A CRITICAL EVALUATION OF ASSESSMENT PRACTICES IN MUSIC LITERACY PROGRAMMES FOR YOUNG ADULTS

Jacomine Pretorius

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Supervisor: Mr. D.J. Taljaard
Co-supervisor: Prof. J.H. Kruger

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along unfamiliar paths I will guide them;
I will turn the darkness into light before them
and make the rough places smooth.
These are the things I will do;
I will not forsake them.
Isaiah 42:16

ABSTRACT

A critical evaluation of assessment practices in music literacy courses for young adults

The topic of assessment has attracted wide-spread attention in the discipline of music education in recent decades. However, most research centers on school-based assessment, and then mainly on the assessment of practical music subjects. Current assessment practices in music literacy programmes (such as 'paper-and-pencil' and standardized tests) counteract what is arguably the most important goal of music education, namely the development of musicianship. Therefore, in this study, my aim is to investigate assessment practices in music literacy courses for young adults, and to show how assessment in these courses can contribute to the development of musicianship.

In order to reach these aims, the terms 'musicianship' and 'music literacy' are defined. The importance of a guiding philosophy for assessment is highlighted and constructivism is discussed as an example of such a philosophy, since constructivist principles largely correspond with the principles of assessment and adult education. Principles for effective assessment are subsequently established before being applied to the assessment of music literacy outcomes. Finally, the need for further research about various topics that can inform assessment practices in music subjects is pointed out.

Key words

Adult education, assessment, constructivism, evaluation, measurement, music education, musicianship, music literacy, music notation, music theory, testing, young adult learners.

UITTREKSEL

'n Kritiese evaluasie van assesseringspraktyke in musiekgeletterdheids-kursusse vir jong volwassenes

Die veld van assessering in musiekonderrig het in die afgelope dekades baie aandag geniet. Die meeste navorsing sentreer egter om assessering in skole, en dan merendeels om assessering in praktiese musiekvakke. Huidige assesseringspraktyke in musiekgeletterdheidskursusse (soos 'papier-en-potlood' metodes en gestandardiseerde eksamens) verydel die belangrikste doel in musiekopvoedkunde, naamlik die ontwikkeling van 'n omvattende en geïntegreerde musikale begrip en vermoë. Die doel van hierdie studie is dus om assesseringspraktyke in musiekgeletterdheidskursusse vir jong volwassenes te ondersoek, en gevolglik aan te dui hoe assessering binne hierdie kursusse tot 'n musikale vorming kan bydra.

Ten einde hierdie doel te bereik, word grondbegrippe gedefinieër. Die noodsaaklikheid van 'n rigtinggewende filosofie word aangedui en konstruktivisme word as voorbeeld van so 'n filosofie bespreek, aangesien konstruktivistiese beginsels ook in die meeste gevalle met die beginsels van assessering en volwasse onderrig ooreenstem. Beginsels vir doeltreffende assessering word gevolglik neergelê wat dan op die assessering van musiekgeletterdheid van toepassing gemaak word. Ten slotte word die behoefte aan verdere navorsing oor onderwerpe wat meer lig op assessering in musiekvakke kan werp, aangedui.

Sleutelwoorde

Assessering, evaluasie, jong volwassenes, konstruktivisme, meting, musiekgeletterd-heid, musieknotasie, musiekopvoedkunde, musiekteorie, musikale vorming, toetsing, volwasse onderrig.

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CHAPTER 1

INTRODUCTION

1.1. Problem statement and substantiation

The topic of assessment has attracted wide-spread attention in the discipline of music education in recent decades. Abeles, Hoffer and Klotman (1994:304) point out that "[t]he existence of several books, hundreds of articles and convention sessions, newsletters, and special interest groups of researchers who conduct studies on assessing the outcomes of music education provides ample evidence of the importance of this area to music educators" (see e.g. Boyle and Radocy, 1987). Assessment also is the focus of numerous contemporary articles in music education journals such as *Music Teacher*, *Journal of Research in Music Education*, *Teaching Music*, *Music Educators Journal* and *The South African Music Teacher*.

Most of these writings tend to concentrate on the assessment of performance related musical activities, only occasionally mentioning music literacy, and then only as an adjunct to practical work. They do offer helpful ideas and general suggestions that can be applied to assessment in music literacy programmes, but no explicit attention is given to music literacy outcomes as the primary focus of assessment. Most research further centers on music education in schools, with little consideration being given to assessment practices at institutions for tertiary education. Foundation or diploma courses in music literacy have become a familiar feature at institutions for tertiary education in South Africa, generally attracting young adult learners with little or no formal musical training. There is a need for the development of meaningful methods for assessing music literacy outcomes in these courses.

A major shortcoming in educational assessment practice is the general lack of integration between instruction and assessment, since "[f]ew music teachers

consider assessment as they plan their instruction" (Abeles, Hoffer & Klotman, 1994:304). Elliott (1995:265) refers to Lyle Davidson in writing about the traditional notion to alternate periods of instruction with pauses for testing:

> Traditional procedures require teachers to freeze the teaching-learning process to examine student achievement in "stop time" and out of context. As a result [...] too little of what the student has been learning is being evaluated and too little (if any) part of the normal context of teaching and learning is taken into account. Such evaluations therefore tend to misrepresent both the nature of musicianship and the musical achievement of learners.

This mismatch between assessment strategies and learning outcomes often results from assessment being done for inappropriate reasons, and according to Boyle and Radocy (1987:2) "[i]ndividual teachers and even directors of music programs in schools, including universities and conservatories, occasionally use tests for spurious reasons. Some appear to test for 'window dressing' or because it is expected of them. Others may even use tests as punishment." In other words, they do not have a guiding philosophy for assessment.

Other forms of ineffective testing include the infamous 'paper-and-pencil' test (Abeles, Hoffer & Klotman, 1994:304) and standardized tests. Standardized tests promote assessment-driven instruction, resulting in a lack of diversity that leaves no room for student individuality, expression, and ownership in the process of education.

These shortcomings in assessment practices counteract what is arguably the most important goal of music education, namely the development of musicianship. Musicianship, as defined by Elliott (1995:68) always includes "listenership", and equals "musical understanding". The word "understanding" implies something deeper than formal knowledge about musical works, and constitutes a multidimensional spectrum of musical knowledge, both verbal and non-verbal. Elliott (1995:54) accordingly differentiates between formal, informal, impressionistic and supervisory musical knowledge. Thus, musicianship may be

defined as referring not merely to the practical skills of music making, or to theoretical skills alone, but to an integrated whole that includes both lower and higher level cognitive thinking, practical application, problem solving in the medium itself, affective involvement and social interaction.

The consequent research question of this study is: how can assessment practices in music literacy programmes contribute to the development of musicianship of young adult learners?

1.2. Research aims and objectives

The main objectives of this study are:

- to formulate principles of assessment that can guide the development of musicianship of young adult learners in music literacy programmes;
- to provide practical suggestions for the effective implementation of these principles in music literacy programmes.

1.3. Central theoretical statement

Appropriate forms of assessment will contribute to developing the musicianship of young adult learners in music literacy programmes.

1.4. Method of investigation

This study will include an investigation into:

- the literature on musicianship as well as music literacy in order to formulate definitions for the purposes of this study;
- the literature on adult learning principles;

- the literature on constructivism as a guiding philosophy for assessment;
- the literature on assessment practices in general education as well as music education;
- different forms of current assessment practices in music literacy courses at the NWU School of Music, namely, performance assessment (with reference to the Musikhane community project), classroom questioning and examination papers; and
- further possibilities for research about various topics that can inform assessment practices in music subjects.

CHAPTER 2
MUSICIANSHIP AND MUSIC LITERACY

In this chapter, musicianship is defined and analyzed according to its major components in order to clarify the ultimate goals that assessment in music literacy courses should serve to promote. Music literacy is also defined for the purposes of determining *what* should be assessed.

2.1. The goal of assessment: contributing to the development of musicianship

The hypothesis of this study is that appropriate forms of assessment will contribute to developing the musicianship of young adult learners in music literacy programmes. Development of musicianship is regarded as the basic and most important goal of music education.

Music literacy programmes form part of music theory in general. Rogers (1984:13) writes that musicianship is the goal of music theory training and that some teachers want to discard the word 'theory' altogether in favour of 'musicianship'. He adds that "[t]his seems to put too great a burden on a theory program [...] since musicianship training includes other courses." If musicianship training involves more than the teaching of music theory, then no claims can be made in this study that training in music literacy, which is only the most basic part of music theory, can produce 'complete' musicians. However, certain forms of assessing music literacy outcomes can most definitely strain the development of musicianship, while other practices can serve to enhance it.

In order to know how assessment can aid the development of musicianship, a definition of musicianship needs to be formulated. This is not easy, since the term

'musicianship' is usually applied in a vague and general manner. Durrant and Welch (1995:vii) explain how limiting undefined conceptions of musicianship can be.

> Children and teachers bring a vast array of musical experiences and perceptions to the classroom. Significant amongst these are conceptions of what it is to be 'musical' and a 'musician'. In our experience, such conceptions are often very limited and limiting and inhibit musical development and understanding in both teachers and their pupils.

Rogers (1984:12) writes that "[t]his important, but vague, concept is as elusive as music theory itself and — like a slippery bar of soap — is difficult to grip." In spite of the elusiveness surrounding the term, music educators should endeavour to clarify for themselves what musicianship involves and to construct a definition suitable for their own contexts and purposes. Such a definition will help them to clarify their goals and thus to simplify instructional decision-making. It will also help them to prevent the boredom that accompanies aimless teaching (teaching for the sake of teaching). Students respond best to teachers who have a clear sense of direction. This sense of direction can only come from reflection and knowing what one values as important and why.

Rogers (1984:12) does mention, however, that "[m]ost usage [of the term musicianship] seems to center on skills and abilities that practicing musicians must have." This emphasis on skills is especially appropriate for foundation or diploma courses — the focus of this study. In a sense, these courses can be regarded as vocational training, since these students are training to be musicians who will teach, perform and participate in the musical life of their respective environments. They need to be equipped with the necessary skills to make a success of their musical careers. What, then, do we expect from a professional musician in practice? What knowledge, skills, attitudes and values constitute musicianship? What follows is an attempt to answer these questions by summarizing what I regard as the most essential components of musicianship. These components may be listed as follows:

- enjoyment;
- motivation;
- expression and communication;
- interaction;
- musical skills;
- music literacy;
- critical thinking;
- creativity;
- musical intuition and awareness;
- discipline and opportunity;
- integration; and
- balance and flexibility.

I want to stress the fact that this list is entirely my own compilation and by no means constitutes 'the last say' on musicianship. Much remains to be said about the topic as a whole and each component on its own. I acknowledge the fact that a definition of musicianship can only be context-bound and, as Gould (2003:80) states, that "musicianship is not only a question of measurable degrees but also of priorities both personal and stylistic." Thus, these components necessarily reflect contextual and personal priorities, shaped by the aims of this study.

2.1.1. Enjoyment

First and foremost, a musician is someone who thoroughly enjoys being involved with music and whose contagious personal interest and enthusiasm often lead others to appreciate the source of his/her joy. There can be no enjoyment without affective involvement, though, and no affective involvement without some form of cognition. In *Music Matters* (1995:114) Elliott states that "[e]njoyment [...] is the affective concomitant of self-growth." Later in the book (1995:203) he elaborates:

> Enjoyment or flow is the affective consequence of, the affective accompaniment to, and the prime motivation for the thoughtful actions

> of musicing and listening. Human beings possess tacit and verbal knowledge, concepts, and beliefs about everything in their lives. Our feelings are about people, events and circumstances; affect is directed at things. It is because people develop and hold beliefs and knowledge about the several dimensions of musical works that people can be emotionally moved while listening.

According to Csikszentmihalyi (1988:30), two interlocking conditions must be in place for self-growth and consequent enjoyment to occur: (1) something to do (a challenge) and (2) the capability to do it. Another condition is the presence of goals and standards of achievement, because they "establish the foundation for feedback about how well a person is doing something and where that person stands in relation to achieving his or her goals" (Elliott, 1995:116). For self-growth and enjoyment to be *sustained*, however, both the challenges and the knowledge that define the pursuit must become more complex over time.

To summarize, increasingly complex musical challenges lead to ever higher levels of musical understanding. This produces a sense of self-growth which inevitably results in enjoyment. Thus enjoyment can be said to be a *proof* of real musicianship.

2.1.2. Motivation

If there is no enjoyment, there can be no lasting motivation to pursue a life-long, active relationship with music. "Our motivation is not any material reward. Our motivation is the enjoyment or 'flow' that arises when we apply our conscious powers and knowings effectively in goal-directed action" (Elliott, 1995:114). Motivation is the result of continued musical discovery and a curiosity that is never satisfied. A successful musician's motivation also comes from a true belief in the value of his/her profession (*knowing why* s/he does what s/he does), the confident feeling of being good at what s/he does, and the consistent drive to become even better. Being motivated can thus be seen as a mark of musicianship.

2.1.3. Expression and communication

Knowing how to use music as a vehicle for expression and communication considerably adds to the enjoyment of music. This is especially important in the areas of music making (performance), music appreciation, and music education. Expression and communication are made possible by musical understanding: if there is no understanding, there is nothing to express or communicate. Elliott's (1995:68) praxial philosophy of music education holds that musicianship equals musical understanding. Thus, no music teacher can hope to lead students to appreciation and understanding — to develop their musicianship — without exemplifying musicianship. "Music education should be carried out by teachers who are musically competent themselves. Musicianship and teaching ability (or educatorship) are interdependent. One without the other is insufficient. [...] This is how children develop musicianship themselves: through actions, transactions and interactions with musically proficient teachers" (Elliott, 2002:18). Developing the musicianship and listenership of students automatically extends the range of their expressive and impressive powers by providing them with opportunities to formulate musical expressions of emotions, musical representations of people, places and things and musical expressions of cultural-ideological meanings (Elliott, 2002:17).

However, musicians (especially those who teach) should also be able to express themselves *verbally* about music and engage in intelligent conversation about their experiences of music. This of course requires familiarity with appropriate musical terminology. Although verbal expression is not a prerequisite for musicianship, it can certainly benefit the transmission of the subject. Furthermore, musicians in South Africa function as part of a society with a great interest in music, but with little formalized knowledge. Effective verbal communication can contribute to informed discourse.

2.1.4. Interaction

No musician can function in isolation. Musicianship always involves interaction, be it with the musical material itself, with students, other musicians, or an audience. The understanding and enjoyment derived from interaction with the musical material itself is of little value if it cannot be communicated to or shared with students, fellow musicians or an audience. Thus, interpersonal skills are very helpful to a musician, and can be considered and developed as part of musicianship.

2.1.5. Musical skills

Just as a person learning a new language needs to practise skills such as correct pronunciation, reading aloud and making conversation, musicians need to master certain skills in order to acquire the fluency and accuracy that will enable satisfying musical experiences. These skills encompass singing and/or performing on an instrument, sight reading, playing keyboard harmony, accompanying, improvising, conducting, composing, arranging, and teaching, depending on the context in which the musician is required to function.

Another skill, often neglected, but especially crucial to the development of musicianship is *listening*. Elliott (1995:99) stresses the importance of training 'listenership' within the context of authentic musical projects:

> A music curriculum based on recordings encourages passive listening-to. In contrast, music making places the student-as-listener inside the musical works and practices he or she is endeavoring to learn. The kind of music listening one engages in while performing, improvising, arranging, composing and conducting is a matter of artistic listening-*for*. It is directed toward musical problem finding and problem solving. In sum, educating competent, proficient, and expert listeners for the future depends on the progressive education of competent, proficient, and artistic music makers in the present.

Rogers (1984:18-19) adds that, "[i]n spite of the important and often crucial role that drill and repetition play in building aural skills, ear training is primarily *mind* training — it's what goes on between the ears that counts. Knowing *how* to listen and *what* to listen for are the key ingredients."

2.1.6. Music literacy

Music literacy, defined more extensively in section 2.2., refers to the foundational tools and building blocks needed to engage in all kinds of musical activities. A good musician needs a strong foundation upon which musical experiences can be built. On a very basic level, this requires knowledge of musical parameters (pitch, duration, timbre and intensity) and the relation of these parameters to one another.

Music literacy, in this context, does not merely refer to formal musical knowledge, since this implies a verbal kind of knowledge. Although this kind of knowledge contributes importantly to the development of musicianship, Gardner (1990:42) writes that verbal knowledge is "an ancillary form of knowledge, not to be taken as a substitute for 'thinking' and 'problem solving' in the medium itself." Verbal knowledge, though important, is of no value if it cannot be translated into procedural knowledge. Music literacy, if it is to promote musicianship, cannot be developed out of context, the context being authentic musical problem solving.

There are various perspectives on whether notation should be regarded as part of music literacy or not. Often, the driving force or motivation behind these perspectives is not even musical in nature, but economical, social or political.

Formerly, in South Africa, an "unbalanced racialized education system" prevented the majority of black African musicians from learning to read and write music, resulting in such musicians developing phenomenal skill in playing from memory or by ear (Reetsang, 2003:7). These circumstances still have an influence on beginners who, according to Reetsang (2003:7), are often told by older musicians

that the ability to read music makes one "rigid and demusicalized." Reetsang (2003:7) negates this view by writing:

> It is correct that musicianship is largely about playing, however there are other elements in being a fully professional well rounded musician and it includes being able to play from memory (by ear) and reading. These elements of learning or practice should not be put to competition, as they should be complimenting [sic] each other. In other words they are both equally important in the development of a complete musician.

Musical literacy facilitates and quickens the learning of repertoire, but it should not be emphasized to such a degree that it inhibits spontaneity and creativity. A balance between these two extremes must be found.

2.1.7. Critical thinking

Successful musicians, whether they are making music, teaching, or pursuing any other musical activity, are constantly evaluating their thoughts and actions in order to gain a better understanding of musical concepts and their relations, and to design better ways to apply this knowledge and understanding to their performance, composition, or teaching. This habitual reflection is fostered by teachers who challenge their students' views and stimulate higher level cognitive skills through authentic problem solving situations, thus developing their musicianship.

As critical thinking develops, musicians also learn to appraise their own and other people's efforts at musical activities. "To become independent judges of musical excellence in the future, students need regular opportunities to reflect on the results of their musicianship and that of their peers" (Elliott, 2002:19).

An essential part of a music teacher's task is to teach students how to continue developing their musicianship in the future, and teaching them how to think critically plays a major role in achieving this goal: "[m]usicianship (which always includes listenership) is not something given 'naturally' to some people and not to

others. Musicianship is a form of cognition — a rich form of thinking and knowing — that is educable and applicable to all" (Elliott, 2002:18).

2.1.8. Creativity

Creativity is an important part of *every* aspect of musicianship. Individuality, imagination, exploration, spontaneity, originality, experimentation, and invention should be nurtured from the very beginning, since all of these can serve to facilitate and improve the quality of creative attempts. Durrant and Welch (1995:120) note that "composers, writers, painters are considered important because they are original, i.e. they are individual. [...] If art sets out merely to conform to expectations, it is in danger of stagnation and will ultimately fail to attract new audiences and followers. So, in arts education, do we expect children to conform to, or diverge from, a norm?" Creative freedom is best developed in an encouraging learning environment where students can take risks within certain boundaries, and where activities like composition and improvisation are not considered the monopoly of a few 'chosen' individuals.

Creativity also benefits from the development of critical thinking and discipline:

> Contrary to myth [...] creative products do not arise by accident, or by spontaneous insight, or as a result of unconscious processes. [...] Creative achievements result from know-how, from ideas generated and selected by deliberate choice, by plans continuously altered, by commitments to goals, and by judgments of creative promise. In all of this there is repeated undoing and redoing. Subgoals and subproblems become temporary ends in progress toward a final end product (Elliott, 1995:229).

2.1.9. Musical intuition and awareness

Rogers (1984:9-10) quotes Bruce Benward: "[m]uch of what you learn [...] will at first be simply surface information that you apply in a cursory manner, but as the

concepts and ideas mature in your mind they will become a part of your musical makeup and will eventually amplify and broaden your musical intuition." Musical intuition is what Elliott (1995:64-65) calls "impressionistic musical knowledge." In writing about the nature of artistic knowledge, Durrant and Welch (1995:121) accordingly state that "much 'knowing' in the arts is tacit rather than implicit". Yet Hindemith (1937:11-12) claims that, "[a]lthough the creative process in its highest stages may always remain hidden from human comprehension [...] the dividing point between conscious and unconscious work can be raised to an extraordinary degree."

According to Elliott (1995:65) "impressionistic musical knowledge [...] cannot be taught or learned in abstraction from the actions and contexts of actual music making"; it "develops through critical musical problem solving in relation to natural music making challenges." Musical intuition is a natural by-product of musicianship, and thus the development thereof is intimately tied up with all other components of musicianship.

2.1.10. Discipline and opportunity

No musician, however 'gifted' or 'talented', will reach his/her full potential without discipline. Skills need to be practised and knowledge internalized so that they can become part of a musician's musical intuition. "Even a talented student will notice that in order to overcome the progressively mounting difficulties he cannot depend on his musical instinct alone, but will be compelled to develop his ability to think logically, his acuteness, and his capacity for combining various elements" (Hindemith, 1969:xii). Elliott (1995:236) discards the myth of "music-as-talent" altogether:

> No one is born musical. Instead, people are born with the capacities of attention, awareness, and memory that enable them to learn to think musically — to make music and listen for music competently, if not proficiently. Musicianship is achieved through music teaching and learning; it is neither a gift nor a talent. True, some people seem to have high levels of musical intelligence and high levels of interest in

> learning to make and listen for music well. These factors may enable such people to develop musicianship and musical creativity more deeply and broadly than others. Nevertheless, the vast majority of people have sufficient musical intelligence to achieve at least a competent level of musicianship through systematic programs of music education.

Thus, a factor often overlooked by music educators in developing musicianship is opportunity. The opportunity to engage in and enjoy music must be made available from the earliest stages of a person's life if one is to develop into the musician one can ultimately be.

2.1.11. Integration

Ideally, musicians should have a good background knowledge of musical styles and literature, as well as a general knowledge of different kinds of music. This, together with a sound theoretical and aural foundation as well as appropriate musical skills, creates a wide frame of reference from which they can draw comparisons to increase musical understanding and intuition. Especially important to Rogers (1984:8) is the integration of the conceptual and the perceptual – the interdependence of thinking and listening: "the more thinking that takes place, the more there is to hear; the more listening that takes place, the more there is to ponder."

Integration is also important when it comes to different learning styles, for example visual, aural, and kinesthetic (see also chapter three — section 3.1.6 — concerning the integration of multiple intelligences and different modes of representation). Theoretical concepts in music (for example 'triad') should immediately be reinforced by or, better yet, *preceded* by their actual sound and physical production, preferably within its musical context.

2.1.12. Balance and flexibilty

The diversity in music leaves no room for dogmatism. Although each musician needs to develop a personal philosophy and be able to defend his/her own preferences, a knowledge of and tolerance for other views are essential to maintain an open minded attitude. A musician should stay informed about currents in the musical world by reading books and journals, and maintaining communication with fellow musicians. The flexibility to adapt to a variety of circumstances (for example, in the case of insufficient facilities) is an especially important aspect of musicianship in the South African context of music education and performance.

2.2. Music literacy

In order to establish sound principles of assessment for music literacy programmes for young adults, one needs to know what the assessable outcomes of music literacy are. This section, then, is an attempt to define music literacy *for the purposes of this study* and to enumerate the most important outcomes — general and specific — of music literacy as a subject.

Literacy *in general* refers to the ability to read and write. Pheasey (2002:20) expands this definition to include listening and speaking as well. In short, literacy can be regarded as the linguistic tools needed to function in a language based society. These tools are the means we employ to gain knowledge, to express ideas, to engage in conversation, to build relationships, and for a myriad of other everyday activities. Thus *music* literacy may refer to the foundational tools and building blocks needed to engage in all kinds of musical activity.

It should be noted, however, that a universal definition of literacy in general is not to be found, especially with the emerging of many new literacies in recent years. Semali (2001:3) lists several of these, including computer literacy, information

literacy, media literacy, television literacy, visual literacy, cultural literacy, document literacy, mathematical literacy, political literacy, environmental literacy, diagrammatic literacy, economic literacy, scientific literacy, and technical literacy. Most of the definitions researched by Pheasey (2002:4-7) "seem to have personal values attached" and depend on the context and purpose of the term. A definition for *music* literacy is even more evasive, since very little has been written about the concept. Definitions and viewpoints vary considerably and much overlap occurs. Terms like music literacy, music appreciation, music notation, music theory and musicianship are often used interchangeably, and many who write about music literacy base their usage of the term on the assumption that the reader knows exactly what is meant by it. One finds contradictions even among those who attempt to define music literacy, and while some rely heavily on the music-language metaphor, others question its validity.

A writer who draws an analogy between language and music is Berkley (1999:27), who remarks that "[a] musical education must equip the student with some grounding in musical literacy, in the same way that students studying French or German will learn the basics of reading and writing in that language." Slee (1982:12) relies even more on the metaphor. He writes that the development of musical literacy should follow the same process a child undergoes in becoming literate with regard to language. A child first learns speech through listening to and imitating his/her parents before s/he learns to read and write, "learning something of its grammar and becoming capable of reading silently and with full understanding of the meaning of the words s/he uses." He describes the musical equivalent of this process as follows (Slee, 1982:12):

> Similarly in music, which in many respects closely resembles language, the beginner needs first to be able to manipulate musical sounds by imitation on his voice — the instrument we all possess at birth — and to learn to discriminate accurately between sounds of different rhythms, pitches, durations and intensities. Song is the simplest and basic equivalent of speech, and fortunate is the child who hears and imitates the songs his mother sings to him as an infant. Tuition on an instrument [...] should follow the same sequence of first learning

> musical speech, by rote and imitation, before learning to read musical notation; and by a full understanding of the meaning of the sounds they make and with fluency of expression before learning to read and express the works of others. We regard the child as musically literate only when he goes on to learn to read and write musical notation, understanding its grammar and meaning, and eventually able to hear inwardly and recall silently sounds previously heard or played or read.

In Slee's viewpoint I discern a *preliterate* stage in which memory, concentration and the inner ear are developed with an emphasis on fluency of 'speech' and free expression of musical ideas, and when the student is made aware of the relationships of interval, chord and key, "which help to give meaning to the language of music" (Slee 1982:12). He states that "[t]he principal requisites for the acquisition of musical literacy are a good ear, a good memory, the ability to concentrate and to hear inwardly, and above all an understanding of the relationships involved in music." During the preliterate stage "[s]inging, playing and the memorizing of music [...] will build up an aural experience of recollected sounds, so that when notation is taught the sight of the symbol will bring immediate realization of the sound relationship which it represents" (Slee, 1982:12). The importance of this 'sound before symbol' principle was recognized long before Clarkson (1966:131), who wrote that "[a]n individual's ability to conceptualize is limited by his ability to discriminate the relevant sensory data."

In contrast to Berkley and Slee, Clarkson (1966:130) questions the aptness of the music-language metaphor, because this transference "has encouraged music educators to overrate reading and writing musical script at the expense of developing auditory perception." He notes further that

> [s]tudents are too often drilled in the notational system of a limited tradition instead of learning the *aural* and *memorative* capacities needed for a wider range of musics. Exaggerated deference to the written note underlies the *Urtext* fallacy (the notes are the music), the elaborate role notation plays in some contemporary compositions, and also the

> tendency to teach notation symbols before the sound relations they represent... (Clarkson, 1966:130).

Clarkson (1966:129) argues that "[l]anguage and music are too diverse for the notion of literacy to be transferred uncritically from one to the other" and further states that "educators will need to recall that learning music, unlike learning mathematics or philosophy, requires the education of a sense-organ" (Clarkson, 1966:131). He therefore asserts that "literacy in a given musical tradition depends on the ability to make auditory discriminations among the musical sounds that constitute the utterances of that tradition. Whichever the musical community (rural, urban, popular, elite), whatever the individual's role (composer, performer, listener, thinker), *auditory perception is the prime condition of musical literacy*" (Clarkson, 1966:129; italics added). Another author linking musical literacy to aural perception is Wilson (1965:137). He writes that, "if the process of learning is supported by a sufficiency of relevant aural experience, then the student will benefit enormously. He will, in fact, become musically literate." These observations do not, in fact, rule out the music-language metaphor, since, for the understanding of spoken language, auditory perception is also the 'prime condition.' A listener needs to make extremely fine-tuned auditory discriminations between verbal sounds, and indeed the ears need to be trained to do this.

A view of music as primarily a matter of auditory perception is, however, not shared by Serafine (1988:16), who believes that "musical experience is more a matter of cognition than perception." This belief may be linked with Rogers's (1984:18) observation that "ear training is primarily *mind* training" (see section 2.1.5.). In *Music as Cognition*, Serafine (1988:5) argues that "music is a *form of thought* and that it develops over the life span much as other forms of thought develop, principally those such as language, mathematical reasoning, and ideas about the physical world" (italics added). This stance approximates the view of music as a *sign system* or representational device (see section 3.1.6.), represented in the work of Donald *et al.* (2004:106) who describe sign systems as cognitive tools and forms of thought. Serafine (1988:16) opposes the view of

music as communication, reasoning that "music is perhaps more like literature [or poetry] than like language, and the latter, not the former, has communication as its *raison d'être*." I tend to agree with this analogy, because I regard music as more *expressive* than communicative.

Slee (1982:13) concludes his article by summarizing his definition of musical literacy in the following way:

> [M]usical literacy implies far more than just the ability to read and reproduce on one's own instrument a particular musical score with accuracy of note and fluency of tempo — important as these are. Skill and dexterity need to be balanced by the expression of feelings and the interpretation of style, which only a thorough study of the music in its theoretical relationships of interval, chord and key, and analysis of its structural nature will reveal.

However, this definition goes beyond music literacy into the realm of musicianship and music theory, which can explain why Elliott (1995:322) takes the following stand:

> Some writers use *music literacy* as a synonym for *musical understanding* and *musicianship*. This usage is misleading on two counts. First, *literacy* gives the false impression that knowing how to read music notation is the core of what it takes to be a competent or proficient music maker. More broadly, *music literacy* gives the false impression that musical understanding is essentially a matter of formal musical knowledge. I therefore eschew the use of *musical literacy* for anything more than references to coding and decoding music notation.

Whereas Slee's definition is too broad, Elliott's definition is too narrow for the purposes of this study. Music literacy equals neither musicianship nor merely the use of music notation. Some writers even speculate as to whether the ability to use notation should be seen as a prerequisite for musical literacy at all, since many musical practices worldwide "operate beyond text-based notions of music literacy" (Barrett, 1999:17). However, this debate (also referred to in section

2.1.6.) goes beyond the scope of this study, for which music literacy *includes* the learning and use of notation, but only within the context of authentic musical problem solving in the medium itself. According to Elliott (1995:61), notation should be taught and learned "parenthetically and contextually — as a coding problem to be gradually reduced within the larger process of *musical* problem solving through active music making." Barrett (1999:18) also emphasizes learning through *doing* as part of a broader definition of music literacy — a definition that encompasses "the capacity to listen perceptively and critically to musical experience, and to *participate in the music processes* of composing and arranging, conducting, improvising, and/or performing" (italics added). Taught in this way (in the context of musical problem solving), music literacy will *facilitate* the development of musicianship, which is the broader goal of music education.

Music literacy also does not equal music theory. Rogers (1984:3-4) explains this misapprehension in writing about the purpose and goals of music theory:

> When "theory" is mentioned, almost all students and even some teachers think of scales, do-re-mi, roman numerals, and key signatures. While these items would be part of almost any beginning level of college study, they really represent a pre-theory stage. They are no more a part of the genuine study of music than knowledge of the alphabet, verbs or commas is a part of the study of literature. Rudiments and fundamentals, while absolutely indispensable, are most important for establishing an essential background that leads to the eventual study of other things. Those "other things" constitute the essence of music theory.

Rogers (1984:4) continues by noting that for many teachers and students these background materials become ends in themselves (as is the case with preparation for standardized tests in music literacy), and this inevitably leads to frustrated students who cannot see why these courses are even taught.

For the purposes of this study, music literacy will refer to the acquisition and use of rudiments and fundamentals, covering concepts such as note values, metre and time signatures, grouping, clefs, note names, key signatures, scales, intervals,

triads and cadences. Most important, however, is that this foundation be taught in such a way that it effectively sets the stage for the "other things" Rogers refers to. This is especially crucial in foundation or diploma courses for young adults with little or no formal musical training. In such courses, time is usually very limited and thus the teaching of music literacy should aim to provide students with the tools independently to continue building on their foundations. These students may still find themselves in the preliterate stage discussed above. The majority is still new to the process of developing "a good ear, a good memory, the ability to concentrate and to hear inwardly, and [...] an understanding of the relationships involved in music" — the *requisites* that Slee (1982:12) lists for the acquisition of musical literacy. If they are now subjected to learning concepts without the deeper understanding that comes from aural associations, the development of an integrated musical understanding (essential for true musicianship) might remain out of reach. Clarkson (1966:132) claims that, if students are unable to discern aurally what they are taught conceptually, they are not so easily motivated to take responsibility for their own learning:

> Lacking the ability to put a musical question or discover a musical answer, he [the student] is constrained to accept the rhetoric of conclusions laid down in the curriculum. No matter how effective the instruction or how well-founded the judgments, the student does not acquire the musical fluency needed to transcend the curriculum. Nor is he able to take the essential final step of the learning process — the confirmation in practice of concepts that are to him as yet hypothetical.

This type of learning will certainly not encourage life-long learning. Therefore, it is crucial that, in teaching music literacy, every concept be learnt in the context of authentic musical problem solving, presenting the sound before the symbol. All methods of assessment should then reflect these practices.

CHAPTER 3

A PHILOSOPHY FOR ASSESSMENT: CONSTRUCTIVISM

The current chapter can be viewed as an introduction to chapter four, in which the principles of assessment will be discussed. The main argument of this chapter rests on two premises: firstly, that assessment should be motivated by a sound philosophy, which is the first and most important assessment principle of all because it attempts to answer the *why* of assessment and, secondly, that constructivism is such a sound philosophy. Lambert and Lines (2000:2,199) fittingly state that "any discussion of assessment needs to take account of the kind of learning we wish to promote," and call for a better theorized "assessment *for* learning" to challenge and counteract the heavily theorized "assessment *of* learning." Importantly though, Black (1998:123) points out that these changes "cannot be realised by change of assessment alone. The changes have to be part of a coherent programme in which curriculum and pedagogy are also restructured."

It has become axiomatic that every aspect of any educational programme must be motivated by a sound philosophy that is shared by all participants. This philosophy must guide all curriculum development, lesson planning, instruction, and assessment. Without such a shared philosophy, one can easily lose sight of what exactly one hopes to accomplish through an educational programme. Rogers (1984:15) is particularly adamant that all aspects of a course should be "patterned by design and not by chance." He makes it clear that "to not decide on a particular approach is itself a decision — a decision for confusion and for a course with no bearings."

Just as thinking about instruction is essential for improvement, thinking about assessment is a prerequisite for growth in that area. As Rogers (1984:3) states, "[m]any theory teachers proceed from hidden assumptions formed and coloured

by their own undergraduate theory classes rather than from concepts based on reflective and mature personal conviction." Thus, teachers must ensure that they stay informed about teaching trends and research findings concerning the ways in which people learn. According to Boardman (2001:50), "[t]hese ideas must not merely be acknowledged, but absorbed as basic assumptions." She pleads with all teachers to ensure that they possess "a theory of instruction that is cohesive, coherent, musically sound, and based on the best of research we have available" (Boardman, 2001:53).

For the purposes of this dissertation, I chose *constructivism* as a guiding philosophy. The reasons for this choice are as follows.

- The principles extracted from assessment literature (discussed in chapter four) correspond to a large extent with the principles of constructivism.
- Most principles of adult learning as encountered in andragogical literature are — implicitly or explicitly — rooted in constructivist philosophy.
- According to Donald *et al.* (2004:107), these constructivist principles are also consistent with an outcomes-based educational (OBE) approach to teaching and learning — an approach that brought about many important changes in the South African educational setting over the last decade.

Thus, constructivism will be discussed before the relation between constructivist and assessment principles will be indicated in chapter four. Since much overlap exists between constructivist and adult learning principles, some aspects of adult learning will be incorporated into the present discussion. Lambert *et al.* (1995:26) note that, even though constructivist learning theory is not age- or stage-bound, constructivist principles were more readily accepted in andragogy than in pedagogy, since adults are seen as more self-directing individuals than children.

3.1. Constructivism

Constructivism is neither a new idea nor a passing fashion. "Constructivism, as a way of coming to know one's world, is supported by a long and honourable body of literature and research" (Brooks & Brooks, 2001:23), much of which is referred to in *In Search of Understanding — the Case for Constructivist Classrooms* by Brooks and Brooks (2001:23). It is a "concept underlying theories of how children, adults, and even organizations learn" (Lambert *et al.*, 1995:xii) and draws from a variety of fields, including philosophy, psychology, and other sciences (Lambert *et al.*, 1995:1). The work of well known theorists like Dewey, Piaget, Bruner, and Vygotsky, as well as that of more recent cognitive psychologists set the stage for the emergence of constructivist learning principles (Lambert *et al.*, 1995:24). In short, "constructivism is a philosophy of learning founded on the premise that, by reflecting on our experiences, we construct our own understanding of the world we live in" (On Purpose Associates, 2001). Thus, applied to education, constructivism suggests that students construct their own meaning. This proposal is "based in part on Plato's contention that knowledge is formed within the learner and is brought to the surface by a skilled teacher through processes of inquiry and Socratic dialogue" (Lambert *et al.*, 1995:16).

Basically, the theory of constructivism is rooted in our innate search for understanding in the day-to-day processes of making sense of the world we live in. "Individuals bring past experiences and beliefs, as well as their cultural histories and world views, into the process of learning; all of these influence how we interact with and interpret our encounters with new ideas and events. As our personal perspectives are mediated with the world, we construct and attribute meaning to these encounters, building new knowledge in the process" (Lambert *et al.*, 1995:xi-xii). In other words, new experiences are synthesized into what we have previously come to understand (Brooks & Brooks, 2001:4). The influential Swiss educator, Jean Piaget, suggested that people are "actively engaged in an ongoing process of *adaptation* to the world they live in" (Donald *et al.*, 2004:63).

Thus, "from infancy onwards, children are involved in constructing or building progressively more complex 'maps' [schemata or cognitive structures] of their world in an attempt to organize, understand, and adapt to it" (Donald *et al.*, 2004:64).

This adaptation happens through three continuously interacting processes, namely assimilation, accommodation, and equilibration. When sufficiently compatible, new information can be *assimilated* (fitted into) a person's existing cognitive structures, thus simply extending his/her map. When contradicting or conflicting situations arise, this calls for an adjustment or reshaping of cognitive structures in order to *accommodate* the new information (Donald *et al.*, 2004:64 & Lambert *et al.*, 1995:1,17). According to Donald *et al.* (2004:64), these two processes interact continuously in an attempt to establish equilibrium.

> Progressive accommodations open up more possibilities of assimilations, and vice versa, in ever-expanding cycles. These have to be organized and kept in some kind of dynamic balance across the child's different maps, and in relation to his complete understanding of the world at any specific time. Piaget's unique term for this continuous process of organization and dynamic balancing is *equilibration*. (It is an active process of establishing and re-establishing equilibrium in the child's whole map or cognitive structure.) Associated with this is the concept of *cognitive conflict*. This occurs when a child is confronted with information or experience which he can't deal with in terms of his current maps. This challenges him to modify his entire mapping structure; to equilibrate. In so doing he moves towards a more effective way of organizing and dealing with his world. In Piaget's theory, this process of equilibration is the 'engine' that drives the development.

If one accepts the basic assumption that individuals construct their own understanding through reflection upon their interaction with objects and ideas (Brooks & Brooks, 2001:4), some key constructivist principles become clear. These principles, as distilled from the literature, are:

- active participation and metacognition;
- social interaction and language;
- multiple perspectives versus absolute truth;
- context, authenticity and relevance;
- connecting with students by building on prior experience;
- promoting diversity to accommodate students' unique learning needs; and
- holism and integration.

3.1.1. Active participation and metacognition

If, as constructivism holds, knowledge is actively constructed instead of passively received (Donald *et al.*, 2004:100), then active participation is certainly the first essential principle to consider. Donald *et al.* (2004:100,102) rightly state that "one of the most central concepts of constructivist thinking is that of active agency," seeing human beings as "*active agents* in their own development." They (Donald *et al.*, 2004:108-109) also explain the educational implications of this principle:

> [L]earning and cognitive development are not passive, they are active processes. This means that passive time is wasted time. Of course, there will always be times when you need to instruct, demonstrate or explain. These need not be passive times as long as you have 'connected' with your students at their level of understanding, and as long as you ensure that they are thinking while you are talking. Essentially, activities need to be varied — some whole-group instruction and interaction, some group or pair activities, and some individual activities. ... But the whole process needs to add up to all students being actively involved for as much of the total time as possible.

Active involvement calls for the utilization of higher level cognitive skills than mere rote learning requires. Von Glasersfeld (1995:181) writes that "teachers should never fail to manifest the belief that students are capable of thinking" and sees problem solving as a powerful educational tool (Von Glasersfeld, 1995:183): "[i]f students do not think their own way through problems and acquire the confidence

that they *can* solve them, they can hardly be expected to be motivated to tackle more" (Von Glasersfeld, 1995:181)

Brooks and Brooks (2001:16) write that, "in the constructivist approach, we look not for what students can repeat, but for what they can generate, demonstrate, and exhibit." They believe that "the nature of questions posed to students greatly influences the depth to which the students search for answers" and advise teachers to use cognitive terminology such as 'classify,' 'analyze,' 'predict,' and 'create' when framing tasks and questions (Brooks & Brooks, 2001:44, 105). This requires students to "make connections, delve deeply into texts and contexts, and create new understandings" (Brooks & Brooks, 2001:105). This kind of learning allows students to not only master the content, but to develop "an understanding of the operative principles that govern the entire problem area" (Von Glasersfeld, 1995:181). The development of such *structural* knowledge creates a balance between process and product (or content), an important notion in constructivist thinking, as Lambert *et al.* (1995:22) point out. Donald *et al.* (2004:108) elaborate on this point:

> Teachers can often be so concerned about getting the content — the 'what' of learning — across to their students that they neglect the process — the 'how' of learning. Both are important, and both require active engagement from both teacher and student.
>
> Bruner makes this very clear. First, in terms of *content*, he asserts that knowledge is not only about facts and information. All learning areas are structured according to key concepts and relationships. At any level, a student's understanding of that area can be promoted through encouraging a grasp of the structure that underlies it. [...] Second, in terms of *process*, Bruner demonstrates how students can be helped to develop more effective and powerful strategies — ways of going about their learning.

This second point made by Bruner brings up another important notion in constructivism — that of *metacognition*. Donald *et al.* (2004:105) explain it as follows:

> Cognition is about thinking, planning, remembering, problem-solving and a range of other activities that go on in our minds. Simply stated, *metacognition* refers to what we are aware of about what goes on in our minds; what we understand about how we think, plan, and remember. [...] In constructivist terms, metacognition is an important concept because it refers to a *higher level of active engagement* that people can develop in relation to their own thinking and understanding (italics added).

"This is the essential insight of constructivism: to know not only that we know but how we know" (Knuth & Cunningham, 1993:168). Knuth and Cunningham (1993:174,175) also refer to metacognition as the development of *reflexivity* and state that there is no higher educational goal than the natural emergence of reflexivity as a result of other constructivist practices. "[T]he more conscious you are of your own strategies, the more you can look at them critically, learn from others, and adapt and refine them" (Donald *et al.*, 2004:105).

The development of structural knowledge (grasping the underlying structure of a learning area) and reflexivity will enable learners to play an even more active role in the construction process and take responsibility for their own learning. "The teacher's responsibility is to create educational environments that permit students to assume the responsibility that is rightfully and naturally theirs. [...] Autonomy and initiative prompt students' pursuit of connections among ideas and concepts. Students who frame questions and issues and then go about answering and analyzing them take responsibility for their own learning and become problem solvers and, perhaps more important, problem finders" (Brooks & Brooks, 2001:49,103). This is precisely what Bruner (1967:53) identifies as the long-term aim of any instruction: the learner should become a self-sufficient problem solver.

Lambert *et al.* (1995:xii) point out, though, that "this constructive, interpretative work is facilitated and deepened when it is undertaken with others." This consideration is the focus of the next principle (section 3.1.2.). "While the individual learner is the only one who can construct his or her unique understanding of the world, this understanding emerges in a social context.

Concepts take on meaning through a process of social negotiation" (Knuth & Cunningham, 1993:171).

3.1.2. Social interaction and language

In the past few decades, the importance of cooperative (or collaborative) learning and dialogue has been recognized by numerous authors, prompted by the writings of theorists such as Freire, Vygotsky and Bakhtin (Knuth & Cunningham, 1993:171; Donald *et al.*, 2004:100). "Psychologists have shown how the knowledge or meanings that are constructed by individuals and whole societies are closely tied to social, historical, and cultural contexts" (Donald *et al.*, 2004:100). Thus, "all learning takes place within a socio-cultural context" (Boardman, 2001:51), and the primary means through which this social construction of meaning is enabled, is social discourse or dialogue (Knuth & Cunningham, 1993:171; Brooks & Brooks, 2001:108,111). This process has been referred to by Von Glasersfeld (1995:191) as "the negotiation of meaning and knowledge. [...] What we see others do, and what we hear them say, inevitably affects what we do and say ourselves. More important still, it reflects upon our thinking."

The socio-cultural context also serves as an important *motivation* for adult learning. Jarvis (1995:46) believes that "the motivating force for learning is a discordant experience between the self and the socio-cultural environment." He (Jarvis, 1995:45) consequently acknowledges the importance of connectedness:

> [I]rrespective of the conditions of the physical body, the individual self continues to interact with others within the same socio-cultural milieu enabling the person to continue to construct a universe of meaning. If other people are withdrawn then that dynamic tension between the self and the wider society, which is at the heart of learning, disappears and people may begin to doubt themselves, suffer senility, anomie, etc.

This corresponds with Burge and Roberts's (1998:8-9) view, who list "the need to feel connected and belong in supportive relationships" as one of the internal motivational factors that drive the actions of all adults.

Cooperative learning strategies promote *active agency* and stimulate *cognitive conflict* (see section 3.1.) between students at differing levels of understanding (Donald *et al.*, 2004:114). "Collaborative rather than competitive relationships create a climate that allows for talking in order to think, making mistakes, letting go of old ideas or attitudes and being open to anything new. ... [W]hen learners are helped to learn with and from each other, the result as a whole can be greater than the sum of its parts" (Burge & Roberts, 1998:22;25). Lambert *et al.* (1995:22) agree that, by using cooperative learning strategies, students can "arrive at more complex solutions collectively than they could have individually."

Donald *et al.* (2004:114) offer the following suggestions for the implementation of cooperative learning activities:

> Cooperative learning can take many forms. It can relate to interactions between pairs of students or among a larger group of students. The task can be specific, such as solving a particular problem; relate to a larger task, such as putting together a presentation to the class; or involve students in a multi-dimensional project, such as planning and organizing a school function. [...] Whatever its form, co-operative learning experiences have in common that students engage in activities that have some clear goal or purpose that, through interaction, sharing and joint problem-solving, they are challenged to achieve. Your role is to set this learning experience up, monitor its progress, and mediate it where necessary.

Von Glasersfeld (1995:190) considers it an excellent strategy to put students into groups of two or three and designating the one the teacher considers the 'weakest' to report on their results at the end of the session. This compels them to explain their thoughts to one another, and has the advantage that "students tend to listen more openly [or perhaps more critically] and with more interest to their fellow students than to the teacher." Burge and Roberts (1998:26) list several additional advantages of collaborative group discussions, summarizing the key points from an article by Johnson and Johnson (1992:123-125).

- Group discussions allow learners to: summarize; explain; elaborate on information, which helps encode into long-term memory; seek feedback; and strengthen what is known.
- Learners develop creative and divergent thinking styles as they adjust to different styles of thinking and expression.
- Learners temporarily suspend the expression of their own opinions while listening to other points of view.
- Learners monitor and regulate each other's thinking as it is held up for critical review and exploration.
- Peer expectations can increase motivation to come to class prepared.
- Peers can give and get process feedback (ongoing), as well as terminal feedback at the end of the course.

According to Cooper *et al.* (1980:243) as well as Johnson and Johnson (1981:444), cooperative learning can also help to promote interpersonal attraction among initially prejudiced peers, thus promoting cross-ethnic interaction in instructional as well as free-time activities. In this way, it benefits psychosocial development and "the value of cooperation in societal terms" (Donald *et al.*, 2004:114). McKay and Northedge (1995:77) consider it especially important that adult students relate to each other as equals, treating each other with friendliness and respect. This can only happen if effective dialogue and trust are the foundations of instruction.

Burge and Roberts (1998:10) list the four sequenced stages of growth a group can experience according to Tuckman and Jensen (1977), two American social science researchers:

1. forming (the first meeting, in which there are no conflicts);
2. storming (with uncertainties, conflicts arise about group goals and process);
3. norming (setting up ground rules for productive and comfortable work);
4. performing (getting the job done).

Later, Tuckman and Jensen (1977:419,426) actually included a fifth stage, namely 'adjourning.' Burge and Roberts (1998:10) add that one should expect and not be alarmed by conflict in groups. "Sometimes a smart instructor only needs to tell the group that it's quite usual for these stages to happen; to name the problem is halfway to solving it."

Von Glasersfeld (1995:188,190) emphasizes the importance of dialogue by pointing out that verbalization requires reflection, and that reflection — or more specifically, self-reflection — is a crucial aspect of the construction process. "Starting with adults and making application to learners of any age, Schön suggests that the key to growth and development, whether as a teacher or a student, is the ability to reflect on one's learning, to adapt behaviour based on that reflection, and to develop a theoretical workframe, or set of understandings, that takes into account one's experiences" (Schön, 1995 as referred to by Lambert *et al.*, 1995:22). Hence "it is one of the primary duties of the teacher to create an atmosphere in the classroom that not only allows but is also conducive to conversation, both between student and teacher and among students" (Von Glasersfeld, 1995:188-189).

Concerning teacher-student dialogue, Brooks and Brooks (2001:ix-x,62) stress the fact that constructivist teachers seek and value their students' points of view: "[w]hile it is certainly true that virtually all teachers do a good deal of talking to and with their students, *listening* is at least an equally important component of a constructivist teacher's repertoire" (italics added). Especially in adult education a genuine dialogue must be established from the very beginning. An atmosphere of trust has to be built where students feel free to voice their opinion concerning all aspects of the course and even to talk about their feelings (McKay & Northedge, 1995:73). McKay and Northedge (1995:70), Burge and Roberts (1998:22), and Jarvis (1995:150-151) agree that the instructor must take the trouble to get to know the learners and find out more about their previous experience, motivation for participation, expectations, personal preferences, learning needs, and aims. "While this serves a diagnostic function, it has more purposes than this because it

enables the educator to learn the language of the potential learners and also to identify with them" (Jarvis, 1995:150). The instructor must likewise communicate his/her expectations to the group and open certain issues — e.g. class rules, homework, or frequency of assessment — to negotiation, so that learners feel empowered by sharing in the decision-making (McKay & Northedge, 1995:84-85).

Brooks and Brooks (2001:60) strongly state that "[t]eachers who operate without awareness of their students' points of view often doom students to dull, irrelevant experiences, and even failure" since "students' points of view are windows into their reasoning."

> Students' unorthodox conceptions, much like mistakes they make in their attempts to solve problems, are among the clues from which the teacher can infer aspects of their actual conceptual network. More revealing still is what they say when asked to explain how they conceptualize a given situation and what general rules or 'laws' they apply to it. (Von Glasersfeld, 1995:187)

Thus, part of valuing students' points of view is seeking elaboration of their initial responses (Brooks & Brooks, 2001:111). "Students' first thoughts about issues are not necessarily their final thoughts nor their best thoughts. Through elaboration, students often reconceptualize and assess their own errors" (Brooks & Brooks, 2001:111). Yet, Brooks and Brooks (2001:66) call attention to the fact that students may need some additional encouragement in this area.

> [M]ost students have been trained to view both a teacher's asking for elaboration and a teacher's challenge to their ideas as sure signs that their responses are incorrect. [...] Because of this, both the challenging of ideas and the seeking of elaboration automatically threaten students. However, when these two practices become a regular classroom custom, students overcome their ingrained aversion to the dreaded second question, and come to understand that the teacher is genuinely interested in knowing more about what they think and why.

Where dialogue is concerned, the question of language deserves some consideration. As Knuth and Cunningham (1993:171) put it, "[i]n a very real sense human learning is human languaging, the exchange of conversation and dialogue." Von Glasersfeld (1995:182) sees language as an indispensable tool that can either help or hinder the construction of understanding and states that "the blind faith in the efficacy of language is probably the most frequent impediment to successful teaching." Students interpret the meaning of the teacher's words and phrases in terms of their individual experiences. Therefore, it is unlikely that the students' interpretations will "coincide with the meaning the teacher intends to convey." Von Glasersfeld (1995:182) gives the following advice concerning this "indeterminacy inherent in the communication system":

> The difficulty is greatly reduced if the teacher keeps in mind that the words he or she uses have, for the listeners, associative links to their own experiential worlds and *not* to an independently existing reality that would be the same for all. Language does not convey knowledge but can very well constrain and orient the receiver's conceptual constructing. If teachers remain aware of this principle, they will constantly test the students' interpretations and not rest until the responses seem compatible.

Von Glasersfeld (1995:1) bases these assertions on his statement that "what we make of experience constitutes the only world we consciously live in. [...] [A]ll kinds of experience are essentially subjective, and though I may find reasons to believe that my experience may not be unlike yours, I have no way of knowing that it is the same. The experience and interpretation of language are no exception." Burge and Roberts (1998:11-12) even identify gender-based differences in the way people communicate and state that "many, but not all, woman learners prefer to use relational styles of learning behaviour, and that many, but not all, men prefer to use more independent styles," the separate styles being characterized by a 'rapport' versus 'report' style of speech.

The centrality of language in the social construction of meaning necessitates the creation of opportunities for students to develop and refine their use of language. According to Donald *et al.* (2004:115-116), this means "encouraging students to

interact through language, with you, with their peers, and through reading and writing, in a variety of learning contexts and activities. To develop their use of language as a tool for learning, students need to engage in constant discussion, reflection, debate, and interactional problem-solving. [...] Classrooms should very seldom be silent places, or places where only the teacher's voice is heard."

Teachers need to be aware of students who tend not to interact because they are not confident in their ability to use language fluently in an academic context. "By not interacting, their language development is further held back and they lose more confidence" (Donald *et al.*, 2004:116). Group work and cooperative learning activities can help to break this negative cycle, since such students are usually afraid of exposing themselves in front of the whole class (Donald *et al.*, 2004:116). Especially in the South African context teachers must show consideration for students who are learning through a second language. These students need to be encouraged and helped to "interact and develop confidence in the language of learning" (Donald *et al.*, 2004:116).

One of the advantages of cooperative learning that links up with the next principle of constructivism is that, through dialogue, students are exposed to multiple perspectives. "[T]he development of the realization that our view is only one of many and that an attitude of acceptance toward other views allows for the growth of our views, is fundamental in constructivism" (Knuth & Cunningham, 1993:170).

3.1.3. Multiple perspectives versus absolute truth

Constructivism demands a paradigm shift in relation to the concept of truth and the situation of knowledge. For a long time, psychological thinking and research have been dominated by the positivist "assumption that knowledge or 'the truth' is out there somewhere," just waiting to be proved or discovered (Donald *et al.*, 2004:99). More recent advances in epistemological theory see knowledge as a construction of the human mind, thus "turning thought from questions of truth and certainty to questions of understanding and representation" (Stubley,

1992:13). Constructivism holds that "knowledge is not fixed and given. It is shaped, constructed, and re-constructed in different social contexts and at different times" (Donald *et al.*, 2004:103-104).

Traditional models of learning and cognition treated knowledge as external to the learner, and instruction as primarily a matter of the effective transmission of this objective knowledge (Knuth & Cunningham, 1993:163,164). Learners were seen "as needing to be 'filled up' with knowledge" (Donald *et al.*, 2004:99), leading to what Freire (1970:57) has called "das 'Bankiers-Konzept' der Erziehung" or "the 'banking' approach to education" (Donald et al., 2004:99). As a result, "young children (and many adults as well) tend to think that knowledge is either right or wrong, that all valid questions have answers, that authority figures (e.g., teachers, text books, etc.) have the answers to these questions and that experts know the truth or have ways to figure it out" (Knuth & Cunningham, 1993:169). Brooks and Brooks (2001:85) explain how teachers encourage this black and white mentality of 'rightness' and 'wrongness' by posing narrow questions for which they seek singular answers. They list two implicit lessons that students extract from such teacher behaviours:

> First, students learn that there is one correct answer to each question posed by the teacher, and that their challenge is to come up with that answer. Second, they learn that they place themselves at some risk if they raise their hands before being certain that they have figured out the one, right answer.

Situations like these erode "[students']"[1] desire to think about and explore issues, which leads them to be preoccupied instead by the far less valuable activity of predicting the answer the teacher wants" (Brooks & Brooks, 2001:86). This does not only have a negative effect on the students' development as learners; it also "denies teachers the opportunity to peer into students' minds" (Brooks & Brooks, 2001:86). Narrow views of instruction (the objective transmission of knowledge) have the additional downside of creating a sense of dependence in learners rather than one of independence. Jarvis (1995:146) explains that, "by the time children

[1] For the sake of consistency and to facilitate the following of arguments, most of the references in quotations to 'pupils' or 'children' have been replaced with 'students.'

grow into adults, they will have learned to expect that teachers will instruct them. Indeed adult students do exert considerable pressure upon educators of adults to conform to their expectations of teachers playing a didactic and, often, an authoritative role."

In contrast to the detrimental effects of traditional models of learning and cognition, constructivism offers new possibilities. "Educational settings that encourage the active construction of meaning [...] share with students the important message that the world is a complex place in which multiple perspectives exist and truth is often a matter of interpretation" (Brooks & Brooks, 2001:21-22). Learners will become aware that their perspective is one among many. Knuth and Cunningham (1993:169) write that, although "[t]here is great comfort in the certainty that one's view of the world is correct, [...] this certainty is obtained at the expense of failing to consider the perspective of others." They (Knuth & Cunningham, 1993:168) suggest that, by encouraging students to assume the perspectives and roles of various individuals, they can be helped to see that "different people can have different views of a situation and that these views can have a sense or logic independent of their own views." Jarvis (1995:79) adds that, "[i]f people are aware that any encoding of meaning or truth is a subjective and social process, then they might adopt something of a healthy scepticism to what they hear or read." This helps them become self-directing adults within society. McKay and Northedge (1995:86) agree that "learners should not just absorb what they are told. They should think about it and decide whether they agree". Brooks and Brooks (2001:110) advise teachers to ask thoughtful, open-ended questions and to encourage students to ask questions of each other, so that they can develop the analytic skills necessary for diverse modes of inquiry. "Creativity and risk taking are not attributes that can be turned on and off. Both need nurturing, encouragement, and support" (Brooks & Brooks, 2001:86).

3.1.4. Context, authenticity and relevance

Constructivists do not accept the usual justification of knowledge as discussed in the previous section. Rather, they consider all knowledge as *instrumental*. Therefore, according to Von Glasersfeld (1995:177), "the first thing required is that students be given the reason *why* particular ways of acting and thinking are considered desirable" — *in a particular context*, I would like to add, since "psychologists have shown how the knowledge or meanings that are constructed by individuals and whole societies are closely tied to social, historical, and cultural *contexts*. What is seen as 'truth' in one context may not be seen so in another" (Donald *et al.*, 2004:100). The idea of 'situated cognition' (Greeno, 1988 and Brown *et al.*, 1989:32 as referred to by Entwistle *et al.*, 1993:331) also lists the social environment as well as the knowledge and prior experience of the learner as important learning contexts. As a result, Boardman (2001:51) urges teachers to "become knowledgeable about the culture from which [their] students come and take it into consideration as [they] plan instruction." Knuth and Cunningham (1993:170) write that "[i]nstruction derived from a constructivist framework must be designed to address issues and be embedded in contexts with which the students are familiar and about which they care." This introduces the notions of authenticity and relevance.

Brooks and Brooks (2001:106) lament the fact "that much of what we seek to teach our students is of little interest to them at that particular point in their lives." They ask the question how a teacher can help students consider a topic relevant.

Firstly, they point out that "[r]elevance, meaning, and interest are not automatically embedded within subject areas or topics. Relevance emerges from the learner" (Brooks & Brooks, 2001:ix). Acknowledging the central role of the learner enables students to experience a greater sense of ownership in the process of learning, resulting in them taking more responsibility for their own learning (Knuth & Cunningham, 1993:171).

Secondly, "[r]elevance can emerge through teacher mediation" (Brooks & Brooks, 2001:35). Von Glasersfeld (1995:177) believes that, "in general, students will be more motivated to learn something, if they can see why it would be useful to know it." By helping students grasp the relevance of a topic, teachers promote students' intrinsic motivation to understand.

Thirdly, teachers should create opportunities for students to solve problems that they themselves view as relevant (Brooks & Brooks, 2001:36). "The structuring of the lesson around questions that *challenge students' original hypotheses* presents students with the initial sparks that kindle their interest" and thus make a problem relevant (Brooks & Brooks, 2001:38; italics added). Problem-solving activities — "most particularly *in response to a felt need* — create interest and energy. Cognitive processes work to address *affectively driven* issues" (Brooks & Brooks, 2001:30; italics added). Brooks and Brooks (2001:39) further suggest that "[c]omplexity often serves to generate relevance and, therefore, interest. It is oversimplification that students find confusing."

Fourthly, "education should allow students to experience life," since "authentic experience [is] essential to learning" (Lambert *et al.*, 1995:19). Burge and Roberts (1998:19) explain that "our brains are 'wired' to actively try to make sense out of information that is presented. This process of meaning-making happens most effectively when learners are asked to confront real-world puzzles, challenges or problems, and then talk through their ideas as they develop." Thus, teachers must present students with real-world possibilities (raw data and primary sources) and then help them to "generate the abstractions that bind these phenomena together" (Brooks & Brooks, 2001:104). This point ties up with the ideas of holism and integration discussed in section 3.1.7.

Fifthly, relevance of instruction is promoted by effective dialogue. "A great deal of everyday life consists of interaction and dialogue. Provided teaching is dialogue and not prolonged monologue, then it remains a valid exercise and relates to everyday experiences" (Jarvis, 1995:78).

3.1.5. Connecting with students by building on prior experience

The constructivist philosophy holds that "teaching must *connect* with where learners are at in their understanding" (Donald *et al.*, 2004:109). More than 60 years ago Dewey (1938:88) wrote that "[i]t is a cardinal precept of the newer school of education that the beginning of instruction shall be made with the experience learners already have." Boardman (2001:50) affirms this by writing that study after study has revealed the relationship of current knowledge to newly acquired knowledge as a crucial factor.

Why is the principle of connection so important for the constructivist teacher? Firstly, "[a]ll students, irrespective of age, enter their classrooms with life experiences that have led them to presume certain truths about how their worlds work. Meaningful classroom experiences either support or contravene students' suppositions by either validating or transforming these truths" (Brooks & Brooks, 2001:ix-x). Secondly, "[o]ne cannot infer relationships among objects, events, or actions unless one has prior understanding through which these perceptions can be organized" (Boardman, 2001:50). Thirdly, Bruner's suggestion that "learning is 'generative,' holding within itself the potential for more learning, [...] reinforces the recognition that newly acquired knowledge (learning) emerges out of that which is already known" (Boardman, 2001:50). According to Bruner (1983:183), learning is about "figuring out how to use what you already know in order to go beyond what you currently think." Boardman (2001:50) elaborates: "*[w]hat one knows will determine what one can learn in the future.*"

What are the consequences when teachers fail to connect with students? "If the conceptions presently held by students are not explicitly addressed, new information is filtered through a lens that may cloud, rather than clarify, that information" and "students will find lessons bereft of meaning" (Brooks & Brooks, 2001:40,69). According to Von Glasersfeld (1995:179), this is one of the reasons why, "[a]ll too frequently, a 'fact' or a relation that seems perfectly obvious to the teacher is not even seen by the student." He elaborates: "concepts and

conceptual relations are mental structures that cannot be passed from one mind to another. Concepts have to be built up individually by each learner, yet teachers have the task of orienting the students' constructive process. Clearly it is easier to orient students towards a particular area of conceptual construction *if one has some idea of the conceptual structures they are using at present*" (Von Glasersfeld, 1995:186, italics added). "The pertinent message here for educators is that we don't know what ideas are within students' reach unless we do something specific to find out" (Brooks & Brooks, 2001:72).

The best way of tapping into students' minds is through dialogue, as pointed out in section 3.1.2. above. By valuing students' points of view, teachers can obtain clues as to where students are at in their understanding (Von Glasersfeld, 1995:187 — see section 3.1.2). Brooks and Brooks (2001:107) also urge teachers to "inquire about students' understandings of concepts *before* sharing their own understandings of those concepts," since "most students stop thinking about a concept or theory once they hear 'the correct answer' from the teacher" (italics added).

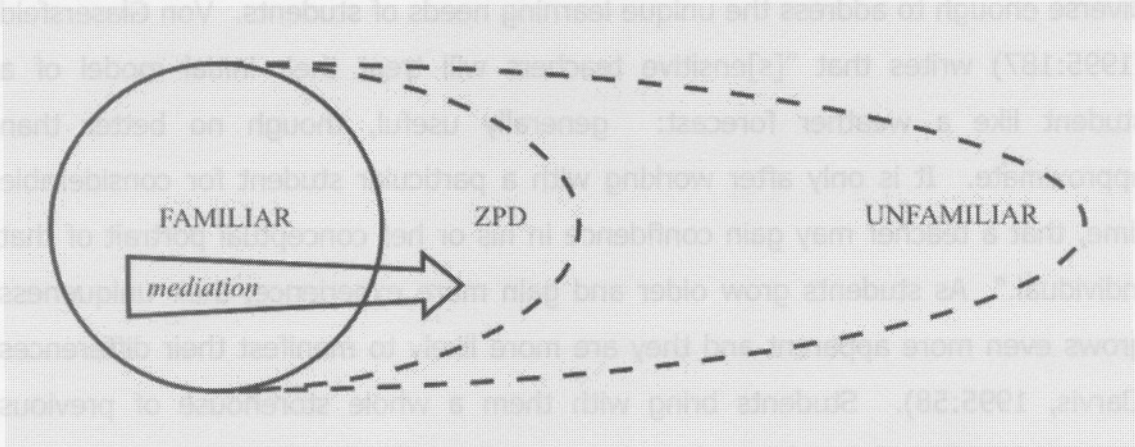
How, then, does a teacher use this information about students' current conceptions for purposes of connection? Donald *et al.* (2004:110) find it useful to apply Piaget's concept of cognitive conflict with regard to the principle of connection, because "equilibration does not occur unless a person's cognitive 'map' is challenged. There must be disequilibrium before the person is motivated to adapt and re-establish equilibrium." Brooks and Brooks (2001:112-113) add that teachers must "use information about the students' present conceptions, or points of view, to help them understand which notions students may accept or reject as contradictory" and then work those contradictions into lessons in order to challenge students' current hypotheses and to enable cognitive growth.

A discussion of connection would be incomplete without reference to the Russian psychologist, Lev Vygotsky's concept of *mediation* and how it happens through his

zone of proximal development (ZPD). Donald *et al.* (2004:71-72) explain the process as follows:

> This [the ZPD] refers to 'where' mediation takes place. The ZPD may be defined as that space that lies just beyond a child's (or anyone's) present understanding. It is that critical space where a child cannot quite understand something alone, but has the *potential* to do so through proximal interaction with another person who does have the capacity. A parent, peer, teacher (or other significant person in the child's life) who engages the child in thinking forward into that space acts as a *mediator* in helping him shift his present position so that he can construct a new level of understanding. (This is sometimes thought of as the 'aha!' experience.)
>
> This is not a difficult idea to grasp. All teachers know that if you present something too far beyond a child's grasp, you will lose his attention. If you present something too familiar, you will also lose his attention. The concept of the ZPD shows, simply and basically, the importance of engaging the child in that critical space of potential development. [...] Teaching/learning cannot be only about teachers 'giving' information to students. The process has to involve an intentional effort to help students organize and understand information in *progressively* more effective ways.

Figure 3.1. Zone of Proximal Development (Donald *et al.*, 2004:71)



Bruner's notion of *scaffolding* relates well to the concept of mediation. According to Donald *et al.* (2004:104), scaffolding involves the mediation of "key *structural*

and/or *strategic* elements" of a given subject. "In the process of scaffolding, the mediator provides help and suggestions, but gradually withdraws as the student reaches a level of constructing his own internalized understanding" (Donald *et al.*, 2004:104-105).

Bruner's idea of *guided discovery* can also be discussed in relation to mediation and scaffolding. Discovery learning must be very carefully planned and it must connect with students' previous understandings. "To be most effective, it needs to challenge them to discover key elements in the *structure* and/or *form* of a topic. And it also needs to be used to help them understand their own thinking, i.e. their strategies for discovering and drawing conclusions about the topic" (Donald *et al.*, 2004:111). Donald *et al.* (2004:111) further mention that this kind of learning does not necessarily go by in a quiet and strictly ordered way — "tolerating what may look like disorder is a really essential part of promoting discovery learning."

3.1.6. Promoting diversity to accommodate students' unique learning needs

Constructivist practices promote diversity by eliciting multiple interpretations and perceptions (Lambert *et al.*, 1995:xiii). If each person perceives and constructs his/her world in a uniquely personal way, then instructional strategies should be diverse enough to address the unique learning needs of students. Von Glasersfeld (1995:187) writes that "[s]ensitive teachers will treat their initial model of a student like a weather forecast: generally useful, though no better than approximate. It is only after working with a particular student for considerable time, that a teacher may gain confidence in his or her conceptual portrait of that individual." As students grow older and gain more experience, their uniqueness grows even more apparent and they are more likely to manifest their differences (Jarvis, 1995:58). Students bring with them a whole storehouse of previous experiences, transformed into knowledge, skills, attitudes, values, assumptions, and feelings, in accordance with their biographical past, cultural background, interests and perspective of reality. They have their own learning styles, although

some may still need to work at developing an effective way of learning. They also have their own personal problems, physical limitations or psychological blocks to learning (McKay & Northedge, 1995:27). Furthermore, learners bring their own expectations to class — of what the course will be about, how the instructor will go about presenting the material, what would be expected of them, and what they would be able to do as a result of the course. "[N]o one person acquires information or processes it in exactly the same way as another person, regardless of what an instructor does" (Burge & Roberts, 1998:13). Thus, teachers will have to develop an individualized approach to teaching, valuing the unique and diverse ways in which their students come to know. They should become aware of aspects that influence learning, such as multiple intelligences, sign systems and modes of representation.

Gardner's theory of multiple intelligences acknowledges the existence of several kinds of intelligences that include spatial, musical, kinaesthetic, interpersonal and intrapersonal in addition to the so-called academic intelligences, namely logical-mathematical and linguistic. These intelligences "serve as a lens through which students perceive and interpret new experience," and "explain why [...] some students experience frustration when only a few intelligences are addressed by traditional curricula and instructional design" (Lambert *et al.*, 1995:23).

Humans have developed a variety of *sign systems* that enable them to represent the world internally. Donald *et al.* (2004:106) see these sign systems as powerful cognitive tools, used by humans to adapt to the world. In constructivism, these tools are very important, since "[t]hey are the means by which humans are actively able to shape, transform, and reflect on their experiences" (Donald *et al.*, 2004:106). Eisner (1994:39) defines them as "vehicles through which concepts that are visual, auditory, kinaesthetic, olfactory, gustatory, and tactile are given public status ... [in] the form of words, pictures, music, mathematics, dance, and the like." The centrality of language in all its forms — spoken, read, and written — was discussed in section 3.1.2. "In addition to language, however, human interaction also involves the formation and interpretation of other complex sign

systems [e.g. gestures, music, graphic or visual art, and mathematics]. We use *many* sign systems to socially construct our world" (Goolishian & Winderman, 1988 as referred to by Knuth & Cunningham, 1993:172). It should also be noted that different people construct their world according to different *metaphors* that are not necessarily shared.

Bruner's *modes of representation* can be regarded as a more systematic or refined outlook on sign systems. He proposed that there are three modes of representation (Boardman, 2001:52):

- the *enactive* — representation through action (e.g. playing different rhythms on a drum);
- the *iconic* — representation through some form of imagery (e.g. representing the rhythms by using graphic notation); and
- the *symbolic* — representation through a symbolic system (e.g. learning the different note values like 'crotchet' and 'quaver').

Bruner initially used these terms with reference to cognitive developmental stages, but Boardman (2001:52) refers to them "as alternative ways of representing understanding, a definition that he [Bruner] later proposed." If seen as developmental stages, the use of symbolic representation (especially language) allows a "progressive release from immediacy," so that this tool "shapes, augments, and even supersedes the child's earlier modes of processing information" (Bruner, 1964:13,14). Yet, Donald *et al.* (2004:116) emphasize the importance of including *all* of these modes in instruction:

> [I]t is important to understand that, although the symbolic mode becomes dominant, the other modes continue to develop in their own right. Thus, we can develop very complex levels of enactive representation (for example dance) and of iconic representation (for example visual, artistic, or musical imagery). Both interact with each other and with symbolic representation as they develop. We cannot afford to neglect any one of these modes of representation in the process of teaching/learning.

Students have unique and preferred ways of representing their world. Teachers will have to incorporate as wide a variety of sign systems and representational modes as possible in order to give all students the opportunity to demonstrate their strengths and work on their weaknesses.

3.1.7. Holism and integration

Traditional curricula and instruction break wholes into parts and then focus separately on each part (Brooks & Brooks, 2001:46). According to Donald *et al.* (2004:99), this is a result of positivism (referred to under section 3.1.3) which is characterized by its tendency to *reductionist* ways of thinking. Positivism assumes "that reality can best be understood by breaking it up into its smallest parts; that if these parts are understood, the whole can also be understood" (Donald *et al.*, 2004:99). However, as Lambert *et al.* (1995:23) mention, "[r]esearchers now believe that learning is less sequential than previously thought" and that "students do not learn small, discrete skills in sequence and then at some point put these skills together to form large concepts and deep understandings". The problem with reductionism, as Donald *et al.* (2004:99) point out, "is that wholes are more than the sum of their separate parts. Understanding complex systems and relationships cannot be 'reduced' to understanding their elements only." Rather, Wiggins (1993b:202) states that teachers must lead students "from a *crude* grasp of the whole to a *sophisticated* grasp of the whole."

As a consequence of these insights, curricula are structured and lessons are built around primary concepts and "big ideas" in a constructivist environment. Teachers organize information around "conceptual clusters of problems, questions and discrepant situations because students are most engaged when problems and ideas are presented holistically rather than in separate, isolated parts" (Brooks & Brooks, 2001:ix, 46). Brooks and Brooks (2001:x, 47) explain further:

> Constructivist teachers often offer academic problems that challenge students to grapple first with the big ideas and to discern for themselves, with mediation from the teacher, the parts that require

> more investigation. [...] When concepts are presented as wholes, [...] students seek to make meaning by breaking the wholes into parts that *they* can see and understand. Students initiate this process to make sense of the information; they construct the process and the understanding rather than having it done *for* them.

This sense-making process is prompted by relevant problems that offer authentic, real-world challenges to students (Brooks & Brooks, 2001:104). Brooks and Brooks (2001:116) also write that "[c]onstructivist teachers provide time for students to construct relationships and create metaphors," since "[m]etaphors help people to understand complex issues in a holistic way and to tinker mentally with the parts of the whole to determine whether the metaphor works."

Constructivism does not only deal with whole concepts, but also with whole learners. Burge and Roberts (1998:23) repeatedly call for an integration of head, heart, and body — the cognitive, affective, and psychomotor domains. Learning is a product of action, cognition, and emotion functioning simultaneously and synergistically (Boardman, 2001:51). Boardman (2001:51) explains that "by the 1960s discussion began to expand consideration of the learning process to tentatively acknowledge that there was a triarchy of three domains, each with its 'special' type of learning. These were defined by Bloom and others as cognitive, psychomotor, and affective." Caine and Caine (1991:51-52) additionally write about Paul MacLean's triune brain theory which identifies three layers or 'brains': the reptilian system or *R-complex*, the *limbic system* (emotion), and the *neocortex* (cognition). These three layers interact to such an extent that "the ingredients [...] we deal with in education, such as 'concepts,' 'emotions,' and 'behaviours'" cannot be considered separate (Caine & Caine, 1991:57). Caine and Caine (1991:58) emphasize the fact that "[o]ur emotions are integral to learning. When we ignore the emotional components of any subject we teach, we actually deprive students of meaningfulness." Krech and Crutchfield (1974:493-494) coined the term 'perfink,' implying that people perceive, feel, and think simultaneously.

3.2. The constructivist teacher

Implicit in the constructivist perspective, Phye (1997:595) believes, is the belief that "a teacher is, and always has been, the most important agent of change in the classroom." Thus, the successful implementation of constructivist theory depends on the attitude of the teacher, who must be convinced of the validity of these principles. Teachers need to familiarize themselves with the well documented research on constructivism and make a *deliberate* effort to work it into their thinking, planning and teaching. They also need to investigate their own ideas and assumptions and "the social constructions of meaning of which [they] are a part" (Donald *et al.*, 2004:100). Brooks and Brooks (2001:13) claim that most teachers agree with the quest and goals of constructivism, but that some teachers have difficulty practising constructivist methodologies. They write that "[t]he pathway to becoming a constructivist teacher meanders through our own memories of school as students, our professional education, our deeply held beliefs, our most cherished values, and our private versions of truth and visions for the future" (Brooks & Brooks, 2001:13).

Brooks and Brooks (2001:120,126) conclude that "creating constructivist classrooms requires bold changes — institutional adaptations that break significantly from past and current practices to create new structures and norms for the institutions undergoing change. [...] This is no easy task. But the alternative is the status quo or new versions of it." They (Brooks & Brooks, 2001:121) stress the importance of structuring pre-service and in-service teacher education around constructivist principles and practices.

> Rather than presenting Skinner and Thorndike in the educational psychology course required of undergraduates, expose students to the research of Piaget, Vygotsky, Elkind, Dewey, and Gardner. Rather than teaching undergraduates about mastery learning and the Hunter Model in their methods courses, expose them to the important methodological work of Sigel, Fosnot, Forman, Wadsworth, Labinowicz, Duckworth, Karplus, and Joyce and Weil.

> The philosophical underpinnings of the theories and practices to which pre-service teachers are exposed have a lasting impact on their perception of the teaching role.

Brooks and Brooks (2001:124) also urge institutions to focus resources more on teachers' professional development than on textbooks and workbooks, recommending "teacher support groups, the scheduling of common planning time, conference attendance, the use of external and in-house consultants, and sustained peer coaching. All of these activities need to be bound together by a common thread, or vision, relating to the education of students."

The following points encapsulate the behaviours of a constructivist teacher.

3.2.1. Cultivating the art of teaching in order to foster the art of learning

Von Glasersveld (1995:183) urges teachers to cultivate the art of teaching by developing a style "that inspires relaxation and enjoyment because they [the teachers] feel at home with the subject matter and do not find the activity boring." According to him, this is one of the secrets to remove the dreariness of obligation and to design a deliberately chosen form of play.

Von Glasersfeld (1995:192) sums up his theory of radical constructivism in one sentence by writing that "the art of teaching has little to do with the traffic of knowledge, its fundamental purpose must be to foster the art of learning." Therefore, teaching should only happen when active learning is the result. "Teaching has to involve a constant, *intentional* search for more effective ways of connecting with the learning process. And you cannot do that unless you understand how constructive learning happens" (Donald *et al.*, 2004:107). Donald *et al.* (2004:100-101) summarize the crux of this assertion as follows:

> [W]e need to accept that human beings cannot be understood as objects who are passively influenced by the forces around them. They — the students, teachers, parents, and others we work with — are

> *active agents* who are making meaning of their lives within and through their social context; just as you and I are."

3.2.2. Becoming facilitators and mediators of learning

Constructivism calls for a new kind of relationship between teacher and student: "[t]he educator is not the 'fount of all wisdom' trying to fill the empty buckets" (Jarvis, 1995:151). Brooks and Brooks (2001:49) emphasize the fact that the teacher cannot take sole responsibility for the students' learning. "The teacher's responsibility is to create educational environments that permit students to *assume the responsibility that is rightfully and naturally theirs*. Teachers do this by encouraging self-initiated inquiry, providing the materials and supplies appropriate for the learning tasks, and sensitively mediating teacher/student and student/student interaction" (italics added). Thus, the teacher acts as a facilitator and mediator of learning, accepting and encouraging student autonomy and initiative, helping students "to search rather than to follow" and even allowing "student responses to drive lessons, shift instructional strategies, and alter content" (Brooks & Brooks, 2001:22, 102, 103, 105). This learner-centred approach requires teachers to be sensitive to students' unique learning needs and to value their points of view. "The ability to listen effectively and gather information regarding cognitive and affective functioning and the subsequent ability to adapt teaching methodologies are the heart of what we, as educators, can provide for students" (Brooks & Brooks, 2001:83).

As mediators of learning, teachers must ensure "that learners encounter dissonance or 'disequilibrium' in order to help them reconstruct their schemas, accommodating what they currently believe to new and contradictory information" (Lambert *et al.*, 1995:22). Brooks and Brooks (2001:ix, 30) put it in the following way:

> In a constructivist classroom, the teacher searches for students' understandings of concepts, and then structures opportunities for students to refine or revise these understandings by posing contradictions, presenting new information, asking questions,

> encouraging research, and/or engaging students in inquiries designed to challenge current concepts. [...] Helping students or groups of students to clarify for themselves the nature of their own questions, to pose their questions in terms they can pursue, and to interpret the results in light of other knowledge they have generated is the teacher's main task.

As facilitators of learning, teachers also need to create a learning environment conducive to conversation and exploration. "[W]hen the classroom environment in which students spend so much of their day is organized so that student-to-student interaction is encouraged, cooperation is valued, assignments and materials are interdisciplinary, and students' freedom to chase their own ideas is abundant, students are more likely to take risks and approach assignments with a willingness to accept challenges to their current understandings" (Brooks & Brooks, 2001:10).

3.2.3. Valuing enquiry and uncertainty as lifelong learners

Brooks and Brooks (2001:110) urge teachers to avoid a right/wrong mentality by asking open-ended questions and also encouraging students to ask questions. "If we want students to value inquiry, we, as educators, must also value it. If teachers pose questions with the orientation that there is only one correct response, how can students be expected to develop either the interest in or the analytic skills necessary for more diverse modes of inquiry?" They write that teachers must lead students to experience and appreciate the world's richness and complexities by presenting them with real-world challenges (Brooks & Brooks, 2001:5, 104).

It is important that teachers act as role models in this regard, as Brooks and Brooks (2001:9-10) explain:

> When students work with adults who continue to view themselves as learners, who ask questions with which they themselves still grapple, who are willing and able to alter both content and practice in the pursuit of meaning, and who treat students and their endeavours as works in

> progress, not finished products, students are more likely to demonstrate these characteristics themselves.

Phye (1997:595) agrees with this view by drawing attention to the reversibility of student-teacher roles: "[t]he irony for teachers is that, while we encourage students to be coteachers, we must not forget that as teachers we are also students. To foster change in others, we must change ourselves."

3.2.4. Taking the necessary time

Constructivist teachers are not in a hurry. Brooks and Brooks (2001:39) lament the fact that most curricula cram too much information into too little time, resulting in students retaining little of what they initially remembered over time. They explain that "[s]tudents haven't forgotten; they never learned that which we assumed they had. In demanding coverage of a broad landscape of material, we often win the battle but lose the war. We expose students to the material and prepare them for the tests, but we don't allow them to learn the concepts" (Brooks & Brooks, 2001:39-40).

Brooks and Brooks (2001:115) additionally point out the importance of allowing students enough time to come up with their own ideas and answers.

> In every classroom, there are students who, for a variety of reasons, are not prepared to respond to questions or other stimuli immediately. They process the world in different ways. Classroom environments that require immediate responses prevent these students from thinking through issues and concepts thoroughly, forcing them, in effect, to become spectators as their quicker peers react. They learn over time that there's no point in mentally engaging in teacher-posed questions because the questions will have been answered before they have had the opportunity to develop hypotheses.

CHAPTER 4

PRINCIPLES OF ASSESSMENT

In this chapter, I will discuss what I perceive to be the fifteen most salient principles of assessment as encountered in recent assessment literature. Most of these principles are of a general nature, applicable to most subjects and situations. In chapter five I will attempt to show how they can be applied to music literacy as a subject and to the development of musicianship.

As noted in chapter three, I found that the principles extracted from assessment literature correspond to a large extent with the principles of constructivism. My impression is confirmed by Lambert *et al.* (1995:24) who write that "[n]ew directions in the assessment of student learning parallel growing understandings regarding constructivist learning theory." Thus, the accord between assessment principles and the constructivist learning principles discussed in the previous chapter will be indicated in the present chapter.

Writing from a constructivist point of view, Brooks and Brooks (2001:viii) state that "[l]earning is a complex process that defies the linear precepts of measurement and accountability." Therefore, "educational settings that encourage the active construction of meaning [...] acknowledge that learning, and the process of assessing learning, are, at best, elusive and messy endeavours that are not easily managed" (Brooks & Brooks, 2001:21-22). Lambert *et al.* (1995:24) explain the relationship between assessment and constructivism as follows:

> Chittenden [1991:24-26, 31] and Gardner (1991) propose moving from a testing culture to an assessment culture, in which assessment practices are ongoing and cumulative while formats are open-ended and drawn from a variety of settings. Assessment, as envisioned by Chittenden and Gardner and others, both contributes to the theory of constructivist learning and is influenced by it. Their view incorporates

assessment into the design of instruction and uses authentic measures to seek to understand what and how each student has learned.

It will be noted that much overlap exists between the various principles of assessment, but, as Lambert and Lines (2000:1) write at the beginning of their book, "we want to promote from the start an understanding that the field of assessment in education is large, complex and, most importantly, interconnected." Therefore, extracting and organizing these principles was my main task, since none of the sources provide a convenient list or overview of all the relevant topics concerning current trends in assessment. The following principles crystallized out of my study of assessment literature.

- Assessment is implemented by enthusiastic, open-minded, competent, and accountable teachers.
- Assessment is based on a well structured curriculum with clearly defined outcomes and criteria for assessment.
- Assessment forms a continuous, integral part of instruction.
- Assessment is valid, reliable and fair.
- Assessment is set within a positive learning environment.
- Assessment is learner centred.
- Assessment is diverse and flexible.
- Assessment includes self-assessment.
- Assessment encourages interaction.
- Assessment includes peer assessment.
- Assessment is authentic.
- Assessment promotes higher-level cognitive thinking.
- Assessment promotes an integrated understanding of concepts.
- Assessment is functional.
- Assessment is employed formatively.

4.1. Assessment is implemented by enthusiastic, open-minded, competent, and accountable teachers

Good assessment practices are made possible by good teachers who constantly reflect upon what happens in their classrooms. To develop good assessment practices, teachers must first become aware of the fact that something can always be done better. Then they must have the passion, enthusiasm, and initiative to pursue these higher levels of excellence. Without this continuous desire and search for improvement, assessment easily becomes a tiresome duty that falls into stagnation. As Lambert and Lines (2000:2) state, "[i]t is not often we find a teacher who claims to like marking. It is more common to find marking, and assessment in general, treated as a kind of necessary evil, or chore to be undertaken as quickly and as efficiently (and painlessly) as possible." One reason for this is that many teachers fail to make the connection between assessment and their wider function as teachers. "[A]ssessment often appears to be taken as an issue separate from the creative processes of teaching and learning" (Lambert & Lines, 2000:1-2). This flawed perception, in turn, could be due to the absence of a sound instructional philosophy.

For necessary changes to occur, teachers must possess informed educational *convictions* strong enough to resist the 'assessment culture' of a previous age and to overcome the difficulty of "moving from good intentions to good practice" (Torrance, 1995a:xi), since "information alone is not always sufficient to persuade us to use [better] assessment techniques" (Stauffer, 1999:25).

In addition to a philosophy based on research, informed educational convictions and the establishment of good assessment practices, the importance of subject knowledge cannot be over-emphasized, since we live in an age where knowledge is constantly evolving. One can no longer sustain a life-long career with the knowledge one had upon graduation. This calls for an open-mindedness and a teachable spirit, open to suggestion as well as correction.

Race (1995:3) claims that "the most important thing we do for our students is to assess their work. It is in the final analysis the assessment we do that determines their diplomas, degrees, and future careers." Asmus (1999:22) and Radocy (1989:33) agree that assessment is an important part of a music teacher's professional responsibility, but as Schafer (1997:513) points out, "many teachers have received no formal assessment instruction." Race (1995:3) elaborates on this dilemma:

> Just as it seems to be assumed that anyone appointed to a teaching post in higher education can automatically teach, it is also implicit that they should be able to assess students' work. Many teachers in higher education wield their red pens for the first time without ever having had any real training in how to assess. Many are embarrassed at the notion of even asking for any guidance, yet are quite intimidated at the responsibility attached to assessing.

This problem was already articulated in 1988 by Stiggins (1988:366), who identified assessment training for practicing teachers as the highest educational priority at that stage. Apparently, the problem was not entirely solved in the following decade. Rather, one can argue that it was augmented because of the increasing demand on teachers to implement more valid and authentic methods of assessment in order to reflect curricular developments (Torrance, 1995a:ix). As indicated in chapter three, outcomes-based education as well as current developments in assessment practices rests heavily on constructivist learning principles. Therefore, I want to suggest that teachers should not only receive training in implementing new methods of assessment, but that they should be led to understand the philosophy *behind* these new strategies (also see section 4.15.).

Although teacher training is a necessary step in solving the problem, it is not sufficient. Race (1995:3) also calls for increased accountability with reference to assessment practices:

> Teaching is a public affair, and we get all sorts of feedback regarding how well or how badly we teach... Assessment, however, tends to be a private and intimate affair, and there is seldom anyone looking over our shoulders as we go about designing and implementing assessment.

> Given the importance of assessment, it is probably the aspect of our profession that should be scrutinized most carefully.

Precisely because of this lack of transparency, Lambert and Lines (2000:133) refer to classes as 'black boxes.' They encourage teachers to "open up and share professional practices with others in the same department or school" (Lambert & Lines, 2000:134). Siebörger and Macintosh (1998:1) explain that "[t]eachers all have meaningful information to share about assessment, and sharing it with each other can be very rewarding professionally." Lehman (1997:59) adds that "some of the most useful improvements have been made by groups of music teachers working together." Therefore, frequent opportunities for dialogue between colleagues cannot be regarded as optional.

An emphasis on assessment practices should, however, not force teachers to succumb to an 'accountability trap' (Lambert & Lines, 2000:164), in which case the collection of assessment data and the comparison of grades become the focus of assessment. This leads to grades being grossly over-emphasized and teachers putting labels on students, the effects of which "may indeed be more harmful than any positive effects that might come from [...] testing" (Boyle, 1989:25). Over-emphasizing grades can also lead to a misplaced sense of achievement or failure on the teacher's side, instead of a focus on the formative potential of assessment. For these and other reasons, Brooks and Brooks (2001:124) plead for the elimination of letter and number grades, saying that "grading drives testing."

> Schools over-emphasize test results — teachers gauge their own efficacy by them, parents fixate on them, and students come to fear them. Ultimately, test results obscure opportunities to honour and value individual differences and instead translate differences into classifications that place, even trap, students in a range of settings such as remedial and gifted programs. [...] Overtly, grades communicate that some students are 'smarter' than others. Grades are used to place students into tracks, which usually have a profound effect on students' options for college, career and income. Subtly, grades become the rewards and punishments for school performance. The pursuit of the

> rewards and avoidance of the punishments overwhelm the search for understanding. (Brooks & Brooks, 2001:122, 124)

It should be remembered that assessment is done *for the students* and that learning should always be the focus of assessment. This might call for some changes, as Goolsby (1995:44) puts it: "[m]usic teachers will [...] find their tasks slightly altered – instead of our traditional roles as masters of 'error detection,' we will endeavour to become masters of 'learning detection.'"

4.2. Assessment is based on a well structured curriculum with clearly defined outcomes and criteria for assessment

The curriculum dictates what is taught and assessed. As Siebörger and Macintosh (1998:33) point out, the curriculum is much more than just the syllabuses that teachers have to teach. "It comprises all the activities (intentional and unintentional) which take place within a school. The curriculum includes, therefore, the textbooks and other learning materials used and the assessment which takes place." Hence, good assessment practice is rooted in a curriculum that reflects the chosen instructional philosophy and does not focus on course content alone, but specifies the desired knowledge, skills, attitudes, and values the students are expected to have at the end of the course. The curriculum answers the *what* of assessment.

Much has been written about the relation between assessment and curriculum. While some authors believe that change in assessment must be an outgrowth of curricular and instructional transformation, others suggest that changes in assessment might drive changes in curriculum and instruction. Changes can, of course, be either progressive or regressive. Siebörger and Macintosh (1998:33) write that "[s]ometimes assessment will have a positive, strengthening, effect on the curriculum and at other times it can have a negative influence."

Torrance (1995b:2) explains that "traditional paper-and-pencil tests [...] can have a narrowing effect on the curriculum, in terms both of curriculum content and of teaching methods employed, and that such an approach to learning can result in [students] coming to know certain things without understanding them and without being able to generalize from specific examples to similar problems in different contexts." This happens because students are coached in a "narrow range of test-taking skills" instead of learning a "broader range of higher-order competencies and understandings" (Torrance, 1995d:145). Preparing students for tests and examinations becomes the sole focus of instruction. Lambert and Lines (2000:194) as well as McKay and Northedge (1995:223) also refer to this negative 'backwash effect' that 'teaching to the test' can have on curriculum and pedagogy.

Assessment can also have a positive impact on curriculum and instruction. According to the Office of Technology Assessment (1992:11, as referred to by Torrance, 1995c:46), advocates of new assessment methods *endorse* 'teaching to the test' when the tests consist of *authentic* tasks that take account of higher-order skills and competencies such as problem-solving, investigation, and analysis. "[T]hese new authentic assessments will [then] lead to improved teaching and learning [...] as teachers adapt their classroom [...] practices to ensure that their students succeed at the new tasks" (Torrance, 1995b:3). In this way, "the assessment drives the changes," as Siebörger and Macintosh (1998:34) point out:

> Everyone seems to accept that assessment (or the threat of assessment) is a powerful incentive for both learners and teachers to direct their attention to specific aspects of the curriculum. [...] One of the problems of curriculum development is how to get learners and teachers to use or experience new aspects of a curriculum. It is here that assessment sometimes comes to play an important role, because if the changes can be linked to assessment there is a much stronger motivation for the teachers and the learners to accept them.

For this reason, a great responsibility rests on those who design syllabuses and methods of assessment. The teaching of music notation in South Africa is often driven by the paradigms suggested by examining bodies such as UNISA and ABRSM, but the influences are not always salutary.

Ultimately, it is important to realize that changes in assessment require curricular adjustments and vice versa. As Le Grange and Reddy (1998:3) write, "authentic continuous assessment of the learner cannot take place without continuous evaluation of the wider educational curriculum that influences the learning." Torrance (1995c:55-56) sees the issue in the following way:

> Teachers have engaged with changes in assessment most enthusiastically and effectively when these changes have derived from, or developed in parallel with, clearly understood changes in the curriculum. But changes in assessment *per se* run the risk of being interpreted within a traditional 'testing paradigm' rather than a 'pedagogical paradigm' and so confounding the best intentions of those developing new forms of assessment. Thus, rather than thinking of authentic assessment 'driving' instruction, it might be more helpful to think of it as providing a new framework for the discussion and development of instruction.

One way to ensure a close link between assessment and the rest of the curriculum, is to use aims and objectives. "According to this approach, the assessment used should be in accordance with the aims of a course, a programme of instruction or lessons taught" (Siebörger & Macintosh, 1998:34). The majority of authors in assessment literature agree about the importance of having clear goals and objectives[1] for assessment that is aligned with curricular goals. In fact, some suggest that the new focus on assessment is *due to* the current emphasis on 'outcomes' or 'standards,' because "[w]ithout assessment, it's impossible to know whether or not standards have been achieved" (Lehman, 1997:58). According to McKay and Northedge (1995:226), there has been a "new focus on the *outcomes* of education and training instead of on the *content*. Outcomes are a description of what people *can do* at the end of a course — in other words, outcomes describe how people can *use and apply* the knowledge and skills they have learnt" (italics added). They (McKay & Northedge, 1995:227) explain that some of these skills are difficult to assess in traditional ways (written

[1] It should be noted that these terms fit in better with the old view of education where 'goals' and 'objectives' were seen as targets that the *teacher* had to attain whereas 'outcomes' in OBE focus on what the *student* should be able to do as a result of instruction.

examinations). Thus, "the move to outcomes education means that different ways of assessing people in terms of how they use and apply their skills and knowledge have to be developed" (McKay & Northedge, 1995:228). Siebörger and Macintosh (1998:36,38) state that "[a]n important advantage of using outcomes is that they link the aims, the content, and the assessment of the curriculum. [...] Outcomes-based education [also] provides a specific answer to the question of what should be assessed: the outcomes should be assessed according to assessment criteria."

Assessment criteria are very important in outcomes-based education. They link directly with learning outcomes (Lambert & Lines, 2000:163) in that they "specify in more detail what has to be done to achieve the outcome" (Siebörger & Macintosh, 1998:37). McKay and Northedge (1995:237) indicate that "[o]ne of the values underlying this approach [regarding assessment criteria] is a belief in transparency and openness." According to Lambert and Lines (2000:18), "the word transparency is used to describe the extent to which all the participants [...] know what is required of them, know the system by which they will have their work assessed and the ways the marks are awarded." This requires educators to think carefully about the knowledge, skills, attitudes, and values they want students to demonstrate as a result of instruction, and then to determine the performance criteria for each outcome. "[L]evels of achievement must be predetermined and understood by the class" (Cope, 1996:41).

For assessment criteria to be transparent (shared and understood), dialogue and the active involvement of students are essential (Lambert & Lines, 2000:141; Scott, 1998:17). Yet, students are often unclear as to why they are doing what they are doing and what they're supposed to accomplish through it. "Research in measuring feedback provided to students in relationship to what the teachers ask of the students indicates that, during the vast majority of [classes], students have no way of knowing whether they are accomplishing what is expected of them. This sense of accomplishment can only come if students are aware of the specific goals of the [...] class" (Goolsby, 1999:32). Goolsby (1995:41) also writes that "we have known for years that students learn more when they are aware of what

they're expected to learn" and that "music education will benefit if we articulate what we want our students to remember and be able to do when they leave our class."

Stipulating desired performance by means of specific criteria that have to be reached, means that assessment is *criterion* referenced rather than *norm* referenced. When assessment is norm referenced, the performance of an individual within a group is judged against the performance of the whole group (Lambert & Lines, 2000:15 and Siebörger & Macintosh, 1998:13). Criterion referenced assessment has numerous advantages.

- According to Lambert and Lines (2000:135), the grading dilemma is greatly reduced if assessments are criterion referenced. The reason for this is probably that criteria make feedback to students easier and more effective.
- Assessment criteria "underpin effective marking" (Lambert & Lines, 2000:162), making assessment more fair and objective (Radocy, 1989:31). Without it, judgments can easily be influenced by subjective impressions based on aspects such as quantity and presentation instead of quality (Lambert & Lines, 2000:134). Lambert and Lines (2000:163) note that "[a]ny discussion on criteria [...] needs to address the issue of 'effort'." Especially in music education, there is a tendency to reward effort, since all students are not equally 'talented.' However, Lehman (1998:38) refutes this argument by stating that "[n]o student gets an 'A' in algebra or chemistry solely because he or she showed up and tried hard. [...] Good attendance, effort, behaviour, and attitude are probably best treated as prerequisites for learning."
- Shared criteria empower students, enabling them to "assume more of the responsibility for their own learning" (Goolsby, 1999:35). As Hickey (1999:30-32) states, "[s]eeing how the teacher intends to grade their work gives students important information that they can use before they begin, while they work, and after they get the assignment back from the teacher." Feedback

based on criteria shows them exactly why, where, and how they lost or gained marks, and, consequently, what they can do to improve. Assessment is no longer "something done to them" (Lambert & Lines, 2000:141).

- "When the criteria for assessment are made clear at the beginning of [a] project, self-assessment and peer assessment (if learners are working in groups) become natural since learners will constantly be measuring their progress against the criteria to see whether they are fulfilling the requirements and, if not, to see how they can alter their work in order to fulfil the criteria" (Le Grange & Reddy, 1998:22).

- To some extent, criteria can reduce the damaging tendency for teachers to 'rank' students. As Lambert and Lines (2000:163) state, "ranking pupils and judging their work (assigning a value to it) are two quite different activities." Ranking promotes a spirit of competition, whereas criterion referenced feedback encourages ipsative referencing (or self-referencing): students measure their achievements against their previous performance instead of comparing themselves to their peers (Siebörger & Macintosh, 1998:13; Lambert & Lines, 2000:16).

One disadvantage, though, is that the task of defining clear assessment criteria can be very time consuming and not as straightforward as it sounds, because "defining precisely what is required is very difficult" (Lambert & Lines, 2000:17). Especially in music education, "teachers are often unclear about the parameters of the assessment — what they actually are meant to be assessing. This is compounded by the fact that linear and sequential development is not the norm, consequently there is no clear paradigm of artistic progression" (Durrant & Welch, 1995:120). As a result, "[s]ome music educators believe that music teaching and learning are very difficult, if not impossible, to assess. Usually, such beliefs stem from an insufficient level of detail as to exactly what the student is to be able to do or know after music instruction" (Asmus, 1999:19). Durrant and Welch (1995:120) address this difficulty:

> In order for learning in the arts to be assessed, we need to specify the nature of the evidence for learning that we will accept. This usually implies some form of criterion-referencing in which we require the [student] to *act on* the arts material in some way. In this case, the statements of attainment [outcomes] require critical verbs to illustrate clearly what is being asked and assessed. Our preference is for words like *recognize*, *identify*, *distinguish* and *describe*.

Thus, clear outcomes and criteria for assessment are just as important in music as in any other subject. The alternative, Lehman (1997:59) asserts, "is to accept the premise that music lacks specific skills and knowledge to be taught and learned." He further states that "[outcomes] are based on the premise that every student should learn certain specified skills and knowledge" and that "grades should report to what extent students are meeting the standards" (Lehman, 1998:37). However, to be consistent with constructivist principles, Brooks and Brooks (2001:11) encourage teachers to "value [students'] present conceptions, rather than measure how far they are from other conceptions."

Actually, the concern for clearly defined outcomes and assessment criteria has more roots in behaviourist than in constructivist philosophy. "Essentially, *behaviourist thinking* requires the clarification and definition of specific objectives which are then taught and learnt in carefully graded stages [from the more simple, concrete, specific, closed and descriptive to the more complex, abstract, general, open and explanatory]. It lies behind the objectives-led model of curriculum planning" (Lambert & Lines, 2000:129). Constructivist teachers, on the other hand,

> are not satisfied (merely) with the identification of objectives and testing how well they were met [...], but with trying also to find what the pupils *could* achieve with help. Thus assessment is an integral part of teaching and learning, its main purpose being to look forward and help pupils realise their learning potential through self-knowledge. [...] It [constructivism] helps us understand that the processes of assessment are at least as important as the products [results or outcomes]" (Lambert & Lines, 2000:130).

This is not to say, however, that outcomes and assessment criteria should be disregarded by followers of constructivist principles. The manifold advantages of this system deserve to be acknowledged. I suggest that the whole approach to outcomes and criteria be given a 'constructivist touch.' This can be done, for instance, by not presenting assessment criteria to students as a *fait accompli*. Rather, allow a degree of negotiation regarding the steps that can be taken to reach a specific outcome, or regarding which aspects of an upcoming assignment or presentation should be valued. This way, more focus is placed on the process of assessment than on the product, and students are allowed to:

- be active agents in their own learning;
- 'own' the assessment criteria, taking more responsibility for their own learning;
- interact with peers and teacher through dialogue and negotiation;
- consider different perspectives;
- add their own relevance to the topic, perhaps applying it to an area of personal interest;
- demonstrate the extent of their knowledge about the topic at that stage, enabling the teacher to effectively challenge their current hypotheses and mediate learning; and
- grapple with the learning experience as a whole in order to identify the necessary steps for achieving the outcome, thus developing a more integrated understanding of the concept.

4.3. Assessment forms a continuous, integral part of instruction

All recent writings on assessment strongly emphasize the fact that assessment forms "an integral part of successful teaching and learning" (Le Grange & Reddy,1998:13). It is no 'add-on' to instruction (Asmus, 1999:19), but an essential component that requires planning and coordination (Lambert & Lines, 2000:197; Stauffer, 1999:26). Lambert and Lines (2000:193) even suggest that

good classroom assessment may be indistinguishable from teaching when operating properly. They illustrate this point by asking the question: "is skilled debriefing through questioning a teaching skill or an assessment skill — or both?" (Lambert & Lines, 2000:125). Lambert and Lines (2000:110) also write that this stance "helps counter the claim that busy teachers have 'no time' to engage seriously with formative assessment practices: this, the argument runs, would be tantamount to saying they have no time to teach effectively!" Equating assessment with teaching is perhaps the biggest paradigm shift that teachers have to make with regard to new assessment strategies, since education has been dominated for so long by the 'teach, then test' model, to use Salaman's (1998:41) phrase. On the other hand, it might be what good teachers have been doing for years, naturally stemming from a real concern for *learning* as opposed to just getting the content across. Lambert and Lines (2000:150) accordingly state that "the challenge identified here is for teachers to focus more on learning (and less on teaching!)."

In assessment literature, different terms are employed to refer to learning-integrated assessment to a greater or lesser extent:

- *informal assessment* — "assessment which is carried out as part of normal classroom teaching" as opposed to *formal assessment* "which is specially arranged and is not part of normal classroom teaching" (Siebörger & Macintosh, 1998:22-23);

- *continuous assessment* — "the continuous updating of assessments of the performance of a learner; learning with frequent pauses for assessment" or "assessment that happens throughout a course," checking regularly on what a student has learnt (Siebörger & Macintosh, 1998:25; McKay & Northedge, 1995:241) as opposed to *terminal assessment* — "a measurement of performance made at the end of a course or unit of study" (Siebörger & Macintosh, 1998:25);

- *formative assessment* — "assessment that happens during the period of teaching and learning" or that is "conducted as the learning process takes place and is used to influence or inform the learning process" (McKay & Northedge, 1995:229; Le Grange & Reddy, 1998:4) as opposed to *summative assessment* which "takes place at the end of the learning experience for a purpose outside the learning experience" (Le Grange & Reddy, 1998:4); and
- *internal assessment / classroom assessment* — assessment that is carried out in class by the teacher or trainer of a particular group of learners, as opposed to *external assessment* which is "conducted by an outside body such as an examinations board or a training board" (McKay & Northedge, 1995:230).

"While the difference between the terms formative and summative assessment is in the *use* made of the assessment, the difference between continuous and terminal assessment is in the *frequency* that the assessment takes place" (Siebörger & Macintosh, 1998:25). The terms formal and informal, as well as internal and external, focus more on the *nature* of the assessment. Thus, in order to best promote learning, *continuous classroom* assessment should be employed for *formative* purposes. "This will involve informal assessment processes [...] as well as occasionally more formal approaches" (Lambert & Lines, 2000:197).

Siebörger and Macintosh (1998:26) list a number of reasons that prompted the official introduction of continuous assessment in South African schools. These reasons are summarized below.

- *Examinations* — learners spend too much time writing examinations. Examinations put extra pressure on learners and teachers and cause some learners to work only at examination time, not throughout the year.
- *To change methods of teaching* — continuous assessment requires teachers to plan their teaching with assessment in mind, rather than thinking of it as

separate from assessment. Furthermore, it would encourage diverse activities such as group work, projects and excursions.

- *Formative assessment* — it was hoped that by introducing continuous assessment, educators would begin to use the feedback from assessment more formatively to help learners to learn better.

- *Curriculum development* — continuous assessment was introduced to prepare the way for the National Qualifications Framework and outcomes-based education.

- *Learner centredness* — continuous assessment gives learners a much better opportunity to take control of their own learning, and it gives them a better idea of why they are doing well (or not).

- *Year marks / coursework* — combining test and examination marks obtained from continuous assessment will most often improve the validity of the total mark of a learner.

Thus, continuous, formative assessment will enable students to "centre their attention on the process of learning rather than only the measured product of their performance" (Lambert & Lines, 2000:134), while giving a more accurate report of their abilities than a single test or examination (McKay & Northedge, 1995:224). As McKay and Northedge (1995:223) point out, "[t]here might be a number of reasons why someone who has performed well throughout a course of study does not do well in an examination." Siebörger and Macintosh (1998:26-27) list a few additional advantages:

> Continuous assessment gives teachers the opportunity to vary the kind of assessment used and the activities on which the assessment is based because it takes place a number of times [...]. In many instances this is valuable. Learners don't get so bored, teachers find their work more interesting, and different aspects of work can be emphasized, which is a help to learners who do well in some things but not in others. Some

> kinds of learning do not require variety, but repetition. Continuous assessment can be especially useful in these cases.

Furthermore, continuous assessment creates more frequent opportunities for the teacher to really get to know the students as learners, and for the teacher and students to get into one another's heads and learn from one another (Lambert & Lines, 2000:144).

Brooks and Brooks (2001:x,97) wholly agree with the principle of learning-integrated assessment:

> Constructivist teachers don't view assessment of student learning as separate and distinct from the classroom's normal activities but, rather, embed assessment directly into these recurrent activities. [...] The point is: differentiating between teaching and assessment is both unnecessary and counterproductive. Assessment through teaching, through participating in student/teacher interactions, through observing student/student interactions, and through watching students work with ideas and materials tells us more about student learning than tests and externally developed assessment tasks.

All the constructivist principles identified in the previous chapter are best nurtured in the normal classroom context of teaching and learning. Thus, continuous classroom assessment which is formative (see section 4.15.) is more consistent with constructivist principles than terminal or external assessments which are summative.

Literature on assessment in music education strongly support this principle, as seen in the writings of Asmus (1999:19), Boyle (1989:23), Cope (1996:40,42), Lehman, (1998:40), Niebur (1994:23), Robinson (1995:32), Salaman (1998:41), and Stauffer (1999:27). Cope (1996:42) writes: "[i]t is essential that music educators make assessment an integral part of all music education." Assessment should be "embedded within the instructional process and should not interrupt or intrude into the process" (Lehman, 1998:40).

4.4. Assessment is valid, reliable and fair

Validity and *reliability* are probably two of the most frequently encountered terms in assessment literature. According to Siebörger and Macintosh (1998:11), these terms are used to describe *fairness* in assessment (although fairness may also deal with other issues not related to validity and reliability). Lambert and Lines (2000:7) have a learner-centred perspective on validity and reliability:

> Ultimately, the idea behind all assessment is to discover something about the person being tested. It may be new, useful information, such as when a potential employer looks at an examination grade, or it may have a retrospective feel, such as when a teacher sets a test as a way of confirming that learning has taken place. Importantly, it may also give the person being tested information [...]. Whatever the precise use or circumstances, it is vital that what the test says about that individual is correct [...]. In technical terms this means that the test must be both valid and reliable.

Validity is actually quite a complex matter, resting beneath the fairly straightforward notion that a test (or any assessment activity) should measure what it intends to measure, or that it should accomplish what it is meant to (Siebörger & Macintosh, 1998:11; McKay & Northedge, 1995:237; Lambert & Lines, 2000:7). Traditionally, four types of validity (identified by Stobart & Gipps, 1997 as referred to by Lambert & Lines, 2000:7) have been considered important:

- *Predictive validity* "measures the extent to which the score on one type of test enables someone to predict a performance later on." Universities use this device to sift applicants. Good matriculation grades are regarded as good predictors of the intellectual skills required to successfully complete a degree.

- *Concurrent validity* is "a measure of the accuracy of two tests that purport to measure the same thing. However, both tests must be independently valid as well."

- *Construct validity* is "the notion that for a test to be *valid* it has to test those attributes it is supposed to. Psychologists call these attributes, or underlying skills, 'constructs,' because they are a construction about the nature of human behaviour." To test 'reading,' for instance, one would have to test all the underlying skills involved, "such as reading both aloud and silently, with accuracy, fluency and perhaps with verve if it is to an audience, understanding the content, recognizing the difference between reading poetry and prose, and so on."

- *Content validity* is "concerned with the content being tested. In the context of an external examination, Wood neatly defines it as 'a function of the success with which the board translates what the syllabus says into an operational examination' [...]."

More recently, however, the concept of *unitary* validity has emerged in relation to an increasing focus on formative assessment. This means that, "no matter how well constructed a test, no matter how valid it is in terms of the criteria mentioned above [predictive, concurrent, construct, and content validity], if the results are not used appropriately it will not be valid" (Lambert & Lines, 2000:9). Durrant and Welch (1995:119) may, perhaps unknowingly, be referring to unitary validity in writing that "[a]ssessment in an educational context is only valid in relation to the purpose it serves." Thus, unitary validity has to do with the inferences and actions that are drawn from a test. Black (1998:44) describes these as falling into two main categories:

> One type of inference might look forward to the future performance of a student in new learning programmes or in remedial work on the previous programme. The other might look back at the previous learning programme and so lead to changes to improve test results for future students.

Though ultimately less significant, reliability has been researched more thoroughly than validity (Lambert & Lines, 2000:10,11). Reliability refers to the consistency

of assessment (Siebörger & Macintosh, 1998:12) and whether it will give the same result "across all occasions, tasks, observations and settings" (Lambert & Lines, 2000:11). This also means that, "[i]f an exercise is marked in a reliable way, it should be given the same marks, whether it is at the top of the pile or at the bottom, whether it is marked quickly or slowly, whether it is done by a girl or a boy, whether the teacher likes the learner or not, and whether or not it is marked by different markers" (Siebörger & Macintosh, 1998:12). It is, however, not just a lack of consistency on the assessor's side that can cause a test to be unreliable. Lambert and Lines (2000:11) indicate that "we can never have identical candidates on two occasions, because even the same person will change." Therefore, other reliability measures are used as well (Stobart & Gipps, 1997:42 as quoted by Lambert & Lines, 2000:11):

- *test-retest reliability*, which is based on gaining the same marks if the test is repeated;
- *mark-remark reliability* which looks at the agreement between markers; and
- *parallel forms / split-half reliability* in which similar tests give similar marks.

Thus, reliability is more applicable to formal tests and examinations than to informal types of classroom assessment. However, William (1992, referred to by Lambert & Lines, 2000:11) employs the term *dependability* in referring to the reliability of classroom assessments. For classroom assessment to be dependable, *disclosure* and *fidelity* must be observed. Lambert & Lines (2000:11) explain the meaning of these terms:

> *Disclosure* investigates the extent to which a student gets a question right or wrong depending on the nature of the question itself (it is a well tried technique of teachers to re-phrase a question so as to encourage a positive response) and *fidelity* looks at the way the evidence is, or is not recorded. Fidelity can be lost in three ways: either because the teacher does not observe it, or because it is incorrectly observed, or because, despite observing it correctly, it is not recorded (Stobart & Gipps, 1997:43). (italics added)

Broadfoot (1995:9-10) gives the following explanation for the extreme emphasis on reliability in traditional assessment cultures:

> Historically the practice of educational assessment has been largely driven by a perceived need to *measure* individual intellectual capacity. When educational assessment first began to be widely used in the nineteenth century, this was in response to the institution of mass educational provision and the associated need to provide a 'ladder of opportunity' into the expanding industrial economies of that era. The pressing need to find mechanisms of selection that would be both socially acceptable and identify the 'best' candidates, led to a premium being put on assessment techniques that appeared to be fair and objective, that had high levels of reliability. [...] The preoccupation with reliability has, in turn, tended to lead to a concentration on that which is more readily measurable — such as knowledge and understanding and a relative, if not absolute, neglect of higher-level intellectual skills, of personal and social competences and attitudes.

This fixation on reliability can also be linked to the development of numerous aptitude tests for measuring musical 'giftedness,' such as the Gordon Musical Aptitude Profile, the Seashore Measures of Musical Talents, the Colwell Music Achievement Test, and the H. D. Wing Standardized Tests of Musical Intelligence (Cope, 1996:40). These tests resulted in the reduction of musicality and musicianship to that which is measurable.

Broadfoot (1995:10) notes that "the social imperatives for assessment today are very different from those of a century ago." This is due to a shift in our world view, as Gipps (1994:167) points out:

> Assessment is not an exact science, and we must stop presenting it as such. [...] The modernist stance suggests that it is possible to be a disinterested observer, while the post-modernist stance indicates that such detachment is not possible... The *constructivist* paradigm does not accept that reality is fixed and independent of the observer; rather reality is constructed by the observer, thus there are multiple constructions of reality. This paradigm would then deny the existence of such a thing as a 'true score.' (italics added)

Lambert and Lines (2000:199) mention that this does not mean adopting "an extreme relativist position of 'anything goes'... But it is to question the feasibility, or even desirability, of preserving traditionally rigid, objectivist assumptions of reliability." They advocate a "paradigm shift from a scientific, psychometric model of assessment to an educational model" (Lambert and Lines, 2000:199). Gipps (1994:167) calls it 'reconceptualizing reliability.' As a result, the new assessment culture has been characterized by an increasing emphasis on validity (rather than reliability) "which allows the full range of curriculum objectives including cognitive, psychomotor and even affective domains of learning to be addressed by the use of a wider range of more 'authentic' techniques" (Broadfoot, 1995:12). Thus, for assessment to promote musicianship while taking into account constructivist principles, it has to be valid rather than reliable.

In addition, Frith and Macintosh (1984:25) discuss five factors that teachers should take into account when trying to establish fairness. These five factors are summarized and adapted by Siebörger and Macintosh (1998:13):

1. The importance, length, size or weight of the assessment — does it match the amount of work which has been done?
2. The choice of the assessment technique — does it match the way in which the learners have been taught?
3. The instruction and/or questions given to the learners — do all learners understand what they are expected to do or answer?
4. The method of administering the assessment — are the conditions appropriate; is there enough time; do learners have access to the resources that they need?
5. The method of marking — is it as objective as possible? Should the learners know how it is to be marked?

Some of these considerations overlap with aspects of reliability and validity. Wiggins (1993b:213) also regards the test-taker's point of view as an important factor in the matter of validity: "[h]ow one's work and talents are judged is of paramount concern to everyone. Thus fairness demands that the test-taker's responses be solicited and pondered." He even devised a questionnaire to be completed by students after every major test, thus enabling teachers to "assess

their students' sense of a test's aptness and fairness" (Wiggins, 1993b:213; questionnaire in Wiggins, 1993a:246 – see appendix A).

Finally, Siebörger and Macintosh (1998:12) state that "[t]he interaction between the context of the assessment, the individual learner and the human judgment of the educator means that assessment will always fail to achieve complete validity and reliability." Though they advise the assessor to "*aim at as much validity and reliability as possible,*" they acknowledge too that validity is more important than reliability, "as it can still be useful to have validity without much reliability, but a reliable assessment which has no validity is useless" (Siebörger & Macintosh, 1998:12-13). The Office of Strategic Services (1948:42) supports this view: "[s]urely, the essential criterion of a good test is its congruence with reality; its coherence with other tests is a matter of secondary concern."

4.5. Assessment is set within a positive learning environment

For assessment to take place within a positive learning environment, teachers need to create an atmosphere of 'relaxed alertness' (Kassner, 1998a:29; Caine & Caine, 1991:87) wherein students feel secure enough to venture out of their comfort zones, take risks, and make mistakes (Lambert & Lines, 2000:137). I believe that such an environment will be a natural outcome when the other assessment principles discussed in this chapter are observed. That is, namely, when assessment is:

- *enforced by enthusiastic, open-minded, competent and accountable teachers.* The main responsibility for creating a constructive classroom ecology rests with the teacher. Teachers who operate out of a heartfelt conviction of the value of their subjects and a genuine concern for the students as learners as well as persons are well on their way to creating this kind of environment.

- *based on a well structured curriculum with clearly defined outcomes and criteria for assessment*. As pointed out in section 4.2., students who are aware of the goals and objectives toward which they are working, learn better than students who remain uncertain of what is expected of them. As a result, they will experience more confidence, which will, in turn, contribute to a positive learning environment.

- *a continuous, integral part of instruction*. Continuous assessment that forms an organic part of teaching and minimizes disruption to ongoing classroom activities (Asmus, 1999:22) will allow learners to be more relaxed about assessment as it becomes part of the normal classroom routine. "Experienced adult educators tell us that our learners will perform better if they are relaxed" (McKay & Northedge, 1995:221).

- *valid, reliable and fair*. Teachers who prove themselves fair and consistent with regard to assessment practices will earn the trust and respect of their students — a necessary condition for a positive learning environment. This includes giving all students equal opportunities to express their understanding instead of focusing on those who always get the answers right.

- *learner centred instead of teacher centred*. Teachers who view themselves as facilitators of learning provide for an entirely different learning environment than those who view themselves as transmitters of knowledge.

- *diverse and flexible*. Diverse and flexible assessment strategies increase students' chances for success, resulting in a more positive learning environment.

- *inclusive of self-assessment*. When students are trained in self-assessment, they are empowered by an increased sense of responsibility. Consequently, they feel more in charge of their own learning and more at home in their learning environment.

- *interactive*. Group work creates an atmosphere of cooperation rather than competition and encourages active rather than passive learning. Both of these conditions contribute to a positive learning environment. A healthy dialogue between teacher and students is also crucial, since students must feel free to ask questions and voice their opinions.

- *inclusive of peer assessment*. Peer assessment contributes to a positive learning environment, because students feel that their opinion really matters and that they are trusted enough to partake in the judging process.

- *authentic*. Authentic assessment activities that are based on real-world challenges relevant to students' interests and needs raise the level of student involvement, because students can see the value of what they are doing. In this way, the learning environment can be the living environment.

- *geared towards higher levels of cognitive thinking*. Assessment that encourages the utilization of higher order skills like application, analysis, synthesis and evaluation is more likely to rule out surface learning and boredom.

- *promoting an integrated understanding of musical concepts*. Assessment that promotes an understanding of concepts instead of requiring a reproduction of facts also makes students feel more in charge of their own learning.

- *functional*. Assessment that is used for the right reasons — that is, for formative and motivational purposes, helps students to cultivate a more positive attitude towards assessment, because it helps them to improve.

Lehman (1998:40) writes that, "[i]n order for students to reach their full potential in music, every school should provide a music learning environment." He regards sufficient scheduling, staffing, materials, equipment, and facilities as an important part of this environment (Lehman, 1998:40).

4.6. Assessment is learner centred

As noted before, assessment is primarily done *for the students*, and therefore should be used "as a tool in service to the learner, rather than as an accountability device [or] a teacher effectiveness measure" (Brooks & Brooks, 2001:88). Siebörger and Macintosh (1998:58) write as follows about the meaning of learner centred education in the context of outcomes-based education:

> There is a debate about what exactly learner-centred education is. However, the exact meaning of the term is not significant, as long as it is clear that the individual learner is important in OBE. Outcomes are not written for the class to attain but for individuals. Each learner is unique, has his or her own way of learning, own pace, and needs to have good records of what has been achieved and what has still to be done. Assessment is to help the learner, not to provide a set of marks for the teacher.

Constructivism is, overall, a *learner centred* philosophy, emphasizing the way in which individual students construct their own meaning. Thus, with regard to assessment, "[t]he teacher's quest will not be to put an 'objective' label on each [student], but to understand how they are learning (or why they are not) in particular local contexts" (Lambert and Lines, 2000:202). "[Constructivist] ideas insist that teachers need to know the minds of their [students] in order to arrange and promote learning most effectively" (Lambert & Lines, 2000:128). In addition, assessment practices must take into account the development of the whole learner by maintaining a balance between the cognitive, psychomotor and affective domains (Le Grange & Reddy, 1998:6). Therefore, the challenge here is again for teachers to focus more on learning and less on teaching (Lambert & Lines, 2000:150).

Siebörger and Macintosh (1998:18) suggest that teachers might try to see assessment from the learners' perspective. Stauffer (1999:30) concludes:

> Whatever its advantages to schools, administrators, and teachers, assessment should always focus on benefits to students. Instruction is

> most meaningful and assessment is most relevant when it leads *students* to take pride in their accomplishments... In the end, assessment should be a celebration of each student's learning – a time when he or she can say with assurance and pride, 'I can do these things; I know these things; *I am a musician'.*

As is the case with a positive learning environment, most of the other principles identified in this chapter will to some extent contribute to assessment that is learner centred. However, I consider the following four principles (discussed in sections 4.7. to 4.10.) as particularly instrumental in this regard.

4.7. Assessment is diverse and flexible

Much has been written in section 3.1.6. about the need to use a variety of instructional methods in order to accommodate students' unique learning needs. If students have different needs and dispositions, then assessment also needs to be differentiated. As Race (1996:6) points out, "[s]tudents are highly intelligent people; if we confront them with a game where learning is linked to a rigid and monotonous diet of assessment, they will learn according to the rules of that game. To improve their learning, we need to improve our game." Thus, diversity is the "key operational touchstone to guide effective classroom assessment" (Lambert & Lines, 2000:174). Race (1995:3) also argues that "the greater the diversity in the methods of assessment, the fairer assessment is to students," because students are allowed "a range of processes through which to demonstrate their respective strengths and weaknesses" (Race, 1996:6). Stauffer (1999:26) agrees with this statement: "[c]reating a 'menu' of assessment options provides students who learn in different ways with multiple opportunities to express what they know and can do."

There are, indeed, "a wide variety of [...] assessment methods and strategies that could be employed to provide a comprehensive reflection of the learner's development in all areas" (Le Grange & Reddy, 1998:20). Assessment can take

any of the forms discussed below, ranging from formal examinations to a variety of informal classroom assessments.

The method employed will depend on and "vary according to the nature not just of the subject or topic, but also the specific activity within that subject or topic" (Durrant & Welch, 1995:119). Siebörger and Macintosh (1998:21) advise teachers to "find the method which fits best with the *purpose* of the assessment" (italics added). Teachers will need to "experiment with different strategies on a regular and informal basis" (Le Grange & Reddy, 1998:35) in order "to find out which works best in a given situation and when it is most appropriate" (Cope, 1996:42). The range of methods used should also help the teacher to "gain a comprehensive understanding of each student's ability" (Stauffer, 1999:27). Le Grange and Reddy (1998:35) as well as Siebörger and Macintosh (1998:30) emphasize the importance of teachers' sharing ideas for questions and activities.

Music education provides even more opportunities for implementing diverse assessment strategies than some other disciplines do. Asmus (1999:20) notes that "[a]ny type of assessment must address the great diversity of instructional settings that exist in music education." To be consistent with constructivist principles, teachers should not just employ a variety of assessment techniques; they should also allow students to find "a variety of acceptable solutions to a problem within clearly established parameters" (Niebur, 1994:25), and thus to explore the grey areas between 'right' and 'wrong.'

What follows is a discussion of the most common methods of assessment. These will be applied more specifically to music literacy in the next chapter.

4.7.1. Traditional written examinations or tests

A written examination is defined by McKay and Northedge (1995:231) as "a structured question paper to be answered in writing within a certain period of time." Although widely criticized, written examinations "will continue to play a

large part in the overall assessment picture" (Race, 1995:4), mainly because they are easy to administer (McKay & Northedge, 1995:231). Large numbers of students can be assessed at the same time, making it more cost-effective than some other forms of assessment (McKay & Northedge, 1995:231). It also ensures equality of opportunity, in the sense that all students have "the same tasks to do in the same way and within the same timescale," and teachers can be sure that it is the candidates' own work (Race, 1995:4). However, having to work through piles of examination papers makes it more difficult to deliver effective feedback to students about the detail of their performance. Furthermore, "badly set exams encourage surface learning" and tend to measure students' proficiency at answering examination questions, rather than the depth and quality of their learning (Race, 1995:4)

Race (1995:4-5) offers a number of very useful tips for setting good examination questions that is well worth quoting here at some length.

- *Don't do it on your own!* Make sure you get feedback on each of your questions from colleagues. They can spot whether your question is at the right level more easily than the author. [...] It is better still when all questions are discussed and moderated by teams of staff. Where possible, set questions with your colleagues. This allows the team to pick the best questions from a range of possibilities.
- *Ask colleagues: 'what would you say this question really means?'* If they tell you anything you hadn't thought of, you may need to adjust your wording a little.
- *Keep your sentences short.* You're less likely to write something that can be interpreted in more than one way if you write plain English in short sentences. This also helps reduce any discrimination to students whose second language is English.
- *Work out what you're really testing.* Is it decision-making, strategic planning, problem solving, data processing (and so on), or is it just too much dependent on memory? [...] Be up-front about all the things each question is likely to measure.
- *Don't measure the same things again and again.* ...it is all too easy in essay type exam questions to repeatedly measure students' skills at

writing good introductions, firm conclusions, and well-structured arguments. [...]

- *Include data or information in questions to reduce the emphasis on memory.* In some subjects, case-study information is a good way of doing this.
- *Make the question layout easy to follow.* A question with bullet points or separate parts can be much easier for (tense) candidates to interpret correctly than one which is just several lines of continuous prose.
- *Don't overdo the standards.* When you're close to a subject, it's easily possible that your questions get gradually harder year by year.
- *Write out an answer to your own question.* This will be handy when you come to mark answers, but also you'll sometimes find that it takes you an hour to answer a question for which candidates have only half-an-hour.
- *Decide what the assessment criteria will be.* Check that these criteria relate clearly to the syllabus objectives or the intended learning outcomes. Make it your business to ensure that students themselves are clear about these objectives or intended outcomes, and emphasize the links between these and assessment.
- *Work out a tight marking scheme.* Imagine that you are going to delegate the marking to a new colleague. Write it all down. You will find such schemes an invaluable aid to share with future classes of students, as well as colleagues actually co-marking with [you], helping them to see how assessment works.
- *Use the question to show how marks are to be allocated.* ...put numbers in brackets to show how many marks are attached to various parts of the question (or alternatively, give suggested timings such as 'spend about ten minutes on Part 2').
- *Try your questions out.* Use coursework and student assignments to give components of your future exam questions pilot runs, and use or adapt the ones that work best for exams.

4.7.2. Open-book examinations or tests

These are similar to traditional written examinations with the difference that students are allowed to consult their textbooks or any other type of reference material that they take into the examination room. Sometimes this also means relaxing time constraints, since students will be needing a lot of time to search for and process information and data (Race, 1995:5). In addition to the advantages of traditional examinations, open-book examinations put less stress on students' memories and reduce the pressure on those students "who happen to be slower at writing down their answers (and also students who happen to think more slowly)" (Race, 1995:5). They also enable teachers to measure alternative skills like information retrieval and how well students *use* and *apply* that retrieved information (Race, 1995:5). However, care needs to be taken to ensure that all students have equal access to resources, especially if limited stocks of library books are available. For this reason, teachers may decide to prescribe the books that students may employ (Race, 1995:5).

4.7.3. Objective / structured tests

Objective or structured tests include true/false, multiple choice, completion, matching, and short answer tests (Lambert & Lines, 2000:148). These methods enable teachers to test a greater cross-section of work while saving time with regard to administration and marking (Race, 1995:6). *Devising* them takes a lot of time and skill, though (Race, 1995:6), and they tend to "over-emphasize unimportant memory items" at the expense of testing a broad range of skills (McKay & Northedge, 1995:232). Though enjoyable to students (partly because they can gain marks by lucky guesses instead of correct decisions), these formats are not very helpful other than perhaps in an end-of-course setting (Lambert & Lines, 2000:148; Race, 1995:6).

These are a few of the suggestions offered by Race (1995:5-6) for designing effective multiple-choice tests.

- *Try out questions with colleagues and with large groups of students.* Make sure that people are, on the whole, selecting correct options for the right reasons, and not because in one way or another the question gives away which is the correct option.
- *Make sure that distractors are plausible.* If no-one is selecting a given distractor, it is serving no useful purpose. Distractors need to represent anticipated errors in students' knowledge or understanding.
- *Try to avoid overlap between questions.* If one question helps students successfully to answer further questions, the possibility increases of students picking the right options for the wrong reasons.
- *Ensure that students are well-practiced at handling multiple-choice questions.* Answering such questions well is a skill in its own right... We need to make sure that students are sufficiently practiced, so that multiple-choice exams measure their understanding and not just their technique.
- *Gradually build up a large bank of questions.* This is best done by collaborating with colleagues, and pooling questions that are found to be working well.

4.7.4. Essays

According to Lambert and Lines (2000:148), this type of task includes timed essays (as in an examination), resource-based essays, and extended writing for a specified audience. They are easy to administer and they can assess "a range of skills and attributes ranging from recall to synthesis and evaluation" (Lambert & Lines, 2000:148). Thus, they better reflect the depth of student learning and also allow for individuality and expression. However, essays take time to write, restricting the syllabus coverage, and they can be just as time consuming and difficult to mark, since subjectivity plays an undeniable role (Race, 1996:3). Furthermore, essay writing is an art in itself, which can lead to students from some backgrounds being disadvantaged, since they have never been coached in writing good essays. To overcome this obstacle, Race (1996:3) advises teachers to work through good and bad examples of past essays with students and showing them how it is marked, even involving them in peer assessment of each

others' essays. He further suggests that teachers might give students the opportunity in class to practise constructing several *frameworks* for essays rather than fully finished masterpieces, because drawing these concept maps or diagrams requires a lot more thinking and learning (Race, 1996:3). Lambert and Lines (2000:148) add that the formative potential of essays can be enhanced by having students *redraft* their arguments and ideas after receiving them back.

4.7.5. Reviews

Writing a review requires students to "interact in depth with the information they review" (Race, 1996:3). It engages them in higher-level skills such as comparing, contrasting and evaluating, which focuses their attention and prevents passive reading or listening (Race, 1996:3). Reviewing also lends itself well to group work. Race (1996:4) offers the following suggestion:

> It is useful to get students both to locate all relevant major resources addressing a field, and to prioritise (for example) the most important or most relevant half-dozen sources. [...] Then suggest they write individual reviews of different sources. [...]

4.7.6. Reports and projects

Projects are defined by Le Grange and Reddy (1998:21) as follows:

> Generally a project is a long-term task in which learners engage individually or in groups. The project may consist of a number of activities, which are dependent on the desired outcomes of the project. It may include activities like making objects or models, identifying and attempting to solve problems, experimenting or presenting experiments and presenting information collected from other sources.

A report can be written as the last stage of a project, explaining the process and findings of the project. As Race (1996:4) points out, it is difficult to provide students with general guidelines with regard to report writing, since the nature of a report differs substantially from one field to another. Report writing is a form of authentic assessment, since "the ability to put together a convincing and precise

report [...] is a skill relevant to many jobs" (Race, 1996:4). Race (1996:4) adds that "the task of writing reports can involve students in research, practical work, analysis of data, prioritizing, and many other useful processes. Sometimes these processes are hard or impossible to assess directly, and reports provide secondary evidence that these processes have been involved successfully (or not)." However, reports are time-consuming for students as well as teachers. Students may "spend too much time writing reports at the expense of getting to grips with their subject matter in a way which will ensure that they succeed in other forms of assessment such as exams" (Race, 1996:4). On the other hand, teachers may find it difficult to maintain the quality and quantity of feedback to students with piles of reports to mark. Race (1996:4) suggests involving students in marking each others' reports before moderating them. This saves marking time and provides students with a lot more feedback. Assessment criteria should be made explicit so that students can see the "balance between the marks associated with the structure of their reports, and those given to the content and the level of critical thinking and analysis" (Race, 1996:4). Furthermore, "[i]t is important not to focus on the end product only but to take the process and circumstances into account" (Le Grange & Reddy, 1998:21).

4.7.7. Oral assessments

Oral assessment can take a number of forms, of which the most common are probably presentations and viva voce examinations (including interviews). Siebörger and Macintosh (1998:28) point out some advantages that oral assessments have in comparison with written assessments:

> Written assessments are sometimes unsatisfactory because they make it possible to 'waffle' (learners pretend that they know something when they really don't); some learners can't write well or fast; or learners might not understand what is required and have no opportunity to ask about it. Spoken assessments overcome these problems (but may create others, as any approach in assessment will result in some learners being disadvantaged).

Lambert and Lines (2000:149) define a presentation as a verbal report, prepared and presented to an audience. The skills assessed are very different from those assessed by written tests or examinations, and Race (1996:6) argues that "the communication skills involved in giving good presentations are much more relevant to professional competence needed in the world of work." The advantage of presentations is that (most) students take them quite seriously, since "[t]he fact that they are preparing for a public performance usually ensures that their research and preparation are addressed well, and therefore they are likely to engage in deep learning about the topic concerned" (Race, 1996:6). When presentations entail the collaborated effort of a group of students, peer assessment can be employed. This is especially helpful in the case of big classes where it would be quite time-consuming to let each student have a turn (Race, 1996:6). Presentations cannot be anonymous, though, making it "difficult to eliminate subjective bias," and, unless recorded, there will be "limited evidence available to reconsider the merit of a particular presentation" (Race, 1996:6). These negative aspects can be partially eliminated by the employment of more than one assessor (Siebörger & Macintosh, 1998:27), and by basing judgments on "suitable and agreed *procedures* and *criteria*" (Lambert & Lines, 2000:149). Race (1996:6) suggests that teachers involve students in devising the assessment criteria for their own presentations and then drawing up grids and allocating a weighting to each criterion. "When students have a sense of ownership of the criteria, they tend to work much harder to achieve them" (Race, 1996:6).

Viva voce examinations are employed to "add to or consolidate the results of other [written] forms of assessment. They normally take the form of interviews or oral examinations where students are interrogated about selected parts of work they have had assessed in other ways" (Race, 1995:6). Students can be given an equal chance by asking set questions from a well-constructed agenda and then evaluating and comparing their responses (Race, 1995:6). Viva voce examinations also provide "useful checks on the ownership of evidence," although it may be possible for the agenda to 'leak' (Race, 1995:6). Other drawbacks are that these interviews can only cover a small part of the syllabus, and that "[c]ultural and

individual differences can result in some candidates underperforming when asked questions by experts and figures of authority" (Race, 1995:6). Therefore, Race (1995:6) urges teachers to try putting students at ease at the beginning by starting with a very straightforward question or talking about a matter irrelevant to the examination. He further advises teachers to work together with one or more colleagues and to confer and make notes after each interview (Race, 1995:6). Davidson and Scripp (as quoted by Robinson, 1995:30) provide some additional advantages that interviews offer the music educator:

1. Interviews make it possible to build lesson plans and curriculum on the basis of students' actual knowledge as well as specific knowledge of the domain.
2. Interviews help teachers monitor the extent to which students integrate class work into their already active musical lives.
3. Through interviews, teachers can better assess the range of a student's application of lessons and the degree to which students take or show initiative.
4. Interviews provide a ready and simple tool teachers can use for revealing the extent to which students in class or ensemble carry what they've been taught into playing, listening, and thinking about music.

Possibilities exist for more informal forms of oral assessment. This can include teachers observing students' contributions to group discussions (Lambert & Lines, 2000:149) and judging students' responses to questions asked in class. Siebörger and Macintosh (1998:47) also list role-play and debate as spoken activities that can be assessed.

4.7.8. Practical or task-based assessments

These types of assessment are also referred to as 'performance events' by Lambert *et al.* (1995:25). They require students to *demonstrate* their knowledge and skills through tasks or activities that they have to carry out (McKay & Northedge, 1995:233), thus integrating the cognitive and psychomotor domains —

theoretical knowledge and real-life practice. For this reason, it is crucial that task-based assessment be included in continuous assessment activities. If students are employed on the basis of their grades, then grades also need to reflect the extent to which they have mastered the skills needed in practice. Employers are looking for candidates who can *do the job* (Race, 1996:4).

4.7.9. Portfolio assessment

As Race (1996:5) points out, using portfolios as a means of gathering evidence of student achievement is becoming increasingly common as an assessment device. Lambert *et al.* (1995:25) also mention that portfolio assessment reflects constructivist principles, especially with regard to students reflecting on their own learning. According to Asmus (1999:20), "[p]ortfolio assessment is a tool for recording process and product — tangible evidence of a student's learning collected over time." Thus, portfolios are compilations of what learners have done, usually consisting of work samples that are selected by the students themselves according to requirements which may be specified (Siebörger & Macintosh, 1998:48; Lambert *et al.*, 1995:25). Evidence displayed in portfolios can range from conventional tests to results from authentic tasks (Black, 1998:97), and may even include "feedback comments from tutors and reflective analyses by the students themselves" (Race, 1996:5). Portfolios have the advantage that they offer a far better reflection of students' abilities and even their development as learners than other forms of assessment (Race, 1996:5). They can "reflect attitudes and values as well as skills and knowledge, [making] them particularly useful to employers" (Race, 1996:5). However, they take a long time to assess, and the individual nature of portfolios makes it "harder to decide on a set of assessment criteria which will be equally valid across a diverse set of portfolios" (Race, 1996:5). In other words, they are harder to mark objectively. Race (1996:5) provides the following tips for utilizing and assessing portfolios:

- *Specify or negotiate intended learning outcomes clearly.* Ensure that students have a shared understanding of the level expected of their work.

- *Propose a general format for the portfolio.* This helps students demonstrate their achievement of the learning outcomes in ways which are more easily assembled.
- *Specify or negotiate the nature of the evidence which students should collect.* This makes it easier to assess portfolios fairly, as well as more straightforward for students.
- *Specify or negotiate the range and extent of the evidence expected from students.* This helps students plan the balance of their work effectively, and helps them avoid spending too much time on one part of their portfolio while missing out important details on other parts.
- *Don't underestimate the time it takes to assess portfolios.* Also don't underestimate their weight and volume if you have a set of them to carry around with you.
- *Prepare a pro-forma to help you assess portfolios.* It is helpful to be able to tick off the achievement of each learning outcome, and make decisions about the quality of the evidence as you work through a portfolio.
- *Provide interim assessment opportunities.* Give candidates the opportunity to receive advice on whether the evidence they are assembling is appropriate.

4.7.10. Classroom questioning

As Lambert and Lines (2000:148) point out, classroom questioning is a very flexible format of assessment that can cover an enormous variety of questions and responses. Kassner worked very extensively on the topic of effective questioning strategies. He writes:

> Great teachers of the past, such as Socrates and Buddha, relied heavily on questions to bring enlightenment to their followers. Do you encourage students to approach musical problems from a variety of perspectives and strategies, and are you skilled in responding to students' answers in a variety of ways? [...] Teachers ask an average of 395 questions per day, but often these questions are the type that requires only low-level thinking and single-answer 'mimetic' recall.

> Classrooms would be more stimulating, interesting, and challenging if teachers regularly asked questions that required thinking at higher levels. [...] By questioning, rather than telling, teachers can guide the creative process without imposing their own ideas (Kassner, 1998a:29, 34).

Kassner (1998b:33) also asserts that "higher level questioning is an extremely valuable technique for improving students' musicianship. [...] [It is] the technique most likely to engage students' full attention and lead to the deepest thinking and sensitivity."

In his article "Would better questions enhance music learning?" Kassner (1998a:30-31) presents a complete flowchart for asking effective questions (see appendix B), covering aspects such as:

- general information the teacher needs to keep in mind;
- what type of answer or situation the teacher is expecting;
- the ability level of the individual or group;
- the content area that will be addressed;
- things the teacher needs to remember about questions;
- the teacher's response to student answers; and
- the teacher's reflection on the response and subsequent action.

He advises teachers to consult the flowchart when writing lesson plans and to keep a checklist of question-starters handy when teaching (Kassner, 1998a:32). Question-starters can be derived from Bloom's (1956) cognitive taxonomy (Pasch *et al.* as referred to by Kassner, 1998a:32, 33 – see appendix C). Similarly, Hunkins (as referred to by Kassner, 1998a:33) "suggests phrases for questioning in the affective domain, such as 'Do you like?' and 'Are you interested in?'"

In his later article "Improving your IQ — intelligent questioning" Kassner (1998b) adapts Flanders's (1970:230-231) interaction analysis matrix for use in a music class. The matrix enables teachers to evaluate video recordings of their own lessons by checking off the amount of time devoted to each of the following behaviours:

- divergent questions (higher thinking skills);
- divergent student answers;
- wait time;
- music performance;
- using students' ideas;
- affirmation;
- feelings / emotions;
- convergent questions (lower thinking skills);
- convergent student answers;
- lecture;
- directions;
- criticism; and
- silence other than wait time or any other behaviours.

Kassner (1998b:34, 35) gives examples of both a healthy and an unhealthy pattern (see appendix D), suggesting that "the more patterns of checks there are near the bottom or the more they stay in one category, the less students tend to be engaged and the less they enjoy class." Kassner (1998b:36) concludes:

> One of the great benefits of careful interaction analysis is that the teacher quickly internalizes the matrix and begins to think about it subconsciously when deciding how to proceed with the lesson. [...] Asking good questions and responding effectively to student answers are important skills that are seldom natural, in-born skills, but usually result from thoughtful attempts to improve ourselves.

In order to test the applicability of this matrix adapted by Kassner, I used it to evaluate music theory classes by three different lecturers at the conservatoire of the North-West University in 2005. I did not utilize video recordings and I also did not work with three minute intervals, but simply ticked off the various behaviours as they occurred while the classes were in session. I noted a few additional behaviours not listed in Kassner's matrix. These included student questions and comments (and explanations by the teacher as a result of these questions and comments), class discussions (a free and informal exchange of teacher or student ideas, comments and questions), demonstration (on either the black board or the

piano), correction (when a question by the teacher was answered incorrectly by a student) and refinement of a question by the teacher. Behaviours number one (feelings/emotions), three (using student ideas), five (wait time) and twelve (criticism) received the fewest ticks, while behaviours number two (affirmation), six (divergent student answers), seven (divergent questions), eight (convergent questions), nine (convergent student answers) and ten (lecture) received the most amount of ticks. I further noted that most questions asked by the teachers were directed to the class as a whole, which resulted in some students doing most of the talking while little or no participation was received from other students. Most teachers are not very comfortable with wait time. As a result, they often answer their own questions before students have had sufficient time to think. Teachers also correct student answers too quickly. Instead, they can use other students as a resource when one student gives a wrong answer.

Questioning is surely the method of assessment that can most successfully be integrated with the classroom processes of teaching and learning. It is also an invaluable tool in mediating student learning, since questioning is one of the primary mediums which teachers can use to gain knowledge of students' present understanding and, consequently, to pose problems and create challenges that would lead them to a more sophisticated understanding.

In addition to all of the techniques discussed in section 4.7., there are other, less formal assessment devices available to teachers. These can simply include observing students at work, watching and listening to them, checking class exercises and homework tasks (spot checks in class), and having occasional one-to-one informal conversations with students about their work and progress (Lambert & Lines, 2000:197; Siebörger & Macintosh, 1998:22).

4.8. Assessment includes self-assessment

Self-assessment can be seen as one of the ultimate goals of formative classroom assessment (Lambert & Lines, 2000:112; Siebörger & Macintosh, 1998:64; see also section 4.15.). The reason is that "self-assessment is intrinsic to learning" (Black, 1998:132). As Sadler (1989:119, quoted by Lambert & Lines, 2000:112) writes:

> [F]or students to be able to improve, they must develop the capacity to monitor the quality of their own work during actual production. This in turn requires that students possess an appreciation of what high quality work is [and] that they have the evaluative skill necessary for them to compare with some objectivity the quality of what they are producing in relation to the [...] standard.

Sutton (1995:132, cited in Lambert & Lines, 2000:125) believes that a major part of the teacher's task consists of encouraging students to become autonomous, adding that this "will not be achieved merely by wishing it so." Goolsby (1999:35) accordingly states that "[o]ne of the primary goals of music education in general is musical independence. [...] [T]his goal in part translates to self-assessment." Siebörger and Macintosh (1998:8) list a few other ways (besides self-assessment) in which student autonomy can be promoted:

> One of the [...] ways [...] is for learners to have some choice in the assessment (whether to write a test or to do a project; to work individually, in pairs or in groups; to speak about something or to write about it) and to have some say about when and how it takes place. Learners can contribute to the assessment by, for instance, suggesting questions to be asked, working out a mark scheme after an assessment activity has been completed by being given a chance to say what aspects they find (or found) difficult or easy and explaining why.

I will now discuss some of the main advantages of self-assessment. Most of these advantages are very important from a constructivist perspective.

- *It encourages active participation* (see section 3.1.1.). By having to assess the quality of their own work and progress, students are forced to be actively involved in the process of learning (Lambert & Lines, 2000:132; Cope, 1996:41). This breaks the pattern of passive learning (Lambert & Lines, 2000:147).

- *It promotes metacognition* (section 3.1.1.). Self-assessment involves students in processes of self-reflection (Le Grange & Reddy, 1998:19) and thinking about their own learning (Lambert & Lines, 2000:147).

- *It empowers students* (Lambert & Lines, 2000:141). "[Students] are better motivated to learn when they feel that they are a part of the process" (Siebörger & Macintosh, 1998:8). Better motivated students will take more ownership and responsibility for their own learning (Robinson, 1995:32). Lambert and Lines (2000:143) state it this way:

  > Encouraging open and honest self-assessment can at least support pupils to avoid 'helplessness' by reducing the tendency under pressure to explain any difficulties (or successes) in terms of luck, mood, effort, teacher, health, family circumstances etc. Put in these terms, raising the level of pupil involvement in self-assessment is part of creating the whole classroom ecology which enables pupils to work with confidence — not always succeeding, often making mistakes, but always learning: what one mathematics teacher described as becoming "more conscious in relation to their work" (Black & Atkin, 1996:110).

- *It creates an opportunity for mediation* (see section 3.1.5.). "An example [...] would be when a learner is asked by the teacher to select his or her best [assignment] and to state the reasons for the selection" (Le Grange & Reddy, 1998:19). This enables the teacher to see where students are at in their understanding and what they value as important, creating an opportunity for 'connection' to take place (section 3.1.5).
- *It lightens the teacher's workload.* Although monitoring student learning will remain the primary task of the teacher (Goolsby, 1999:35), "teaching students to assume a greater role in the evaluation process can relieve a teacher of much

work" (Goolsby, 1995:42). This does not necessarily mean less marking for the teacher, but possibly less correction as students grow in self-awareness and avoid errors by monitoring the quality of their own work during production. Teachers might even be surprised at how much tougher students tend to be on themselves than they as teachers might have been (Robinson, 1995:33).

The prerequisites for establishing effective self-assessment are twofold:

- *an atmosphere of transparency* (see section 4.2.). For students to assume more responsibility for their learning, they need to know where they stand. Therefore, Goolsby (1999:35) urges teachers to "continually share their goals, objectives, and expectations with their students." Lambert and Lines (2000:147) advise teachers to clearly communicate learning goals ('the overarching picture') to students according to the following three stage sequence and to establish "a positive action cycle with [students] and teacher working together":
    1. clarify the desired goal;
    2. establish the present position in relation to this goal; and
    3. find ways to close the gap.

  As Le Grange and Reddy (1998:22) point out, "when the criteria are made clear at the beginning of [a] project, self-assessment and peer assessment [...] become natural since learners will constantly be measuring their progress against the criteria to see whether they are fulfilling the requirements and, if not, to see how they can alter their work in order to fulfil the criteria."
- *sufficient practice and time*. "[L]earners cannot be expected to assess themselves well without practice. [...] It should be acknowledged that no matter when they begin to do so, it will probably take at least a year before they can do it properly" (Siebörger & Macintosh, 1998:64).

4.9. Assessment encourages interaction

The importance of interaction and cooperative learning have been thoroughly addressed in sections 2.1.4 and 3.1.2. Thus, with regard to assessment, it is equally important for the teacher to:

- establish a healthy dialogue with students, valuing their points of view and providing them with effective feedback; and
- ensure that students have frequent opportunities to work and assess together in groups.

As for teacher-student interaction, Torrance and Pryor (1998:10) actually define formative assessment as "a social interaction between teacher and [student] which is intended to have a positive impact on [student] learning." For the teacher to value students' points of view, "opportunities for [students] to express their understanding have to be built into the teaching. The intention here is to initiate interaction and allow the teacher to build up knowledge of the learners — and, crucially, also to allow the [student] inside the teacher's head" (Lambert & Lines, 2000:144). Continuous assessment is very important in this regard, because it implies and encourages constant communication between teachers and students concerning students' progress in relation to learning outcomes (Le Grange & Reddy, 1998:10, 34).

As for student-student interaction, group work is an important strategy that can be applied to most contexts and methods of assessment. Group work assessment is especially helpful with large classes (Siebörger & Macintosh, 1998:27) and allows the teacher to "move among groups to observe and assess various skills and activities like communication, ability to work with others, project progress, and so on" (Le Grange & Reddy, 1998:10). Group work also allows for peer assessment (see section 4.10.), thus helping students to develop a variety of indispensable social and working skills (Siebörger & Macontosh, 1998:27).

Interaction with educational technologies has already reached a high level of sophistication and provides valuable and unique assessment techniques.

4.10. Assessment includes peer assessment

Peer assessment promotes interaction in the sense that assessment is not a private affair, and students even gain some insight into the job of the teacher. In this way, understanding is promoted. The same benefits of and preconditions for self-assessment (see section 4.8.) apply to peer assessment, with the added advantage that students acquire the important skill of making informed judgments about another person's work. This skill is particularly relevant to music education and the development of musicianship (see section 2.1.7.).

Le Grange and Reddy (1998:19-20) differentiate between formal and informal types of peer assessment, providing the following examples:

> An example of formal peer assessment is when a group of learners work together on a project and each learner is asked to assess another learner. The criteria used to make judgments are agreed upon prior to the formal assessment. [...] It can take place informally and in an ongoing way when learners are given the opportunity to work together in groups. Informal verbal comment from other group members to the learner about his or her ideas can be extremely useful. Remarks made by peers may lead the learner to rethink and reassess his or her original idea.

Peer assessment can also include:

- students marking each other's books, exercises, tests, et cetera (Siebörger & Macintosh, 1998:8);
- students giving their reaction to a presentation or piece of writing (Siebörger & Macintosh, 1998:8); or
- students giving their advice or suggestions on how a piece of work can be improved;

- observing a performance of a student's composition by other students.

4.11. Assessment is authentic

According to Torrance (1995b:1), authentic assessment is "a generic term which is gaining international currency to describe a range of new approaches to assessment." These approaches promote "assessment which is appropriate to the purpose for which it is used and appropriate to the nature of what is being assessed" (Siebörger & Macintosh, 1998:35). This, in turn, calls for assessment tasks that are relevant to life outside the school or particular institution (Goolsby, 1995:39) — tasks that are more practical, realistic and challenging than traditional paper-and-pencil or standardized tests (Torrance, 1995b:1; Siebörger & Macintosh, 1998:35). Other terms used to describe such new approaches are 'performance assessment,' 'coursework assessment' and 'school-based assessment' (Torrance, 1995b:1).

As Torrance (1995d:146) explains, "[h]istoricaly, assessment has been developed for purposes of selection and certification." The goal was to select and invest in the most 'talented' individuals who would be able "to 'put most back' into the economy" (Torrance, 1995d:146). However, this often resulted in the 'wrong' candidates succeeding, namely those who were good at test-taking rather than those who would "make the most useful contributions to society" (Heyneman & Ransom, 1992:108; Torrance, 1995d:146).

Broadfoot (1995:10) sketches the current situation:

> There is a higher priority on encouraging people to continue their education rather than on excluding them. Above all, there is an urgent need for education systems to train people who will have the appropriate range of skills and attitudes to be capable of undertaking a variety of work roles in a climate of rapid technological change. Problem-solving ability, personal effectiveness, thinking skills and willingness to accept change are typical of the general competencies

> straddling cognitive and affective domains that are now being sought in young people. To the extent that the assessment industry falls short of matching these new educational priorities with appropriate new techniques, so it will also inhibit the pursuit of such new educational goals.

Davis (1999 as quoted by Lambert & Lines, 2000:193) agrees with this view by writing that "[a] competitive industrial economy needs employees who can both communicate and listen, make flexible and intelligent use of their knowledge and skills, work effectively with others and who are suitably motivated. These qualities cannot be tested by examinations."

The move in recent decades towards a "more practical and vocationally orientated curriculum" (Torrance, 1995a:x) resulted in a subsequent call for more valid, authentic ways of assessing students. Since outcomes are "a description of what people *can do* at the end of a course" (McKay & Northedge, 1995:226), the shift to outcomes-based education (also referred to as *competency-based* education by Wiggins, 1993b:206) "will lead to greater authenticity in assessment, as the assessment will be directly dependent on the outcome and the assessment criteria" (Siebörger & Macintosh, 1998:39). Therefore, McKay and Northedge (1995:226) believe that "[n]ew methods of assessment will give employers and educationists better information about what someone knows, and what they can do."

Wiggins (1993b:214), in his article *Assessment: Authenticity, Context, and Validity*, makes a strong case for assessment that is not only authentic, but also simulates the *context* of real-world challenges "in all their messiness."

> Yet almost every major test (or set of textbook problems) is a *drill* test, not a performance test. What we must keep asking is, [...] what does the 'doing' of mathematics, history, science, or art look and feel like *in context*? And how can our tests better replicate authentic challenges and conditions instead of isolated drills? (Wiggins, 1993b:202; emphasis added)

Wiggins (1993b:208) concludes: "Authenticity in testing, then, might well be thought of as an obligation to make the student experience questions and tasks under constraints as they typically and 'naturally' occur, with access to the tools that are usually available for solving such problems." He subsequently argues that genuinely authentic tasks will not necessitate restrictions on student resources: "why not allow students to bring notes to an exam? Is this not precisely the sort of thing we really want to find out about students — whether they are organized, well-prepared, and effective at using what they know?" (Wiggins, 1993b:208).

In section 3.1.4. it was pointed out that constructivists see authentic experience as essential to learning (Lambert *et al.*, 1995:19). Therefore, authentic forms of assessment that present students with real-life problems and challenges is also fully consistent with constructivist principles. In fact, Wilson (1992:123) considers the increasing call for authenticity in assessment as *evidence* of a constructivist influence on student learning. Brooks and Brooks (2001:96-97) indicate the importance of authentic assessment for the constructivist teacher by pointing out the difference between traditional tests and authentic assessment activities:

> Tests, then, particularly multiple-choice tests, are structured to determine whether students know information related to a particular body of knowledge — usually a curriculum guide or syllabus. The focus is outward, not inward, on material, not personal constructions. Therefore, the overarching question asked by the test is *"Do you know this material?"* Authentic activities (tasks and problems already relevant or of emerging relevance to students) also relate to a particular body of knowledge, but rather than structuring assessment around specific bits of information, they invite students to exhibit what they have internalized and learned through application. The overarching question posed by such activities is *"What do you know?"* These two overarching questions are quite different.

They add that "[a]uthentic assessment, like learning, occurs most naturally and lastingly when it is in a meaningful context and when it relates to authentic concerns and problems faced by students" (Brooks & Brooks, 2001:96).

With regard to music education, Robinson (1995:33) states that students should be given the opportunity to "experience what real musicians do — perform, compose, and listen to music — using the same types of assessment processes that professional musicians use in their daily activities." Other authentic musical behaviours that students can and should engage in are (for example) improvising, teaching, analyzing music and presenting what they have learned to a wider audience. Robinson (1995:32) even adds reflective thinking, practising, studying and researching. This allows students to apply their knowledge and skills to real world situations and to develop "the skills needed to form a lifelong involvement with music" (Cope, 1996:40). Consequently, assessment should focus on what students "might be expected to do with their musical abilities in the future" (Stauffer, 1999:26), ideally allowing them to "express these solutions in primarily musical mediums, such as singing, playing, moving, improvising, or composing" (Niebur, 1994:25). The challenge for music educators can be expressed in the words of McClelland (1973:7): "testers have to get out of their offices [...] and into the field where they actually analyze performance into its components. If you want to test who will be a good [musician], go find what a [musician] does."

However, Cope (1996:41) mentions the fact that, since these forms of assessment "require more than just answering questions, it becomes more challenging for the music educator to evaluate how well students can use their musical knowledge." Therefore, she suggests that teachers design multilevel rubrics (tables, charts, or explanations of scoring categories or criteria) for assessing these authentic behaviours. A variety of achievement levels must be specified and understood by the class (Cope, 1996:41).

4.12. Assessment promotes higher-level cognition

Many of the other assessment principles discussed in this chapter will lead learners to function at higher levels of cognition, especially diverse methods such as self- and peer assessment and most forms of authentic assessment. As

mentioned in section 4.7.10., Kassner (1998b:33) believes that "the technique most likely to engage students' full attention and lead to the deepest thinking and sensitivity is high level questioning in the cognitive and affective domains." Brooks and Brooks (2001:44) agree that "the nature of questions posed to students greatly influences the depth to which the students search for answers":

> Constructivist teachers often ask students to think about questions they would not ordinarily consider on their own. Of course, highly didactic teachers do the same thing. So what's the difference? A significant difference is that constructivist teachers seek to ask one big question, to give the students time to think about it, and to lead them to the resources to answer it (Brooks & Brooks, 2001:39).

Lambert and Lines (2000:133) explain why traditional paper-and-pencil as well as standardized tests are not the best medium for testing higher-order skills such as application, analysis, synthesis and evaluation.

> [D]evising and designing examination questions which test real understanding is a highly skilled occupation and not easily achieved. Even the best questions are constrained by the circumstance: they have to be readily assimilated by the candidate and answerable within the time frame, for example. For reasons such as these, and the manner in which pupils are often prepared with past papers, revision sheets and prompts, tests and examinations tend to focus attention on the kind of 'performance' that will 'gain credit,' rather than on deep learning which may encompass uncertainty and doubt as much as correct answers.

Le Grange and Reddy (1998:6) agree that the majority of traditional examinations and class tests primarily assess lower-order abilities in the cognitive domain, while assessing very little in the psychomotor and affective domains. Broadfoot (1995:11-12) notes that "the changing assessment culture [on the other hand] prioritizes the promotion of higher and more appropriate learning outcomes rather than the search for the most accurate ways of measuring these."

Wiggins (1993b:204) argues that understanding is inseparable from particular *habits of mind* and that "academic learning and our assessment of it cannot be

understood unless we see our aim as the formation of good habits of mind in each subject." He subsequently asks the question: "[h]ow can I assess students' learning unless I see whether they have *learned how to learn* in the subject in question?" (Wiggins, 1993b:204). This idea corresponds with the development of structural knowledge and metacognition (see section 3.1.1.).

4.13. Assessment promotes an integrated understanding of concepts

As with higher-level cognitive thinking, most of the other assessment principles will, when complied with, enable students to develop a deeper understanding of musical concepts as well as the *relationship* between concepts, because assessment will focus more on the *context* in which these concepts occur instead of seeing them as entirely separate phenomena (see sections 2.1.11. and 2.2.). The constructivist principle of holism and integration (section 3.1.7.) is extremely important in this regard. Assessment of musical concepts should acknowledge the importance of the psychomotor and affective domains in addition to the cognitive domain (Le Grange & Reddy, 1998:6), encouraging students to interact with the musical material through production, perception, and reflection (Robinson, 1995:31). Aesthetic experience should be valued by considering students' musical preferences in the choice of material and allowing students to express their honest opinions.

Salaman (1998:40-41) argues that "almost all tests in music lessons are hideously unmusical," adding that "[t]esting and music do not seem to go together very well." This is probably because "[c]onceptual assessment is often associated with written tests and work sheets" (Niebur, 1994:24), divorcing concepts from their aural, visual and kinaesthetic *contexts*. This is most often the case with standardized tests in music literacy, especially when students are taught to the test and drilled in faultlessly completing countless decontextualized paper-and-pencil exercises. In the light of this situation, Brooks and Brooks (2001:viii) state:

"there is much evidence [...] that classroom practices specifically designed to prepare students for tests do not foster deep learning that is applied to new settings. [...] Despite completing all their assignments and passing all their tests, too many students simply are not learning."

Yet, there are those who believe that standards can be raised and maintained by imposing external standardized tests on students and teachers. According to Lambert and Lines (2000:192), the issue is not as simple as it appears. They quote Davis (1999:7) who remarks that

> [...] written tests cannot properly assess the extent of candidates' 'connected' knowledge. They fail to discriminate between two categories of [students]:
>
> 1. those who have 'learned up' particular sets of facts or specific skills but who can only use them efficiently in examination contexts, and
> 2. those who are developing a richer, more connected knowledge, in the light of which they can obtain satisfactory test scores.

Davis's stance corresponds to Katz's (1985, referred to by Brooks & Brooks, 2001:8) differentiation between perceived and actual success in writing about the difference between *performance* and *learning*. Brooks and Brooks (2001:8-9) elaborate:

> Students educated in a setting that stresses performance learn that technique, rules and memory matter more than context, authenticity and wholeness. Therefore, rather than seeking deep understanding, these students seek short-term strategies for accomplishing tasks or passing tests. When asked, several weeks or months later, to apply what they supposedly had learned, most students can't.

Lambert and Lines (2000:194) accordingly state:

> [T]here are those [who] would assert that good examination results are evidence enough of good teaching! This may well be the case, but it is not necessarily so. There are [students] who achieve good grades having overcome the obstacle of poor teaching; there are others who despite good grades still do not see themselves as knowledgable and confident in the subject.

The reason is that too many teachers have a finer knowledge and understanding of the requirements of external examinations than they have of the learning needs of their students (Lambert & Lines, 2000:135). Lambert and Lines (2000:193) conclude that, "unless we take steps to find out about the [students] as learners we may fail to help them develop 'a richer, more connected knowledge.' Over-reliance on external summative assessment, or teaching to the test, is therefore a risky strategy to adopt to raise standards [...], depending on what we value as 'high standards'."

However, standardized tests in music literacy will probably remain with us for a very long time to come. For this reason, Lambert and Lines (2000:193,196) state that coursework will have to be utilized for assessing those abilities that the paper-and-pencil tests are not well suited to, in this way increasing the overall validity of external examinations. This means that "[t]eachers are in a position to hold in check the potential of external tests to obliterate wider educational purposes, so long as they see their role as extending beyond preparing pupils only for the examinations" (Lambert & Lines, 2000:193).

4.14. Assessment is functional

For assessment to be functional, it should be used for the right reasons, resulting in a high degree of unitary validity. This boils down to assessment being used for motivational purposes, as well as for improving learning and instruction. In other words, assessment should be used *formatively*. This is what Lambert and Lines (2000:195) refer to as 'assessment *for* learning': "Rather than concentrate on assessment methods as ends in themselves, [...] it is important to maintain our gaze on how using assessment formatively can impact on learning. [...] [I]t is not *the testing process* that raises standards: [...] 'weighing the baby does not make it grow'" (Lambert & Lines, 2000:150, 195). Siebörger and Macintosh (1998:25) agree that "[t]he purpose of educational assessment is not merely to measure what learners have achieved, but *to help learners to learn and achieve more*.

Assessment which does not motivate students to learn and tell them what they need to do in order to improve does not fulfil its educational purpose."

Ultimately, assessment is *not* for:

- the sake of assessment, or for 'window-dressing' (Boyle & Radocy, 1987:2);
- assigning grades and comparing marks (Lambert & Lines, 2000:134);
- labelling students (Siebörger & Macintosh, 1998:6);
- punishing students (Boyle & Radocy, 1987:2);
- accountability purposes and collecting assessment data (Lambert & Lines, 2000:135,164); or
- correcting errors and showing students their mistakes. As Black (1998:123) states, "[f]ormative feedback implies more than correction of errors. It really needs understanding of their causes, which would tax the best learning experts." Lambert and Lines (2000:137) also have their say about this:

> If we show people where they make mistakes will they avoid them in the future? We might imagine that such an assumption is not unreasonable, particularly if the people concerned have a clear vested interest and the motive to do better. Such an essentially behaviourist view works for some. But it is less likely to succeed if [students] fail to understand *why* they have made mistakes and *how* they can avoid them in the future. In this case new meanings have to be constructed, which is why we say communication is important, implying dialogue between teacher and [students].

Lambert and Lines's (2000:147) research does indeed show that "good formative assessment *can* produce substantial learning gain," and the Assessment Reform Group (ARG, 1999:2) goes even further by claiming that "assessment which is explicitly designed to promote learning is the single most powerful tool we have for both raising standards and empowering lifelong learners."

4.15. Assessment is employed formatively

According to Lambert and Lines (2000:128), the ideas behind formative assessment "[rest] quite heavily on a broadly *constructivist* model of teaching and learning." Torrance (1995b:3) elaborates:

> [I]t has been long recognized [...] that assessment can have a negative impact on learning. However, at least some versions of formative assessment, usually associated with a constructivist perspective on the process of learning, would appear to be taking a more positive, dynamic and forward-looking approach to the relationship between assessment, teaching and learning, and thus to establish, not so much what students have learned, or have not learned, but what they *might* learn in the immediate future with appropriate help from a teacher or peer.

Thus, formative assessment is "motivated by the educational goal to improve learning (...not standards)", and is therefore "less influenced by concerns of test reliability and comparisons of [students] than by the need to understand the learners as individuals, and to ensure that they also have growing awareness of themselves as learners" (Lambert & Lines, 2000:193). According to Sadler (1989:121 as quoted by Lambert & Lines, 2000:113), "[f]ormative assessment is concerned with how judgments about the quality of student responses [...] can be used to shape and improve the student's competence by short-circuiting the randomness and inefficiency of trial and error learning." Thus, it involves "spelling out what has been learned, what is being learned and what the next learning steps may be: mistakes are valued because they can give clues to where there may be learning blocks" and they enable learning to take place (Lambert & Lines, 2000:5,137). Formative assessment is further defined as assessment that takes place frequently during the course of study, privately rather than publicly, and using all kinds of evidence (Lambert & Lines, 2000:5,193).

4.15.1. Formative assessment as a means of improving student learning

McKay and Northedge (1995:229) define formative assessment solely in terms of the *timing*, by stating that formative assessment happens "during the period of teaching and learning" while summative assessment "always takes place at the end of a course." However, in this narrow definition lies a danger that teachers who utilize continuous classroom assessment may think that they are practising formative assessment when, in fact, they are just scheduling frequent class tests without applying the results or evidence in any formative way. As Lambert and Lines (2000:111,136) point out, "classroom [or continuous] assessment has the potential to be formative, but it is not necessarily so" — it may lack *consequential* validity. They explain this term as follows:

> FA [formative assessment] is any activity undertaken by teachers, including their students assessing themselves, which provides feedback that has *consequential validity*. By this we mean that *formative assessment is valid when it can be shown to have positive consequences in terms of learning outcomes*. For example, it makes pupils better learners; it increases their confidence; it raises their level of self-awareness or encourages learning autonomy; it enables them to perform better in examinations (Lambert and Lines, 2000:132). (italics added)

4.15.2. The role of feedback

For assessment to be used formatively, feedback strategies should be incorporated "at all stages of the planning, preparation and organization of lessons," thus becoming a "regular and integral part of the lesson plan" (Lambert & Lines, 2000:137,147). This is because "feedback from assessment usually creates many profitable new teaching and learning opportunities immediately after the results of the assessment are known" (Siebörger & Macintosh, 1998:7). Feedback can be given in either spoken or written form. However, Lambert and Lines (2000:110,135) caution against spoken feedback directed to the whole class:

> There are occasions when routine classroom assessments (say, returning a project or a homework task) may legitimately turn into a session with a focus on discipline, motivation or behaviour. But this ought not to happen too frequently because there comes a time when [students] stop listening, especially if such feedback is to the whole class and is therefore conducted at a level of generality that allows individual [students] to switch off. [...] *[A]ny* whole-class feedback is likely to miss the learning needs of individual [students]. Of course, providing individual feedback is more difficult to organize and manage — but at least is more likely to have impact.

Marking is probably the most common medium that teachers use to provide students with individual feedback. However, some teachers miss this opportunity because, "apart from a big tick at the end (possibly to indicate that the work has been read, or at least seen) and a grade or score according to some kind of simple rating scale (e.g. A-E; 1-10; per cent)," feedback is often non-existent (Lambert & Lines, 2000:160-161). Badly done marking can also be damaging in the sense that it transmits unhelpful messages to the student about what is valued in a piece of work (Lambert & Lines, 2000:162).

Yet, it is true that "[l]inking marking with formative assessment [...] implies the development of some demanding skills on the part of teachers" (Lambert & Lines, 2000:166). Therefore, Lambert and Lines (2000:136-137,166) suggest that teachers practise writing succinct but meaningful comments on students' work, "directed by the words 'you can improve this work by ... '. What completes the sentence should be [...] precise and subject-specific, positive whilst avoiding blanket or meaningless praise and focused on next steps." As they point out, "the role of feedback needs expansion to include notions of feedforward, with [students] *shown* strategies to promote improvement" (Lambert & Lines, 2000:130). The real skill, though, is "knowing what single point to raise with the [student]. One specific target or next step stands some chance of being assimilated and acted upon, whereas scattering targets like confetti is as unhelpful as offering none at all" (Lambert & Lines, 2000:168). This task is in part

facilitated if feedback is criteria referenced, provided that "the criteria have shared understanding between teacher and [students]" (Lambert & Lines, 2000:137). In addition, teachers should keep in mind that "[students] learn best when they get feedback from their assessment quickly." Siebörger and Macintosh (1998:24) explain:

> This encourages them, reinforces the positive things learned and ensures that they have not forgotten what they have done by the time that they receive the assessment. [...] One way of improving assessment in this area, is, however, to tell learners at the time that they are assessed the 'return date' on which they can expect to get feedback from the assessment. Then, at least, they feel that there is a two-sided agreement with the teacher, which involves trust in the learner and trust in the teacher.

They further emphasize the need for teachers to, at the beginning of a year or course, "plan the assessment in such a way that learners can benefit as much as possible from the feedback that they receive and can be motivated to improve through their assessment" (Siebörger & Macintosh, 1998:9).

Apart from being very laborious, though, written feedback also has limited impact, partly because it is one way communication (Lambert & Lines, 2000:137). For this reason, "[m]arking work alongside the [student] can be immensely valuable, because the work becomes the subject of conversation: such conversation is 'authentic,' concerning work that was recently committed to paper, and producing feedback that is direct and instant" (Lambert & Lines, 2000:169).

4.15.3. The importance of motivation

When feedback is applied formatively, it can have a very significant impact on students' motivation for learning. Stauffer (1999:28) explains:

> Awareness that we are making progress toward a goal is a large part of what motivates us to continue working. Our students are no different. Both research and experience tell us that students need not only general feedback about their progress, but also information that is specific and

> individual. The information that we gather from assessment and share with our students should help them recognize what they have accomplished and, at certain stages, what they can still achieve.

McKay and Northedge (1995:215) write: "[w]hen learners can see that they have learnt something, and that they are improving, this gives them a feeling of achievement," and, according to Siebörger and Macintosh (1998:9), it is "[a] basic premise of progress in learning [...] that success motivates learners to learn more."

Tunstall and Gipps (1995:2 as quoted by Lambert & Lines, 2000:151) add that "[t]eacher feedback not only aids the learning process, it also affects how [students] view themselves." Thus, students' academic self-esteem is largely dependent on the feedback they receive from teachers. Lambert and Lines (2000:142) subsequently state that "[h]ow people feel about themselves as learners is a key determinant of how much progress or how much success they can anticipate (or feel they 'deserve')." Siebörger and Macintosh (1998:6) elaborate on this scenario:

> [O]ne of the most common effects of being assessed at school is that learners who do well see themselves as successful and those who do badly see themselves as failures. Unless they can be helped to succeed again, those who do badly start behaving as if they are failures and begin to believe that a particular subject or school as a whole is not for them. Worse than this, teachers begin to have the same view of the learners and start to label them as failing students. [...] The most obvious way to improve educational assessment is to use its results positively, rather than negatively.

Good feedback must therefore be ipsative rather than normative, avoiding comparisons with other students (Lambert & Lines, 2000:137) and "devoted to building self-esteem and belief in oneself in every [student]" (Black, 1998:136). "If a teacher lets learners know that he or she expects them to do well, encourages them to do so and tells them why they need to improve, learners will begin to believe that they really do have the necessary ability" (Siebörger &

Macintosh, 1998:7). However, Lambert and Lines (2000:132-133) caution against misdirected praise:

> Praise can, of course, be a positive force and is considered by most teachers to be motivating. But praise can be misused. Indiscriminate praise can be debilitating because it soon becomes unclear to [students] what exactly is worthy of praise.

Furthermore, the danger exists that teachers may yield to a behaviouristic scheme of motivation, using reinforcements such as praise, rewards, and grades. As Von Glasersfeld (1995:180) points out, "these are examples of extrinsic motivators, in that an activity is engaged in order to get the promised incentive... There is no question that this procedure works... [but] extrinsic motivators do not motivate an effort to *understand*." Therefore, Bruner (1971:123-124, quoted by Brooks & Brooks, 2001:96)[1] emphasizes the importance of *intrinsic* motivation that comes from discovery:

> A method of instruction should have the objective of leading the [student] to discover for himself. Telling [students] and then testing them on what they have been told inevitably has the effect of producing bench-bound learners whose motivation for learning is likely to be extrinsic to the task — pleasing the teacher, getting into college, artificially maintaining self-esteem. [...] [D]iscovery and the sense of confidence it provides is the proper reward for learning.

All constructivist learning principles are geared towards the activation of students' intrinsic motivation for learning. Especially when assessment is authentic, relevant and context-bound, students will be intrinsically motivated, as Raven (1992:89) points out: "[i]mportant abilities demand time, energy, and effort. As a result, people only display them when they are undertaking activities which are important to them. It is meaningless to attempt to assess a person's abilities except in relation to their valued goals."

[1] Unfortunately, this quotation was found neither on p. 123-124 (as stated by Brooks and Brooks) nor on any other page of Bruner's book, *The Relevance of Education*.

4.15.4. Formative assessment as a means of improving instruction

Formative assessment does not only help students to improve their learning. It also comes in handy when teachers are re-thinking and evaluating instructional methods, because assessment results can, to a certain extent, indicate whether a teaching programme is "sufficiently challenging, relevant and worthwhile" (Lambert & Lines, 2000:194). This helps the teacher to identify

- "areas where improvements in either instruction or the programme are necessary" (Cope, 1996:40); and
- subsequent steps that can be taken to enhance student learning in the future (Asmus, 1999:19).

As Boyle (1989:23) writes, effective assessment "enables teachers to get to know individual students' abilities and needs, thus providing a basis for planning and developing appropriate instructional strategies." Although ipsative and criterion referencing are preferred above norm referencing, Lambert and Lines (2000:16) explain how teachers can even apply norm referencing formatively:

> [T]he best performance in a test sets a standard. The teacher can say, 'if X can now understand and can do it, then so should the rest of the class.' There is nothing wrong with that as long as it is used for diagnostic purposes, such as 'Was X's score far beyond the rest of the class? In which case why?' 'Did I teach in a particular style that suited certain individuals and not others?' and so on.

Brooks and Brooks (2001:87) write from a constructivist paradigm: "[r]ather than using assessment results as indices only of individual student knowledge, such information might shed light on the relationship between the student and the teacher. In this paradigm, the student is not assessed in isolation, but in conjunction with the teacher, and both learn as a result of assessment."

Finally, Lambert and Lines (2000:150) emphasize the fact that "*any* technique, including those used in objective testing procedures, can be *used* formatively — though clearly some (e.g. open ended enquiries or projects) are more amenable to providing useful (usable) information than others (e.g. multiple choice tests)." Therefore, formative assessment requires thoughtful planning by the teacher.

CHAPTER 5

APPLICATION AND EVALUATION

The different methods of assessment discussed in sections 4.7.1. to 4.7.10. of the previous chapter will now be applied more specifically to the assessment of music literacy outcomes, after which a traditional written examination paper will be evaluated according to the assessment principles discussed in chapter four.

5.1. Application of the most common methods of assessment to music literacy outcomes

5.1.1. Traditional written examinations or tests

In my opinion, formal written examinations and tests have almost no meaningful place in the assessment of a music literacy course striving to promote musicianship. If more authentic and contextual ways of testing students' understanding of musical concepts exist (and they certainly do!), then why would we want to continue limiting, frustrating, and boring students with written examinations? Perhaps the only way these examinations can be justified is as a final summative measure after (and *only* after) students have had ample opportunity to demonstrate what they know and can do through a wide variety of other, more authentic, assessments.

The following are some suggestions to keep in mind when designing question papers for music literacy examinations.

- Ensure that questions are consistent with the outcomes of the course as stipulated in the curriculum or study guide and as dealt with in class. Surprise can be employed in many constructive ways, but there are better times and places than in examinations to surprise students. The reason is that time

constraints and other stress factors can keep some students from performing at their best when confronted with unfamiliar situations. If, however, the teacher wishes to include an element of surprise, bonus questions or even choice questions provide a good solution. In this way, different types of students can be accommodated.

- Use real music to base questions on and from which students have to extract examples. Also keep in mind that utilizing small, fragmented excerpts is not necessarily the most desirable way of incorporating 'real' music into question papers. A more authentic way to do this would be to provide students with the complete score of a musical piece and also playing it to them so that they can at least hear how it sounds. Relevance should be kept in mind when selecting these musical examples. Unfamiliar sounding music that is foreign to the students' experience has little more value than harmony exercises in half notes. Of course, foreign music may gradually be introduced over time, but one should start where the students are at in their understanding (see section 3.1.5.). Certain compositions can be prepared before the examination so that students can form an auditory image of these compositions.

- Questions in which students are asked to give their opinion can be included. This involves the affective domain. It is preferable that the student must previously have had a chance to ponder the issue at hand, for example during a class discussion.

- Students can be asked, for example, to explain how they would teach a certain concept to children. This enables the teacher to assess their understanding at a deeper level.

- Students can be asked to correct something that is wrong by, for instance, identifying inappropriate character, tempo, and dynamic indications in a piece of music, stating why they are inappropriate and suggesting better ones.

Furthermore, students should always receive their papers back, and they should receive it as soon as possible. The time lag between writing the examination and getting the feedback from the teacher is one of the main drawbacks of written examinations. This problem can perhaps be overcome by computer assisted assessment which takes less time, demands fewer resources, and makes examinations more enjoyable to students.

5.1.2. Open-book examinations or tests

For largely the same reasons that traditional written examinations are not the best way to assess students' musical literacy, open-book examinations are not suited to this task either. It would be senseless to test students' knowledge and understanding of music rudiments while they have access to rules and tables. The closest that one can probably get to an open-book examination in music literacy is if, for instance, students are asked to bring specified scores with them, and the questions are then aimed at finding examples of certain musical concepts in these scores.

5.1.3. Objective / structured tests

In music literacy there are a great number of simple but important 'memory items' that students need to know without thinking too much about them, for example note names, key signatures, descriptions of meters, harmonic functions of triads, foreign language terms, et cetera. Of course, these concepts must first be experienced in context, but at some point they need to become part of the students' musical vocabulary, which requires some memory work.

5.1.4. Essays

Essay assessment is not really suited to the testing of music rudiments, because rudiments mainly involve the *actions* of students. Essays can, however, be employed to promote student reflection, for example, students can be asked to

write an essay about their own progress in the subject. Other stimulating topics can include "The relevance of music literacy today" or "The education of music literacy: practice, problems, and suggestions." Assessment activities such as these help students to express themselves about the subject at hand (see section 2.1.3.) and to develop important critical thinking skills.

5.1.5. Reviews

In music literacy, book reviews may take the form of students comparing and evaluating different textbooks (or any other teaching material that they would use to teach music literacy to children) in the way suggested by Race (1996:4) and as quoted in section 4.7.5. In addition to reviewing books, music students may also be asked to write reviews of musical performances, either individually or in groups. In the beginning, this task may be facilitated by handing out rubrics to students consisting of specific, predetermined performance levels that they can tick off, or with musical terminology that they have to use or apply. These rubrics can also be devised with the students' help, taking the form of a class discussion in which students are asked to state the prerequisites for a good performance. Although some may argue that this type of activity falls outside the scope of a course in music literacy, I think it could be a good way for students to integrate their musical knowledge, thus addressing the important principle of holism (see sections 2.1.11. and 3.1.7.).

5.1.6. Reports and projects

There are a number of authentic musical activities that students can engage in as part of a project and after which reports may be written about the process, problems, and what was learnt through it. Examples are: incorporating music rudiments into their own compositions, organizing and presenting musical performances (even composing the music for them), working out lesson plans and teaching a class on a specific musical concept, doing research about a specific topic, et cetera. This overlaps to an extent with practical or task-based

assessments (section 4.7.8.). The same topics mentioned in section 5.1.4. with regard to essay writing can be applied to report writing, perhaps incorporating some more research or practical work in order to make it a long term project.

5.1.7. Oral assessments

Presentations may effectively be used in a music literacy course. This is especially appropriate for aspects of the work that are usually treated as self-study, such as musical terminology or foreign language terms. These can be divided among the students (or groups of students), and then each student or group has to prepare a part of the work for a class presentation in as creative and interactive a way as possible. Interviews can also be very useful in determining what exactly students understand and where there may be learning blocks. One of the topics mentioned in section 5.1.4. ("The relevance of music literacy today") can also be used to structure a debate. In this case, the proposition defends the need for music literacy while the opposition states reasons why music literacy may no longer be important in the current musical scene. This gives students a much broader understanding and appreciation of the subject while exposing them to multiple perspectives, which is important from a constructivist point of view.

5.1.8. Practical or task-based assessments

The Musikhane community project at the North-West University can be discussed as an example. This project involves students teaching music to children from schools in previously disadvantaged communities. Participation in the project forms part of the requirements for the module they are doing and students are assessed based on their performance during various teaching activities, as well as the children's performance during the final concert. By attaching assessment to practical work, the students are helped to "approach such work more earnestly and critically" (Race, 1996:4). However, the effectiveness of students' learning from the project can be further increased by introducing peer assessment and even self-assessment, and by restructuring the existing assessment practices.

Self- or peer assessment can take the form of students writing reports or filling out a questionnaire after each lesson, with questions pertaining to (for example) the problems experienced and how they would do it better next time. These questionnaires could then form the basis of class discussions where teacher and peers can share the techniques that work for them and solve problems together. This will force students to critically reflect on their performance and to "become more self-aware of how well (or otherwise) they are approaching practical tasks" (Race, 1996:5).

A problem with this type of assessment is the difficulty of agreeing on assessment criteria for practical skills. It is also often easier to assess the end-product (for example, the concert) rather than the processes and skills involved in getting there (Race, 1996:4). Race (1996:4) mentions that some students may be inhibited or distracted when someone is watching their performance. In the case of students teaching children, it can be noted that children often exhibit their best behaviour when someone from outside is evaluating the lesson. Consequently, the student does not get to deal with problems that may otherwise arise.

5.1.9. Portfolio assessment

Portfolio assessment should be a crucial part of any course in music literacy, mainly because of the advantages associated with students being able to *see* their progress. This will already motivate them to progress even more. Specifications, formats and submission dates for student portfolios should be incorporated into study guides and students must be given the responsibility of compiling and managing their own portfolios, although they should be kept accountable through frequent checks by the teacher. Student portfolios may include lesson designs, research for lessons, compositions, recordings or reports of lessons, self-assessments, peer assessments, tests, examination papers, exercises, and, importantly, corrections of exercises, tests or examinations. This forces students to reflect back and avoid making the same mistakes again. Reading lists (with a specified number of articles or chapters to be read during each month) can also

be included in portfolios and students can even keep track of the development of their listening preferences over time in the form of weekly or monthly listening lists. Of course, many more possibilities exist that may be exploited by the creative teacher.

5.1.10. Classroom questioning

Teachers will find enough ideas for applying classroom questioning to music literacy in appendices B, C and D, as well as in section 4.7.10.

5.2. Evaluation of examination paper

It was my intention to evaluate examination papers of both the North-West University (NWU) and the University of Pretoria (UP), since the UP offers a course similar to the University Diploma in Music of the NWU. Students at the UP can do a Certificate in Group Music or an Advanced Certificate in Group Music. Both courses include music literacy as a subject and it also serves as a bridging course for students who intend to do the Bachelors Degree but do not yet meet all the requirements. Students doing these courses do not write music literacy examinations. They receive a workbook together with a CD and an answering book (Hoek, 1986;1987;1989). The book has a self-evaluating system and the students do assignments that are marked by the lecturer. Thus, examination papers in music literacy were not obtainable from the UP.

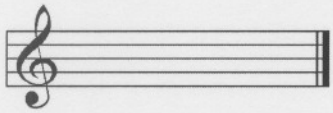
For this reason, I will only evaluate an examination paper from the NWU. I chose only the most recent music literacy paper available in the library of the NWU Conservatoire (that of November 2005), since I found that earlier question papers contained similar questions. I will take one question at a time, explain what it tests, and make suggestions regarding better ways to test the specific knowledge or skill. These suggestions are by no means exhaustive and creative teachers will find many other authentic ways to assess these concepts.

5.2.1. Question 1.1 — metre and time signatures

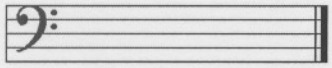
QUESTION 1 (20)

1.1 Write the following time signatures on the staff. (4)

1.1.1 Simple triple time with minim beats



1.1.2 Compound duple time with dotted crotchet beats



This question tests the following:

- knowledge of note values like minim and dotted crotchet;
- knowledge of terminology like 'simple triple' and 'compound duple';
- knowledge of the difference between simple and compound time; and
- how to translate this knowledge and terminology into symbols (time signatures).

Metre is always better experienced *practically* by clapping, conducting or moving to different meters in music (either performed or recorded), and therefore assessment will also be more authentic if students are asked to demonstrate their knowledge in these ways. Students can even be asked to evaluate performances or recordings with guiding questions such as: "Was the metre clear?" or "What could the time signature of this piece be?" or "Did they play rhythmically?" An example of a question promoting higher-level cognition in an examination paper would be if students are asked to explain how they would teach concepts like note values and metre to children, although this type of activity would also be better assessed practically (see section 4.7.8.).

5.2.2. Question 1.2 — grouping

1.2 Rewrite and group correctly. (10)

This question tests the following:

- knowledge of note values;
- knowledge of time signatures; and
- knowledge of grouping rules and how to apply these in different meters.

Grouping is a purely visual exercise that is hard to assess *practically*. Certain rules need to be learned and applied. There are, however, more authentic and less authentic ways to assess students' knowledge in this area.

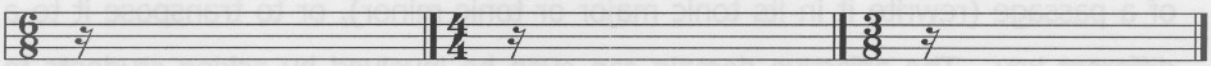
The question at hand is typically an established examination question with little relation to music making. One can ask the question: "When, where and how will students be expected to demonstrate knowledge of grouping in their careers as musicians?" I believe that activities like transcription or composition offer the most authentic examples. Students can be asked to transcribe a song from a CD or to compose and perform a melody within a prescribed metre. Students can even be given a set of note values (like in figure 5.1. below) and be asked to regroup these in as many rhythmical phrases as they can think of within a certain

metre. This is a good problem solving activity as well as a useful exercise for the beginning of composition.

Figure 5.1.

5.2.3. Question 1.3 — grouping with rests

1.3 Complete the following bars with rests. Pay attention to the correct grouping. (6)

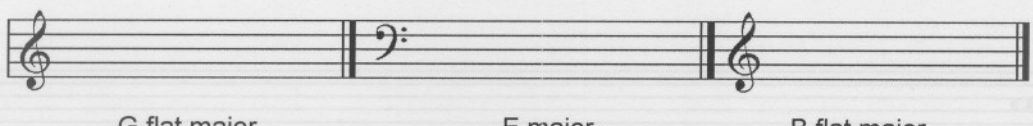


This question is not authentic, since such bars are not found in real music. Rests can be combined with notes in activities such as those suggested in section 5.2.2. above.

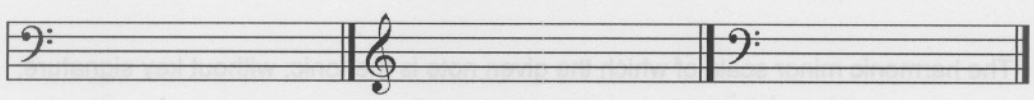
5.2.4. Question 2.1 — keys and key signatures

QUESTION 2 (30)

2.1 Write the key signatures of the following keys. (6)



G flat major E major B flat major



D minor C minor G minor

This question tests the students' knowledge of:

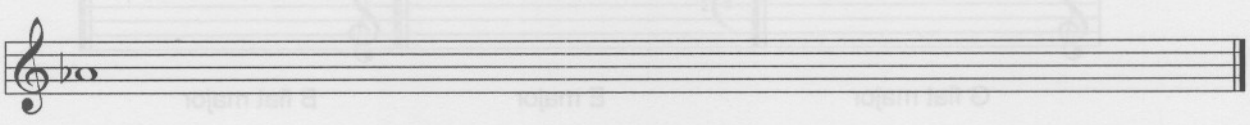
- the G- and F-clefs;
- sharp and flat keys;
- how many sharps or flats each key has;
- the order of the sharps and flats;
- the pattern of the sharps and flats on the staff; and
- related keys (major & minor).

As with grouping, testing students' knowledge of key signature in this way also becomes a purely visual exercise. The concept of key signature is not easily assessed in a practical way. However, the concept of key can be explored in a variety of ways, often by integrating it with transposition activities. Students can be asked to rewrite a passage in its enharmonic equivalent, to change the mode of a passage (rewrite it in its tonic major or tonic minor), or to transpose it to a different key. The affective domain can even be involved by asking students to compose a melody or song, and then to experiment with different keys in order to find the key (or keys) that fits best with the type of melody, the mood of the song, or the voice of the performer.

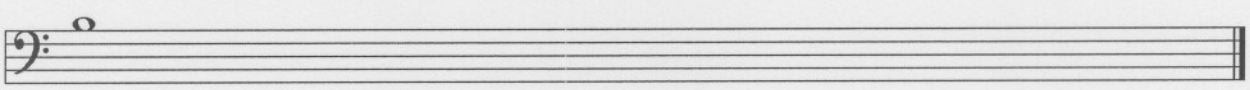
5.2.5. Question 2.2 — scales

2.2 Write the following major and minor scales according to specifications. (24)

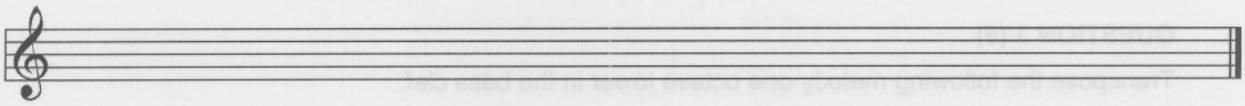
2.2.1 The major scale of which the given note is the tonic; without key signature; ascending and descending.



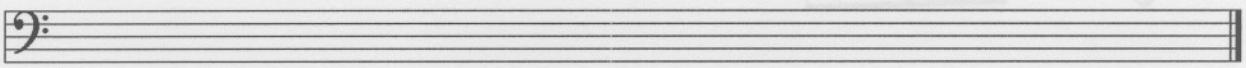
2.2.2 The harmonic minor scale of which the given note is the tonic; without key signature; ascending.



2.2.3 E melodic minor scale; ascending and descending; without key signature.



2.2.4 The major scale with three sharps; with key signature; descending.



This question tests everything listed under 5.2.4. as well as the following:

- what with/without key signature means;
- knowledge of the technical names of scale degrees; and
- knowledge of the structure of the scale (e.g. where the semitones are).

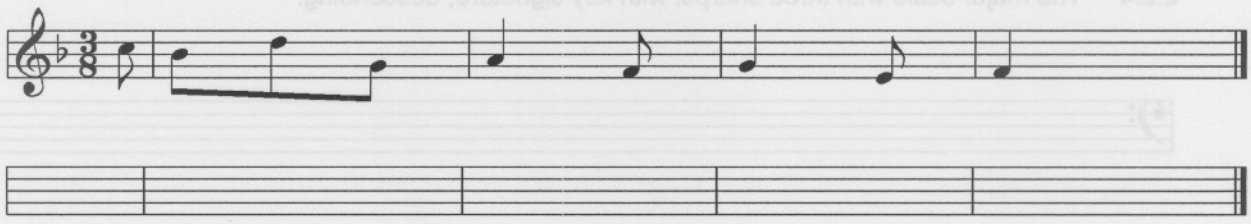
Scales are abstractions that help to teach students the concept of key, but written scales have little relation to musicianship. Therefore, testing students' knowledge of scales should be integrated with aural training by singing scales on note names as well as solfa, or even by playing them on the keyboard or another instrument. This makes them more sensitive to the structures of the different scales instead of just memorizing a set of rules (e.g. where the semitones are, or remembering to raise the leading tone in a minor key). It is important that scales must *first* be explored aurally (through listening, singing and playing) in as many different ways as possible, so that the writing of scales serves just as an additional elucidation of the concept. As with note values, metre and time signatures (section 5.2.1.), students can be asked to explain how they would teach the concepts of key, key signature and scales to children.

5.2.6. Question 3 — transposition

QUESTION 3 (5)

Transpose the following melody one octave lower in the bass clef.

Witthauer



This question tests the following:

- knowledge of the G- and F-clefs;
- knowledge of note names;
- knowledge of the interval of an octave; and
- accuracy.

With questions such as this one, it is important that real music be used. However, real contexts also contribute to the authenticity of transposition exercises. Questions can be placed in context by working with voice ranges or transposing instruments. Transposition for transposing instruments should follow a very basic study of orchestral scores and transposing instruments.

5.2.7. Question 4 — questions based on a musical excerpt

QUESTION 4 (20)

Answer the following questions.

Haydn

4.1 Add a suitable time signature. (1)

4.2 Give the meanings of the following. (5)

allegro _____

mf _____

_____

_____

_____

4.3 Name the minor key in which this passage is written. (1)

_____

4.4 Explain the B natural in bars 3, 4 and 8. (2)

_____

4.5 Name the relative key of this passage. (2)

_____

4.6 Are there any similarities between bars 1 – 2 and 5 – 6? Discuss. (2)

_____

4.7 Are there any differences between bars 1 – 2 and 5 – 6? Discuss. (2)

_____

4.8 Figure the triad at (a). How many times does this triad appear? (3)

_____ _____

4.9 Figure the triad at (b). (2)

_____

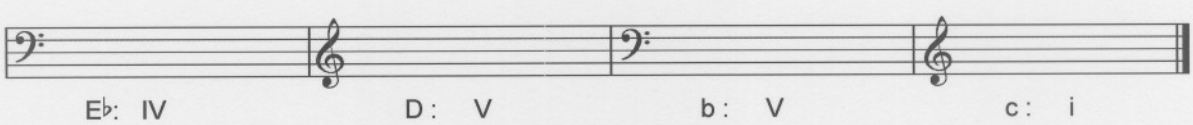
This question can perhaps be regarded as more authentic, since questions are based on an excerpt from a real (though unidentified) piece of music. Using real music does not necessarily make the assessment more authentic, though. As stated in the previous section, real *contexts* — creating real life scenarios — contribute even more to the authenticity of examination questions. These scenarios must connect with the students' experience. They can, for example, be given a piece that they have to teach to a choir or a song that they have to teach to children. It can even be one of many songs that they have sung and analyzed in class.

What further diminishes the authenticity of this question, is the fact that an obviously unmusical accent is placed on the last note of the excerpt just for the sake of asking the students what it means. The second part of question 4.8 (requiring the students to count how many times the triad in question appears) also has no clear musical relevance.

5.2.8. Question 5.1 — triads

QUESTION 5 (10)

5.1 Write the following primary triads with key signature. Use semibreves. (4)



This question tests everything listed under 5.2.4. as well as the following:

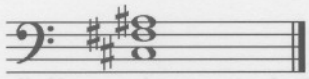
- knowledge of note values;
- knowledge of note names;
- knowledge of major and minor triads; and
- knowledge of Roman numeral figuration.

As with scales, triads can be sung on note names or on solfa or played on an instrument. Authentic activities that can be used to assess students' knowledge of triads are the following:

- transcription of simple harmonies, giving melodies and songs (recorded or performed);
- harmony at the piano or guitar;
- composition;
- analysis of relevant music; and
- teaching, for example they have to train a vocal group and give a lecture demonstration during which they use the right terminology.

5.2.9. Question 5.2 — triads in inversion

5.2 Figure the following triads according to key, degree and position. (6)



This question builds on question 5.1 by testing students' knowledge of the different inversions of triads and their figuration. The same activities, as listed in the previous section, can be used to assess students' knowledge of inverted triads. In addition, students can explore the difference in sound quality between different inversions. They can, for example, be asked why they would rather end a composition with the tonic triad in root position than in first or second inversion.

5.2.10. Question 6 — aural assessment

QUESTION 6 (15)

6.1 Listen to the scales played by the examiner and identify them as major, harmonic minor or melodic minor. (5)

6.2 Listen to the triads played by the examiner and identify them as major or minor. (5)

6.3 Notate the rhythmic pattern played by the examiner. (5)

Question 6.1 tests students' ability to aurally discern between major, harmonic minor and melodic minor scales, but the relevance of this exercise can be questioned by asking: "Where, in their careers as musicians, would students be asked to make such a discernment?" Instead, they can be given a simple text to set to music and asked to say which of the two modes (major or minor) would best suit the mood of the text. Then they can be given a melody of a text in the major mode and asked to transpose it to the minor mode. They will have to experiment with the harmonic and melodic forms of the minor in order to determine which would be the easiest to sing and which would sound the most natural. This would not be aural assessment in the traditional sense of the term, but it would certainly create more of an aural awareness among students regarding the difference in sound quality between the different scales. Furthermore, listening to and identifying scales tend to be more passive than the singing or playing of scales (as suggested in section 5.2.5.), which will require a greater degree of active participation from students.

Question 6.2 poses the same problems as question 6.1. It is a passive activity with little authenticity. An example of a more authentic activity suited to the aural assessment of triads would be the following: students are played a major triad in open position and a major triad in closed position after which they are asked to say which of the two they would use in a composition for children about giraffes. As with scales (and as suggested in section 5.2.8.) triads can be sung or played, resulting in a higher degree of active participation.

Question 6.3 is a standard rhythmic dictation exercise. Why not let students first imitate the rhythmic pattern on a drum or by clapping (even while walking on the beat) before they are required to notate it? That way they can activate the psychomotor domain and get a better idea of the metre.

On face value, aural assessments seem to be more authentic than written assessments, but it is not necessarily so. These assessments can be given more of a real world feeling by putting them into context, for example, the teacher (or another student) can act as a pupil. S/he sings or plays a simple piece, making rhythmic, melodic or harmonic mistakes while doing so. The students must then (while following the score) recognize the mistakes the teacher makes. This will be a valuable exercise for those students who will be teaching instrumental or vocal music, and it can even be done with an ensemble of two or more 'pupils'.

CHAPTER 6

SUMMARY AND SUGGESTIONS

In this chapter, I will attempt to highlight once again those aspects that I regard as indispensable in the establishment of healthy assessment practices. Finally, I will make some suggestions for further study.

6.1. Summary

The role and responsibility of the educator is the golden thread that runs throughout this dissertation — to quote Phye (1997:595) once again: "a teacher is, and always has been, the most important agent of change in the classroom." Teachers who desire to successfully implement new methods of assessment have a threefold paradigm shift to make with regard to (1) themselves, (2) their students and (3) their outlook on assessment.

Firstly, educators must become lifelong learners in order to ensure at all times that their subject knowledge is not only up to date, but *relevant* to the needs of their students. They should take the time to *reflect* upon what goes on in their classrooms and to question every aspect of their teaching. Reflection is extremely important because, as educators, we inevitably inherit certain methods and mentalities from the people that taught us and then, unthinkingly, apply these to our own teaching. *Thinking* about assessment is the primary requirement for change in that area. However, teachers should not only think; they should also make an effort to find out what *other people* think about assessment in order to enrich their own and others' idea banks. This awareness can come from reading books or articles and organizing discussion groups with colleagues. In doing so, they should reach outside the field of music into other fields of enquiry, as I did by looking at adult education, constructivism and assessment literature in general.

Subsequently, as stated in section 4.1., they must accept the challenge to move "from good intentions to good practice" (Torrance, 1995a:xi) and make this a lifelong habit lest they become too comfortable and yield to stagnation.

Secondly, educators must realize that it is *all about the students*. A learner-centred philosophy must guide all their actions and decisions. The goal is not just to have students pass their examinations, but to prepare them for a future career in music (or at least for fulfilling participation in society through music). Teachers of music literacy (or any other subject for that matter) must help students to see the relevance of the subject, and to apply what they are learning now to what they will be doing after they finish the course, whether they will be teachers, performers, composers, adjudicators, arts managers, sound engineers, et cetera. In order to do this, teachers must learn how to *listen* to their students and create opportunities for them to talk about their hopes, fears and expectations. As for learner-centred assessment, the key words are authenticity, relevance, diversity and integration.

Thirdly, teachers must learn to equate assessment with teaching. As stated in section 4.3., this is perhaps the biggest paradigm shift that they have to make. Teaching is not solely for learning and assessment solely for testing. When teaching equals assessment, assessment strategies (formal as well as informal) are built into lessons which enable the teacher to continually monitor the students' level of understanding while learning is taking place. When assessment equals teaching, assessment results are not used to judge students in the sense of "you make it or you don't," but to inform the learning process and to create an awareness of making progress towards a goal.

6.2. Suggestions

This dissertation is only an initiation into the topic of assessment in music literacy courses, and it is hoped that it will serve as a springboard for further study. I will offer some suggestions.

6.2.1. The concepts of musicianship and music literacy need to be investigated and defined more precisely (also within different contexts), and the influence of musical literacy on musicianship can be examined in order to discard myths such as the one referred to in section 2.1.6. (that the ability to read music makes one "rigid and demusicalized" — Reetsang, 2003:7).

6.2.2. In section 2.1.5. I listed musical skills (singing or performing on an instrument, sight reading, playing keyboard harmony, accompanying, improvising, conducting, composing, arranging, teaching and listening) that practicing musicians must have. More *specific* methods for assessing these skills at different levels and in various ways (also as part of music literacy) need to be developed so that educators can be helped to better assess their students.

6.2.3. Especially the didactics and assessment of aural skills is a specialized field receiving more and more attention. The actuality of this topic can be seen in numerous articles, such as those by Rifkin and Urista (2006), Cutler (2002), Gillespie (2001) and Lorek and Pembrook (2000) in the *Journal of Music Theory Pedagogy*. A thorough study of aural assessment will also benefit assessment practices in music literacy, since music literacy concepts consist of *sounds and symbols*.

6.2.4. The employment of computers and other forms of technology in the assessment of music literacy as well as other music subjects can form

part of suggestions 6.2.2. and 6.2.3. above, or it can be a study on its own. Technology has the potential of lightening the teacher's workload, because music skills that require a lot of drill and repetition (and time to mark!) can successfully be managed by computers. Even activities like musical analysis will be easier if students (who perhaps do not yet have the skill to play a piece on the piano) can listen to the music on the computer while analyzing the piece. Such research will contribute to making assessment more *relevant* to students who are already using various forms of technology in most other areas of their lives.

6.2.5. Empirical research can be done with the aid of questionnaires and interviews to determine how the *students* feel about assessment practices in music literacy courses. This will lead to more informed suggestions about assessment in these courses.

6.2.6. More extensive empirical research, similar to that which was done using Kassner's (1998b:34, 35) matrix (section 4.7.10. and appendix D), can be done in order to evaluate and inform classroom assessment practice. My own efforts in this regard were only a starting point to test the applicability of the material.

6.2.7. Research can be done on the topic of grading schemes, like percentage methods (e.g. 80-100% = A; 70-80% = B; etc.), curving (e.g. the five highest scores = A) and contract systems or rubrics (a defined amount of work or level = A) (Rogers, 1984:168) in order to determine the origin thereof, the advantages and disadvantages thereof, and whether such schemes are, in fact, better than merely telling students that they 'pass' or 'fail'. Systems distinguishing only between 'pass,' 'fail,' and 'merit' (or 'first prize') are used at many European conservatoires. A study of the benefits and drawbacks of each system can yield interesting results, and it will also shed more light on how assessment affects students' motivation for learning.

APPENDIX A

Student Questionnaire on the Test (Wiggins, 1993a:246)

Please circle the number that best represents your response to each statement (from "strongly agree," 1, to "strongly disagree," 5).

1.	This was a fair test of what we learned.	1 2 3 4 5
2.	This test was easy, if you studied for it.	1 2 3 4 5
3.	This kind of test really makes you think.	1 2 3 4 5
4.	This kind of test is new for me.	1 2 3 4 5
5.	I did a good job of preparing for this test.	1 2 3 4 5
6.	You did a good job of preparing us for the test.	1 2 3 4 5
7.	I was unfortunately surprised by the questions you chose.	1 2 3 4 5
8.	The directions were clear.	1 2 3 4 5
9.	You provided lots of different ways for us to show that we understand what was taught.	1 2 3 4 5
10.	There was enough choice in the questions we could select to answer.	1 2 3 4 5
11.	Some questions should have been worth more points and/or others worth less.	1 2 3 4 5
12.	We were allowed appropriate access to resources (books, notes, and so on) during the test.	1 2 3 4 5
13.	I expected the grade I got, once I saw the test questions and then later found out the right answers.	1 2 3 4 5
14.	There wasn't enough time to do a good job; I know more than I was able to show.	1 2 3 4 5

APPENDIX B

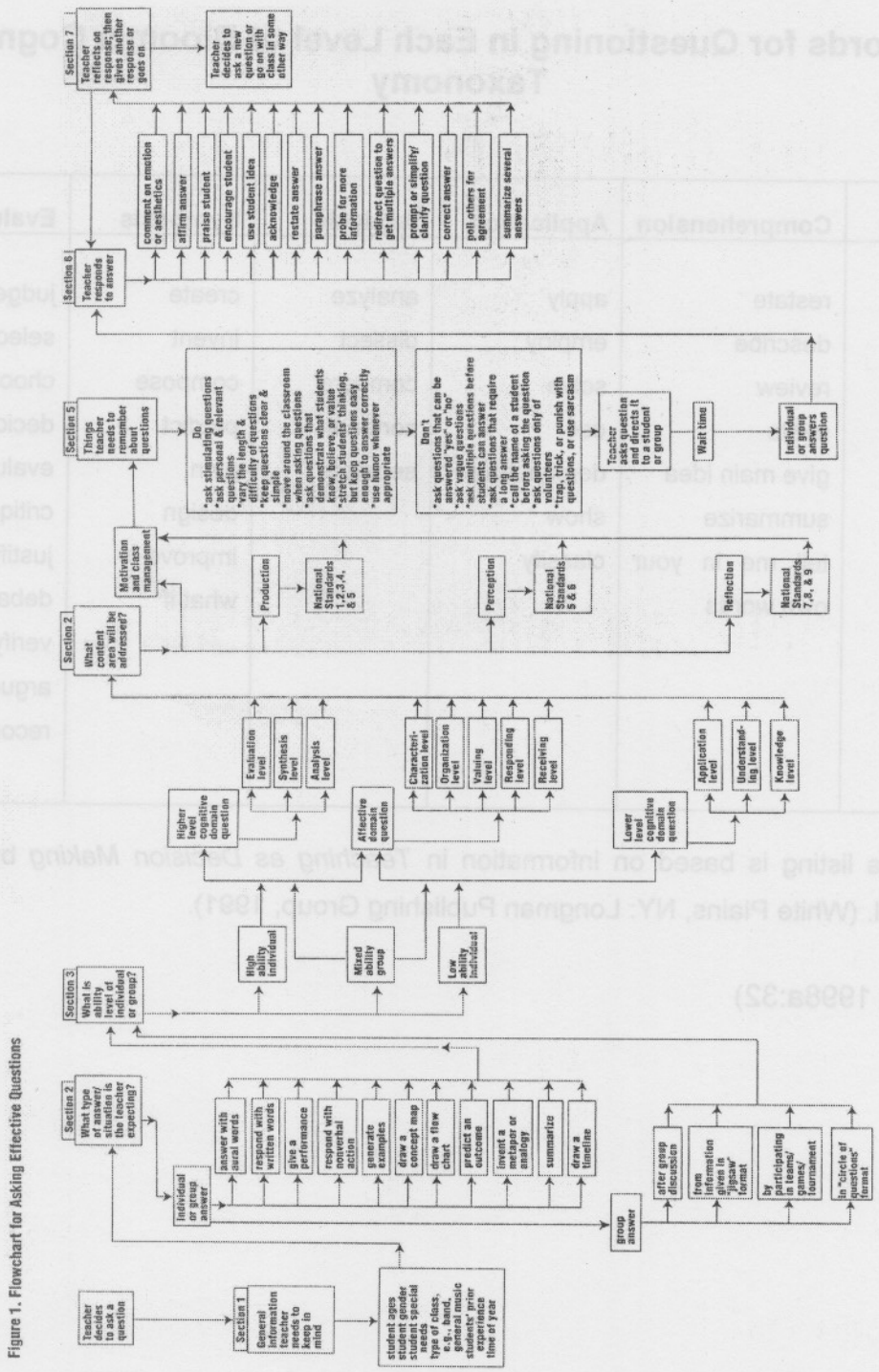


Figure 1. Flowchart for Asking Effective Questions

Kassner (1998a:30-31)

APPENDIX C

Cue Words for Questioning in Each Level of Bloom's Cognitive Taxonomy

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
name	restate	apply	analyze	create	judge
complete	describe	employ	dissect	invent	select
select	review	solve	compare	compose	choose
list	relate	use	contrast	predict	decide
recall	give main idea	demonstrate	separate	plan	evaluate
identify	summarize	show		design	critique
correct	tell me in your	classify		improve	justify
how	own words			what if	debate
what					verify
who					argue
					recommend

Note: This listing is based on information in *Teaching as Decision Making* by Marvin Pasch et al. (White Plains, NY: Longman Publishing Group, 1991).

(Kassner, 1998a:32)

APPENDIX D

Flanders Interaction Analysis Matrix: Healthy Pattern (Kassner, 1998b:34)

Minute #12		========== Three second intervals ==========																		
Behaviors		**1**			9		**15**			24	**30**			39	**45**				54	
Feelings/Emotions	1																✔			
Affirmation	2										✔									
Using student ideas	3											✔								
Music performance	4	✔	✔	✔																✔
Wait time	5						✔							✔	✔					
Divergent student answers	6							✔								✔	✔			
Divergent questions (higher thinking skills)	7				✔	✔							✔							
Convergent questions (lower thinking skills)	8								✔											
Convergent student answers	9									✔										
Lecture	10																			
Directions	11																	✔	✔	
Criticism	12																			
Silence other than wait time, anything else	13																			

Flanders Interaction Analysis Matrix: Unhealthy Pattern (Kassner, 1998b:35)

Minute #12		========== Three second intervals ==========																		
Behaviors		**1**			9		**15**			24	**30**			39	**45**				54	
Feelings/Emotions	1																			
Affirmation	2																			
Using student ideas	3																			
Music performance	4	✔	✔	✔																✔
Wait time	5																			
Divergent student answers	6																			
Divergent questions (higher thinking skills)	7																			
Convergent questions (lower thinking skills)	8						✔													
Convergent student answers	9							✔												
Lecture	10					✔				✔	✔	✔	✔	✔			✔		✔	
Directions	11													✔	✔	✔	✔	✔	✔	
Criticism	12				✔				✔											
Silence other than wait time, anything else	13																			

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