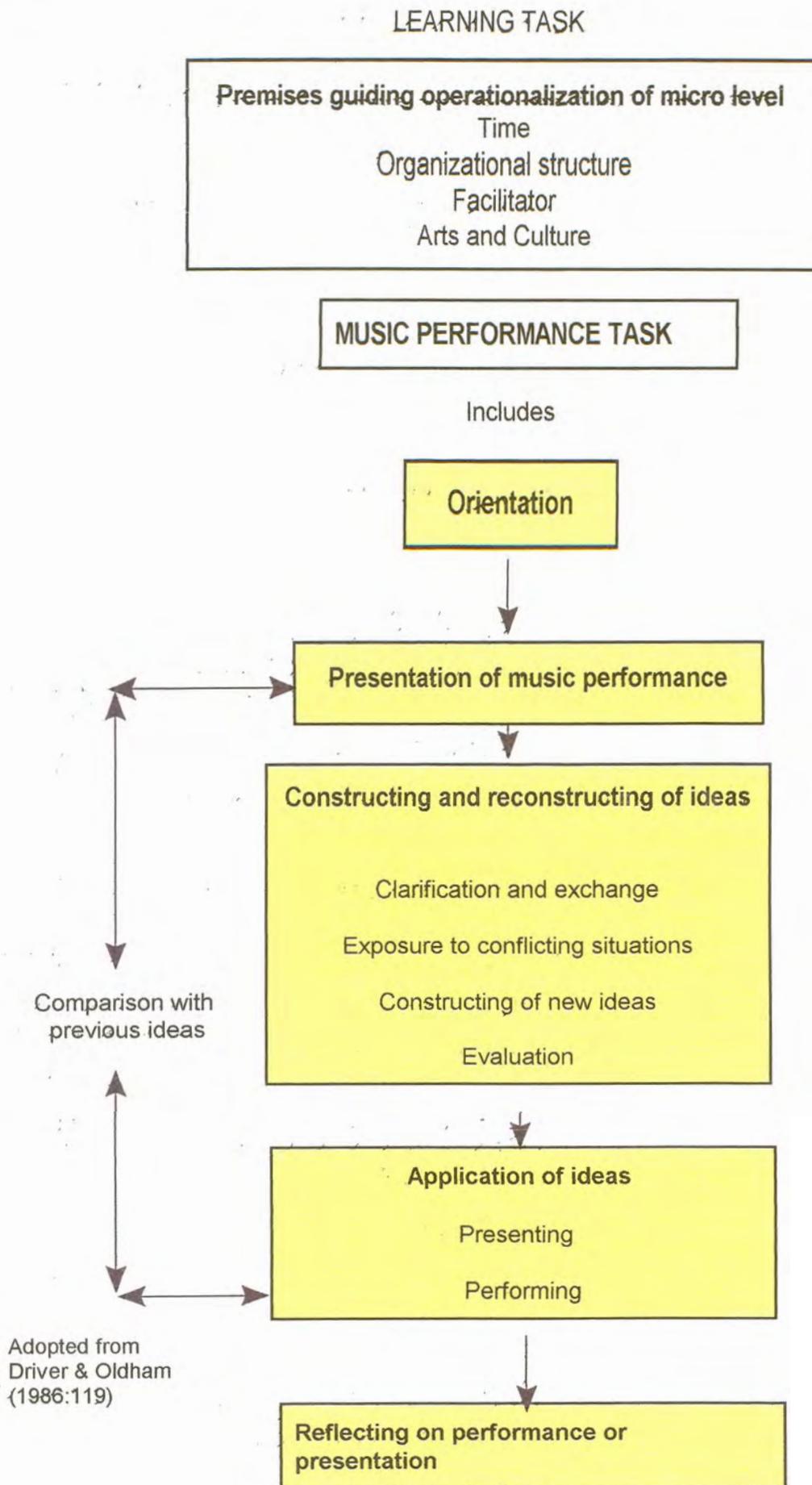
(v) REFLECTING ON PERFORMANCE:

This may be done through dialogue - an important postmodern element of learning. Meta learning is involved when the learners are asked to reflect on their own and the work of other groups. They have to motivate their opinions by showing the difference between ordinary and critical thinking (chapter 3, section 3.2).

3.1.7 OUTCOMES AND ASSESSMENT STANDARDS FOR THE INTEGRATED HOLISTIC CONCEPTUAL FRAMEWORK TO DEVELOP LEARNING POTENTIAL THROUGH MUSIC

The learning outcomes for the conceptual framework have been designed to demonstrate what the DLP-Conceptual Framework for Music has to achieve. The learning outcomes and

Figure 6.1 Learning task for the micro level of the conceptual framework



Adopted from Driver & Oldham (1986:119)

assessment standards for the postmodern holistic conceptual framework for the music learning environment are as follows:

Table 6.4 Learning outcomes and assessment standards for the DLP-Conceptual Framework for Music

Outcomes for conceptual framework	Assessment standards for conceptual framework
1. To demonstrate an integrated holistic approach to the music - and the general learning environment.	1. Accommodate the whole person - mind, body and soul, through music in the music and general learning environment. Involvement, commitment, participation and enjoyment.
2. To provide an extended or non-traditional role for the music - and the general learning to develop learning potential.	2. Accommodate the different needs of learners.
3. To provide opportunities for music as an intra- and extracurricular activity.	3. Provide extended opportunities to involve learners in a variety of music activities.
4. To transform learners from concrete to abstract thinkers with deep and true understanding.	4. Show evidence of application of knowledge, skills and attitudes in group music and other learning areas.
5. To reflect the diversity of the learners in the postmodern music learning environment.	5. Show evidence of sensitivity and knowledge about cultural groups, intelligence and diverse music interests.
6. To reflect a democratic music learning environment where learners have the right to choose and validate decisions.	6. Demonstrate an open approach to learners and activities.
7. To provide opportunities for critical and reflective thinking in the music learning environment.	7. Apply ability to critically analyze and express opinions of own and other work.
8. To demonstrate an understanding for the needs of the learners in a postmodern music learning environment.	8. Demonstrate a relaxed learning environment to build self-confidence and self-understanding of learners.
9. To reflect globalization as a world wide-trend in music.	9. Demonstrate understanding of popularization of music trends.
10. To promote values such as democracy, musical diversity, respect and honesty of opinion.	10. Demonstrate social and affective skills such as acceptance, appreciation, responsibility and sensitivity.

3.1.8 CHECKLIST FOR THE MUSIC EDUCATOR

A checklist (table 6.5) serves a double function. It serves as a controlling agent after the completion of the music learning task, to control how many of the elements of the model have been included in the learning experience. It also checks if the outcomes have been met.

CHECKLIST FOR MUSIC EDUCATORS - MACRO LEVEL

YEAR:

WHOLE PERSON DEVELOPMENT				
Intellectual development:				
1	2	3	4	
				Critical thinking
				Metacognition
				Memorizing with music
				Dialogue
				Cooperative learning
				Evaluation eg. tone colour, dynamic level etc.
				Educator as model
				Learning atmosphere of critical thinking
				Bloom's taxonomy
Emotional development:				
1	2	3	4	
				Affective content
				Interpersonal intelligence
				Intra personal intelligence
				Krathwohl's taxonomy
				Emotional intelligence
				Music therapy
Spiritual development:				
1	2	3	4	
				Intuition
				Imagary
				Learning with music
				Music therapy
Psychomotor development:				
1	2	3	4	
				Music and movement
				Body movements with music to learn music concepts
				Movement and expression
				Music and dance
				Music and entertainment
				Choral work with movement
				Taxonomy for psychomotor development

MULTIPLE INTELLIGENCE				
Left brain hemisphere:				
1	2	3	4	
				Logical-mathematical intelligence
				Linguistic intelligence
Right brain hemisphere:				
1	2	3	4	
				Spatial intelligence
				Music intelligence
				Bodily-Kinaesthetic intelligence
				Interpersonal intelligence
				Intra personal intelligence
				Emotional intelligence

FOUR QUADRANT BRAIN MODEL				
A-quadrant - upper left:				
1	2	3	4	
				Logical, rational
				Analytical
				Fact-based,
				Theoretical
B-quadrant - lower left:				
1	2	3	4	
				Organized,
				Methodical
				Sequential
				Planned
				Detailed
C-quadrant - lower right:				
1	2	3	4	
				Interpersonal
				Feeling-based, expressive
				Kinaesthetic
				Emotional
D-quadrant - upper right:				
1	2	3	4	
				Holistic, conceptual
				Intuitive, experemental
				Integrating
				Synthesizing

MUSIC LEARNING ENVIRONMENT				
1	2	3	4	
				Music performance task
				Learners are actively involved in learning
				Discover and explore
				Educator facilitate
				Cooperative learning
				Educator communicate through questions and learners through dialogue
				Classroom walls are filled learners work

ROLE AND MANAGEMENT OF MUSIC EDUCATOR				
1	2	3	4	
				Principles of framework applied
				Learners construct own knowledge
				Educator compliments learners' thinking
				Scaffolding
				Modelling
				Coaching, guiding
				Learners make decisions and negotiate problems
				Everyone is involved in class management
				Behaviour concerns are opportunities to discuss and solve problems

ASSESSMENT				
1	2	3	4	
				Meta learning takes place
				Outcomes and assessment are clear to learners
				Learners believe assessment is an opportunity to learn
				Educators develop ability to analyse problems and think critically with the standards of good thinking

MOTIVATION				
1	2	3	4	
				Threads of punishment are avoided
				Promising word awards are avoided
				Learners realize they are responsible for own learning
				Learners are disappointed if period ends
				Learners leave the classroom discussing their work
				Learners come after school to discuss their work
				Learners look forward to the learners activities
				The classroom is viewed as "our" classroom

Secondly, it assists the music educator in future planning of an integrated approach to learning in the music and general learning environment.

3.2 THE ROLE OF THE ARTS AND CULTURE EDUCATORS AND THE DLP-CONCEPTUAL FRAMEWORK FOR MUSIC IN THE LEARNING ENVIRONMENT

A secondary recommendation concerns the music educators and the primary school principals. Given the postmodern world we live in with all its demands, it is the task of educators to assist learners in coping in the postmodern world they have to live and learn in. To achieve this, pre service and in service training of educators are necessary. To implement the DLP-Music Model successfully, information sessions will have to be administered. These information sessions may be arranged through informative lectures, workshops, as well as formal and informal discussions.

Institutions involved in pre service training of educators should take cognisance of the DLP-Music Model and its significance for the Arts and Culture learning area. It could be to the advantage of pre service educators to include the extended use of music in the curricula. An added bonus is the breeding of an awareness among future music educators of the entrepreneurial possibilities as Arts and Culture educators.

The Arts and Culture educator, supported by the school principal, are the key role players in this endeavour to introduce a non-traditional approach to music to develop the learning potential of the primary school learners. The music educator has to facilitate the process of the implementing the conceptual framework. The DLP-Conceptual Framework for Music sufficed as an example to be used to design own music performance tasks to the specific needs of the learners of a school.

The DLP-Conceptual Framework for Music was designed to empower the Arts and Culture educator in the role of being the informed person on the staff on the development of learning potential through music. The benefits of music in the learning environment have to be propagated by the Arts and Culture educator for music and the general learning environment may be introduced as

To accomplish this, the music educator's task includes the perusing of all media resources for more information on this relatively unexplored field to keep up with the latest developments in this field. A need exists for information on the whole person, whole brain and multiple intelligence, as well as the constructing of knowledge by the learners. Educators and school principals should be informed by means of literature and news letters on these vital issues for the twenty-first century. This knowledge should also be shared with the rest of the staff and parents by means of informative talks, informal and formal discussions, workshops and making literature available to assist educators to accommodate music in their learning programmes of the specific learning areas.

4. LIMITATIONS OF THIS STUDY

The study was conducted while C2005 was phased in and the Report of C2005 Review Committee and the Revised National Curriculum Statement announced. Class Music has been replaced by the learning area Arts and Culture which is a complete deviation from the traditional approach to Class Music. During this time educators experienced various uncertainties and problems and it might have affected the Class Music educators' responses to the questionnaires and interviews. One of the questionnaires returned uncompleted with a note scribbled on the questionnaire that Class Music was not part of the school curriculum. Thus, the scope and depth of the study were constrained by this first limitation.

A second limitation is that the research tools were limited to former advantaged schools where Class Music was part of the traditional school curriculum. Consequently, no music educators from former disadvantaged schools formed part of the investigation. Indeed this limited the sampling size to the extent that the Research Aid Centre of the University of Pretoria performed only one-way frequency distributions tests and a limited amount of two-way frequency distribution tests on the data. It is therefore recommended that if this study were to be replicated or taken to scale, the target group and sample population are of greater magnitude and that they are selected from many representative institutions.

The third limitation of this study pertains to the nature of the questions in the two questionnaires. The researcher made concerted efforts to develop a collection of questions to elicit meaningful responses to support the aim of the study. The questionnaires were validated by two experienced

music educators and their contributions incorporated into the final product. However, it was found when the questions were analyzed that the nature of some of the questions could be improved. The word *choice* in Questionnaire A, question 2.2 was confusing (openly and freely; unstructured; structured debates; judgements of peer performances and self-judgement of own performances). The words *unstructured dances* and *openly and freely* could be interpreted as ambiguous to the respondents. Questionnaire A, question 2.9 contained concepts that may be unfamiliar to many music educators (verbal assessment, portfolios and reflective writing). Questionnaire A, question 2.12 could have been phrased with more accuracy (free movement; structured dances; own creative dances and dances from different countries). The words *free movements* and *creative dances* serve the same purpose and only one of the two should have been included in the questionnaire. The researcher accepts the criticism.

A fourth limitation and recommendation are related to the research methodology of this study, which can be described as a mixed methodology design of combining the quantitative and qualitative approaches. This research design required a superior knowledge of both these paradigms. As the researcher is a novice qualitative and quantitative researcher it placed restrictions on the results of the study. A recommendation may be the in-depth preparation of researchers through formal research methodology studies before at commencement of such research at a masters level.

The research tools for the study were questionnaires and interviews. A fifth limitation of the study is the absence of observations of classroom practices of schools.

5. FURTHER RESEARCH

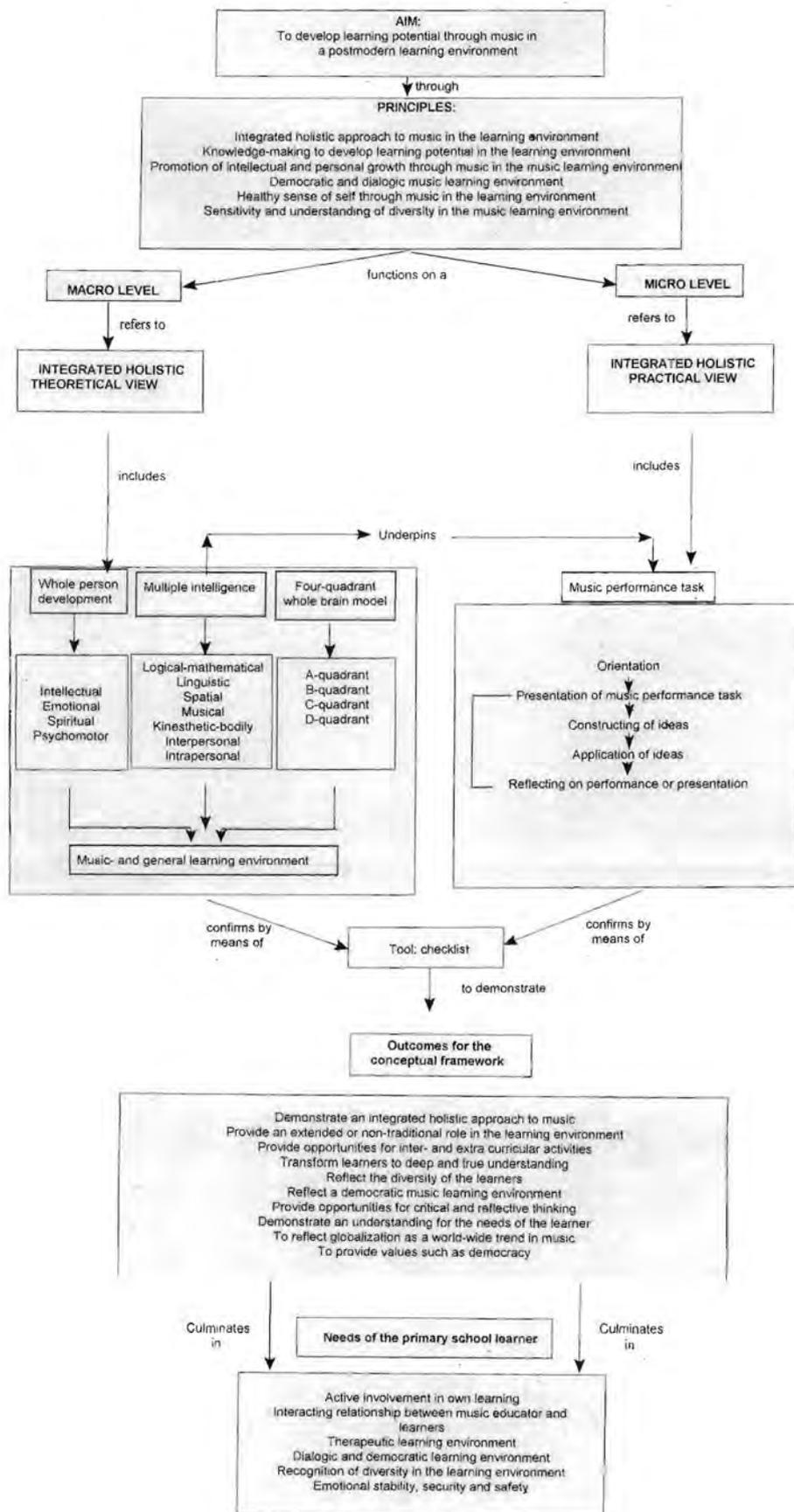
In general, too little has been done to develop the learning potential of learners through music in the primary school. This field offers almost unlimited opportunities. This study proposed the development of learning potential through music, but seeing that music is such a vast field, future studies could be directed towards one specific area. The following areas for further studies could be considered:

- ✓ The development of spiritual intelligence through music in the learning environment.

- ✓ The development of emotional intelligence through music in the learning environment.
- ✓ Multiple intelligence in the Arts and Culture learning area.
- ✓ The construction of knowledge in the music learning environment. The implementation of this concept should be investigated and developed for the learning area Arts and Culture.
- ✓ The evaluation of the DLP-Conceptual Framework for Music.

6. CONCLUSION

This study investigated the notion that a transformative curriculum model is necessary for the postmodern learning environment to transform the abilities of the learner. It was argued and confirmed that music has the innate qualities to develop the learning potential of learners. This powerful tool is at hand and should be employed to its fullest in the learning environment. The learning area Arts and Culture has the intrinsic potential, not only to cultivate the cultural aspects of society, but also to develop the learning potential of the primary school learner.



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ADDENDUM A

**LETTER OF APPROVAL FOR RESEARCH PROJECT:
GAUTENG EDUCATION DEPARTMENT**

Box 992
Pretoria
0001

Tel: (012) 346 1476

17 November 2000

Gauteng Department of Education
111 Commissioner Street
Johannesburg
PO Box 7710
Johannesburg 2000

Dear Sir

RE: APPROVAL OF RESEARCH STUDY QUESTIONNAIRES

In connection with the telephone conversation of the 17 November 2000, I herewith wish to confirm that I am currently an M.Ed. student at the University of Pretoria, faculty of Education. I seek the approval for the completion of a questionnaire by primary school group music educators (Arts and Culture) and primary school principals. The questionnaire will assist me in my research studies.

I want to mention that the target population of the questionnaire includes a scientific and statistical selection of primary schools from all the Gauteng districts. It is the intention to have the questionnaires completed during February 2001.

Enclosed please find the following:

- Research proposal for the study
- Two questionnaires

I hope to hear from you soon in order to complete the administration

Kind Regards



M.E. van Niekerk
Tel: 346 1476

ADDENDUM B

COVER LETTER: QUESTIONNAIRE A & QUESTIONNAIRE B

Fakulteit Opvoedkunde

Geagte Respondent

U skool is gekies om aan 'n navorsingsprojek deel te neem. Die doel van die navorsingsprojek is om 'n ondersoek te loods na die moontlike uitbreiding van die rol van Klasmusiek tot 'n inter- of buitekurrikulêre program, om sodoende die leerpotensiaal van die primêre skoolleerder te optimaliseer.

Dit sal waardeer word indien u, ten spyte van 'n druk program, bygaande vraelys invul en voor 23 Februarie 2001 in die ingeslote, gefrankeerde koevert kan terugstuur. Die vraelys sal ongeveer vyftien minute neem om te voltooi. U is anoniem of naamloos in die ondersoek en geen antwoorde kan na 'n betrokke persoon of skool terugherlei word nie.

U eerlike en openhartige opinie sal 'n belangrike bydrae tot die ontwikkeling van die leerarea, Kuns en Kultuur, asook die belangrike rol van musiek in die leeromgewing, lewer. U bereidwilligheid om aan die ondersoek deel te neem, word op prys gestel.

Met vriendelike groete

Die uwe

DEKAAN

STUDIELEIER

NAVORSER

Faculty of Education

Dear Respondent

Your school has been chosen to participate in a research project which investigates the possibility of extending the role of Class Music (Arts and Culture) to an inter- or extra-curriculum programme to develop the learning potential of the primary school learner.

It would be appreciated if you could, in spite of your busy schedule, complete the following questionnaire and return it in the stamped envelope before 23 February 2001. It will take about 15 minutes of your time. You will be anonymous in the research investigation and no information answers can be related to a person or school.

Your honest opinion will render an important contribution to the development of the Arts and Culture learning area, as well as the significant role of music in the learning environment. Your willingness to participate in the research is highly appreciated.

Respectfully yours

DEAN

STUDY LEADER

RESEARCHER

ADDENDUM C

**COVER LETTER: REQUEST FOR PARTICIPATION IN
RESEARCH PROJECT**

Februarie 2001

Fakulteit Opvoedkunde

Die Hoof

Geagte Heer

**RE : NAVORSINGPROJEK NA DIE MOONTLIKE UITBREIDING VAN
KLASMUSIEK (KUNS EN KULTUUR LEERAREA)**

Marinda van Niekerk is tans besig met studies aan die Universiteit van Pretoria ter vervulling van die graad M.Ed.(Kurrikulum studies). Sy onderneem 'n navorsingprojek as deel van die vereistes van hierdie graad.

U skool is een van twee skole wat gekies is om aan die spesifieke navorsingsprojek deel te neem. Die doel van die navorsingsprojek is 'n ondersoek na die moontlike uitbreiding van Klasmusiek (Kuns en Kultuur leerarea), tot 'n program wat die leerpotensiaal van die primêre skool-leerder ontwikkel.

Die ondersoek wat die vorm van 'n onderhoud inneem, sal afsonderlik met die skoolhoof en musikonderwyser gevoer word. As u gewillig is om aan die projek deel te neem, sal daar op 'n gepaste datum besluit word en 'n onderhoudskedule sal aan u gestuur word vir die nodige insae. Die onderhoud sal omtrent dertig minute van die skoolhoof en 'n uur en 'n half van die musiekonderwyser se tyd in beslag neem. U is anoniem of naamloos in die ondersoek en geen antwoorde sal na 'n betrokke persoon of skool terugkerlei word nie. Ek sal dit waardeer as ek van u terugvoering kan ontvang voor 28 Februarie 2001, sodat die nodige afspraak gefinaliseer kan word.

U eertlike en openhartige opinie sal 'n belangrike bydrae tot die ontwikkeling van die leerarea, Kuns en Kultuur, asook die belangrike rol van musiek in die leeromgewing lewer. U bereidwilligheid om aan die ondersoek deel te neem, word op prys gestel.

Met vriendelike groete

Die uwe

Departementshoof Onderwys
en Opleidingskunde

Studieleier

Navorser

February 2001

Faculty of Education

The Principal

Dear Sir/Madam

RE: RESEARCH REGARDING THE DEVELOPING OF LEARNING POTENTIAL THROUGH MUSIC

Marinda van Niekerk is currently engaged in studies at the University of Pretoria in fulfilment of the requirements for the degree M.Ed.(Curriculum studies). She is undertaking a research project as part of the requirements for this degree.

Your school is one of two schools, which has been chosen to participate in this research project which investigates the possibility of extending the role of Class Music to develop the learning potential of the primary school learner.

The investigation will be conducted separately with the school principal and the music educator of the school by means of an interview. If you are willing to participate in the research project a suitable date will be arranged for the interview and an interview schedule will be sent for your perusal. The interview will take approximately thirty minutes of the school principal, and one and a half hours of the music educator's time. You will be anonymous in the investigation. It will be appreciated if you could reply before 28 February 2001 to finalize a date for the interviews.

Your willingness to participate and share your opinions and experience will be highly appreciated and will render an important contribution to the development of the Art and Culture learning area, as well as a significant role of music in the learning environment.

I will be grateful if you could let me know as soon as possible whether you are interested in involving your school in this research project. I hope my request will be considered favourably.

Respectfully yours

Head of Department of
Teaching and Training

Study Leader

Researcher

ADDENDUM D

QUESTIONNAIRE A

QUESTIONNAIRE A
**QUESTIONNAIRE TO BE COMPLETED BY CLASS MUSIC
OR ARTS AND CULTURE EDUCATORS ONLY**

- Please circle the relevant number(s) of your preference
- If more than one option is applicable, please circle both or more
- When in doubt do not indicate your preference

PERSONAL DATA

		Office use:
		Respondent number:
		V 1 <input type="text"/> <input type="text"/> <input type="text"/> 1-3
Gender:		
Male	1	V 2 <input type="text"/> 4
Female	2	
Which of the following best describes your teaching position at school?		
- I teach Class Music or Art and Culture only	1	V 3 <input type="text"/> 5
- I teach Class Music or Art and Culture and other subjects or learning areas	2	
I am involved in the following phase(s)		
- Junior primary phase or foundation phase	1	V 4 <input type="text"/> 6
- Senior primary phase or intermediate phase	2	V 5 <input type="text"/> 7
- Senior secondary phase or senior phase	3	V 6 <input type="text"/> 8
How many years of teaching experience do you have?		V 7 <input type="text"/> <input type="text"/> 9-10
_____ years		
Age:		V 8 <input type="text"/> <input type="text"/> 11-12
_____ years		

INFORMATION CONCERNING THE INFLUENCE OF A CHANGING SOCIETY ON THE SCHOOL AND THE NEEDS OF THE LEARNERS

For your answer make use of the five point scale which varies from:
 "TO NO EXTENT(1)" to "ALWAYS(5)"

NB: The term CLASS MUSIC refers to the learning area ARTS AND CULTURE

QUESTION 1		SCALE					Office use:	
		1	2	3	4	5		
1.1	I teach multicultural groups of learners in Class Music	1	2	3	4	5	V 9	<input type="text"/> 13
1.2	I experience discipline problems in Class Music If indicated <i>To no extent (1)</i> go to 1.4	1	2	3	4	5	V 10	<input type="text"/> 14
1.3	I experience the following discipline problems							
	- Disobedience	1	2	3	4	5	V 11	<input type="text"/> 15
	- Verbal disruption	1	2	3	4	5	V 12	<input type="text"/> 16
	- Behaviour problems	1	2	3	4	5	V 13	<input type="text"/> 17
	- Not task orientated	1	2	3	4	5	V 14	<input type="text"/> 18
	- Other						V 15	<input type="text"/> 19
							V 16	<input type="text"/> 20
							V 17	<input type="text"/> 21
							V 18	<input type="text"/> 22
1.4	I find that learners need to discuss their own experiences' and stories in Class Music	1	2	3	4	5	V 19	<input type="text"/> 23

For your answer make use of the five point scale which varies from:
 "TO NO EXTENT(1)" to "ALWAYS(5)"

QUESTION 1		SCALE					Office use:	
		1	2	3	4	5		
1.5	I find a lack of perseverance among learners in completing activities in Class Music	1	2	3	4	5	V 20	<input type="text"/> 24
1.6	I find that learners enjoy being physical and mentally actively involved in Class Music	1	2	3	4	5	V 21	<input type="text"/> 25
1.7	I find that learners need to be involved in selecting classroom activities	1	2	3	4	5	V 22	<input type="text"/> 26
1.8	I find that learners are informed about international pop music trends	1	2	3	4	5	V 23	<input type="text"/> 27
1.9	I find that learners enjoy the popularizing of classical music (Pavarotti and friends, classical music in TV-commercials etc.)	1	2	3	4	5	V 24	<input type="text"/> 28
1.10	My music taste differs from that of the learners in Class Music	1	2	3	4	5	V 25	<input type="text"/> 29
1.11	I experience aggressive behaviour in Class Music If indicated <i>To no extent (1)</i> go to question 2	1	2	3	4	5	V 26	<input type="text"/> 30
1.12	I experience the following aggressive behaviour							
	- Verbal aggression	1	2	3	4	5	V 27	<input type="text"/> 31
	- Physical aggression	1	2	3	4	5	V 28	<input type="text"/> 32

INFORMATION CONCERNING THE MUSIC EDUCATOR AND A HOLISTIC APPROACH TO GENERAL CLASS MUSIC

For your answer make use of the five point scale which varies from:
 "TO NO EXTENT(1)" to "ALWAYS(5)"

QUESTION 2

SCALE

		1	2	3	4	5	Office use:
2.1	In Class Music I give the learners the opportunity to express their opinions about music If indicated <i>To no extent (1)</i> go to 2.3	1	2	3	4	5	V 29 <input type="text"/> 33
2.2	The learners express their opinions in the following ways						
	- Openly and freely	1	2	3	4	5	V 30 <input type="text"/> 34
	- Unstructured debates	1	2	3	4	5	V 31 <input type="text"/> 35
	- Structured debates	1	2	3	4	5	V 32 <input type="text"/> 36
	- Judgements of peer performances	1	2	3	4	5	V 33 <input type="text"/> 37
	- Self-judgement of own performances	1	2	3	4	5	V 34 <input type="text"/> 38
	- Other	1	2	3	4	5	V35 <input type="text"/> 39
2.3	Thinking skills taught in Class Music are						
	- Transferable to other subjects or learning areas	1	2	3	4	5	V 35 <input type="text"/> 39
	- Specific to Class Music	1	2	3	4	5	<input type="text"/> 40
2.4	I include activities in general class music that stimulate left brain hemisphere activities (mathematical/science and language activities)	1	2	3	4	5	V 36 <input type="text"/> 41
2.5	I discuss the emotional content of songs (hate, joy, love etc.) with the learners in Class Music	1	2	3	4	5	V 37 <input type="text"/> 42

For your answer make use of the five point scale which varies from:
 "TO NO EXTENT(1)" to "ALWAYS(5)"

QUESTION 2

SCALE

		1	2	3	4	5	Office use:
2.6	Learners express inner personal feelings in Class Music If indicated <i>To no extent (1)</i> go to 2.8	1	2	3	4	5	V 38 <input type="text"/> 43
2.7	Learners are given the opportunity to reflect on learning experiences by means of the following						
	- Verbal assessment	1	2	3	4	5	V 39 <input type="text"/> 44
	- Portfolios	1	2	3	4	5	V 40 <input type="text"/> 45
	- Reflective writing	1	2	3	4	5	V 41 <input type="text"/> 46
	- Other						V 42 <input type="text"/> 47
							V 43 <input type="text"/> 48
							V 44 <input type="text"/> 49
							V 45 <input type="text"/> 50
2.8	The learners perform activities in Class Music to create a relaxed state of mind If indicated <i>To no extent (1)</i> go to 2.10	1	2	3	4	5	V 46 <input type="text"/> 51
2.9	The activities to create a relaxed state of mind are the following						
	- I start the lesson with suitable, planned music to get the learners focused	1	2	3	4	5	V 47 <input type="text"/> 52
	- I make use of background music to get learners focused	1	2	3	4	5	V 48 <input type="text"/> 53
	- I play stimulating music while learners are busy with creative work	1	2	3	4	5	V 49 <input type="text"/> 54
	- Other						V 50 <input type="text"/> 55
							V 51 <input type="text"/> 56
							V 52 <input type="text"/> 57
							V 53 <input type="text"/> 58

For your answer make use of the five point scale which varies from:
 "TO NO EXTENT(1)" to "ALWAYS(5)"

QUESTION 2		SCALE					Office use:	
		1	2	3	4	5		
2.10	I teach musical concepts (beat, metre, tempo etc.) by means of							
	- Clapping / clicking etc.	1	2	3	4	5	V 54	<input type="checkbox"/> 59
	- Body movement	1	2	3	4	5	V 55	<input type="checkbox"/> 60
	- Creative movements	1	2	3	4	5	V 56	<input type="checkbox"/> 61
	- Other						V 57	<input type="checkbox"/> 62
							V 58	<input type="checkbox"/> 63
							V 59	<input type="checkbox"/> 64
						V 60	<input type="checkbox"/> 65	
2.11	I include dancing in Class Music	1	2	3	4	5	V 61	<input type="checkbox"/> 66
	If indicated <i>To no extent (1)</i> go to question 3.1							
2.12	I teach dancing in the following ways							
	- Free movement	1	2	3	4	5	V 62	<input type="checkbox"/> 66
	- Structured dances	1	2	3	4	5	V 63	<input type="checkbox"/> 67
	- Own creative dances	1	2	3	4	5	V 64	<input type="checkbox"/> 68
	- Dances from different countries	1	2	3	4	5	V 65	<input type="checkbox"/> 69
	- Other						V 66	<input type="checkbox"/> 70
							V 67	<input type="checkbox"/> 71
						V 68	<input type="checkbox"/> 72	
						V 69	<input type="checkbox"/> 73	

INFORMATION CONCERNING MUSIC AS AN INTER- OR EXTRA-CURRICULAR PROGRAMME TO DEVELOP LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER

For your answer make use of the five point scale which varies from:
 "TO NO EXTENT(1)" to "ALWAYS(5)"

DEFINITION: To accurately complete this questionnaire you need to know when a question refers to the extended or non-traditional use of music. It means that Class Music usually has an end product or performance as outcome. Non-traditional refers to the developing of learning potential as outcome, not necessarily a performance.

QUESTION 3		SCALE					Office use
		1	2	3	4	5	
3.1	I am primarily involved in music activities as part of my extracurricular duties at school	1	2	3	4	5	V 70 <input type="checkbox"/> 74
3.2	I prefer being involved in music activities only (choir, band, music evenings etc.)	1	2	3	4	5	V 71 <input type="checkbox"/> 75
3.3	I would like to be involved in an extended or non-traditional programme at school (music and study methods, music therapy etc.) rather than other activities	1	2	3	4	5	V 72 <input type="checkbox"/> 76
3.4	I feel that the learners may benefit from involvement in an extended or non-traditional use of music (music and study methods, music and therapeutic help etc)	1	2	3	4	5	V 73 <input type="checkbox"/> 77
3.5	The school uses music in an extended or non-traditional context If indicated <i>To no extent (1)</i> go to 3.7	1	2	3	4	5	V 74 <input type="checkbox"/> 78

For your answer make use of the five point scale which varies from:
 "TO NO EXTENT(1)" to "ALWAYS(5)"

QUESTION 3		SCALE					Office use:	
		1	2	3	4	5		
3.6	The school uses music in the following extended or non traditional ways							
	- Calm soothing music while learners enter the school hall	1	2	3	4	5	V 75	<input type="text"/> 79
	- Structured music (Baroque music etc.)	1	2	3	4	5	V 76	<input type="text"/> 80
	- Music in corridors	1	2	3	4	5	V 77	<input type="text"/> 81
	- Other						V 78	<input type="text"/> 82
							V 79	<input type="text"/> 83
							V 80	<input type="text"/> 84
						V 81	<input type="text"/> 85	
3.7	The school has a music centre where individual learners receive instruction in various instruments	1	2	3	4	5	V 82	<input type="text"/> 86

ADDENDUM E

QUESTIONNAIRE B

QUESTIONNAIRE B
QUESTIONNAIRE TO BE COMPLETED BY PRIMARY SCHOOL PRINCIPALS ONLY

- Please circle the relevant number(s) of your preference
- If more than one option is applicable, please circle both or more
- When in doubt do not indicate your preference

PERSONAL DATA

Gender:		Office use:		
		Respondent number:		
		V1	<input type="text"/> <input type="text"/> <input type="text"/>	1-3
Male	1	V2	<input type="text"/>	4
Female	2			
How many years of experience do you have as a primary school principal? _____ years		V3	<input type="text"/> <input type="text"/>	5-6
Age: _____ years		V4	<input type="text"/> <input type="text"/>	6-7

INFORMATION CONCERNING MUSIC AS AN INTER- OR EXTRA-CURRICULAR PROGRAMME TO DEVELOP LEARNING POTENTIAL OF THE PRIMARY SCHOOL LEARNER

For your answer make use of the five point scale which varies from:
"TO NO EXTENT(1)" to "ALWAYS(5)"

DEFINITION: To accurately complete this questionnaire you need to know when a question refers to the extended or non-traditional use of music. It means that Class Music usually has an end product or performance as outcome. Non-traditional refers to the developing of learning potential as outcome, not necessarily a performance.

QUESTION 1		SCALE					Office use:
		1	2	3	4	5	
1.1	Do you think that Class Music or the learning area Arts and Culture still has a role to play in education today	1	2	3	4	5	V 5 <input type="checkbox"/> 9
1.2	Besides teaching Class Music as a school subject the school also offers music in an extended or non-traditional context If indicated <i>To no extent (1)</i> go to 1.4	1	2	3	4	5	V 6 <input type="checkbox"/> 10
1.3	The school uses music in the following extended or non- traditional ways						
	- Calm soothing music while learners enter the school hall	1	2	3	4	5	V 7 <input type="checkbox"/> 11
	- Str+C66uctured music (Baroque music etc.)+C89 while writing tests	1	2	3	4	5	V 8 <input type="checkbox"/> 12
	- Music on corridors	1	2	3	4	5	V 9 <input type="checkbox"/> 13
	- Music in administrative buildings	1	2	3	4	5	V 10 <input type="checkbox"/> 14
1.4	In my opinion it may be of help to the learners if they were taught how to study more effectively with the help of music	1	2	3	4	5	V 11 <input type="checkbox"/> 15

For your answer make use of the five point scale which varies from:
 "TO NO EXTENT(1)" to "ALWAYS(5)"

QUESTION 1		SCALE					Office use:
		1	2	3	4	5	
1.5	I believe that music may be used as a therapeutic activity (relax pupils, enjoyment etc.) in the school	1	2	3	4	5	V 12 <input type="checkbox"/> 16
1.6	I think that an extended or non-traditional use of music may contribute to a positive teaching and learning image at the school If indicated <i>To no extent (1)</i> go to 1.8	1	2	3	4	5	V 13 <input type="checkbox"/> 17
1.7	The image of the school will benefit in the following ways						
	- It indicates that the school is serious about learning	1	2	3	4	5	V 14 <input type="checkbox"/> 18
	- The school is concerned about each learner	1	2	3	4	5	V 15 <input type="checkbox"/> 19
	- It will attract more pupils to the school	1	2	3	4	5	V 16 <input type="checkbox"/> 20
	- The school will be perceived as an innovative and progressive school	1	2	3	4	5	V 17 <input type="checkbox"/> 21
1.8	I encourage new ideas that will be of benefit to the school	1	2	3	4	5	V 18 <input type="checkbox"/> 22
1.9	I am prepared to encourage training of the music educator to fulfil an extended or non-traditional role at the school	1	2	3	4	5	V 19 <input type="checkbox"/> 23
1.10	The Class Music educator is primarily involved in music activities as part of her/his extracurricular programme	1	2	3	4	5	V 20 <input type="checkbox"/> 24

For your answer make use of the five point scale which varies from:
"TO NO EXTENT(1)" to "ALWAYS(5)"

QUESTION 1		SCALE					Office use:
		1	2	3	4	5	
1.11	The extracurricular activities of the Class Music educator includes the following						
	- Sport activities	1	2	3	4	5	V 21 <input type="checkbox"/> 25
	- Cultural activities	1	2	3	4	5	V 22 <input type="checkbox"/> 26
	- Organize functions	1	2	3	4	5	V 23 <input type="checkbox"/> 27
	- Music activities	1	2	3	4	5	V 24 <input type="checkbox"/> 28