Chapter 3

TRENDS IN THOUGHT, FRAMEWORKS AND CONCEPTS RELEVANT TO MUSIC TEACHERS IN THE 21ST CENTURY

> (Students) are like salt, sugar, flour and chalk, which all look pretty much alike and which have vastly different natures and uses. Having discovered the different capacities of his pupils, the teacher will – as far as possible within the plan, adapt his teaching to their differences (Highet 1989:197).

3.1 Introduction

Individual private music teaching is important in the current era of education, being one of the last of the great oral traditions with student and teacher often working together for many years in a close one-to-one partnership. The dynamics of each of these partnerships are different. Therefore the challenges that individual private music teachers face carry a lot of responsibility (Esping 2000:vii). This responsibility demands flexibility in meeting demands of students and calls for continuing professional development on the side of the teacher in order to keep up with trends in thought, frameworks and concepts relevant to the teaching environment (Thickstun 2009:60).

A trend can be seen as an inclination in a particular direction (Trend:2009), whereas a tendency is a likelihood of behaving in a particular way or going in a particular direction; a tendency to move towards, forward from or past a particular trend in thought or belief system (Tendency:2008). A framework is a basic conceptual structure used to solve or address complex issues (Framework:2009). This might refer to the various disciplines in this study coexisting with one another. The term concept is a cognitive unit of meaning – an abstract idea or a mental symbol sometimes defined as a ‘unit of knowledge’,

built from other units which act as a concept's characteristics. A concept is typically associated with a corresponding representation in a language or symbology such as a word. Its meaning is explored in mainstream cognitive science and philosophy of mind (Concept:2009).

Challenges teachers may encounter are how the meaning of these terms relate with music teaching, themselves and their pupils. These terms are present in many different contexts, disciplines and in each have similar or different meanings. The aim of this chapter will be to explore how these terms interact with or are in relation to one another in order to re-think current teaching methods.

As stated earlier, music teachers should be proficient in all the aspects of music they are responsible for teaching. A philosophy is necessary for overall effectiveness and serves as a sort of "collective conscience" for music teachers as a body (Reimer 2003:2). Knowledge about psychology, philosophy as well as music will guide teachers in moving towards challenging fixed pedagogical ideas, not necessarily arriving at specific answers, but broadening thinking processes in areas of concern. Because of the importance of brain profiles, personality types and Multiple Intelligences, these will be discussed in greater detail in chapters 5 and 6.

3.2 **Relevant psychological developments**

Relevant psychological developments relating to aspects of the thesis are discussed here. This contributes to the eclectic nature of the theoretical framework as briefly discussed in chapter 1.

3.2.1 **Humanistic trends**

Humanism within a psychological context refers to any mode of thought or action in which human interests and dignity are valued and which takes an individualistic, critical and secular perspective (Corsini 2002:454). Applied to teaching, a humanistic trend denotes a point of view that students are essentially positive and productive, that to be self absorbent is inherent, and that, given proper surroundings, students can reach their ultimate potential (Corsini 2002:455).

If teachers should apply humanistic psychology in teaching their students it will refer to an outgrowth of existentialism[5] and phenomenology[6] that focuses on the individuals' capacity to make their own choices and create their own style of life. This approach is holistic and it highlights spontaneity and the development of human ability through innovative means rather than the evaluation of unconscious or behavioural change (Corsini 2002:455 and Jordaan and Jordaan 1998:29). Corsini (2002:455) explains humanistic theory as a general approach to human behaviour and human life that emphasizes the uniqueness, worth and dignity of each individual, and the development of personal values and goals that reflect the interplay of physical, psychological and sociocultural factors. This is practically illustrated by Esping (2000:8) where she describes sympathetic[7] teachers as not merely reflecting what they hear, but instead responding to what excites each pupil and then reacting in a way that reinforces each student's

[5] A term associated with philosophers such as Kierkegaard and Nietzsche where they portrayed the viewpoint that one gives one's life meaning through action; life has no value unless one gives it value (Existentialism 2009). Therefore the individual is the centre of all thought. It is a reaction to philosophical and scientific systems that treat humans as members of a genus or instances of universal laws (Guignon 2005:252).

[6] Phenomenology refers here in a psychological context to the individuals' subjective experiences. In philosophy, experience refers to 'in-relation-to' phenomena, and is defined by qualities of directedness and worldliness which are evoked by the term 'Being-in-the-World' (Phenomenology 2009).

[7] Sympathetic here denotes a teacher with empathy for his/her students.

natural gifts. This is done by adjusting presentation, expectations, syllabus and even personality to suit each student's learning style.

3.2.1.1 The concept of Holism in teaching and learning

The term Holism is problematic to define since its meaning is based upon the discipline it refers to. Since this thesis deals with the interaction of a variety of disciplines it is important to look at extensive definitions of the term.

Kavanagh (2002:551) in *The South African Concise Oxford Dictionary* defines the noun Holism chiefly in philosophy as "the theory that certain wholes are greater than the sum of their parts." In medicine, the same dictionary regards the term as "the treating of the whole person, rather than just the symptoms of a disease." The author has found the definitions by Crystal (2006a:636) in the *Penguin Encyclopedia* of Holism and holistic medicine to be very extensive. Holism is there defined as:

> A thesis which maintains that some wholes are more than the sum of their parts; the wholes could be biological organisms, societies, art works; or networks of scientific theories. Methodological holism claims that there are large-scale laws of societal behaviour which do not reduce to laws of individual behaviour.

Holistic medicine on the other hand can be seen as:

> An approach to medical treatment based on the theory that living creatures and the non-living environment function together as a single integrated whole (holism); first propounded by Jan Christian Smuts in *Holism and Evolution* (1926). Implicit in this view is that, when individual components of a system are put together to produce a larger functional unit, qualities develop which are not predictable from the behaviour of the individual components (Crystal 2006b:636).

Collins et al (2006:365) add to the above definition. The adjective holistic is referred to as "considering the complete person, physically and mentally."

Within a holistic approach the teacher's task is to create situations within which students may decide to learn. Accountability for learning is up to the student. For ultimate development, all areas of a person should be developed to the utmost in order to function in harmony with each other (Corsini 2002:447).

Philosophical shifts that have taken place during the period of the enlightenment, leading towards postmodern thinking, can also be implemented within a music teaching context. These shifts include ideas outlined by Capra (1995), as discussed in the following few sections.

3.2.1.2 The shift from the parts to the whole

Essential properties arise from the interaction and relationships between the parts within a living system. These properties are destroyed when the system is taken apart, either physically or theoretically, into isolated elements. The ecosystem is a good example where energy and matter are moving in constant cycles. These cycles function within networks. All the properties can only be understood if the whole ecosystem is observed. Applied to a teaching framework, this shift would refer to the teacher being sensitive to the students' personality, intelligence, learning style and brain functioning while teaching (Capra 1995).

3.2.1.3 The shift from analysis to context

The shift from the parts to the whole is not easy. Many teachers have been conditioned by their modernist upbringing and education to think in terms of parts. Western philosophical thought has largely been mechanistic and reductionistic, concentrating on the parts.

Twentieth century science and education alike have had to come to the conclusion that living systems or pupils cannot be understood solely by a method of analysis. It can still be used, but analysis has limitations in that the general

trend in thought is to consider the student as a whole. Therefore, as stated previously, the properties of the parts can only be understood from the organisation of the whole. Thus in order to understand something, you do not take it apart, you put it into a larger context. This might lead teachers to better understand their pupils, because the pupils are viewed in relation to their background, ability, environmental influences and personality (Armstrong 2000:18-19; Capra 1995; Coil 2000:106-107 and Jensen 1996a:92).

3.2.1.4 The shift from objects to relationships

The shift from objects to relationships developed when physicists in the 1920s discovered that there are no parts at all. What was called a 'part' was merely a pattern in an inseparable web of relationships. Therefore, the shift from the parts to the whole can be seen as a shift from objects to relationships. In the mechanistic, modernistic view, the world is seen as a collection of objects and the relationships between them are secondary. In the systems view, as well as from a postmodern and holistic perspective, it is realized that the objects themselves – the organisms in an ecosystem or the people in a community – are networks of relationships, embedded in larger networks. From a teaching perspective, relationships are primary to the teacher and objects are secondary (Capra 1995 and Coil 2000:102-104).

3.2.1.5 The shift from hierarchies to networks

Since around the time of Descartes, multileveled arrangements have been called hierarchies, which can be seen as fairly rigid structures in all areas of life including domination and control. This is unlike the multileveled order found in nature. In view of the fact that living systems at all levels are networks, it is important to visualise the web of life as living networks interacting with other networks (Capra 1995 and Grenz 1996:18).

3.2.1.6 Understanding Holism in relation to Postmodernism

Understanding holistic thought in relation to Postmodernism is a complicated quest. This is so since the question arises as to how the concept fits in with chaos and systems theories as well as their relationship to Postmodernism.

Chaos and systems theory as well as Holism are all approaches that have challenged limitations within modernist thinking and endeavoured to move beyond these limitations (Grenz 1996:7). It is difficult to situate such trends within philosophy, but using postmodern, eclectic and holistic approaches one does not have to place them in any particular position; they are all intertwined with each other.

These approaches are both 'episodical moments' and 'pointers' rather than positions. All these movements are in an 'agonistic networking' (Grenz 1996:18,39). They are agreeing and disagreeing all the time; in constant motion; dynamic and complex. One of the limitations of Modernism within this context is that all networks or systems are reduced to simplistic or reductionistic concepts like a machine with its individual parts.

3.2.2 Cognitive trends

Until the late 1950s psychology as a field of study was heavily influenced by behaviourist[8] approaches. Structuralism[9] was the first major school of thought in psychology. Functionalism[10] emerged as an alternative to Structuralism (Sternberg 2006:5-6). In the early 1960s psychologists became aware of the

[8] A person accepting the theoretical position of behaviourism - a model posing that a scientific psychology must be based on objective, observable facts rather than subjective processes such as thoughts and feelings (Corsini 2002:103).
[9] Structuralism seeks to understand the structure (configuration of elements) of the mind and its perceptions by analyzing those perceptions in their constituent components (Sternberg 2006:5).
[10] Functionalism seeks to understand what people do and why they do it (Sternberg 2006:6).

limitations of these approaches, because of the narrow spectrum of human nature studied (Jordaan and Jordaan 1998:25 and Smith 1999). Sternberg (2006:7) refers to Associationism[11] as a less rigid school of thought than Structuralism. In reaction to these schools of thought, cognitive trends emerged. The terms cognitive and cognition derive from the Latin *cognoscere,* meaning to 'know' or 'to be conscious of' (Jordaan and Jordaan 1998:25).

3.2.2.1 **Cognitive behavioural trends**

Cognitive behavioural trends include the study of how students perceive and learn things that must be remembered (Jordaan and Jordaan 1998:25 and Sternberg 2006:2). In cognitive oriented therapies, the aim is to identify and record thoughts, presumptions, beliefs and conduct that are related and to recognize those which are dysfunctional. This is done in an attempt to replace them with more practical ones (Cognitive behavioural therapy 2009).

3.2.2.2 **Cognitive orientation to learning**

Cognitive processes in learning interact with each other and with non-cognitive processes (Baron et at 2006:15-16 and Sternberg 2006:22-23). Applied to relevance in a musical framework, teachers and students will mostly remember what they perceive. Similarly, thinking processes depend in part on memory processes.

Sternberg (2006:22) is of the opinion that people cannot reflect on what is not remembered. On the other hand, non-cognitive processes are in relation to cognitive processes in that students for example will learn better when they are motivated to learn. However, learning will likely be reduced if the student is upset about something and cannot concentrate on the learning task at hand (Sternberg 2006:22).

[11] Associationism examines how events or ideas can become associated with one another in the mind to result in a form of learning (Sternberg 2006:7).

Taking the above aspects into account, observations showed (Gardner 1993, 1999, 2003; Herrmann Brain Dominance Instrument 2007 and Jensen 1998, 2000, 2007) that learning causes altered states in the human brain. Cognitive processes can influence biological structures and vice versa (Sternberg 2006:22-23). The author has found the summary of the following three learning orientations useful in order to understand the interaction with cognitive learning processes.

Figure 1: Three orientations to learning (Merriam and Caffarella 1991:138).

Aspect	*Behaviourist*	*Cognitive*	*Humanist*
Learning theorists	Thorndike, Pavlov, Watson, Hull and Skinner.	Koffka, Kohler, Lewin, Piaget, Ausubel, Burner and Gagne.	Maslov and Rogers.
View of the learning process	Change in behaviour.	Internal mental processes (including insight, information processing, memory and perception).	A personal act to fulfil potential.
Locus of learning	Stimuli in external environment.	Internal cognitive structuring.	Affective and cognitive needs.
Purpose in education	Produce behavioural change in desired direction.	Develop capacity and skills to learn better.	Become self actualized, autonomous.
Educator's role	Arranges environment to elicit desired response.	Structures content of learning activity.	Facilitates development of the whole person.
Manifestations in student learning	Behavioural objectives – competency based education. Skill development and training.	Cognitive development – intelligence, learning and memory. Learning how to learn.	Andragogy – self-directed learning.

The approaches, as seen from the above table, involve contrasting ideas as to the purpose and process of learning – as well as the role that educators may take.

It further underlines the idea that cognitive learning does not operate in isolation. It interacts with other systems (Sternberg 2006:22-23). These influences are more fully discussed in chapter 5.

3.2.2.3 **Gestalt[12] psychology**

Gestalt psychology was developed in the early 1900s by German psychologists Max Wertheimer, Wolfgang Köhler and Kurt Koffka (Corsini 2002:414). This approach focuses on the dynamic organization of experience into patterns or configurations. It came into prominence as a reaction against structuralism and behaviourism. In Gestalt psychology it is held that the whole is greater than the sum of its parts and is applied to such fields as learning, insight, memory, social psychology and art (Corsini 2002:414). Gestalt psychology could be linked to the concept of Holism in that aspects of its meaning coincide with Holism.

Two thinking patterns are found in Gestalt psychology:

- Productive thinking: is solving a problem with insight
- Reproductive thinking: is solving a problem with previous experiences and what is already known (Gestalt psychology:2009).

Reproductive thinking is a very common thinking pattern. For example, when a person is given several segments of information, he/she deliberately examines the relationships among its parts, analyzes their purpose, concept and totality and reaches the "aha!" moment, using what is already known. Understanding in this case happens intentionally (Gestalt psychology:2009).

[12] A German word for 'good form'. Gestalt refers to an integrated system whose parts are in dynamic interrelation with each other and with the whole. Max Wertheimer adopted the term for application to his concepts (Corsini 2002:413). Benson (1998:93) explains that there is no accurate translation for the word Gestalt (hence the original German word) but, loosely, Gestalt means "form", "shape", "pattern" … with the emphasis being on "the whole".

3.3 Relevant philosophical developments

As with music and psychology, the field of philosophy has seen a vast number of developments from the Ancient world until the present. For the purpose of the study the author will focus on developments in modern thinking, stretching into postmodern thinking.

For the past approximately two hundred years, views about music have been interpreted through categories of science, philosophy, history, architecture, art and communication theory. Today these views, under the umbrella term modernity, are dying because of the current revolutions in those same fields of studies (Webber 1999:7). In the light of these changes, the question can be asked: What will teachers' perceptions of music and more specifically learning styles look like in the future? Webber (1999:7) suggests that in reflecting on such a question it is important to observe that "the road to the future runs through the past". The challenge is to observe the various contexts from which trends are shaped.

The author acknowledges when thinking about teaching and learning styles that an immediate reaction could be to do so from the perceptions imprinted by past education, current place of work, teaching experiences and the surrounding teaching community. Interacting with Postmodernism as a movement is challenging, because when applying the ideas to a musical context it introduces a whole new set of questions that teachers should interact or network with (Grenz 1996:18).

Postmodernism asserts that experience is personal (cannot be generalized) and that meaning is only for the individual to experience, not for anyone to dictate. Therefore, modern themes like honesty and progress become invalid in a postmodern world on the grounds that every person's definition of the terms will be different (Postmodernism 2006; Tarnas 1996:397 and Weiss and Wesley

2000). From a postmodern perspective, words do not have inherent significance. The value they have is the interpretation that the researcher/teacher gives to them. Words are 'pointers' towards knowledge. Description linked to words is affected by teachers' and pupils' own pre-suppositions.

Dualism is a term that needs clarification within the postmodern context. Dualism is where things stand in opposition to each other. Dualisms are therefore things like right and wrong, good and bad, up and down, black and white – something stands in opposition to something else. Dualism has to do with binary oppositions. This is what postmodern thinking challenges. Things in this context are not right or wrong, good or bad: they are different from each other and they stand in relationship to other things (Tarnas 1996:395-396). Pluralism, on the other hand, has to do with the idea that there is not only one way of doing, teaching or viewing things (Tarnas 1996:402). This is a valuable postmodern concept, especially with regard to perceptions of learning strategies in music.

3.3.1 **The modern world view**

In both the following historical periods, music has wrestled with unique sets of philosophical, scientific, political and cultural factors. The Pre-Historic/Ancient period (100-600) was dominated by Platonic thought. Plato is still considered the dominant philosopher of the period (Webber 1999:14). The medieval world (600-1500) shifted towards an Aristotelian outlook. Aristotle, in contrast to Plato, insisted the universal was within the created order (Philosophy Timeline 2007).

Shifts in current world views are also experienced (Grenz 1996:2; Webber 1999:14). Toulmin (1992:31-34) describes the changes that initiated the shift towards the modern world view:

- A transition from the oral to the written. This also means a transition from rhetoric to logic. The research programme of modern philosophy thus set aside all questions about argumentation (among particular people in

specific situations, dealing with concrete cases, where varied things were at stake) in favour of proofs that could be set down in writing, and judged as written.

- There was also a shift from the particular to the universal. Previously philosophers followed Aristotle's approach[13], but now assume that the Good and the Just can be reduced to universal and timeless principles.

- A third shift has to do with the transition from the local to the general. According to modern philosophers, disciplines like geography and history can broaden the mind, but not deepen it. Toulmin states that for Modernism, the demands of rationality impose on philosophy a need to seek out abstract, general ideas and principles, by which particulars can be connected together.

- A transition from timely to timeless occurred. The humanist concentrated on timely issues: issues in specific moments of time dealing with the now rather than the past.

Toulmin (1992:43) came to the conclusion that the outcome of these four shifts - "from oral to written, particular to universal, local to general, timely to timeless" - led away from a practical philosophy to a theoretical conception of philosophy. Toulmin believes there is a revival of the previous 'practical philosophy' in the current worldview and that this revival of practical philosophy can be seen as the arrival of Postmodernism which is also characterized by a loss of unity and a recovery of the rhetorical, the particular, local diversity and the timely.

Morris (2005) divides history in four main sections in order to understand the Modernism that preceded Postmodernism:

[13] The Good has no universal form, regardless of the subject matter or situation: sound moral judgment always respects the detailed circumstances of specific cases (Toulmin 1992:31-32).

- The Ancient World ended with the fall of the Roman Empire
- The Middle Ages lasted until the Renaissance, and
- The Modern World developed through the Reformation and the
- Enlightenment.

One of the essential elements in the development of modern society, within the Enlightenment section mentioned above, has been the search for a set of eternal or absolute values. These can stand outside any particular time or society and could provide a basis for rational and consistent judgments.

Burke (2005) describes modernity or Modernism as being characterized by three major features:

- Intellectually, there was the power of reason over ignorance
- There was the power of order over disorder, and
- There was the power of science over superstition.

The above could provide a basis for rational and consistent judgments or could be regarded as universal values (Burke 2005). Mitchell (1997) discusses the possibility that "the main characteristic of Modernism would be an attempt to take command of humanity's destiny and this world in the interest of moving towards an utopia of some sort". Applied to the context of this thesis, the author does not believe that it is possible to take total control of the destiny of a pupil's learning style(s) or the teachers' teaching strategies and their perceptions thereof.

Modernism includes such terminologies as Enlightenment[14] and Realism[15]. It describes a relatively fixed period of history where certain types of ideas and themes were extremely influential and prevalent in society.

[14] Understanding, Awareness, Knowledge and Wisdom (Collins et al 2006:255).
[15] The belief that reality exists independently of observers (Realism 2007).

Research on the origins of Postmodernism revealed confusing elements. Morris (2005) regards Hegel as the first postmodernist, but he is of the opinion that it would take many years for the social changes implicit in his philosophy to be worked out in the real world. The features of postmodern culture began to arise in the 1920s with the emergence of the Dada art movement. A further movement away from Modernism is seen in the rejection by Michel Foucault[16] of the Enlightenment (Grenz 1996:127-134).

Both World Wars contributed to Postmodernism and after the Second World War postmodern ideas culminated in writings of the French philosophers[17] in the 1970s and early 1980s (Postmodernism 2006). Postmodernism is a set of ideas and themes subsequent to Modernism. It can be seen as a movement in intellectual thought and philosophy that stood in reaction to the rationalism, scientism and objectivity of Modernism (Chagani 1998). A term such as globalization[18] also formed an important part of the postmodern movement.

Disenchantment with Modernism in Western history had its origins in the works of F.W. Nietzsche (Tarnas 1996:395). Postmodern views culminated in the writings of some of the following French philosophers: J. Baudrillard, J. Derrida, M. Foucault, J-F. Lyotard, and R. Rorty. Derrida's writings are virtually indecipherable, and meant to be so. This is because his aim is to deconstruct[19] words and demonstrate the dynamic and endless play of meaning in language (Chagani 1998). Chagani notes that the radical anti-essentialism of postmodernists leads

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[16] M. Foucault was a postmodern French philosopher and historian of thought (Gutting 2005:280).

[17] Notably J. Baudrillard, J. Derrida, M. Foucault, J-F. Lyotard and R. Rorty (Postmodernism 2006).

[18] Described as referring to a culturally pluralistic and profoundly interconnected global society lacking any single dominant centre of political power, communication, or intellectual production. Instead, the world is moving towards decentralization in all types of global processes (Postmodernism 2006).

[19] Deconstruction is a term used to denote the application of postmodern ideas of criticism, or theory to a "text" or "artifact". A deconstruction is meant to undermine the frame of reference and assumptions that underpin the text or the artifact. In its original use, a "deconstruction" is an important textual "occurrence" described and analyzed by many postmodern authors and philosophers (Postmodernism 2006).

them to criticize concepts and erase distinctions with which modernists are comfortable. He further states that postmodernists are suspicious of essences and natures and that is what makes their enterprise distinctive. Postmodernists tend to remove the necessity of foundations and of choosing one position over another, allowing the freedom to construct own positions or teaching methods/strategies for that matter. Chagani's ideas are supported by Morris (2005).

Scholars further make distinctions between two kinds of Modernism and two kinds of Postmodernism. Each mindset has a hard version and a soft version (Gnu 2006).

3.3.2 **Modernism and its influence on methods of music teaching**

The Worldview-Postmodernism Fact Sheet (2001:1) describes Modernism "as a broad and somewhat ambiguous term used to embrace a diverse range of arts, attitudes, philosophies and cultural moods which emerged following the 18th century Enlightenment" (Collins et al 2006:255). Epistemologically it is characterized by a "strong belief in rationalism and science as well as a strong scepticism in both the supernatural and the authority of religion" (Tarnas 1996:276).

Taken to the extreme, Modernism leads to scepticism and reductionism (Gnu 2006). In hard Modernism, knowledge and understanding are important. Things must be scientifically proven or explained. There are absolute norms and values. There are few or no interactions between anything (Benson 2002). This type of mindset is unlikely to instil within students a freedom or creativity to learn and therefore the author prefer a more relational approach in teaching. This is a concept associated with Postmodernism where things are more in a relational status to something else. Benson (2002), to give but one example, supports this viewpoint.

Soft Modernism regards an account of the way the world is as being possible, even if it would be difficult to conceive of one. Gnu (2006) states: “It considers philosophical reasoning as a legitimate venture that can lead to truth about the world, but it acknowledges that absolute certainty is impossible”. He writes further that science can be considered a legitimate method of learning, but does not hold science as the only or most important source of knowledge.

In soft Modernism there is a set of ideas that are valuable, good, praiseworthy and admirable and a concomitant set that are the opposite. All these ideas are truly independent of any specific background (Gnu 2006).

3.3.3 **Postmodernism and its influence on methods of music teaching**

Postmodern music is both a musical style and a musical condition. As a musical condition, postmodern music is simply the state of music in Postmodernism, music after Modernism. In this sense, postmodern music does not have any style or characteristic. It is also seen as an outgrowth of Minimalism (Postmodernism_ Manifestations 2006).

In Modernism the basic subject of music includes the elements of musical technique (e.g. specific intervals, motivic fragments or rhythms). In Postmodernism, music can be seen within an avant-garde context as the use of non-specific intervals, addition of manufactured objects and unconventional performance practices (Post- modern_music 2006).

The language of Postmodernism does not speak of dualisms or opposites, but would rather state that for functional reasons focus will be on either a conservative orientation or a liberal orientation. For teaching purposes reference will preferably be made to the word ‘framework’ instead of ‘model’. Ideas are open-ended and on a continuum. Nothing has a specific meaning and because things are in relation to one another they are relative (Grenz 1996:15). Therefore

Postmodernism would seldom use words like ‘core’, ‘essence’, ‘origin’, ‘analysis’ or ‘amazing facts’ to describe the mindset.

Soft Postmodernism rejects those extremes of Modernism found in hard Modernism: the reductionistic view of reason, which reduces psychology to biology, biology to chemistry, and chemistry to physics. It rejects the restriction of the understanding of human personality as a set of stimulus-response reactions and it rejects objectivity which denies the effect of historical and cultural situations (Erickson 2001:105-109).

Hard Postmodernism, best represented by the philosopher Jacques Derrida and the term deconstruction[20], goes even further to reject the idea of any sort of objectivity and rationality. It maintains that all theories are simply worked out to justify and empower those who hold them, rather than being based on facts. It also rejects the idea that language has any sort of objective or extralinguistic reference. The danger of this mindset is that it can lead to nihilism (nothing has any meaning at all). It moves from relativism to pluralism in truth and all knowing and speaking are done from a perspective that is equally as true or valuable as any other (Erickson 2001:114-115).

The author acknowledges the good that both Modernism and Postmodernism have brought to society and more specifically to teaching, but both mindsets have their limitations. The absolutes and structures of Modernism are regarded as valid. Something ‘broader/more flexible’ than Modernism has been discovered. Therefore she will operate from a soft postmodern or a past-modern mindset where concepts/words are not as deconstructed as with the mindsets of the hard Postmodernists. Hard Postmodernists (e.g. Derrida (1981), Foucault (1982) and Lyotard (1984)) are prone to deny any kind of truth. The author’s listing in the previous sentence of specific hard Postmodernists is based on the

[20] See footnote 19 above.

frequency with which their names and ideas surfaced during the literature survey. However, it is acknowledged that there are many other hard Postmodernists.

3.3.4 **Tendencies describing Modernism and Postmodernism**

The features in the table below are only tendencies, not absolutes, in order to help the reader to see more clearly the shifts between the two philosophical movements. The tendency to see things in seemingly obvious, binary, contrasting categories is usually associated with modernism. The tendency to dissolve binary categories and expose their arbitrary cultural co-dependency is associated with postmodernism.

3.4 **Relevant developments in perception**

Perception is not just a matter of passively picking up information from the senses, but the product of an active construction process. The brain works on the information received and makes hypotheses about reality without conscious direction, so that the ultimate awareness is a combination of sensory stimulation and interpretation. As teachers one generally assumes that the world is as one sees it and that others (students) see it the same way – that senses reflect an objective and shared reality (Butler and McManus 2000:14-15). This is not really true when one thinks, for instance, of how students during a lesson find the ticking of a metronome either irritating or not. Some notice the light on the metronome, others do not. Students differ in the way they absorb new information and they respond differently to the same stimuli (Esping 2000:31).

Gathering information about the world is complex and active: the mind and the senses work together, helping teachers to construct a perception of reality. One does not just see patterns of light, dark and colour – what one sees becomes organized patterns so that the objects have meaning (Butler and McManus 2000:15-16).

3.4.1 **Views on perception**

Since this study is to a great extent eclectic, defining perception is problematic as the term in itself can convey various different meanings depending on the context in which it is used. The author will consequently aim to discuss a number of different viewpoints, regarding the term, that could possibly be applied to all the disciplines concerned. This may even result in no fixed definition as such, but offer certain 'pointers' that can expand teachers' thinking styles or belief systems.

3.4.2 **What is perception?**

In psychology and the cognitive sciences, perception "is the process of acquiring, interpreting, selecting, and organizing sensory information" (Perception 2007a). The word perception comes from the Latin 'percepio', meaning "receiving, collecting, action of taking possession, apprehension with the mind or senses" (Perception 2007a). However, in order to further understand the term, it is necessary to consider more definitions.

Corsini (2002:705) depicts perception as:

> The awareness of having the senses being stimulated by external objects, qualities, or relations. Immediate experiences, as opposed to memory; ability to select, organize, and interpret various sensory experiences into recognizable patterns. The interpretation placed upon a stimulus or experience, determined by general organization principles.

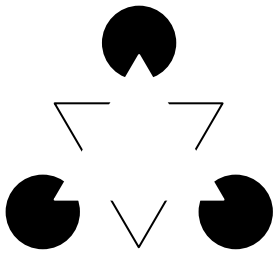
The Online-Medical-Dictionary (2007) describes perception as "the process by which the nature and meaning of sensory stimuli are recognized and interpreted" (also see Perception 2007b). Ely and Rashkin (2005:325), defines perception as "the process of becoming aware of objects, qualities, or relations through the senses. While sensory content is always present in perception, perceived information is influenced by training, education, and experience".

Musical perception as discussed by Davies (1978:99) focuses more on the organizational concept of music, specifically being aware of intervals, harmonic sequencing and the perception of tonal sequences. From these elements, tunes can be constructed and the listener is able to group and organize material in a particular way. Deutsch (1980:168) supports Davies's viewpoints. In the context of this thesis Davies's definition is not fully applicable, but for gaining an overall view regarding perception, it is worth referring to.

Collins et al (2006:559) explain perception with the words "understanding, awareness, conception, consciousness, feeling, grasp, idea, impression, notion, sensation and sense" whereas Hawker (2006:669) presents the following description: "become aware of something through starting to see, smell, or hear it … to understand or interpret something in a particular way … impression, idea, conception, notion, thought, belief … insight".

Johnson (2006:421) characterizes perception as "the process of gathering sensory information and assigning meaning to it." Refer to the following figure.

Figure 2: Kanizsa[21] figure (Corsini 2002:521; Jordaan and Jordaan 1998:304).



When looking at Figure 3 one perceives a white triangle, but when covering the three black circles, the white triangle is not there, only a semi-lined triangle. No one of these perceptions is either true or false, unless one believes that one's

[21] The Kanizsa figure is an example of apparent perception; perceiving something that does not exist. Most people not only 'see' a triangle, but see the 'triangle' as being whiter than the surrounding background (Corsini 2002:521).

own perception is the only admissible one. A similar description of the above viewpoints is given by Grobler et al (2003:50) and supported by Covey (2004:193-197).

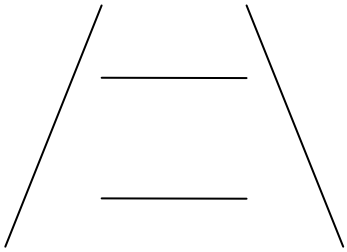
Within a philosophical framework the term 'sense perception' is used when describing perception (Martin 2005:775). This term is appropriate within the context of this thesis, since sense perception is described as:

> … the use of our senses to acquire information about the world around us and to become acquainted with objects, events, and their features. Traditionally, there are taken to be five senses: sight, touch, hearing, smell and taste (Martin 2005:775).

Philosophical debate around perception has taken place since ancient times. Much debate focuses on the contrast between appearance and reality. Objects can be misperceived and an individual can be misled about their nature, as well as perceiving them to be the way that they are. Martin (2005:775) states: "it may seem to us as if we are perceiving when we do not perceive at all, but only suffer hallucinations."

Objects vary in their appearance and how something appears to the individual will be determined by the point of view from which it is viewed and the conditions under which the perception takes place. Misperception can occur in different ways; examples of illusion happen in normal conditions of perception. One common example is that of the Ponzo illusion (Martin (2005:776). See Figure 3.

Figure 3: The Ponzo illusion



The two horizontal lines are in fact the same length, even though the top one looks longer.

Martin (2005:776) outlines two distinct tasks relevant to the term perception, and what it needs to explain:

- What perceptual experience is, the state of mind when things sensorial appear a certain way, and
- What it is for such an experience to be a genuine perception of some object, as opposed to a mere illusion or hallucination.

McLaughlin (1998) comments on the above statements by Martin. When perceptions are based on how things appear, they form assumed real beliefs, which sometimes count as knowledge. However, the ever-present and logical possibility of illusion makes beliefs acquired by perception fallible: there is no absolute guarantee that they are true or real.

3.4.3 **What influences perception?**

Aspects that influence perception are:

- Expectations
- Wants and needs
- Beliefs and attitudes (Johnson 2006:156).

An interesting viewpoint is that of Rogers (1987:484), discussed further in Grobler et al (2003:45), where he regards perception as an experience comparable to needs, behaviour, emotions and values. These 'experiences' cannot be separated from each other. Perception as a concept of experience can be described as "how people perceive themselves and their world, and how this perception constitutes their reality." If this definition is viewed within a teaching context, it is possible that every teacher will have his or her own experiences regarding learning strategies. That is acceptable because each teacher is unique and will experience and perceive the world/teaching in a changing way. The conflicting experiences associated with various different learning strategies are understandable, because that is the teachers' realities (Grobler et al 2003:219). Thus observation, perception and experience of the world or reality are individual matters. People respond in terms of both experience and perception (Grobler et al 2003:49).

Johnson (2006:156) stresses that wants and needs will constantly affect what the individual perceives in interpersonal communication situations, especially when dealing with parents and when teaching pupils. This aspect could be viewed from a different angle – a teacher may fail to perceive information or messages conveyed by pupils that are not consistent with his or her opinions, beliefs and attitudes, or he/she may refuse to enlarge thinking strategies regarding teaching in this respect.

Roulston et al (2005:60) support Johnson's ideas, but add that experiences also influence perceptions. Applied to a music teaching context, being perceptive regarding pupils' self image and the nature of the learning to take place, teachers can shape their images and beliefs about teaching and their own music teacher identities (Roulston et al 2005:63). One can thus conclude that personality also plays an important role in perception (Roulston et al 2005:73-74).

3.4.4 **Perception from a psychological and philosophical perspective, applied to music teaching**

Visual perception, and that involving other senses, was carefully studied by Wertheimer.[22] According to Wertheimer, perception involves both the sense organs (e.g. seeing) and the brain (thinking) (Benson 1998:99). This is useful in music teaching, especially in perceiving and reasoning. Reasoning involves an "out of the box" teaching approach, because students are encouraged to think for themselves. Aspects of learning are not dictated and the student becomes engaged in the process of learning instead of doing precisely as told. Regarding "out-of-the-box" teaching, Magrath (2007:47-48) expresses the following interesting ideas regarding "out of – and in the box" thinking:

> At first thought, I believe it has to do with thinking and listening in more creative ways than those to which we are accustomed. It could mean doing something differently and in ways we might not immediately explore if we had continued on our normal path without stopping to listen to an inner voice and to act differently.
>
> I wonder if functioning "outside the box" has to do fully with creativity? Might it deal with taking normal activities in teaching or daily life and re-shaping them to include something not predictable? It might have to do with listening to another and accepting his ideas, putting ourselves in his shoes to understand him better. It might have to do with more frequently asking the question: "What ……. if ...?" It could mean that we listen to students carefully and differently so that we let them give us clues regarding how to teach them. And, it could include the re-ordering of our lives so that we are balanced and stimulated in body, mind and spirit … in addition to being focused on our teaching livelihood.
>
> Teaching inside the box means that we accept the status quo. It can easily become a formula for teacher boredom and, perhaps eventually, teacher burn out. When we're inside the box, we have reasons new ideas or activities will not work … again and again.

[22] A German psychologist (1880-1943) recognized as the founder of Gestalt psychology (Benson 1998:95).

> Outside-the-box thinking and teaching can produce excited students and engaged teachers … a formula for energy in the lesson and the entire studio. Look for a spark of an idea that intrigues you … and then follow that spark, sublimating excuses to maintain the status quo.

3.5 The challenges of learning and teaching in the 21st century

Learning and teaching in the 21st century poses many challenges to music teachers in various teaching capacities. It is important to take into account Robinson's reference (in Azzam 2009:23) to the job of the teacher to be to help students to make sense of the world they are going to live in. Some challenges teachers face in the 21st century are outlined in the following sections.

3.5.1 How to keep students interested in music

Students are often exposed to numerous activities that they can take part in and pressurized either by parents or peers to do as many activities as possible. Some students are able to cope with this scenario, but normally this is not the best outcome for most students. Aspects relating to these statements are discussed more fully in chapter 4 under 4.7.4.3 and 4.7.5.

To keep students interested in music or to inspire them to even take up an instrument is a very real challenge for music teachers today. Generally teachers need to be aware of the pressures of society on students in order to develop more empathy and understanding towards them (Chen 2003:26 and Portner 2009). It is often the only way teachers can connect to students where they feel the teacher is on their level (Esping 2000:7). In order to achieve this, the teacher's role changes to facilitator instead of dictator (Portner 2009).

Motivation, combined with creativity, plays an important role in keeping students interested in music (Reynard 2008). Motivation is more fully dealt with in chapter

4 under 4.7.3, 4.7.4, 4.7.4.1 and 4.7.4.2. Creativity is referred to later in this chapter under 3.5.2.

There also needs to be a fine balance concerning repertoire between what the student would like to learn and what the curriculum may require. This aspect can have a significant influence on keeping students interested in music (Harris and Crozier 2000:31).

3.5.2 How to keep up, as teacher, with new developments in a high-paced society

Some of the issues relating to this section such as keeping ahead of technology, reading new literature, using the internet for research, belonging to discussion groups and networking with senior colleagues are of importance for teachers (Barnett 2009 and Robinson in Azzam 2009). The author would like to address another important aspect that is often disregarded by teachers themselves and society, confronted with different challenges than 30 and 40 years ago (Chen 2003:29).

Faber (1991:313) claimed that "teacher stress and burnout have affected and continue to affect the lives of teachers and their families, administrators, students and all of society". The effectiveness of managing stress as a teacher is crucial to leading a normal and successful life. It is also impossible for teachers to function in optimized creativity and to radiate an energy and passion for their job when constantly tired and over-exerted. Chen (2003:29) suggests a few metaphors[23] that teachers can use in their views about teaching when constantly stressed. "Teaching is a journey"; "Teaching is taking a roller coaster ride". Chen (2003:29) links this with life being a journey with a beginning and an end. Teaching is a journey within the journey of life. Teachers should take into account the bigger

[23] A metaphor is a way of thinking, an image that once captured by the mind can guide an action to its completion (Chen 2003:24).

picture when creating long term teaching goals. Those who do not do this are often the ones mired in the myriad details of day-to-day teaching. It is normal for music teachers to experience ups and downs in their profession, but being able to admit this fact brings peace of mind. Fighting it leads to frustrations and anxiety. The author agrees with Chen (2003) in this regard.

Another metaphor proposed by Chen (2003:29) is interesting: “Teaching is juggling”. At work the teacher is responsible for teaching students of different abilities, personality types and who respond to different ways of learning. In addition to instruction, there are the in-service training, grading and assignment preparations. Every child’s family also makes different demands on the teacher and at their own homes the teachers are also faced with their own family responsibilities and pressures. In order to manage all this there needs to be effective planning but also enough time for rest and restoration.

3.5.3 General considerations concerning the challenges of music teaching in the 21st century

Further addressing the above issues, the 21st century educator needs to possess characteristics that are student-centred and holistic; teaching about how to learn as much as teaching about the subject area. Knowledge about brain-based learning and Multiple Intelligences is also of importance (Chen 2003:26). Beeman (1998) explained that for teachers to be successful a need arises that less time should be spent on polishing skills as dispensers of knowledge and more time should be spent on thinking about the ways in which the teacher can facilitate students’ learning processes.

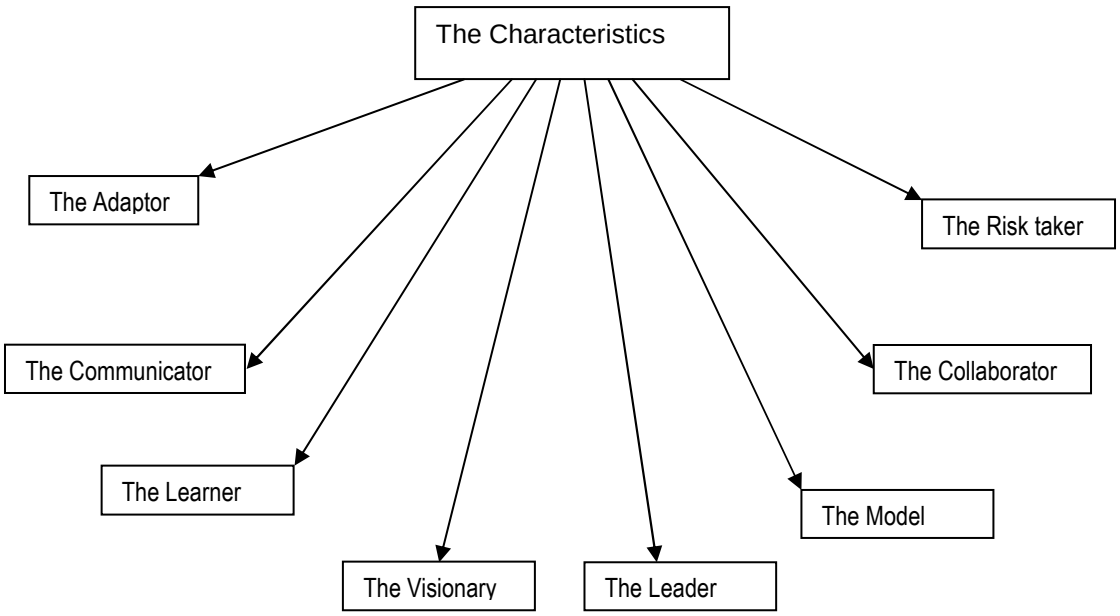
The author agrees with the latter half of the previous sentence, and with Barnett (2009) who suggests that teachers need to engage in and interact with the following skills in order to advance in their profession:

- Communication

- Connectivity
- Creativity
- Collaboration
- Digital technologies.

Furthermore the discussion of Nussbaum-Beach et al (2009) is regarded as providing valuable tools and characteristics that successful 21st century music teachers need to display in their personalities and teaching. The characteristics displayed in Figure 4 and then discussed below are in no specific priority order.

Figure 4: Characteristics of the 21st century music teacher



3.5.3.1 **The Adaptor**

The 21st century teacher who is an adaptor must be able to adjust the curriculum and the requirements to teach to the curriculum in imaginative ways. The

teaching experience should be dynamic and the teacher has to be able to apply different learning styles to include different modes of learning.

3.5.3.2 The Communicator

Beeman (1998) and Nussbaum-Beach et al (2009) suggest that the 21st century teacher should be fluent in using tools and technologies that enable communication and collaboration. Emphasis needs to be on facilitating, stimulating, controlling and managing the teaching situation effortlessly.

3.5.3.3 The Learner

As teachers expect students to be lifelong learners, so it is expected of teachers themselves to stay current and continue to absorb experiences and knowledge. There is no progress in learning when the teacher is still using lesson plans from five years ago.

3.5.3.4 The Visionary

The visionary teacher's key tools should be imagination, looking across disciplines and an ability to see and develop web technologies for music teaching.

3.5.3.5 The Leader

Teachers need to display characteristics of leadership when engaging with students. These characteristics include having vision, skills, resources and an action plan tied to incentives in order to be an effective teacher.

3.5.3.6 The Model

Nussbaum-Beach et al (2009) explain that teachers should aim to model the behaviours that they expect from their students. Apart from teaching music it is of importance still to teach sound values. This is a difficult task since students are exposed to a myriad of external factors that influence values.

3.5.3.7 The Collaborator

Teachers can collaborate with tools such as Bebo, Blogger, Ning, MSN, MySpace, Second life and Wikispace to enhance teaching and captivate learners. Apart from this it is also necessary to collaborate through sharing, contributing, adapting and inventing. Teachers should be prepared in guiding students to connect subject matter and there must be efficient pedagogical preparation to focus on the issues being taught. The right kind of working conditions should be created and there needs to be an element of 'serving' or 'collaboration' with diverse students in order to reach and have an impact on them (Barnett 2009). The role of the teacher is significant in the life of the student since teachers often see students for longer periods and more frequently than their parents (Nussbaum-Beach et al 2009). This does not necessarily constitute criticism of parents; it is a mere statement of fact.

3.5.3.8 The Risk taker

Frequently teachers must take risks and surrender themselves to their students' knowledge. Students often have a broad knowledge of digital technology which can play an important role in having a vision and goals to facilitate learning (Nussbaum-Beach et al 2009).

Robinson (in Azzam 2009:22) and Barnett (2009) agree that using technology is an important skill to possess as teachers in the 21st century because technology

is advancing at such speed. It is transforming how music teachers and students work, think, connect and change cultural values. Lancaster (2003:69) adds to the views of Robinson and Barnett. He suggests the embracing of technology as part of the future of keyboard education. Professional teachers cannot afford to turn their backs on new technology. Lancaster argues that music survived the decline of the harpsichord, and it will survive even if the acoustic piano suffers the same fate. The most important aspect of music tuition is that teachers and students grow as people and as musicians. He sums up his viewpoint with a remark by an eleven year old who made a comment on the difference between the piano and the synthesizer: “The piano is the more beautiful instrument, but the keyboard is the more interesting one.” One of the challenges of music teachers is to interest students so that they can appreciate beauty: technology can help with this.

Beeman (1998) and Rotherham and Willingham (2009:16) propose that critical thinking and problem-solving have been part of human progress throughout history, but it is a question of “how teachers and students think”. This is what brings reform and therefore teachers need to be in touch with their environment and student needs, understanding backgrounds and having a passion to educate themselves through available sources to be the best teachers they can be. Previously too many concepts, methods and ideas were possibly readily accepted by students and teachers as correct and true without much thinking. Music teaching was mainly teacher-centred. Such an approach has created problems for teachers in the 21st century when students struggle to think for themselves regarding understanding of and reasoning about concepts. In order for music teaching to be more student-centred, teaching has to change from so-called spoon feeding to critical thinking and questioning, even when definite answers are not reached.

3.6 Biological concepts relevant to music teaching

From a psychological point of view, biological concepts refer to the study of nerve cells in order to grasp the structure and operation of the nervous system within the human body. Human beings are living systems through the interconnectedness of cells and the relative contributions of hereditary and environmental factors to subsequent development (Jordaan and Jordaan 1998:79). In the context of this thesis the focus will rather be on an aesthetic approach that will be applied to music in focussing on aspects such as creativity, preference, emotion and self image. The above terms can be seen as being interrelated within psychology and music. The human nervous system, body cells, heredity and environment will be referred to when necessary.

3.6.1 Creativity

Using teaching methods to help students become better problem solvers is a primary goal of the educational process. The same is true of enhancing and fostering the creative talents of students. Although educational psychologists may disagree on how problem-solving skills and the creative talents of students can best be developed, there is little disagreement on the importance of these goals (Henson and Eller 1999:341).

There is no real consensus among psychologists on what constitutes creative thought or creativity (Henson and Eller 1999:353; Jordaan and Jordaan 1998:427) and unlike many phenomena in psychology, there is no standardized measurement technique (Creativity 2009). However, Robinson (in Azzam 2009:1) suggests that creativity involves critical thinking and therefore new creative ideas can be evaluated. Henson and Eller (1999:357) claim that teachers should be very cautious to assign specific grades/marks to creativity because these will not foster encouragement amongst students to be creative.

Aspects that are generally researched by psychologists when forming an opinion on creativity are the creative process, the creative product, circumstantial factors influencing creativity, attributes of creative people, measurement of creative ability and teachers' and students' capacity to learn to be creative (Jordaan and Jordaan 1998:428). Creativity has been associated with right or frontal lobe[24] brain activity or even specifically with lateral thinking[25]. A possible definition of creativity is that it is an "assumptions-breaking process" (Corsini 2002:234). Creative ideas are often generated when the teacher discards preconceived assumptions and attempts a new approach or method, the development of new theories and techniques or devices that might seem unthinkable to others (Corsini 2002:234 and Creativity 2009). Creative thinking is then the mental processes leading to a new invention, solution or synthesis in any area. Corsini (2002:234) explains that a creative solution may use pre-existing objects or ideas but creates a new relationship between the elements it uses, such as mechanical inventions, social techniques and artistic creations.

Within a musical perspective the challenge is to apply creative ideas to teaching, using student-centred techniques. The author has found an explanation by Rubin (1985:32-33), taken up in Eggen and Kauchak (2001:20-21), of teaching sonata form to be interesting in the context of this section. Rubin (1985:32-33) describes a scenario where a teacher has used every possible established and researched method she could find to teach the various sections of sonata form to a small group of students. Nothing she used seemed to be effective and the group could not identify, hear or remember where either the development section or recapitulation started. In addressing this problem the teacher decided to observe student behaviour on the playground. She saw a group of students listening to a new rock hit. A boy with a tape recorder was standing in the middle of the group while some students were singing and others just swaying to the music. Upon

[24] The lobe that forms a part of the cerebral cortex in the brain (Creativity 2009). The areas of the brain are discussed in more detail in chapter 5.
[25] Term associated with Edward de Bono from 1960 to the present (Creativity 2009).

walking away the teacher got an idea to try out with her group of students. In the next session she asked the students who all had tape recorders. A number of students had one. She told them that they were going to conduct an experiment. While playing Beethoven's *Eroica* symphony one student had to be ready to record the opening theme and another one the second theme when it is first introduced. The teacher appointed another two students to be ready to record the development and the recapitulation. After this all of them had to play the sections of the symphony back in sequence as they had recorded it.

The students were first surprised at this new change in the lesson but then participated with commitment. Despite slight deviations in pitch and timing between the recordings, the teacher had reached her goal and the students had fun in the process and could identify the various sections with ease. The teacher capitalized on the demonstrated principles suggesting that actively involving students and relating abstract ideas to their personal lives increase learning and creativity (Eggen and Kauchak 2001:21).

Gardner (2006:43) mentions that, in some definitions, creativity and intelligence are viewed as related (also supported by Henson and Eller 1999:355), while other investigators have stressed the relative independence of the two. Yet from Gardner's point of view the measures of creativity growing out of the psychometric tradition are even more impoverished than the measures of intelligence.

When people in general are asked who they know who can be classified as creative, prominent names arise like Einstein, Mozart and Picasso. This does not mean that creativity is restricted to a handful of people: there are many music teachers and students who do creative work but never become famous. Highly creative people who excel at innovation tend to differ from other people in three ways: they have a high level of specialized knowledge, are capable of divergent thinking mediated by the frontal lobe and are able to modulate neurotransmitters

such as nor-epinephrine in their frontal lobe (Creativity 2009). However, these ideas are challenged by Robinson (in Azzam 2009:22-23) in that one of the misconceptions that exists about creativity is that it only relates to 'special people' whereas a policy for creativity in education needs to be about everybody, not just a few. Creativity is not about 'letting go' - it is a disciplined process that requires skill, knowledge and control as well as imagination and inspiration.

Gardner (2006:67) and Henson and Ellen (1999:353-355) describe the characteristics of creative students as:

- Willing to take risks
- Rejecting limitations and often trying the impossible
- Questioning social norms
- Being inquisitive and curious
- Being intelligent and creative
- Having substantial knowledge about their chosen field of study
- Being motivated and prepared.

Jensen (1996a:235) links the creative process with motivation. He is of the opinion that a reward system prevents the establishment of intrinsic motivation because there is rarely an incentive to be creative – only to demonstrate the asked-for behaviour. Jensen states that creativity is rarely part of any reward system and therefore he deems motivation and creativity as at the far ends of a scale. He explains this in the following quotation: "You get either intrinsically motivated creative thinking or extrinsically motivated repetitive, rote, predictable behaviours".

Henson and Eller (1999:357) explain the methods that teachers can use to encourage creativity amongst students as:

- Model and demonstrate creativity yourself
- Provide opportunities for students to be creative
- When students are creative, be sure to reward their efforts.

Gardner (2006:67) adds a few teacher related comments to the above explanation by Henson and Eller. Gardner stresses that teachers cannot be creative unless they have mastered their domain.[26] Creativity also has more to do with personality than with intellectual power. "No matter how bright or hardworking an individual is, if opportunity to be creative is denied, there can be no creativity" (Henson and Eller 1999:354).

3.6.2 **Preference**

Various researchers have suggested that musical opportunities[27] are significant in contributing to one's musical preference (Fung 1996; LeBlanc 1982 and Wapnick 1980). Very often, music educators subscribe to a long-term goal of broadening students' musical preferences (LeBlanc and Cote 1983; Shehan 1986). In so doing, they lead students to engage in music away from their preferred styles, thereby expanding their horizons. Such a goal requires seeking out new and different music. (I have observed during the last 16 years of piano teaching that a great number of pianists can be led to prefer to play more jazz/contemporary/popular than traditional, classical styles of music).

Fung's 1996 study showed that preference is an important mediating agent in the process of music teaching and a 'springboard' for further music learning. LeBlanc's 1982 interactive theory of the sources of music preference formed a model that was constructed in such a way as to present the possible influences that could lead a listener to a single music preference decision, which could be either an acceptance or rejection of it.

> Music preference decisions are based upon the interaction of input information and the characteristics of the listener, with input information

[26] Domain here refers to the creative domain in question – e.g. music teaching (Gardner 2006:67).
[27] Referring to features such as composers and repertoire being exposed to over a period of time, music listened to amongst peers and students' learning styles.

> consisting of the musical stimulus and the listener's cultural environment (LeBlanc 1982:29).

One of the most important goals in music teaching is to broaden students' understanding and appreciation of music.

> Our students will live most of their lives in the twenty-first century. We need to facilitate this bridge to the future by re-evaluating traditional teaching methods and materials to determine their ability to help students embrace the diversity and complexity of contemporary music. By supplementing traditional materials with contemporary compositions and studies from the earliest lessons; we can expose our students to the ever-changing concepts of musical sound and expanded performance practice techniques that will accommodate the diverse range of challenges presented in this music (Johnson 2005:3). Personality characteristics can influence an individual to be more or less receptive to different musical styles and the influence of various aspects of the cultural environment (LeBlanc 1982:35).

Kirkpatrick's 2005 study on choosing motivational repertoire for young pianists (especially 20th century repertoire) showed that when students are playing repertoire they enjoy, understand and that is at the same time pleasant for them, they tend to be more motivated to practise. Magrath (1983:48) explains that students are intrigued by the new sounds and techniques that the avant-garde calls for, resulting in enthusiasm that will affect the students' total attitude and interest in piano study. LeBlanc (1982:40) concludes that a preference decision will be made when a listener feels that enough input information is available. Further exploration of the stimulus and/or environment may or may not be considered necessary. When the music stimulus is rejected, the processing of that stimulus information will end. A listener who decides in favour of acceptance is likely to listen to the favoured music repeatedly, with heightened attention.

3.6.3 **Self image**

A person's self image is the mental picture, generally of a kind that is quite resistant to change, that depicts not only details that are potentially available to

objective investigation by others (height, weight, hair colour, sex, IQ score), but also items that have been learned by that person about himself or herself, either from personal experiences or by internalizing the judgments of others.

A simple definition of a person's self image is his/her answer to the question "What do you believe people think about you?" A more technical term for self image that is commonly used by social and cognitive psychologists is self-schema. Like any schema, self-schemas store information and influence the way people think and remember. For example, information which refers to the self is preferentially encoded and recalled in memory tests (Self image 2009).

3.6.4 **Emotion**

Corsini (2002:324) describes emotion as any “mental state characterized by various degrees of feeling and usually accompanied by motor expressions, often quite intense”. Butler and McManus (2000:62) explain that it is difficult for psychologists to provide an adequate definition of emotion, partly because measures of its components do not consistently correlate with each other. Five components regarding emotion are distinguished:

- Physiological: heart rate and blood pressure changes,
- Expressive: smiling, frowning, slumping in a chair,
- Behavioural: making a fist, running away,
- Cognitive: perceiving a threat, danger, loss or pleasure, and
- Experiential: the complex of feelings experienced.

Emotions normally organize our activities. Feelings, which may keep changing and which are not always understandable or logical, may influence and are influenced by processes such as perception, attention, learning, thinking, reasoning and communicating (Butler and McManus 2000:55). It is interesting to note that different emotions appear to be governed by different parts of the brain. The frontal lobes are known to have special significance for emotion. Butler and

McManus (2000:63-64) have observed that anger and sadness predominantly involve the right hemisphere while emotions such as happiness mostly involve the left hemisphere. The limbic system functions as an emotional centre whereas the cortex and neocortex add the ability to think about feelings.[28]

Robert Plutchik[29] offers an integrative theory based on evolutionary principles. Emotions are adaptive - in fact, they have a complexity born of a long evolutionary history—and although one conceives of emotions as being feeling states, Plutchik explains that the feeling state is part of a process involving both cognition and behaviour and it contains several feedback loops (Chen 2001).

Students and teachers frequently experience mixtures of emotions, or shades of feelings, as various as the colours one perceives. There are common aspects to feelings, although when one student experiences sadness it will differ from other students because the degree of sadness will be influenced by how it fits into their world. 'Their world' is determined by past experiences, memories, thoughts, reactions and the ways in which others have previously reacted to their feelings of sadness (Butler and McManus 2000:62-63; Sternberg 2006:220).

Plutchik's wheel of emotions is worth including since it contains basic and advanced emotions, as well as their opposites. This is important for teachers to be aware of because it will enhance their perceptions regarding their students' emotional states and assist them to work and collaborate with them effectively.

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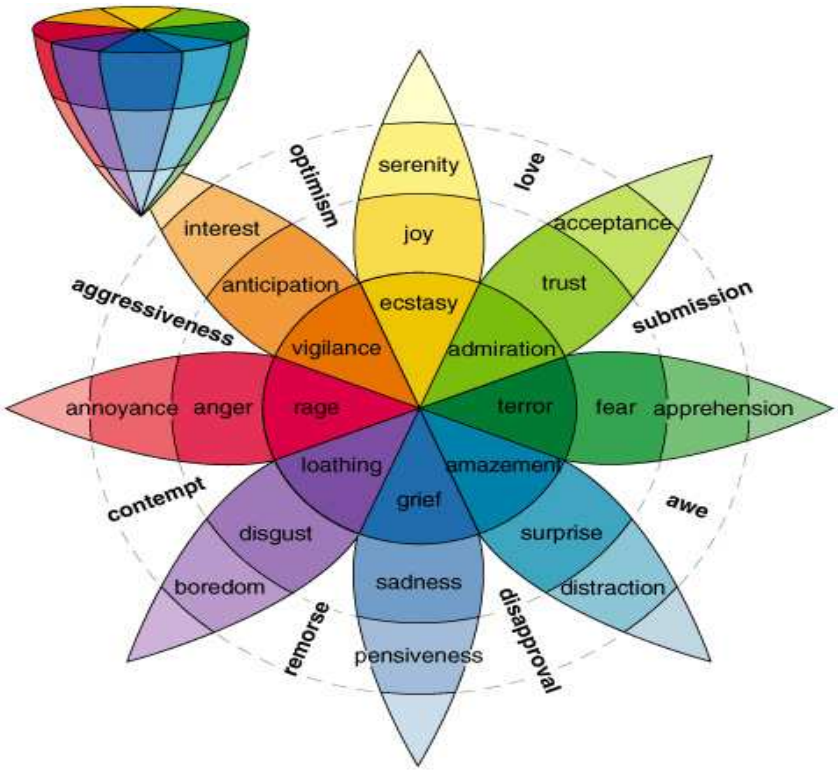
[28] The function of various parts of the brain in relation to learning, teaching and emotions is more fully discussed in Chapter 5.

[29] Robert Plutchik (1927-2006) was a psychologist and professor emeritus at the Albert Einstein College of Medicine. He was also an adjunct professor at the University of South Florida and received his Phd from Columbia University. Plutchik's main research interests were the study of emotions, suicide, violence and the psychotherapy process (Robert Plutchik 2009).

Figure 5: Plutchik's wheel of emotions (Chen 2001).



Plutchik's psycho-evolutionary theory of emotion is one of the most influential classification approaches for general emotional responses. He considers there to be eight primary emotions - anger, fear, sadness, disgust, surprise, anticipation, trust and joy. He states that these 'basic' emotions are biologically primitive and have evolved in order to increase the reproductive fitness of the animal. Furthermore he argues for the primacy of these emotions by showing each to be the trigger of behaviour with high survival value, such as the way fear inspires the fight-or-flight response (Plutchik 2009).

Plutchik's three-dimensional circumplex model (illustrated in figure 5 above) describes the relations among emotion concepts, which are analogous to the colours on a colour wheel. The cone's vertical dimension represents intensity, and the circle represents degrees of similarity among the emotions. The eight sectors are designed to indicate that there are eight primary emotion dimensions defined by the theory and arranged as four pairs of opposites. In the expanded

model the emotions in the blank spaces are the primary dyads - emotions that are mixtures of two of the primary emotions (Mood and Emotion 2009).

The following figure includes the list of basic emotions with their respective opposites.

Figure 6: Plutchik's list of basic emotions with opposites (Chen 2001).

Basic Emotion	**Basic Opposite**
Joy	Sadness
Trust	Disgust
Fear	Anger
Surprise	Anticipation
Sadness	Joy
Disgust	Trust
Anger	Fear
Anticipation	Surprise

The advanced[30] emotion optimism is composed of anticipation and joy. The composed opposite emotion will be disappointment. The advanced emotions will not be discussed in full in the framework of this thesis, but just referred to in order to indicate how the basic combinations work.

An awareness regarding emotion is important in music teaching since it can assist the teacher to be more empathetic and understanding towards students. From their side students can feel a connectedness with their teacher. In practice this would mean the students know the teacher cares, pays attention to their needs and attempts to understand who they really are. The author is of the opinion that the aspect of motivation also plays an important role in that there is an interconnectedness between emotion and motivation. This observation is supported by Butler and McManus (2000:55-57) and Chen (2001).

[30] Advanced here means the combination of two basic emotions as found in figure 6.

Chapter 4

LEARNING AND TEACHING STYLES

> Everyday, every student should have a chance to shine, to glow for a moment in the sunlight of success. Teachers who help create those special times are truly enriching the lives of young persons they've been fortunate enough to teach. The sunlight that's created will continue to spread in countless ways, reaching many for a long time (Yurko 1992:14).

4.1 Introduction

There has been a growing recognition among not only education professionals but also parents that pupils learn in various ways (Bruckner 2009:29); that they have different learning styles. For teachers, an awareness of learning styles can impact substantially on pedagogy, leading to a better understanding of pupils' interactions in lessons, and an awareness of the need to differentiate materials by learning style.

This chapter will provide perspectives on different learning and teaching styles used by teachers and pupils and how these can be expanded in the 21st century. Motivation will also be addressed as it forms an extensive part of the learning process.

Teachers have different preferred modes of thinking, teaching and perceiving. As with teachers, pupils have different viewpoints regarding learning, understanding and perceiving. Such preferences influence how information is processed and stored as well as retrieved in order to make meaning out of it. Effective learning is "whole-brained" (Leonard 2006). Teachers typically design learning experiences that reflect their own thinking/learning preferences, therefore

teachers need to re-examine their previous assumptions about teaching and learning (Leonard 2006).

4.2 What are learning styles?

Pedagogically, learning styles are "the recognition that different pupils learn in different ways" (Learning Styles Masterclass Notes 2006); while some pupils learn more through reading books, others have more success with pictures and diagrams; while some pupils prefer to learn in groups, others like working on their own. Gordon and Bull (2004) view a learning style "as the unique way of thinking and reasoning that characterises an individual learner". Garcia (2002) describes a learning style as "… sensory channels through which an individual receives and retains information". These sensory channels are visual, auditory and kinesthetic. Bruckner (2005:29) and Garcia (2002) assert that everyone has a dominant modality/learning style, but learns with time to integrate other learning styles. Both Bruckner (2005) and Garcia (2002) observed that in children the dominant modality is the most efficient channel to receive and retain information.

Bruckner (2005:29) believes that when individuals are under stress they will choose to operate within the most dominant learning style. The author, however, thinks that there could be a more open-ended approach to these ideas, since learning is influenced by various circumstances as will be discussed in due course. It is acknowledged that pupils function from a dominant learning style, intelligence or brain quadrant during musical learning, but the question arises as to how to address the other criteria relating to the less developed areas of their learning styles, intelligences and brain quadrants[31].

An eclectic viewpoint in this regard will give both pupil and teacher the freedom not to be stereotyped or labelled as a specific learner or teacher. However, there

[31]The Ned Herrmann brain dominance framework and possible other existing frameworks concerning the four brain quadrants will be referred to in detail at a later stage in the chapter.

need to be some flexible guidelines to start with when learning and teaching and therefore it is necessary to acknowledge and consult the various existing theories, viewpoints and classifications contributed by notable educators, neurologists, philosophers, psychologists and researchers.

There is a substantial body of literature, based on the work of Howard Gardner, on the concept of 'Multiple Intelligences[32]'. Gardner is credited with originating the theory about these intelligences, initially identifying seven (Gardner 1983, 1993), and later adding subsequent intelligences (Gardner 1999:60-69; Willingham 2000:1; Wise 2001).

Linguistically, the terms 'multiple intelligences' and 'learning styles' are different, but when looking through literature it was frequently found that the descriptions provided are similar, with the two terms often used interchangeably. Thus, although there are linguistic distinctions there is no clear logical or methodological distinction (Learning Styles Masterclass Notes 2006). However, Gardner (2003:8) had noticed by the middle 1990s that there were particular confusions and misinterpretations of his theory. He mentions specifically the confusions of intelligences with learning styles (he does not deem them exactly the same) and a human intelligence with a societal domain (e.g. musical intelligence being equal to the complete knowledge of a certain musical genre). Gardner (1995:202-203) highlights that the concept of 'style' designates a general approach that an individual can apply equally to every conceivable content. In contrast, an 'intelligence' is a capacity, with its component processes, that is geared to a specific content in the world (such as musical sounds or spatial patterns).

The author is of the opinion that the two terms multiple intelligences and learning styles stand in relation to each other; rather than one replacing the other.

[32] Since the aspect of Multiple Intelligences is discussed in chapter 6, the term will just be referred to here in relation to the term learning styles.

Therefore it would be of more functional use to agree with Gardner that the two terms are not in all aspects synonymous. What has happened in most cases is that individuals have taken Gardner's ideas on multiple intelligences as a starting point and altered them to suit their own requirements, renaming the outcome as a scheme of learning styles. As a result, there is no agreed set of learning styles (Learning Styles Masterclass Notes 2006). The aim will thus be, in the sections to follow, to map out the possible learning styles applicable to pupils and how these function in relation to multiple intelligences.

4.3 **Aspects influencing learning and teaching styles**

In understanding aspects influencing effective learning and teaching styles, it is important to focus on the interaction between pupil and teacher in relation to the material being taught. The level of interaction between pupil and teacher is determined by a number of factors. The teacher, for instance, has his or her own particular teaching style, way of communicating and motivational strategies.

During the teaching process, aspects to be considered would be the pupils' brain profiles and personality types[33]. This will determine the type of learners they are. Their dominant intelligences and particular character strengths also play an important role in learning and are fully discussed in chapter 6. Therefore the author has decided to consider independently the facets influencing pupil and teacher at first and then to focus on where these various elements interact.

In order for educators to have a better understanding of their pupils and be more effective in the teaching process, it is necessary to consider the following aspects relating to learning and teaching.

[33] See chapter 5 for a comprehensive discussion of these topics.

Humans access their world through the five senses. These senses become the screens through which pupils interpret their experiences or 'learnings' (Bruckner 2005:27 and Hannaford 1995:31). Hannaford (1995:30) explains that the richer the pupils' sensory environment and the greater their freedom to explore it, the more intricate will be the patterns for learning, thought and creativity.

Bruckner (2005:27) discusses that there are, apart from the senses, other special areas of learning styles observable within pupils. The contextual learning area explores the circumstance of the learning situation. This area concerns itself further with whether a pupil is primarily an independent, dependent or interdependent learner. The contextual framework focuses on whether a pupil is content or relationship driven. The first type of pupil will learn even if he/she dislikes the teacher, while the second needs a relationship to access information. Lastly this framework looks at whether a pupil does better in a structured, conforming environment or in a flexible environment.

Some pupils process information globally while others prefer analytical processing. Global processors think more in abstractions and tend to multitask. As will be discussed later, the Ned Herrmann Brain Dominance framework can be helpful for this learning style area (Bruckner 2005:27).

4.4 **Types of learners**

Research done by both Bruckner (2005) and Hannaford (1995) stresses the importance for pupils to learn mainly through the use of their senses as well as experiencing the learning process practically.

Bruckner (2005:29) and Persellin (1992:307) distinguish between three types of learners. There are those who rely on their visual sense when looking at the learning process; hear music through the auditory channel and those who find it easier to grasp new musical information through the kinesthetic mode. Some

pupils might also sometimes be multisensory i.e. learning easily in any of the three modes. Combined with the above, Bruckner (2005:28) and Hannaford (1995:78-79) continue to explain that each pupil has a specific neurological 'map' that has designed a dominant hand, foot, eye, ear and brain hemisphere. Approaching learning through the use of the four brain quadrants the author will aim to give a brief summary and comparison of eight four-quadrant learning style frameworks, and in a later chapter describe how these interact with the pupils' intelligence profiles. The focus at this stage will be on the Visual, Aural and the Kinesthetic learner.

The author has observed during teaching that pupils generally tend to prioritize one sense over another when approaching new learning tasks. When starting work on a new piece of music some pupils want to hear it first, others would prefer to see the score while others will check for how the piece 'moves' them physically and emotionally at the first hearing.

Gordon and Bull (2004) state that the three main criticisms against the use of learning styles can be:

- The stereotyping or pigeonholing of the learner
- Not a stable cognitive factor over time
- Not stable over different tasks and situations.

Operating from an eclectic orientation, however, the author sees these criticisms as rather general and modernist in approach, since the eclectic orientation will not in principle stereotype a pupil. The assumption that learning styles are not a stable cognitive factor over time is debatable since both pupil and teacher are likely to gain knowledge through thought, experience and the senses and therefore do not necessarily need the learning style to be stable over time. The constant changing and adapting to different students are exciting and creative and can have a positive outcome for both pupil and teacher. That learning styles are not stable over different tasks and situations are likely to be so at times, but

with careful planning and observation both pupil and teacher can adapt to choose the most appropriate learning style to operate from.

4.4.1 **The Visual Learner**

As a society we live in a highly visual world. Almost all the information that pupils access is observed as visual. Relating to this it has been shown that visual retrieval from the brain is the quickest type of recall (Bruckner 2005:31).

Pupils that learn visually think in images and mainly convert all information presented to them into pictures. Personality traits that best represent the visual learner are neatness, order and meticulousness. In instrumental music it will often be the pupil who can sight-read well, and if asked to sing a melody just played, he/she might not be able to. Playing might be very accurate, but there might be difficulties in playing expressively or in memorizing music (Garcia 2002).

Visual learners have the ability to recall information in any order (Bruckner 2005:31). Bruckner concludes that when a certain learning sequence is jumbled, the visual learner will seldom struggle, whereas it would be more difficult for the auditory or kinesthetic learners to be as successful as the visual learners.

These types of learners were found not to enjoy practising their assigned homework regularly, since they rely on reading it for the first or second time during the lesson, pretending to have practised it for hours in preparation.

4.4.2 **The Aural Learner**

Aural learners learn best by hearing or listening, and then repeating what they have heard. They are often talkative and easily distracted by sounds. Some might have difficulty writing. In appearance their clothes might not match,

although they think they do. On their instruments they can play just about anything by ear, but struggle or sometimes even refuse to read the simplest notes (Garcia 2002). The author has found in this regard that aural learners have a tendency to change notes or rhythms in a piece of music, preferring their 'improved version' to the composer's.

The pupils who access the auditory channel first and foremost in their learning style do not necessarily have an advantage over the visual and kinesthetic learners (Bruckner 2005:41). Bruckner observes further that although all pupils have a special keenness towards listening and are naturally drawn to the world of sound, they can still access this world primarily through visual or kinesthetic channels.

4.4.3 **The Kinesthetic Learner**

Kinesthetic learners learn through their body or sense of touch. They learn best by doing, thus whole body movement is the preferred method. They will change their pose from one minute to the next, rarely sitting in one position for more than a few minutes. In appearance and personality they might appear disorganized or restless – they are the young pupils who need to sharpen pencils more than anyone else, and are often lacking a sense of the consequences of their actions. They are the ones who have huge difficulties adapting to traditional classroom settings and therefore can often be labelled as having learning disabilities (Garcia 2002). Bruckner (2005:46) adds to Garcia's viewpoint in that these students are most at risk in our schools today. They are often labelled with ADD[34] (Attention-deficit disorder); ADDH[35] (Attention-deficit disorder with hyperactivity)

[34] A neurobiological disorder with onset before age seven, characterized by inconsistent attention and impulsivity (Corsini 2002:75).
[35] A syndrome characterized by inattention, impulsivity and considerable activity at inappropriate times and places (Corsini 2002:75).

and ADHD[36] (Attention-deficit-hyperactivity disorder), because they do not seem to be able to sit still like their more visual or auditory classmates.

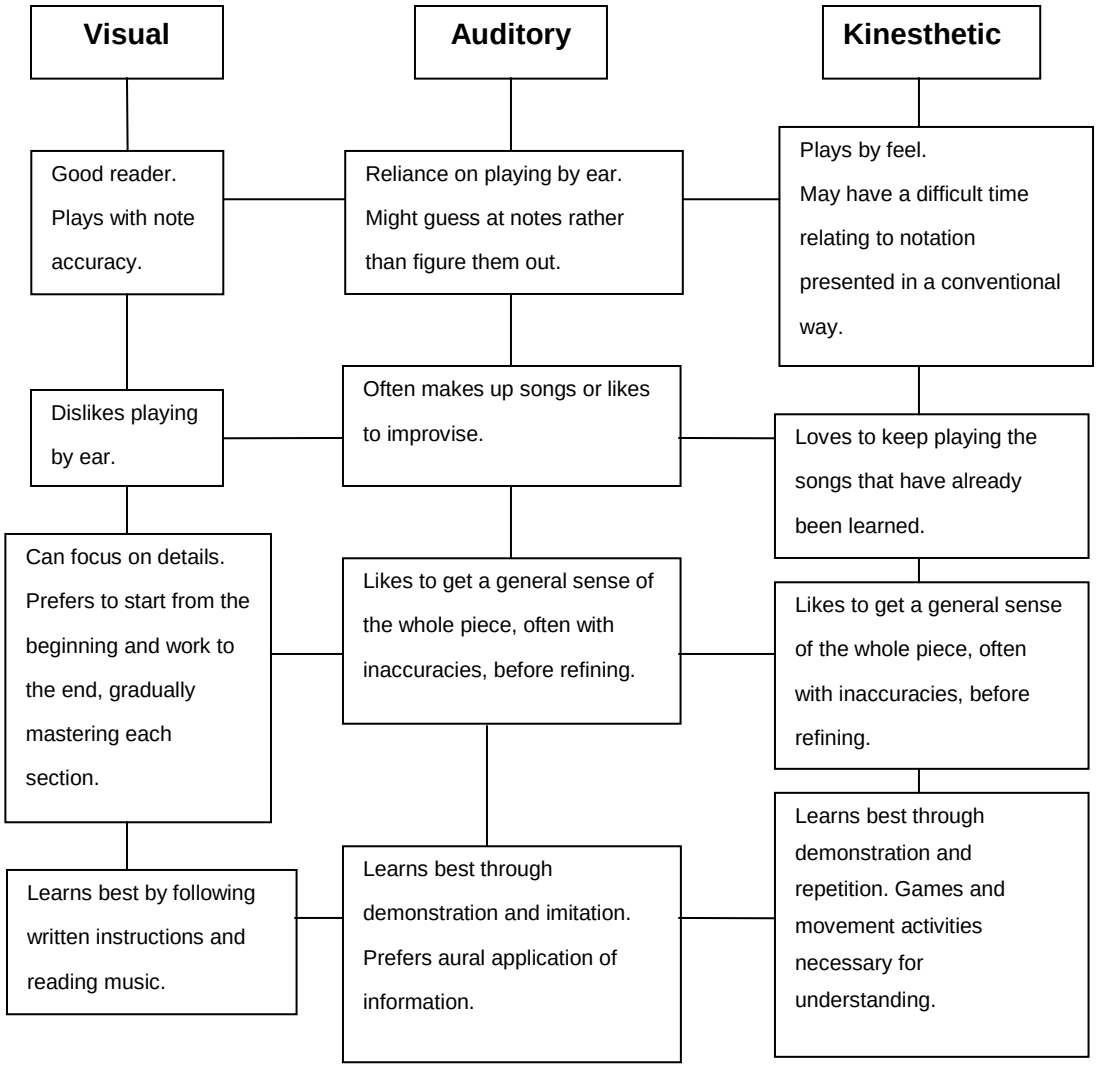
The author has found these students constantly wanting to play even when you are talking to them or explaining something. They enjoy playing the same piece over and over for long periods of time without getting tired of it at all. At first the author found it difficult to believe that these pupils actually learn better when they are in motion. In fact they may need to be in motion in order to grasp verbal input. They often appear to be doing more than one activity at a time, and in fact, they are.

4.5 **Learning types considered in the music teaching context**

In order to summarize the above section the author has found this figure outlined in Garcia (2002) very useful. Only selected items are included for functional reasons.

[36] A neurobiological condition characterized by persistent restless overactivity (also known as hyperactive-child syndrome – HACS). Such individuals are overactive, have a short attention span, sleep poorly and frequently exhibit educational and perceptual deficits (Corsini 2002:75).

Figure 7: Learning styles and characteristics of music students (adapted from Garcia 2002).



4.6 **Learning style models**

Pupils have different learning styles, characteristic strengths and preferences in the ways they take in and process information. The author is of the opinion that for any pupil to eventually function effectively in any professional capacity requires working well in all learning style modes. Thus an objective of education should be to help students build their skill in both their preferred and less preferred modes of learning. Learning style models that categorize these modes

provide good frameworks for designing instruction with the desired breadth. See for example figure 9, where focus is on models making use of the four-quadrant basis, some of which is what the author chose to emphasize. The goal is to make sure that the learning needs of pupils in each model category are met at least part of the time. This is referred to as "teaching around the cycle" (Felder 1996:18). The author acknowledges the use of the following four-quadrant models in teaching and learning. It is not the purpose of this study to discuss each model in detail, but it is important to be aware of different models. These different models give the teacher the opportunity of determining which ones to use when teaching their pupils. The figure to follow is a mere summary of the four-quadrant models most in use.

Figure 8: A description and comparison of eight four-quadrant learning styles and models (Gordon and Bull 2004 and Felder 1996:19-20).

Keirsey Temperament Sorter II • *Guardians* are conformity-orientated, and prefer systematic, structured learning • *Idealists* are interpersonally-orientated, and prefer to learn through discussion • *Artisans* are play-orientated, and are free-wheeling and creative • *Rationals* are learning-orientated, and prefer to learn by theorising, and analysing and creating models
The Kolb Model • *Converging* learners like to learn by solving problems and doing technical tasks, good at finding practical uses for ideas • *Accommodating* learners are people-oriented, hands on learners, who rely on feelings more than logical analysis • *Diverging* learners prefer to learn by observation, brainstorming and gathering information, are imaginative and sensitive • *Assimilating* learners prefer to learn by putting information in concise logical order, and using reflective observation
Herrmann Brain Dominance Instrument Model (HBDI) • *Quadrant A (Cerebral Left)* is a factually-oriented learner, takes a logical, analytical, quantitative approach to learning tasks • *Quadrant B (Limbic Left)* likes to learn in a sequential and organised way, and when instructional exercises are structured and detailed • *Quadrant C (Limbic Right)* has an interpersonal preference, is emotional and kinesthetic • *Quadrant D (Cerebral Right)* prefers to take a holistic approach, is a very innovative learner and is strongly visual
The Gregorc Model • *Concrete Sequential* are hardworking, conventional learners, who are always dependable and organized • *Abstract Random* are sensitive and compassionate learners, who are spontaneous and flexible • *Concrete Random* are quick, curious and intuitive learners, who combine a creative streak with a realistic outlook • *Abstract Sequential* are analytical, objective learners, who are thorough, structured and logical

The 4MAT Model • *Type 1 (Innovative Learners)* are interested in personal meaning, prefer co-operative learning, like brainstorming • *Type 2 (Analytic Learners)* are interested in acquiring facts in order to deepen their understanding of concepts and processes, like lectures and analysis of data • *Type 3 (Common Sense Learners)* are interested in how things work, prefer concrete experiential learning activities • *Type 4 (Dynamic Learners)* are interested in self-directed discovery and rely heavily on their own intuition, like role-playing and games
The Honey-Mumford Model • *Pragmatists* prefer that the topic under study has an obvious link to the real world, and like to be given immediate opportunities to implement what they have learned • *Activists* enjoy new experiences and challenges, like teamwork and problem-solving, and enjoy leading discussions • *Reflectors* prefer to watch, think and ponder on activities, can carry out careful detailed research, and do not like pressure or tight deadlines • *Theorists* like to learn from models, concepts and theories, like to analyze and evaluate, and use logic
The Gordon-Bull Model • *Alpha Style* – these are the practical learners, they like topics which are clearly structured • *Beta Style* – these are the discussion-orientated learners, they like working in groups, and derive most benefit from intrapersonal learning • *Gamma Style* – these are the holistic learners, they prefer an overview of the topic before delving into specific detail. They are highly imaginative and bring this resource to the learning process • *Delta Style* – these are the analytical learners, they are dispassionate learners who like to focus on concepts, theories and logic
Felder-Silverman Learning Style Model • *Sensing Learners* – concrete, practical, oriented towards facts and procedures or *Intuitive Learners* – conceptual, innovative, oriented towards theories and meanings • *Visual Learners* – prefer visual representations of presented material – pictures, diagrams, flow charts or *Verbal Learners* – prefer written and spoken explanations • *Inductive Learners* – prefer presentations that proceed from the specific to the general or *Deductive Learners* – prefer presentations that go from the general to the specific • *Active Learners* – learn by trying things out, working with others or *Reflective Learners* - learn by thinking things through, working alone • *Sequential Learners* – linear, orderly, learn in small incremental steps or *Global Learners* – holistic, systems thinkers, learn in large leaps

As observed from the above, there are many similarities and differences in each model. At times the same thinking style is just called something else. For the purpose of the study the author chose to focus largely on the Herrmann Brain Dominance Model since this method classifies pupils in terms of their relative preferences for thinking in four different modes that are based on the task-specialized functioning of the physical brain.

Ned Herrmann's Whole-brain Model[37] combines Roger Sperry's left/right brain theory and Paul MacLean's triune model (rational brain, intermediate brain and primitive brain) to produce a quadrant model of the brain (Leonard 2006).

4.6.1 **Herrmann Brain Dominance Instrument (HBDI)**

Developed in 1978 by Ned Herrmann, the HBDI is an instrument based on an analogy to the brain's cognitive functioning (Power et al 1999:27). It is a 120-item instrument containing a variety of questions about individual performance on work elements, how individuals describe themselves, best and worst subjects, hobbies, energy level, motion sickness, handedness and personal preferences (Power et al 1999:28).

In his article on the four quadrants of the brain, Gross (2008:1) suggests some practical ways that learning and teaching can be enhanced by acting on the fact that people differ in the ways they learn best. He puts forth his most preferred framework, developed by Ned Herrmann[38]. Briefly, Herrmann suggests thinking of our brains as divided into four quadrants, each with distinctive strengths. This scheme is not a literal map of the anatomy of the brain, but it does reflect the ways in which different physical locations inside your skull specialize in different ways of processing information (Gross 2008:1).

McKeachie (2006) suggests that brain dominance leads to thinking style preferences, which impact on what we pay attention to and how and what we learn best. Each of these four quadrants is listed below with words that typically

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[37] See chapter 5 for further discussion of this model.

[38] William E. "Ned" Herrmann (1922-1999) is known for his research in creative thinking and whole-brain methods. He spent the last 20 years of his life applying brain dominance theory to teaching, learning, increasing self-understanding and enhancing creative thinking capabilities on both an individual and corporate level. Sponsored by General Electric, he developed and validated the Herrmann Brain Dominance Instrument (HBDI) and designed the Applied Creative Thinking Workshop (ACT), which has been recognized as a leading workshop on creative thinking (Ned Herrmann 2007).

characterize a person who uses that thinking style (Herrmann Brain Dominance Instrument 2007). The four thinking styles are:

A: The Rational self/Analytical thinking (Upper or Cerebral Left Brain)

B: The Safekeeping self/Sequential thinking (Lower or Limbic Left Brain)

C: The Feeling self/Interpersonal thinking (Lower or Limbic Right Brain)

D: The Experimental self/Imaginative thinking (Upper or Cerebral Right Brain) (see Figure 9).

Figure 9: The four quadrants by Ned Herrmann (Herrmann Brain Dominance Instrument 2007; Leonard 2006; McKeachie 2006 and Power et al 1999: 27-28).

A: Rational Self/Analytical thinking/ Theorists Understands how things work/technical Knows about money Likes numbers Is realistic Is critical Quantifies Analyzes Factual (judging ideas based on facts, criteria and logical reasoning) Collects data	D: Experimental Self/Imaginative thinking/ Innovators Innovative/creative problem-solving Imagines Is curious/plays/takes initiative Likes surprises Breaks rules/challenges assumptions Long term thinking Is impetuous, takes risks Visual/metaphoric thinking Holistic/looking at the big picture Intuitive Conceptual
B: Safekeeping Self/Sequential thinking/ Organizers Plans/step-by-step problem-solving Timely Is neat Organizes/implement what is organized Is reliable Gets things done Establishes procedures/follows directions Takes preventive action Structured Complexity or detailed/detail oriented work	C: Feeling Self/Interpersonal thinking/ Humanitarians Feels/sensory input Talks a lot Is emotional/looking for personal meaning Is expressive/listening to and expressing ideas Is supportive Touches a lot Likes to teach Is sensitive to others Kinaesthetic Spiritual Group interaction

A majority of people (pupils and teachers in the context of the thesis) have at least two primary quadrants. Each person can have primary preferences (areas of the brain he/she operates easily in and enjoys), secondary preferences (areas of the brain that can be and are accessed when necessary) and tertiary preferences (areas a person may have difficulty accessing or may even avoid). People have varying degrees of dominance in the quadrants and it is not necessary to identify with everything in the quadrant to have some strength there. The full working of the HBDI instrument will not be dealt with in the context of this thesis, but will be referred to for functional reasons when necessary.

Herrmann also developed the concept of whole-brain thinking, characterized by the situational use of all four quadrants as needed. The theory was inspired by the research into left-right brain lateralization during the 1970s, and further developed to reflect a metaphor for how individuals think and learn (Herrmann Brain Dominance Instrument 2007).

4.6.2 **Using the whole-brain in teaching and learning**

Gross (2008) suggests that the knack of effective learning is to know which of the brain quadrants the teacher/student favours and to structure the educational process so that maximum use can be made of those strengths. However, at a later stage in the article he deems it necessary to strengthen all the quadrants of the brain. It is important as a learner or teacher to use a wide repertoire of ways of understanding concepts, including the abstract, the procedural, the imaginative and the emotional. The author shares Gross's opinion in this regard.

The most important challenges people face in life require the use of capabilities from all four ways of thinking. In handling financial affairs, for example, it is not desirable to focus on just one approach such as a bookkeeping mind-set (limbic left), or on imaginative ways to create more wealth (cerebral right), or on feelings about getting and spending (limbic right). People need to use all of these parts of

the brain to best design their financial lives in terms of savings, projections, creativity, or resourcefulness.

To address personal life challenges and those of students, teachers need to develop students' four quadrants maximally and in order to do that they need to use their whole brains (Gross 2008). Power et al (1999:35) note that it is possible for students and teachers alike to survive misunderstandings, lack of creativity, in the box thinking, etc, when concentrating on adopting a variety of thinking styles.

4.7 Flow experiences in learning, teaching and motivation

The American psychologist Abraham Maslow (1908-1970) at first firmly believed in behaviourism, but later his work emphasized human potential and today his contribution to psychology is associated with the hierarchy of needs[39] (Meyer et al 2003:335). Csikszentmihalyi's theoretical model on flow[40] explores optimal experiences that are derived from a wide variety of activities (Csikszentmihalyi 1990:4 and Gelb 2009). Passive and active processes are fully integrated when creativity functions at its peak. Diamond (2009) refers to it as being in the "zone", which indicates a state of ecstasy. All of these descriptions correspond with Maslow's idea of a peak experience[41] which is accelerated through the pleasures of music. Elliott (1995:109) adds to this that the actions of music making and listening give rise to positive and satisfying experiences which are rewarding within themselves.

Human beings have an inherent drive to know their capacities to bring order to consciousness and to gain self-knowledge (Elliott 1995:113, 115). Gardner (1983:3) supports Elliott's view in that he claims that "all men by nature desire to

[39]The hierarchy of needs include physiological, safety, affiliation and love, self esteem and self actualization needs (Meyer et al 2003:338).
[40] Refer to 2.7 in chapter 2.
[41] A peak experience refers to moments of intense excitement and tension, but also of peace, bliss and serenity (Meyer et al 2003:347).

know". This is what Maslow described as self actualization (Meyer et al 2003:341-342). Reimer (2003:52-53) affirms that through music and other arts people discover a sense of meaning, self-understanding and inner development which results in better self-knowledge.

Viewing the above statements it could be said that the main goal of each self is to order, strengthen and support the self and this happens through pursuing activities that are absorbing, demanding and self-fulfilling (Davis et al 2000:247; Elliott 1995:113). Thus optimal experiences arise when teachers and pupils actively seek out and take up challenges that match and extend their capabilities and skills. These experiences give feedback to and strengthen the self, enhancing self esteem (Elliott 1995:115-116).

The many beneficial consequences of flow can enhance intrinsic motivation more than extrinsic motivation (Goleman 1996:94). Csikszentmihalyi (1990:209-213) describes the characteristic dimensions of the flow experience in the following way:

- Perception of clear goal(s) must be present.
- Becoming fully immersed in the activity is important – even to the point of experiencing a sense of loss of self-consciousness and experiencing of self awareness.
- Being single, almost one-track minded in concentration on the task at hand.
- Learning to enjoy the immediate experience at hand.
- An altered sense of time exists (which normally seems to pass faster).

The above dimensions when encouraged in students can lead to more focussed and precise work, concentrated actions in completing tasks and optimal enjoyment of the action or activity being performed.

4.8 Transformative learning theory

Encouraging transformative learning[42] is portrayed by 'teaching for change' – a practice of education where students are challenged to assess their value systems and worldview and are then subsequently changed by the experience (Quinnan 1997:42). Despite this understanding, the practice of fostering transformative learning can be an ever-shifting approach to teaching (Taylor 2009:3).

In music, students may be required to create original interpretation of texts or to consider conflicting interpretations of texts instead of seeking the one, teacher-approved, 'correct' interpretation. This forward thinking approach replaces the instilled ideas that students have learned, practised and been rewarded for (McGonigal 2005:1). Transformative learning theory addresses this general teaching challenge. The theory describes the processes necessary for students to make the most significant kind of knowledge transformation, also known as perspective transformation.

Mezirow (1991:167) describes perspective transformation as:

> … the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand, and feel about our world; changing these structures of habitual expectation to make possible a more inclusive, discriminating, and integrating perspective; and finally, making choices or otherwise acting upon these new understandings.

Teachers who wish to facilitate transformative learning need to create an environment that encourages and rewards intellectual openness. Transformative learning theory recognizes that changing students' or teachers' perspectives is not simply a rational process. Being forced to consider, evaluate and revise underlying assumptions can be an emotionally charged experience. Initial

[42] See 2.6 in chapter 2.

resistance to transformation is common amongst both teachers and students (McGonigal 2005:2).

Taylor (2009:4) mentions that more evolving elements than those listed at first in paragraph 2.6 have emerged. These include:

- A holistic orientation
- Awareness of context and
- An authentic practice.

It is important to note that these elements have an interdependent relationship; they do not stand alone. Without individual experience, there is little to engage in critical reflection. A holistic orientation encourages engagement with other ways of knowing – the affective and relational. Developing an awareness of context includes the surroundings of the immediate learning event, the personal and professional situation of the learners at the time, and the background context that is shaping society. Establishing an authentic practice is significant for fostering trusting relationships between learners and teacher, which often provides the safe environment for learners to engage in critical refection, ultimately allowing transformative learning to take place (Taylor 2009:4, 10-11). Transformative learning is a process that is important to individuals and societies in order to:

- Understand and deal more effectively with different worldviews
- Recognize and address social justice issues
- Expand critical consciousness
- Broaden sense of responsibility and
- Improve social competence (Maingot 2007:5).

4.9 **Motivation**

Motivation forms an important part of music teaching since it determines whether the pupil's musical experience will be positive or not. Robertson et al (2008) regard motivation as one of the biggest challenges teachers face, since it has an

impact on lessons, discipline, stress levels and on pupil results. Success in motivation does not just depend on the student's personality or learning style, but also on how teachers view themselves and their profession (Esping 2000:60).

Madsen (2003:50) explains that what happens to many teachers is that they become frustrated because they do not achieve the results with their students they intended to achieve. This leads to a negative projection upon the pupil. How can the pupil be excited about something the teacher is not?

In the process of trying to be motivating, teachers will find all kinds of students. There are those who do not want to learn unless inspired by great effort. Some children have been taught to love music activities by their parents and others. Certain pupils once had a love for playing an instrument, but somehow experienced a negative environment or maybe a punishing teacher who extinguished it. For these students the desire to learn must be taught or re-taught.

In general most children bring a natural curiosity to their first encounters with formal music study. One of the greatest joys of teachers when working with young pupils is their innocence and naturalness in the teaching situation (Madsen 2003:51).

4.9.1 **Defining motivation**

Harris and Crozier (2000:27) define motivation as "that which causes a person to act in a certain way". The author also agrees with the definition outlined by Heffner (2004a) in the *Psychology Dictionary (K-P) at AllPsych Online* which describes motivation as "the process that energizes and/or maintains a behaviour". Thus in general terms, motivation "refers to a student's willingness,

need, desire and compulsion to participate in, and be successful in, the learning process" (Bomia et al 1997:1 and Ogle 2006).

The definition of motivation can be divided into two categories:

4.9.1.1 Intrinsic motivation

A student can be described as intrinsically motivated when he or she is motivated from within. Intrinsically motivated students actively engage themselves in learning out of curiosity, interest or enjoyment, or in order to achieve their own intellectual and personal goals (Dahlstrom 2001). Dev (1997:13) claims that, "a student who is intrinsically motivated … will not need any type of reward or incentive to initiate or complete a task. This type of student is more likely to complete the chosen task and be excited by the challenging nature of an activity".

Thus intrinsic motivation can be defined as "the motivation or desire to do something based on the enjoyment of the behaviour itself rather than relying on or requiring external reinforcement" (Heffner 2004b). Steele (2008a) describes intrinsic motivation as including "involvement in behavioural pattern, thought process, action, activity or reaction for its own sake and without an obvious external incentive for doing so". A hobby could serve as an example.

4.9.1.2 Extrinsic motivation

A student can be described as extrinsically motivated when he or she engages in learning "purely for the sake of attaining a reward or for avoiding some punishment" (Dev 1997:13). Thus extrinsic motivation can be defined as "the desire or push to perform a certain behaviour based on the potential external rewards that may be received as a result" (Heffner 2004c). This category of motivation would include "circumstances, situations, rewards or punishment, both

tangible and intangible that participation in results in an external benefit" (Steele 2008a). Steele states that tangible benefits could include monetary rewards or prizes. Intangible could include things like recognition and praise.

4.9.2 **Theories that influence motivation**

Painsi and Parncutt (2008) describe implicit self-theories that involve personal attributes such as intelligence and musical ability. There are three implicit self-theories, described below:

4.9.2.1 **Entity theories**

Entity theories portray personal attributes as relatively fixed. People who hold an entity theory want to demonstrate that they have sufficient musical talent, want praise, but dislike criticism.

4.9.2.2 **Incremental theories**

Incremental theories portray attributes as relatively malleable. People who hold an incremental theory want to increase their ability and concentrate on cultivating their ability through effort.

These two theories can lead to poor motivation where there is a lack of musical ability. However, it can be a motivation for students and teachers alike to be more focussed and develop new strategies.

4.9.2.3 **Social cognitive theories**

These theories focus on the stimuli originating within the individuals, in particular their cognitions and affects. Collins et al (2006:138) define the term cognition as "an act or experience of knowing or acquiring knowledge". The term affect is defined by Collins et al (2006:14) as meaning "influence". Amongst all the

theories the researcher deems the social cognitive theories to be most effective when working with aspects of expanding musical perception.

4.9.3 **Aspects that influence pupils' motivation positively or negatively**

There is no doubt that one of the most important contributory factors to pupil motivation is the effectiveness of the curriculum being used (Fraser 2005). Within a musical context this can refer to the choice of repertoire. Should the teacher, for example, follow a specific exam syllabus with the pupil or not?

It is important for teachers to be aware of constant new developments as well as knowing new repertoire in order to motivate students effectively. As Marlais (1997:30) explains, it is always easier to teach well-known pieces. Yet teaching methods and repertoire need to be expanded and teachers need to become knowledgeable about new developments. It is the teacher's responsibility to promote awareness of new music by motivating and inspiring pupils to learn these works. Teachers' excitement will be instilled in their students. If students get excited about work, they consider it play, and both teacher and student will be much happier. The creative/inventive teacher has strived for years to turn work tasks into play. Successful teachers are those who are able to bring about a pleasurable response toward teaching difficult concepts and make the most demanding tasks pleasant. Fraser (2005) and Lau (2007:37) both emphasize that teacher attitudes can have a positive or negative impact on motivation. However, the author finds the description used by Steele (2008b) a particularly useful metaphor when considering aspects that influence pupils' motivation:

> Consider motivation illustrated by the engine in your car. Your engine runs on fuel and so does motivation. Like your engine, it can run on different types and different grades of fuel.
>
> The engine is just one part of the whole vehicle, though a significant one, to enable forward movement. Likewise, words and actions are the fuel

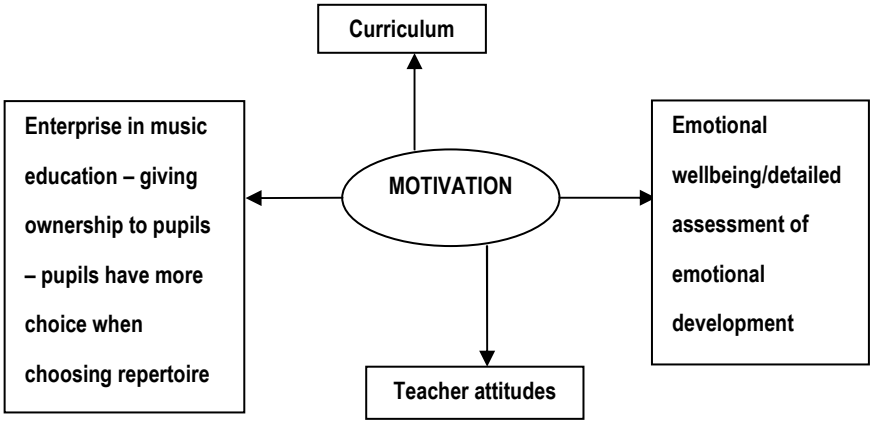
> that, when given to the right motivational type engine, can produce change in thought or behaviour.

Teachers praising effort and taking a genuine interest in pupil welfare are more likely to motivate pupils, particularly those with a low self esteem. Praise for exceptional music achievement alone can demotivate a pupil easily. When the teacher interacts with pupils in early music development, assessing their emotional wellbeing and/or development, motivation in later years can be affected positively through students having higher self esteem and determination to complete tasks (Esping 2000:60; Fraser 2005 and Johnson 2005b:171, 177-179).

Madsen (2003:52) is of the opinion that accurate assessment occurs when the teacher fully understands teaching principles and has observed enough student behaviour to have a good idea of what will work in each specific case – or at least has a high probability of working in each case. This observation can be viewed in a very open-ended way using ideas regarding the theoretical framework outlined in the thesis.

Enterprise in music education can have a positive effect upon the level of pupil motivation. This can be achieved when pupils are given the opportunity to have greater choices when choosing repertoire. It will result in more focussed pupils, engaged with their daily practice (Johnson 2005b:176 and Lau 2007:37). The above aspects are demonstrated in the following diagram.

Figure 10: Factors which have a positive or negative impact on pupils' motivation (Fraser 2005).



Esping (2000:59) emphasizes the interaction between teacher and student in successful motivation. She stresses that each party has specific responsibilities. The teacher must convey information in a clear, interesting way so that every student will be inspired to reach his/her potential. The student needs to absorb this information and apply mental and physical energy in order to be successful. There are five aspects that will influence a student's musical achievement:

- The teacher's musical ability
- The quality of the instruction
- The student's intrinsic ability
- The student's willingness to work
- External factors.

It is suggested that teachers greatly influence all five of these aspects between student and teacher (Esping 2000:59).

4.9.4 **Addressing the unmotivated student**

In order to work successfully with the unmotivated student it is important for the teacher to be aware when the pupil shows signs of poor motivation.

4.9.4.1 Recognizing poor motivation

Robertson et al (2008) suggest that by understanding the causes of a lack of motivation the teacher can start to read the signs at an early stage. For instance a chaotic home background or poor parenting/substance abuse can have a devastating effect on pupil motivation (Fraser 2005 and Johnson 2005b:171). Other signs, such as forgetting books, arriving late or not at all and being difficult during the lesson are mentioned by Khazen (2007).

Often an aspect of learned helplessness[43] is present where pupils believe that they will never be able to complete tasks, play an instrument or advance in music. Certain traumas associated with learned helplessness can be of such a nature as to literally rewire the brain (Jensen 1998:58 and Johnson 2005b:138).

In addition to these signs the author can also add aspects found in own teaching experience, such as not doing homework/practising, constant excuses, lack of communication with the teacher, general boredom and not being committed to achieving anything.

In order to maintain a healthy level of motivation the teacher can introduce a balance of new and challenging work, together with the revisiting and reinforcing of old and previously prepared work (Harris and Crozier 2000:30; Johnson 2005b:167 and Khazen 2007).

4.9.4.2 Addressing poor motivation

When addressing poor motivation, teachers can use the following as a checklist to assist in the motivation task (Esping 2000 60-66; Harris and Crozier 2000:29; Khazen 2007; Lau 2007:36 and Robertson et al 2008).

[43] Learned helplessness is a condition that occurs after a period of negative consequences where the person begins to believe they have no control (Heffner 2004d).

- Check your general attitude to the pupil and the manner in which you represent new material. The teacher can ask him/herself if the new material is introduced imaginatively, positively and as part of an ongoing, developing learning process.

- Keep your schedule consistent and be reliable since routine will help students to plan their other activities around their music.

- Make lessons relevant. This may require the teacher to prepare students for a future they or the teacher cannot yet conceive of.

- Identify special interests and enthusiasms in the pupil. It is extremely important as well to 'show' pupils 'how' once you have told them what to do. Sometimes it will require the teacher to play for them.

- The pupil will often work best when there is a specific goal in sight, for example a forthcoming performance. Setting goals for your students forms an important part of motivation. The teacher can inspire them to prepare repertoire for a house concert, school performance, formal concert, eisteddfod and/or exam.

  The researcher has observed during the teaching of often negative pupils that realistic goal setting and an understanding of where the student is at are of utmost importance for a positive learning outcome. This is also suggested by Johnson (2005b:165, 173 and 175). Creativity in viewing concepts and encouragement as well as approval over a long period of time (even if things do not go well at first) does improve motivation. Therefore the researcher does not agree with the observation of Madsen (2003:52) that if a child does not learn early in life to work hard and long for specific goals, he or she is not likely to change with age. More flexible

parameters are needed in this regard and are illustrated by so-called 'late bloomers'.

It is also important for teachers to set a good example for their students. Since teachers are often role models their actions will influence the student's attitude toward the work he/she is assigned to do.

- Create a positive environment. A well organized teaching milieu will keep pupils on the task and focussed.

- Make your pupils feel safe. Pupils will often be motivated if they feel secure in the environment being taught.

- Esping (2000:64-65) and Harris and Crozier (2000:31) suggest that from time to time, instead of the teacher setting the shape and content of the lesson, transfer the responsibility to the pupil. Begin the lesson by asking what the student would like to do. The teacher will find that this may have a very positive effect on both strongly motivated and less motivated pupils. It will cause pupils to think about their work from a different and useful angle. Given this choice pupils might arrive with a favourite piece that is not part of the curriculum presently studied.

- Praise and reward pupils. Pupils need a range of learning experiences and need praise and rewards. In planning praise and rewards try to use strategies that will let the pupil see the improvement, no matter how small.

  Jensen (1998:65) is of the opinion that external rewards are much less of a motivator than intrinsic rewards for pupils. The behaviourists made a flawed assumption that learning is primarily dependent on a reward (Jensen 1998:63). The author agrees to a certain extent with Jensen in that not all rewards relating to motivation can be achieved from external

sources, but has found that distributing stickers when pupils have played well especially motivates the very young. They seem to collect them assiduously, keeping them in a special place.

In addition to the above list, Khazen (2007) regards enjoyment as an important aspect of motivation. If the teacher is enthusiastic the atmosphere in the lesson will be calm and that makes the lesson more enjoyable. The author does not fully agree here, because at times I have found that there is a dual responsibility from both teacher and student required in order to make the lesson enjoyable.

Khazen (2007) regards fear as another way to motivate a pupil to practise; for instance, fear of failing an exam or performance in public or disappointment of the parent or teacher. The author is of the opinion here that fear as motivator should only be used in extreme cases, but finds it very negative, violating the pupil emotionally. It should be regarded as mostly part of older methods of motivation[44]. Music teaching is about 'relationship' and 'trust'. These qualities will not be achieved through constantly using fear as a method of motivation. Interesting viewpoints are held by Steele (2008a) where he describes negative and positive motivational forces. These could include desire, fear, influence and need. Depending on how fear and influence are framed, they could be either negative or positive forces that serve as motivators. Applied in a music context, the author would suggest that if the possibility of bodily injury such as muscle injuries created through bad posture (negative force) is explained by the teacher, instilling appropriate fear of such injury, the student will automatically try to rectify this by a better posture (positive force). The author finds this a more constructive use of the concept of fear in the teaching process.

[44] Older methods of motivation here refer to those used during pre-modern and modern times.

4.9.4.3 Limitation of activities at an early age

The researcher has observed in the South African environment (relating geographically to the Pretoria area) that young children attempt numerous activities at once without mastering at least one or two properly. This leads to a great deal of pressure in order to perform or please the parent or teacher. As a result, the child does not ultimately enjoy the attempted activities, because there is often little room allowed for mistakes.

Children are often raised with the idea that all attempts at performance of any piece of music must be near perfect otherwise it is not acceptable or good enough. In fact the process of learning, experiencing music and the satisfaction gained from engaging with the music itself may be more beneficial for the student than the ultimate product.

4.9.5 The validity of motivation in teaching and learning music in the 21st century

Keeping up to date in the 21st century can be a challenge for most teachers who were brought up with ‘low tech’ materials.

Teachers should be aware that pupils today are in general technologically sophisticated: they manage the playlists on their iPods, download music regularly, and view bands and soloists on MySpace and YouTube. If teachers can integrate good quality technology into their teaching it may motivate pupils to play and perform more and give an added dimension to lessons. Ideas for this can include using backing/duet tracks, recording pupils playing and the use of midi files with a digital piano (Johnson 2005b:187 and Lau 2007:37).

“Learning styles differ so don’t force pupils out of their comfort zone – by all means stretch your pupils but don’t scare them!” (Robertson et al 2008).