# EURHYTHMICS AND PIANO PERFORMANCE

## A study to determine the benefits of applying Eurhythmic techniques to the preparation of piano works by undergraduate musicians

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# Definition of terms

**Rhythm** The word 'rhythm' comes from a root denoting 'flow'. For the purpose of this study the single term 'rhythm' is used to describe the underlying rhythmic sense of music. Dalcroze (1921, p.64) defines rhythmic sense as "an accurate appreciation of the relationships between movements in time and movements in space".

**Rhythmic division** The detail of note values within the metre.

**Eurhythmics** Eurhythmics specifically denotes the method of teaching attributed to Dalcroze.

**Musical concepts** Refers to the constituent parts of music which make up the whole and include - rhythm, pitch, melody, harmony, tempo, dynamics, timbre, structure, style and interpretation.

**Expression in Performance** The subtle transformation of musical concepts to convey an expressive personal interpretation of a musical work. There are no definite rules of expression in music (Scruton 1980, p.327). To play expressively is to give the music a certain character. This character is not determined by one concept of the music but by the totality of the concepts working together. It is difficult to state which concepts are vital to an expressive

effect. From this view, it seems that any musical concept has the ability to contribute to the overall expression of a piece.

The greatest performers have the ability to shape sounds that have the impression of moving through space (Caldwell 1992, p.27). This imagery sums up the concept of the totality of the musical concepts working together to make music move expressively and to make it capable of moving the listener's emotions.

**Musicianship** A range and variety of skills required to effect a musical performance.

**Kinesthesia** The process of learning through body experience.

# Abstract

This study investigated the benefits of applying Eurhythmic techniques to the preparation of piano works by advanced pianists. It explored possible improvements in expressive performance following the experience of the expressive content of the music by kinesthesia. By rating performances before and after the application of these techniques, the researcher was able to consider the merits of incorporating this approach into performance preparation.

Pertinent to the study was the philosophy of Emile Jaques-Dalcroze, one of the leading exponents of the bodily-kinesthetic experience as applied to musical learning. His contribution, and those of others in the field, was explored through a review of the literature related to the current study.

Practical sessions were conducted whereby the participants worked with the researcher on a chosen piece from their pianoforte repertoire. In the sessions, participants took part in practical activities designed to explore the five musical concepts of tempo, beat, phrasing, dynamics and articulation, which are considered to affect decisions made about the expressive interpretation of musical works. The chosen pieces were recorded before and after the working sessions.

A panel of experts evaluated the recordings using a set of criteria. The criteria, which consider the works in terms of segmented and holistic performance, were designed by the researcher with the express purpose of determining which performance, the first or second, was considered to be the more effective.

In the final analysis, the researcher collated the findings of the panel which indicated that the majority of performances improved in expressive interpretation following the

application of Eurhythmic techniques. Whilst the sample of this study was too small to make categorical assertions, there was sufficient evidence for the researcher to conclude that applying Eurhythmic techniques to the preparation of specific pianoforte performances can result in improvements in musical expression.

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# Chapter 1.0 Introduction

## 1.1 Introduction to the study

In the last two decades considerable work has been done on the nature of expression in musical performance (Todd 1996). However, there remains a tendency for performers and teachers to concentrate on technique often to the detriment of the emotive elements. Giddens (1998, p.255) states that musical expression is often rote-learned or becomes an added extra after the notes have been mastered. Farren-Price (1997) observes that, in musical performances, a sense of interpretation is often the missing ingredient. Timothy Caldwell (cited in Giddens 1998, p.259) notes

> If technique remains the primary focus of teaching, with only a nod at the expressive elements of the music, the outcome is inexpressive playing: the medium (technique) becomes the message, and art becomes mere gymnastics.

Whilst technique (the physical approach to the instrument) is an important aspect of piano training, teachers must encourage participants, at every level of attainment, to develop the necessary intellectual and emotional skills for an effective and expressive performance. However, conventional methodology often emphasises imitative techniques as opposed to encouraging responses based on inner consciousness and awareness.

It is proposed that a physical, kinesthetic approach to musical learning can be effectively integrated into conventional approaches to develop an understanding of, and an ability to produce, the expressive content of music.

The philosophy of Emile Jaques-Dalcroze[1], a Swiss musician and educator, acknowledges that we live in a physical and sensual world and that the sensory systems provide a valuable source of information. It asserts that rhythm is at the core of musical training and encourages an individual response to the rhythmic forces within the music. The vehicle for learning is the whole body which learns to move through time and space to physically enact and express the musical concept being explored.

Piano participants, involved in a kinesthetic music program based on the philosophies of Dalcroze, were informally observed over a period of one year. The results suggest that encouraging a physical response to music increases awareness, perception and appreciation of the musical score which in turn produces a more expressive performance.

The present study was designed to evaluate these observations in a more formalised context. Working with eight pianists, the researcher guided the participants through a series of activities designed to assist the understanding of individual concepts which, in turn, affect the overall expressive performance of their chosen pieces on the pianoforte. A panel of experts evaluated the performances in order to assess the effect of a physical, kinesthetic approach to performance as advocated by Dalcroze.

For those not familiar with the work of Dalcroze, a summary of his approach to musical training follows.

[1] Emile Jaques-Dalcroze is referred to as Dalcroze throughout the following text.

## 1.2 Introduction to the Dalcroze approach

Dalcroze was born in Vienna in 1865 of Swiss parentage and died in Geneva in 1950. As Professor of Harmony at the Geneva Conservatoire, he discovered that many of his participants, although technically proficient on their instruments, had difficulty estimating "with any exactitude variations of time and rhythmic grouping" (Dalcroze 1921, p. vii-viii). These defects he classified under the heading "musical arhythmism". He became disillusioned with conventional approaches to teaching music and began to develop an approach based on the links between body and mind.

> …by experiencing the juxtaposition of the musical elements kinesthetically, the participant can discover and come to understand musical ideas in terms of their potential expressive use (Aronoff 1969, p.168).

The Dalcroze approach is based on the premise that rhythm is the primary element in music and that the natural rhythms of the human body act as the source of any musical rhythmic experience. The gift of musical rhythm is not a mere mental affair; it is physical in essence (Dalcroze 1921, p.31).

Dalcroze (1921) stresses the innate relationship between music and the body and demonstrates how both sound and movement is capable of being described as concepts of time, space and energy. This common ground enables any musical idea to be transformed into movement or gesture.

Musical training is traditionally limited to the fine motor coordination required to play an instrument. The Dalcroze or kinesthetic approach, however, offers its participants the opportunity to experience musical concepts through the whole body.

The relationship between movement and music is at the heart of the Dalcroze experience and provides the vehicle by which musical concepts are explored and

developed. Because the emphasis is on an individual response to music through free movement, as opposed to stylised dance forms, movement provides the teacher with a very flexible and adaptable tool.

At the beginning of his career Dalcroze wrote,

> I have begun to envisage a musical type of education in which the body itself would act as intermediary between sounds and thought, and would become the direct instrument of our feelings (1921, p.12).

The vision of Dalcroze, however, goes beyond a desire to improve his participant's musicality. Becoming involved with the philosophical ideas of his day, the birth of Eurhythmics coincided with a renewal of emphasis on human individuality. (Bachmann 1991, p.9)

Dalcroze takes the "thinking man" (intelligence, imagination, emotions, the soul) on one side and the "physical man" (the body, the senses, actions, instincts) on the other and seeks a medium with which to reconcile the two (Bachmann 1991, p.12).

The physical body, composed of a skeletal and muscular system, is designed to move. The mind is also capable of being moved through emotions or the mobility of thought itself.

> Music is composed of sound and movement, and sound is a form of movement (Dalcroze 1921, p.43).

Music becomes the medium through which Dalcroze leads his participants to explore the rhythm within themselves and the connection between the mind, body and soul. The nature of music, which only acquired rhythms of its own by originally borrowing from those of the body (Dalcroze 1910), becomes inseparable from the nature of the human body and mind.

The philosophies of Dalcroze may not answer every musical problem but they do provide an alternative approach to more conventional methods of assisting in the development of expressiveness that makes them worthy of investigation.

The objectives of the present study are defined in Chapter 2.0.

# Chapter 2.0 Research objectives

## 2.1 Introduction

The present study investigated the effect of applying Dalcroze-based physical, kinesthetic techniques to improving specific pianoforte performances. It highlights some of the problems of conventional approaches to instrumental performance and attempts to answer these problems by applying Dalcroze techniques to facilitate and improve expressive performance.

> If we teach our bodies to work automatically, our minds will have more time and freedom for higher things (Dalcroze 1920, p.41).

## 2.2 Aim of the present study

It is intended to demonstrate the potential of a kinesthetic approach to teaching music by

- establishing through an investigation of available literature the value of a musical training that involves the use of the whole body in response to musical concepts.

- applying these techniques to specific pianoforte performances which will be evaluated by a panel in order to ascertain the possible merits of using Dalcroze principles to improve expression in musical performance.

## 2.3 Defining the problems and specifying questions

Achieving these aims involves identifying three specific problems and associated questions which the research seeks to answer.

**Problem 1**

No amount of intellectualising about musical concepts can alter the fact that music is intrinsically abstract. Music is so ubiquitous and universal a phenomenon…its very nature is elusive (Serafine 1988, p.2). Music is difficult to define. It is not easily experienced in a tangible way because it cannot be touched or seen.

**Question 1**

Does experiencing the music through Dalcroze kinesthetic activities provide the performer with a more clearly defined image of how the music should be played?

**Problem 2**

Conventionally when instrumentalists perform, only the smaller muscle groups, or fine motor senses, of the body are employed. Performers or 'athletes of the small muscles' (Schnebly-Black & Moore 1997, p.30) attempt to achieve a presentable rendition of the work, including notes, rhythm and expression using only the fine motor senses. Whilst many of the actions required in piano technique are generated

from the upper arms and back, and whilst there may be some sympathetic movement of the pianist's body in response to these movements, only the fingers are used to articulate the sound. Instrumental playing does not include the use of the large muscle groups, or gross motor senses of the body, in a kinesthetic sense.

Traditionally, a musician will explore music through the mechanical reproduction of sound on an instrument. This requires a level of technical proficiency before the musical content of the piece can be explored. How much of the emotional content of the music can truly be discovered and expressed whilst struggling with the technical demands of the music? How much more could be achieved away from the pyrotechnic demands of fine motor response?

**Question 2**

Do gross motor experiences provide an effective way of exploring expressive musical concepts separated from the constraints and technical demands of a musical instrument?

**Problem 3**

One of the greatest challenges for a novice performer lies in the rhythmic and expressive interpretation of the work. Dalcroze stated that he did not want his participants to 'know' music but to 'feel' music (Dalcroze 1916). It is not sufficient to be technically competent. The performer must be able to express the music in its fullest sense.

> The artistic result is always the product of a synthesis or emotionally intuitive connection with the piece. The genius may be able to grasp all the factors concerning interpretation without direction. For the majority, it will be necessary to set up a

program of progressive education of [the emotive] intuition, feeding it and enriching it by means of specific activities (Aguilar, 1992 as cited in Giddens 1998, p.255).

**Question 3**

Can a series of specific Dalcroze Eurhythmic-type activities facilitate the understanding and performance of the underlying rhythmic and expressive content of a musical work?

## Chapter 3.0 Review of related literature

A review of the literature related to the connection between human movement and musical performance this century provides a foundation upon which the research questions can be considered. A discussion of literature related to the research of rhythm and movement, the writings of and about Dalcroze and to Dalcroze and instrumental performance follows.

### 3.1 Research literature on rhythm and movement

The earliest reference to the fundamental relationship between rhythm and human movement may rest in Plato. In "The Laws" he arrived at the fundamental definition of rhythm as "the order in the movement" (Paul Fraisse 1982).

The psychologists of the late nineteenth century and early twentieth century, including Mach, Vierordt, Bolton, McDougall, Stetson, Miner & Kofke, investigated the relationship between rhythm and human movement or activity. Ruckmich (1918) compiled a comprehensive bibliography on this subject. Much of this experimental research lacked the rigorous controls of contemporary research design as defined by Campbell & Stanley (1963). However, it serves to demonstrate the interest in this subject at the same time that Dalcroze first began to explore the possibilities of using body movement as an aid to developing a sense of rhythm. It is interesting to note that, in the late nineteenth century and early twentieth century, more research was undertaken on the psychology of rhythm than any other musical concept (Seashore 1967, p147). Winick (1974) published an annotated bibliography of over 500 studies involving rhythm in music.

In the latter half of the Twentieth century, the correlation between movement and rhythmic performance continued to be of interest to researchers. Moog (1979) reported that lack of movement experience in children of different abilities was a factor in poorer rhythmic perception. Cheek (1979) found that, when teaching two groups of children the same music, instructional strategies that included movement were of value when used consistently. Moore (1984) reported an improvement in the rhythmic aptitude of children following Orff and Weikart approaches.

Despite the popularity of approaches to teaching musical concepts through movement, there is a scarcity of substantial research to support the validity of this method. Crumpler (1982) and Joseph (1982), both unpublished doctoral dissertations, explore the Dalcroze approach to the musical learning of young children. Atterbury (1998) contends that the results of these works, and other similar research, is inconclusive and lacking in objective substantiation. It would appear that, due to the lack of rigorous control in the design of these studies, categorical assertions cannot be concluded from the findings.

### 3.2 Literature by Dalcroze

A number of Dalcroze publications exist including the books *Rhythm, Music & Education* (1921) and *Rhythm, Art & Education* (1930) and a number of manuals in which he describes exercises taught in his classes. Dalcroze did not publish a specific method for his approach. He was emphatic in his stance that his approach was “a matter of personal experience” (Dalcroze 1920, p.iii).

In *Rhythm, Music & Education*, Dalcroze records the developments in his research from 1897 to 1921. It is a chronological compilation of the many articles and lectures from this period and allows the reader to follow the evolution of his teaching philosophy. Dalcroze's life-long concern was to create a stronger foundation for musical learning by preparing the inner musician, before studying instrumental technique, to be capable of appreciating the elements of music and eager for new sensations (1930).

His written works continually discuss his ideas on improving the quality of instrumental teaching. His 'solfege' books contain suggestions for interpretative expression, including exercises in dynamic shading, phrasing and accentuation. In *Eurhythmics Applied to Pianoforte Technique* his ideal of educating the whole musician was continued by all manner of exercises designed to challenge the pianist (Giddens 1998). Dalcroze proposed that, if the rules of expressive performance were taught instead of correction by the teacher based on imitation, students should be capable of self-correcting and of applying thoughtful expression to their performances. The exercises encourage the student to listen to what they are playing and to make decisions about the sounds they are emitting based on knowledge and training.

### 3.3 Literature on Dalcroze and his work

There is a sparsity of literature on the work of Dalcroze. The survival of Dalcroze pedagogy may be accredited to the passing of information from teacher to participant in the classroom. The available literature would not suffice in communicating these principles without personally experiencing the work. Bachmann (1991) explains that there is no “list of exercises which might be held up as a blueprint of the method”. Because there have not been any specific directions as to how to conduct a class, teachers have developed individual ways of applying the Dalcroze approach (Alperson 1995).

One of the most valuable resources available to Dalcroze followers is *Dalcroze Today: An Education through and into Music* (1991) written by Marie-Laure Bachmann. As Director of the Institut Dalcroze in Geneva, her purpose in writing is to

“render homage” to the founder of Eurhythmics and to expose its potential (p.26). The book is a serious and in-depth study of Dalcroze’s contribution to education and offers a wealth of practical ideas for the classroom.

Her chapter 'Defects in musical performance' (pp.82 - 85) parallels Dalcroze's list of musical failings which he describes under the heading *arhythmism* (1910 pp.20-21). Dalcroze built up a system of training in order to correct each of these musical failings. Bachmann states that his exercise categories relate particularly to musical performance. But for the purposes of the present study, the list is too general in its application. It has been designed for the work of the Eurhythmic classroom and not for instrumental performance.

*The Rhythm Inside: Connecting Body, Mind & Spirit through Music* by Julia Schnebly-Black and Stephen Moore (1997) offers a fresh insight into the potential of Eurhythmic training. The book explores the Eurhythmic body-movement approach to the study of music along with its potential to influence emotional, physical, mental and spiritual areas of growth. Its explanation of the sensory processes behind the method are thought provoking and offer a clear and lucid explanation of the theory behind Dalcroze Eurhythmics.

A list of related Books, Journal Articles and Theses can be found in Appendix A.

### 3.4 Literature related to Dalcroze and instrumental performance

Literature concerning the application of Dalcroze principles to musical performance on a musical instrument is limited. The researcher is not aware of many Dalcroze

practitioners who have explored the application of gross motor response to instrumental performance. This does not mean that they do not exist but rather that studies of their work have not been published.

Notable in the field of Applied Eurhythmics is Karin Greenhead, Director of Studies for the Dalcroze Society (United Kingdom). The researcher observed sessions conducted by Greenhead at the Dalcroze International Summer Schools (DISS) in Australia (1998, 1999 & 2000) in which the principles of Dalcroze were used to assist participants with the performance and interpretation of specific pieces. Vocalists, pianists, string players, harp players and flautists took part in these Master classes. Greenhead took a passive role in these sessions by facilitating, but not guiding, the kinesthetic experience of the performer. Participants were asked to experience the beat, phrasing and articulation of their pieces using a ball and scarf to enlarge the gross motor experience and imagery. Observers appeared to be in agreement that there were improvements in areas such as tone quality and expressive interpretation but these subjective responses were not formally measured.

In the three years the researcher observed these sessions, the content remained identical. Although Greenhead occasionally implied that she used other activities and props to explore other musical elements, these were not evidenced in the DISS sessions. As yet, Greenhead has not published an account of her work in this area. If she were to do so, it would be a valuable contribution to the field of Applied Eurhythmics & Instrumental Performance.

The American pianist and teacher, Abby Whiteside held views similar to the theories of Dalcroze and dedicated her career to exploring the role of whole-body involvement in piano performance. Her books are no longer in print but John Peace (1993) has published an analysis of Whiteside's piano teaching method with reference to the Dalcroze system. As a teaching method, Whiteside's work is of interest but it does not specifically extend the work of the Eurhythmics class to the musical instrument as intended in the present study.

Herbert Henke, an American professor of Eurhythmics, guides his participants into feeling flexibility and flow in their instrumental performance by using movement. He reports that improvements occur by using this technique (Schnebly-Black 1997, pp.42-43).

The literature shows the evolution of the kinesthetic approach to music education. It reveals that, in his day, Dalcroze was not alone in his interest in this field and that, to the present day, this interest continues all over the world.

The very essence of kinesthetic learning is bodily-experience. The body plays the role of intermediary between sound and thought. Without muscular sensation created through movement of the whole body, there is no experience. Therefore, the Dalcroze approach must be considered as a process to be experienced and not observed if it is to be understood and achieved.

Chapter 4.0 takes us from what has, or is happening, in the Dalcroze field to the processes involved in kinesthetic learning. The present study considers this process

under four separate headings; the sensory, the rhythmic, the physical and the learning processes. It recognises these as pertinent to the process involved in the data collection.

# Chapter 4.0 The Dalcroze experience

Dalcroze discovered for himself the process we now refer to as kinesthesia, the act of learning through body-experience. The Dalcroze experience, which is multi-faceted, can be described under four headings; Sensory, Rhythmic, Physical and Learning. These experiences are described below.

## 4.1 The sensory experience

Dalcroze began his experiments realising that although music is fundamentally an aural experience, musical understanding could not be brought about solely through the auditory sense. The ear may be the organ that receives the airborne note but this sound is received and met by the inner being. The inner being does not 'hear' the note but experiences it inwardly.

> Music is not heard by ear alone but by the whole body (Mothersole 1920, p.23 - cited in Bachmann 1991)

Steiner (1918) asserts that our organism is in itself the most wonderful musical instrument. Dalcroze discovered that musical (or rhythmic) concepts call for a muscular and nervous response involving the whole body. When the body moves, the sensation of movement is converted into feelings which are sent to the brain which, in turn, converts that sensory information into knowledge.

The combination of *moving - feeling - sensing* is referred to as *kinesthesia* (Choksy et al 1986, p.33). Dalcroze called it the *sixth sense* or muscular sense. He realised that hearing could be connected to movement, movement could produce feeling, and feeling could activate the kinesthetic sense into directing information to the brain and back via the nervous system to the body. This process was necessary to improving, correcting and perfecting expressive performance (Choksy et al 1986).

As humans we are constantly gathering, analysing and using information about our world. The body receives information through the senses of sight, sound, smell, taste and touch. In addition to the five sensory systems, the body also gathers information from the proprioceptive system, which monitors the physical placement and position of the body. It is the proprioceptive system that provides the information necessary to control the body in time, space and energy - vital for any dancer, musician, actor or athlete.

The more senses stimulated in the gathering of information, the more reliable the perception of the experience. (Schnebly-Black 1997, p.43). However, as actor Abbott Chrisman states (Schnebly-Black 1997, p.15), there is

> a collective tendency (by teachers and performers) to separate the sensory, mental, kinesthetic, emotional, intellectual and spiritual aspects of experience.

One of the aims of Eurhythmic training is to experience all the states of awareness together so that information is processed as an entity. The use of the whole body in musical training increases the amount of sensory information being used to form musical perceptions. It is not only the small muscle groups (fine motor) which are activated in response to given stimuli, but the whole muscular network - arms,

shoulders, torso, legs and hips. Added to this, the visual and aural sensory systems intensify the experience offering a clearer and more vivid understanding of what has taken place. As the brain builds up a memory bank of sensory impressions, the individual is able to perform with more accuracy, more ease and more predictability.

### 4.2 The rhythmic experience

Dalcroze observed the rhythms of the world-at-large; the rhythms of the body, the rhythms of body language, the rhythms of work and play, of nature, of animals, of visual design, of poetry and dance and even the rhythms of mechanical objects.

> What brings them (the mind and body) together is rhythm (Dalcroze 1942, cited in Bachmann 1991, p.14).

All of these rhythms became possibilities for him to use in his teaching (Choksy et al 1986). Above all, Dalcroze saw rhythm as an expression of individuality. He recognised that everyone has an underlying rhythmic personality (Bachmann 1991, p.14) which governs the manner in which people respond and move.

> The study of rhythm should therefore lead us to bear ourselves, in every aspect of everyday life, in an individual manner (Dalcroze 1915, p.89 - cited in Bachmann 1991)

Dalcroze was amongst the first to realise that

> the basic nature of the rhythmic sense is of a motor kind (Teplov 1966, p.338).

At the time that Dalcroze was experimenting with his new method, psychologists and researchers around the world were discovering how rhythmic sense is connected to motor actions in the body. Teplov's *Psychology of Musical Ability* (1966, pp.339-42) discusses Bolton's conclusion (1894) that involuntary movements are essential to the rhythmic experience. Koffka (1909) discusses the role of motor representation in the

musical experience and Ruckmich (1913) and Seashore (1967) both credit the perception of rhythmic time to physical movement (Marie-Laure Bachmann 1991, p.16).

> Not a single musician, hindered by some fault in his expression of musical rhythm, fails to demonstrate that fault in a bodily way (Dalcroze 1921, p.41).

Seashore (1967) discusses how rhythm finds resonance in the whole organism. It is not a matter of the ear or the finger alone. Indirectly, rhythm affects the circulation, the respiration and all the secretions of the body. Seashore discusses an inventory of some of the things that rhythm does on the side of perception, as opposed to action, which is not conclusive but does dispel the notion that the perception of rhythm is a simple mental process or action (pp.140 - 145).

Rhythm, as an underlying rhythmic flow, is an essential component of all music.

> It is rhythm that gives meaning and form to juxtapositions of sound (Dalcroze 1921, p.48).

However, despite its importance, the study of rhythm in performance has been one of the most neglected areas of formal training since the Renaissance (Cooper & Meyer 1960). Berlioz, in his *'Memoirs',* commented on the failure of the professors at the Paris Conservatoire to instill in their participants "the remotest conception of what is really meant by playing in rhythm". Arnold Walter (1955), the noted Orff specialist, observed that rhythm is still the forgotten element in spite of Dalcroze, whose warnings have never been heeded sufficiently.

### 4.3 The physical experience

In conventional music education, the vehicle for learning is a musical instrument. The focus is on training the very small muscle groups to perform complex rhythmic co-ordinations on a particular instrument. Many successful performers are brought up in this tradition. However, musical feeling and understanding do not originate in the small muscle groups. An attempt may be made to provoke a *feeling* for movement using the memory but an *understanding* of movement cannot be provoked without the movement experience itself.

> A gesture is nothing in itself: its value lies entirely in the feeling that inspires it (Dalcroze 1916, p.116).

In the same way that the ear listens to musical rhythms moving through time so, in the Eurhythmics class, the whole body becomes the mechanism through which music is expressed and studied. In 1924, Rudolf Steiner created the 'eurhythmically motivated human being' (van der Pals 1992, p.10) which served, at the same time, as instrument and player.

> Every human body contains within itself more orchestral possibilities….than the most complex of symphonic bodies (Dalcroze 1916, p.111).

Dalcroze defined the body as the first musical instrument capable of responding to musical signals by interpreting them in movement. He came to realise that the body has an irrepressible urge to reproduce sound by moving through time and space.

> What is remarkable is the existence of an instinctive connection between rhythm, in all its nuances, and gesture (Dalcroze 1921, p.41).

This urge begins with the young child who can be observed moving and responding in movement when music is played. Seashore discusses how the inclination to express music physically develops and becomes more refined with musical training.

> The motor tendency to image the tone or execute it in inceptive movements is highly developed in the musical mind (Seashore 1967, p.6).

In support of the view that music does elicit physical response, Merriam (1964) lists 'physical response' as one of the ten major musical functions. Despite this discovery, Dalcroze realised that, for some, the connection between rhythm and gesture or musical expression and physical movement was effected with difficulty. He maintained that all inadequacies of musical performance manifest their weakness at the level of rhythmic understanding or expression (Bachmann 1991). He sought to determine the specific cause of each musical defect which he listed under the general heading of *'musical arhythmism'* (1910, p.20). He would be led eventually, however, to conclude that

> …as far as motor facilities are concerned, all men are not born equal (Dalcroze 1921, p.65).

It can be asserted in addition that, despite an inequality in motor aptitudes between individuals, the literature (Aigular 1992, Giddens 1998, Schnebly-Black 1997) suggests that a progressive education of the nervous system and motor sense should develop some appreciation of the relationship between gesture and musical expression. Dalcroze's use of gesture as the physical enactment of sound is based on the premise that both movement and music require time and space for their existence.

> Music lives in time. When music becomes audible it carries this being of time into the realm of space (van der Pals 1992, p.14).

It would be equally true to describe music as movement in space *(*Bachmann 1991). Both sound and movement are performed with a particular energy or vitality which 'transports' them with a certain quality through time and space.

Unlike dance, in which movements are stylised, participants in the Eurhythmic class use improvised movements, gestures and postures to express the various elements of music which produce musical rhythm. The essential purpose of these movements is to convey information back to the mover setting up a circuit of movement and response between the brain and the body.

Pratt (1931) suggests that experiences inside the body are subjective whereas experiences outside the body are objective. Emotions and moods are felt organically within the body but can be experienced by outward physical motion which can then be more objectively transmitted into the music. For this to be of benefit to the musician, Dalcroze claimed it was essential to possess a muscular system capable of interpreting the sound and an effective communication system between the mind that conceives and the body that executes (Dalcroze 1921). To this end he created literally thousands of exercises and games to train the body and mind to respond to musical gesture. With training and experience, the participant becomes capable of increased levels of precision, coordination and expressive power (Farber & Parker 1987, p.45).

The movement vocabulary used by Dalcroze is based on fundamental movements and can be easily executed by children and adults. Choksy et al (1986) classifies fundamental movements into two types; movements in place and movements in space (Figure 1).

| MOVEMENTS IN PLACE | MOVEMENTS IN SPACE |
|---|---|
| Clapping | Walking |
| Swinging | Running |
| Turning | Crawling |
| Conducting | Leaping |
| Bending | Sliding |
| Swaying | Galloping |
| Speaking | Skipping |
| Singing | |

**Figure 1: Movements in place and movements in space**

**Choksy et al 1986, p.120**

With this vocabulary, an almost infinite number of movement combinations can be created to express simple or complex musical concepts.

To assist the body to move beyond the confines of its own experience, props such as balls, hoops, elastics and other articles can be used. It is known from photographs, that Dalcroze used balls and hoops in his work. Many contemporary Dalcroze teachers use objects and props in the classroom with the purpose of broadening the physical experience of the participant.

Freed from the constraints of instrumental performance, Dalcroze participants are able to explore and discover their own musicality through a physical enactment of music. Only later is this learning transferred onto a musical instrument.

Despite the seminal contributions to the idea of music education this century, almost a hundred years later, music educators and administrators are struggling to understand the relationship between bodily sensation and mental activity. They remain largely ignorant of the many benefits of training the bodily kinesthetic sense in music education and performance. Learning music is traditionally a cerebral, not corporal, activity. Yet, music is essentially physical in essence and requires a whole body response (Dalcroze 1921, Mothersole 1920, Teplov 1966, Seashore 1967).

> Our cultural traditions drive a sharp division between the mental and physical, the physical being less valued (Young 1992, p.188).

Young calls for the physical, kinesthetic sense to be recognised and understood for its role in all musical experience. She suggests it is the missing, essential part of the 'whole human' response to music.

### 4.4 The learning experience

Dalcroze believed that the essential pre-requisites of musicianship were a finely tuned ear and a physical feeling for rhythm (Giddens, 1997).

> To be a complete musician, one requires a good ear, imagination, intelligence and temperament - that is, the faculty of experiencing and communicating emotion (Dalcroze 1921, p.47).

He was concerned that participants were not learning to *listen* to sounds before performing them or notating them. The whole process of learning disturbed him. About the musical education of his day he states,

> As for composition, the pupils of most of our colleges of music are taught the external forms of musical expression before they have experienced any feeling worthy of expression; they are taught harmonies before they are capable of hearing them inwardly; they are shown how to write counterpoint in two parts before they are sufficiently developed to compose a single melody at all agreeable to the ear (1921, p.54).

He questioned conventional methods of learning. Even today, his questions remain valid to music educators and administrators. He considered that specialised instrumental training should be preceded by singing, listening and rhythmical movement experiences designed to allow the child to experience musical concepts first hand (Giddens, 1997). He considered it absurd to set a young child to study an instrument before he (sic) had been trained to appreciate rhythm and distinguish sounds (1921). Only after the music is felt from within should it be reproduced mechanically on an instrument.

> No schoolmaster would set a child to draw something with which he was not familiar (Dalcroze 1921, p.37).

Yet, this is precisely what we do when we ask participants to play something that is not in their experience. Often in the process of perfecting musical performance, participants are required, at the instrument, to add or change the way they are playing a section of the music without having already experienced how this feels or sounds. Furthermore, much musical training consists of perfecting performance by a stop - correct - replay - go on style (Choksy et al 1986, p.63). This structure does not

encourage freedom to investigate, to explore and to express the music felt within. It encourages the participant to correct notes, timing, accents, dynamics and phrasing. The Dalcroze philosophy approaches the music in a way that encourages spontaneity and creativity.

Figure 2 summarises the more 'traditional' approach to musical learning as discussed above in contrast to the more creative attitude of the Dalcroze approach.

The researcher accepts that there are many viable and successful approaches to teaching music. Music is, however, an expressive art. It emanates from within. The performer should learn to feel the music, to absorb it, to give his body and soul to it; to listen to music not merely with his ear, but with his whole body (Dalcroze 1930).

| **Traditional** | **Dalcroze** |
|---|---|
| *Emphasis on learning notation* | *Emphasis on listening & responding* |
| *Begins with fine motor response* | *Begins with gross motor response* |
| *Sound is mechanically reproduced* | *Sound is heard within* |
| *Importance placed on playing correct notes* | *Importance placed on expression* |
| *Rote learning and imitation* | *Enquiring and creative attitude fostered* |

**Figure 2: A traditional approach versus the Dalcroze approach to teaching music**

Students participating in Dalcroze Eurhythmic classes are given the opportunity to experience music through the body. This physical experience, translated into a

learning experience, is not directly applied to a musical instrument. To apply musical learning to the playing of a musical instrument, the Dalcroze participant must be able to convert the information gathered through the psychomotor senses into a useable product which relates to the performance of the musical instrument, as opposed to the body.

Alperson (1995) describes the Dalcroze discipline as "somewhat mysterious". Conventional approaches to musical learning, based on auditory and visual stimulation, do not prepare the participant for the physical kinesthetic approach of the Dalcroze work.

Participants in the Dalcroze classroom have to learn to control and coordinate a new instrument - the body. However, in the same way that it is not sufficient for the ear to merely hear, the body must learn to process the information it is receiving through the kinesthetic sense. Many new participants to Eurhythmics are still struggling with understanding the approach, let alone being able to apply it to a related field.

Participants need direction to assist them in applying the work to instrumental performance. Whilst many exponents of the Dalcroze approach offer classes which assist in the physical enactment of music, very few actively participate in sessions designed to take this imagery on to the mechanical musical instrument. Karin Greenhead (UK) is prominent in this field (see Chapter 3.4) but this is an area that could receive more attention from accredited Dalcroze teachers throughout the world.

Choksy et al (1986 p.36) describes the Dalcroze process of musical learning as

***Hearing - Moving - Feeling - Sensing - Analysing - Reading - Writing - Improvising – Performance.***

The procedure for musical learning is explicit. In a Eurhythmics class the teacher directs the participant into experiences which will be converted into perception, information and cognition (Choksy et al 1986).

The process in a Eurhythmics class begins with intense directed listening. In response to what is being heard, feelings and ideas are organised and expressed by the participant into gross motor responses. The movements may be in place or may move through the space. It may involve the use of a prop, such as a ball or hoop. The response may be as simple as stepping in time to the beat or circling the arms to demonstrate the length of a phrase. At this stage the teacher may interact if assistance is required to improve responses or resolve problems. The participant may wish to revise the initial response which is now based on information from the kinesthetic memory. The kinesthetic response requires the participant to analyse what has been heard and felt. The participant may be encouraged to verbalise the experience. In a class setting, the group dynamic may involve the sharing of ideas.

The participant may now be led to a visual understanding of what has been learnt. The use of graphics and/or musical symbols evokes imagery which can be used to recall and to consolidate the experience. The body can now respond with more complexity and detail. The opportunity for creating or improvising on the content of the experience may be offered leading to performance.

The present study is concerned with individual instrumental learning. In the instrumental lesson, the above process can also be used to direct learning. Although

the format of a group eurhythmics class is very different to an individual instrumental lesson, the process of musical learning, as described by Choksy et al (1986), can be applied to both situations. In both instances, participants are led into experiences that require them to listen intensely, where feelings and ideas are organised according to kinesthetic recall and where analysing and correction evolve through a physical understanding of time, space and energy.

The use of imagery, which may simply involve the use of the score, following kinesthetic experiences assists recall and the capacity to add more detail to the expressive quality of the musical performance. The opportunity to improvise on the material may include manipulation of all or any of the elements. In the preparation of set works this may only entail manipulation of the expressive elements. Performance is the natural conclusion and consolidates the discoveries.

Having provided the background information pertaining to this study, the methodology selected for seeking answers to the research questions is now described.

## Chapter 5.0 Research methodology

This chapter describes the research methodology, data collection and evaluative procedures as applied to the present study. The research questions, as stated in Chapter 2.3, are restated below. The methodology was designed to obtain data to address these questions.

- Does experiencing the music through Dalcroze kinesthetic activities provide the performer with a more clearly defined image of how the music should be played?

- Do gross motor experiences provide an effective way of exploring expressive musical concepts separated from the constraints and technical demands of a musical instrument?
- Can a series of specific Dalcroze Eurhythmic-type activities facilitate the understanding and performance of the underlying rhythmic and expressive content of a musical work?

## 5.1 Review of related literature in research methodology

Information and the ability to use it, is fast becoming one of the world's most valuable commodities. It is essential to approach research as a process of sequential learnable activities (Bouma 1993). In *The Research Process*, Bouma presents the elements essential to developing research skills including selecting a research problem, collecting data and analysing information in order to reach conclusions about the original problem.

Research on music education is a complex field which can lead into many related disciplines (Kemp 1992). In Colwell (ed), *The handbook of research on music teaching and learning*, 55 chapters are devoted to the various aspects of music education research which serve to illustrate the diversity of the discipline and provide a comprehensive review of research methods.

Kemp, *Some Approaches to Research in Music Education* (1992), introduces the reader to the essential features of a number of methodologies. Contributors to the book present the reader with examples of selected methodologies including historical,

comparativist, experimental, qualitative and action-type research. The book also provides some guidelines relating to the writing of research reports.

For a more detailed understanding of prominent 'qualitative' methodologies relevant to the exploration of music education, Liora Bresler presents a unified view of five genres in *Basic and Applied Qualitative Research in Music Education* (1996). Whilst the qualitative genres facilitate new directions and contributions to the study of issues in music education, they differ in their research perspectives. An analysis of these genres, as specified by Bresler, assists the researcher to choose a methodology best suited to exploring the issues of the study.

The issue of applying a physical, kinesthetic approach to musical learning could be studied using a number of different methodologies. Future studies could, for example, consider the process from a comparativist viewpoint, as an action research study or for its historical contribution to music education.

## 5.2 Discussion of Qualitative research methodology and its application to this study

The current study is based on qualitative methodology which considers the study of events in their natural environment and from the perspective of those involved.

> The qualitative method of research supports the study of music in its natural contexts, drawing on participants' knowledge and experiences (Bresler 1996, p.5).

The researcher sets up a process by which the participants' experience and knowledge may be observed, information collected and evaluative procedures set in motion to address specific questions.

Whilst the fundamentally qualitative nature of this study deals with assumptions, its methodology includes quantitative methods in the form of statistics used to illustrate findings. These are not to be considered statistical in the sense of being subjected to statistical verification procedures.

The conduct of research in isolation from teaching and learning in their natural environment can cause a gap between theory and practice (Bresler 1996). There is no area of human inquiry that epitomises the qualitative more than artists at work (Bresler 1996). Qualitative inquiry is an essential part of seeking a deeper perception of the arts and of the processes involved in creativity. By observing and evaluating performers at work in a natural environment, the essential qualities of qualitative methodology are being recognised. In the present study, participants broaden their experience of Dalcroze methodology in working sessions organized and facilitated by the researcher who is their regular teacher in this field.

The study recognises the value of collaboration between the researcher and the participants. Whilst the researcher directs the practical sessions, it is with the purpose of

- assisting participants through a series of activities aimed at improving the expressive performance of their chosen works;
- collecting participants' perspectives through interview questions.

As applied fields, the study of performance and pedagogy involve the evaluation of present practice with the expectation that, with the discovery of improved skills, current approaches will be reviewed and modified by other practitioners. The

researcher is concerned with current approaches to the teaching of expressive performance. These concerns require illustrative observation of participants in order to define the problems and to propose solutions. Rather than attempt to arrive at causal explanations or understandings of a situation, qualitative research is designed to foster learning and to find solutions to problems (Bresler 1996).

As distinct from other fields, the study of pedagogy and performance requires the researcher to be a practitioner with significant experience of the subject together with a firm knowledge of the literature pertaining to the study (Kemp 1992). The identification of research problems arises from experience and knowledge in the field.

The present researcher's concerns with current attitudes to teaching expressive performance are based on her experience in the field. She has conducted several informal inquiries into the application of Dalcroze methodology to the improvement of expressive performance. The outcome of these classroom experiences have suggested that use of these techniques may directly improve the performer’s ability to play more expressively.

The identity and role of the researcher is integral for the study.

> In observational research the investigator is not only present, but is actively present (Kemp 1992, p.16).

The researcher in this study adopts an experimental approach engaging participants in a series of narrowly defined tasks within carefully controlled conditions. The researcher becomes engaged, with the informed consent of the participants, in pursuing the outcomes of selected intervention.

The goal of researchers is to become aware of their own subjectivities and values (Peshkin 1988, 1994). The researcher is an insider who aims to become aware of her own values as opposed to achieving an objective stance. The value system of the researcher will be evident during the entire research process: design, data collection, analysis and writing (Bresler 1996).

Bresler (1996) states that qualitative methodology signifies a paradigm shift, from a positivist toward a post-positivist worldview. The positivist paradigm isolates variables from their contextual settings in order to understand reality. The aim of qualitative research is not to understand reality but to explore different interpretations of that reality. In this study, this is achieved through empirical methodology which involves knowledge being derived from experience. It is based on the provision of a more clearly defined experiential memory which assists in obtaining a more refined account of what has occurred. Each participant explores their own reality and creates a product capable of being measured in sensory terms. Sensory data are data that can be seen, touched, measured or counted (Bouma 1993, p.12). Dalcroze approaches are singularly experience-based with the objective of creating defined imagery to assist understanding and recall.

The systematic process of collecting information about a specific problem, the scholarly interpretation of the information and the promulgation of the results in terms of the subject matter and the known research are vital to understanding the process of the teacher-learning situation. Information leads to objective foundations on which to base instructional techniques (Colwell 1970). The process of collecting information is closely related to the relevance of the research questions and to the design of the evaluative criteria. An understanding of currently accepted practices concerning

performance evaluation is vital to the credibility of the methodology. The following section reviews relevant literature and considers it in terms of the chosen evaluative design for this study.

## 5.3 Literature related to performance evaluation

> Evaluation is a judgement of the worth of an experience, idea, procedure or product. (Colwell 1970, p.3)

For the purposes of this study the term 'evaluation' will be used exclusively to refer to the collection, analysis, interpretation and application of information about participant performance. The term 'performance evaluation' is used to describe the evaluation technique that determines a participant's ability to perform an assigned musical task.

Loane (1982) states that evaluation, in the most educationally important sense of the word, involves an interaction between self-evaluation (analysing and making decisions about one's own performance) and teacher-evaluation (analysing and making decisions about the performance of another). Boyle (1992) states that, ideally, this interaction should take place in individually administered sessions. Under these circumstances the teacher is able to focus on individual performances drawing each participant's attention to aspects of their performance and to the skills required to improve the final product.

Swanwick (1998) states that, ultimately, evaluation and education are about enabling participants to make musical decisions, to evaluate their own work and to be able to independently transform and develop their own musical ideas.

> Fundamental to educational transactions is a process of interaction and comparison (Swanwick 1998, p.1).

The participant who is encouraged to employ listening skills and to be self-critical becomes able to discern nuances in the performance, to evaluate them and to rectify any perceived weaknesses. Rather than correcting the product, the teacher leads the participant through a process which provides the skills to be self-corrective.

By its nature, performance evaluation is often based on subjective reasoning and the evaluator's own standards for criteria. Mills (1991) states that all evaluation is subjective in the sense that it has been organised by human beings. However, Boyle (1992) discusses the accepted procedures for ensuring some objectivity in performance evaluation.

Some researchers have employed predetermined evaluative criteria (e.g. Fiske 1978; Hunter & Russ 1996; Winter 1993). Swanwick (1998) discusses several researchers' attempts to find and use a common set of evaluative dimensions. Abeles (1973), Bergee (1988, 1989), Saunders (1993) and Saunders & Holahan (1997), as cited in Swanwick (1998), all identify aspects of solo evaluation. A summary of these highlight interpretation, intonation, tone, rhythm, tempo and articulation as important performance dimensions in instrumental evaluation. These correspond to the conceptual structure of music generally considered to involve rhythm, pitch, melody, harmony, tempo, dynamics, timbre, structure, style and interpretation (University of Southern Queensland 1997, p.27). One's ability to use music as a medium of expression is dependent upon an understanding of these basic musical concepts (Bergethon 1998). The constituent parts, or concepts, are broken down from the complete idea of what music involves.

Testing tasks serve different functions which must be appropriate to their purpose. According to Radocy & Boyle (1987) collected data should be content-based, criterion-based or construct-based. Criterion-based data is collected for reference to criteria, or descriptions of performance standards for a particular task, that were specified prior to the participant's performance of the task. The present study has elected a criterion-based evaluation procedure in order that the participant's performance is measured against a consistent standard of achievement and not against the achievement of other participants.

Swanwick (1993), as cited in McPherson and Thompson (1998), proposes a criterion-based evaluative procedure for musical performance. It involves an eight level hierarchy of performance abilities designed for assessing all types of musical performances in a holistic setting.

> Evaluation of performances in formal music settings should involve criterion statements which are clear, qualitatively different from each other, brief enough to be memorable but substantial enough to be meaningful, able to be hierarchically ordered, and useful in a range of settings. Importantly, they should reflect the essential nature of the activity (Swanwick 1993, as cited in McPherson and Thompson 1998, p.19).

Using a rating scale ensures that the testing task becomes quantifiable. Several performance measures are available.

> Usability is a common sense consideration of ease in administration and scoring an evaluation device (Colwell 1970, p.27).

Selecting evaluative criteria strongly influences the evaluation process (Swanwick 1998). In developing criteria, it is important to consider the validity and reliability of

the evaluation. McPherson & Thompson (1998) describe validity and reliability as having independent aims. Validity describes the degree to which the evaluation design measures the intended variables. The present study ensures validity by selecting measuring instruments in the form of criterion-statements describing the currently accepted conceptual structure of music. By using a rating scale to read the data it also ensures the validity of the interpretation of the results.

Reliability, the consistency of the evaluation instrument to obtain comparable results, describes the degree to which the evaluation design ensures intra-judge and inter-judge consistency. Intra-judge consistency refers to the reliability of evaluations within the same panel member and inter-judge consistency to the reliability of evaluations between panel members. The criteria and rating scales are designed to describe, in statements and numerically, the range of predictable and accepted standards of musical performance. It is expected that a panel, conversant with these trends and practices, will be able to categorise the performances according to these standards.

### 5.3.1 Segmented and holistic evaluation

Criterion-referenced scales may be considered in terms of segmented or holistic evaluation. In *segmented evaluation,* evaluators award marks under a series of headings, with the final mark being some linear combination of these sub-marks. In *holistic evaluation,* evaluators are required to consider the performance in its own terms awarding a single mark.

Some researchers have found segmented evaluation to be valid for their purpose. For example, Abeles (1973) and Cooksey (1977) have used segmented approaches in performance analysis.

Mills (1991) argues against segmented evaluation suggesting that holistic evaluation is more musically credible, in the sense that it is closer to the way music is evaluated in the real world. Audiences tend to consider the performance as an entity and not in terms of assessing separate concepts.

> ...it makes no sense to dissect the performance, manipulate the bits, and then reassemble them (Mills 1991, p.175)

Fiske (1977) and Mills (1987) report experiments in which holistic evaluation was found to be more reliable in performance evaluation than segmented evaluation. Swanwick (1996) extends this view by stressing that such a complex activity as musical performance cannot be reduced to a number of single dimensions.

Boyle (1992) discusses criteria statements which reflect both particular (Segmented) and overall (Holistic) aspects of the performance.

> In many cases, evaluators employ some combination of holistic and segmented approaches (Boyle 1992, p.258).

McPherson & Thompson (1998) assume that a musical performance can be broken down into meaningful components. Whether this premise makes sense or not is a matter of personal decision. What can be stated, with some degree of certitude, is that a musical work can, and is, broken down into constituent or segmented parts for the purposes of practicing in order to improve the overall or holistic performance. The

process of communication between teacher and performer is largely based on this approach.

The criteria for performance evaluation, developed for the purposes of this study, reflect the case for both segmented and holistic evaluation. Criterion-referenced statements are included to evaluate both the constituent parts of the performance and the performance as an entity. The criteria for performance evaluation developed for the purposes of this study can be found in Chapter 5.7. The process of collecting data for this study is presented below.

## 5.4 Collection of data

As advocated by Boyle (1992) and discussed in Chapter 5.3, individual practical sessions were conducted with each participant by the researcher. By focussing on individual performances, the researcher enabled each participant to make independent musical decisions related to the development of their performance. The collected data, which included a first and second recording of the chosen work, reflected the process by which the participant had been encouraged to be self-critical and self-corrective during the practical sessions.

The common set of performance dimensions in instrumental evaluation (or musical concepts), identified in Chapter 5.3 and defined for the purpose of this study in Chapter 5.7, were introduced to each participant in practical activities during the collection of data.

- Eight musicians participated in the study. The first two sessions were used to form a pilot study to verify the procedures and evaluation mechanism.
- Each participant was asked to select a work in their current repertoire which they had played for at least eight months. This period implied that a certain level of attainment and facility of performance would have been reached.
- Participants worked on all aspects of the piece including expressive interpretation.
- The work, or extract of the work, would last not longer than two minutes in duration.
- The participant would know the piece either from memory or, at least, sufficiently to enable the participant to work away from the music. The score would be placed on the piano stand for reference during the session.
- Only the participant and the researcher were present in the sessions. This minimised disturbances, nervous tension and, as the participants were accustomed to the researcher in a teaching environment, created as natural an environment as possible.
- Each participant worked for an hour and a half in a private session with the researcher.
- Time was allocated as follows.

  5 minutes - Recording of first performance of chosen work

  60 minutes - Practical session

  5 minutes - Recording of second performance of chosen work

  20 minutes - Responses to interview questions

- The complete sessions, including a first and second performance of their chosen work, were recorded on audio-cassette for reference and for producing

transcripts of the interview questions. First and second performances were digitally recorded for the panel who evaluated the performances according to set criteria.

- During the sessions the participants responded to a set number of exercises and activities designed to assist the perception and performance of musical expression. The exercises incorporated body gesture and movement and use of props. Each session was conducted in the same manner.
- Participants were asked not to discuss the content of, or their responses to, the sessions with other participants until the collection of data had been completed.
- Participants' responses to the three research questions were noted following the sessions.

### 5.5 Selection of participants

In selecting the participants, an awareness of possible contextual variables which may affect the research was crucial. The term 'variables' is used to designate any measure that varies from participant to participant which may affect the outcome of the study. Limiting variables facilitates the data collection and analysis by enabling the results to be applicable to a wider range of settings and situations.

Level of performance skill on the piano and eurhythmic experience were considered to be the major qualifying factors for participation in the study. The activities designed for the data collection were dependent on an inferred level of ability and cognition for their effect.

All participants had studied Eurhythmics for the stated minimum period with the researcher herself. The pianoforte studies of the participants had been contained within a tutelage known and supported by the researcher. Other variables such as specific age ranges, gender and pre-conceived backgrounds are areas that, due to the small number of musicians who satisfied the major criteria for participation (i.e. piano skill and eurhythmic experience) were not used in selection of participants. In discussion of age range, the expectation of advanced piano skills had, by a process of natural elimination, narrowed the age range to adulthood. All participants were 18 years or older.

The exercises in the practical sessions were designed to focus on participants with advanced piano skills and who had previous experience in the Eurhythmic approach. Therefore, for the purposes of the study, all participants satisfied the following criteria:

- Participants had studied piano as their first instrument at a minimum standard of the Grade 8 Australian Music Examinations Board (AMEB);
- Participants had received regular eurhythmic training for at least three months.

## 5.6 Audio recording and interviews

As the sessions were conducted in private, they were audio-recorded in entirety to provide a record of events which will be available to interested parties or to be used as illustrations in any subsequent non-commercial presentation of this research work. Participants had agreed to these conditions by signing a Consent Form of which an example, together with other correspondence, may be seen at Appendix F.

The first and second performances of participants' pieces (16 performances in all) were recorded during the sessions and later placed on a CD for evaluation by the panel. The two performances of each participant were placed consecutively on the CD, but not necessarily in order of performance i.e. first performance followed by second performance or second performance followed by first performance. This introduced an element of comparability between the performances of the same participant and was suggested by the panel members, for ease of evaluation, during the Pilot Study. Whilst the panel members were aware that the performances belonged to the same participant, they were not informed of the order of performance.

At the end of the session, the response to the three research questions were sought and noted from the participants. These were considered in light of the panel's performance evaluations in the final analysis and to suggest possible future implications.

## 5.7 Evaluative Design

In the present study, the panel was called upon to evaluate the product (the first and second performances of each participant). The study focused on intra-personal comparisons i.e. between two performances played by the same performer. It did not

set out to compare one performer against another. This would have required consideration of factors not included in this study such as sample control and the issue of performer's dominant sensory systems as discussed by Cleveland (1987).

To ensure that the panel was able to evaluate effectively the performances of the participants, the following were considered of vital importance:

- relating the criteria to the specific problem;
- establishing clear criteria against which the performance would be evaluated;
- using a rating scale to indicate the extent to which each performer responded to the criteria in each performance;
- ensuring that the collected data was criterion-based;
- the validity and reliability of the evaluation task.

Each step of the evaluation procedure must reflect the research questions. Therefore, the setting up of appropriate evaluation criteria was essential. Correlation with accepted criteria of musical performance was expected as set out in Chapter 5.3. As discussed, the collection of data for evaluation by the panel was criteria-based. Criterion-referenced tests describe participant achievement in terms of what each participant can do and is judged against an absolute standard of performance (Boyle 1992). Participant's performances were evaluated using set criteria.

The scope of the present study considers kinesthetic experience and its relation to the improvement of expression in performance as stated in the Research Problems and Questions in Chapter 2.3. As such, the study confines itself to those concepts related

to the underlying expressive sense of the music. The evaluative criteria have been designed to reflect the application of expressive concepts to the two performances.

Whilst expression in music is effected by subtle transformations of any of the components of music, some of these concepts are more able to be manipulated towards expressive performance. Harmony, melody, rhythmic division and structure are predetermined patterns selected by the composer to create the structure of a musical piece. A performer will not normally change these constructs although they greatly influence the expressive nature of the piece.

Other concepts, such as tempo, beat, phrasing, dynamics and articulation which rely on time, space and energy for their effect, can be used by the performer to create a personal interpretation of the framework. For the purposes of this study, these concepts (Tempo, Beat, Phrasing, Dynamics and Articulation) will be referred to as the expressive concepts. Whilst the composer may suggest or impose an interpretation of the expressive concepts, decisions have to be made by the performer whether to adhere to these interpretations or whether to create an interpretation of one's own. The expressive concepts create the content upon which the criterion statements are formed.

In terms of the present study, where specific concepts within the performance are isolated and experienced in a bodily kinesthetic approach, the compartmentalisation of musical components is necessary. Improvement through the acquisition of new skills takes time and each concept was worked on individually. The evaluative criteria, consisting of segmented and holistic statements, reflect this process by

considering the performance in terms of individual concepts as well as the overall performance. The criteria for segmented evaluation were prepared by the researcher with consideration to the criteria for Performance detailed by the Senior Music Syllabus of the Queensland Board of Secondary School Studies (1995) and the AMEB Syllabus Objectives (1999) for Pianoforte examinations. The Secondary Schools' Syllabus considers musical performance in the three areas of Literacy, Technique and Interpretation. Tempi, Metre (Beat), Phrasing, Dynamics and Articulation, the expressive concepts considered relative to this study, are included as important segmented areas of performance.

The AMEB highlights performance development in the areas of Technique (including correct rhythmic control), Tone (including dynamic range), Phrasing (including articulation and phrasing), Style and, under a general heading, the development of an interpretative ability. These objectives are nationally agreed statements (AMEB 1996, p. 11) and support the concept areas chosen in the present study for the practical sessions i.e. Tempo, Beat, Phrasing, Dynamics and Articulation. In the present study the criteria for segmented evaluation are directly related to the activities and areas developed in the performance.

The panel also evaluated the performances in terms of holistic or overall achievement using a five level hierarchy of performance abilities employed by major examining boards including the AMEB (Examiners Handbook NSW 1997) and the Board of Senior Secondary School Studies Queensland (Senior Syllabus 1995). The AMEB uses a scale from A+ (High Distinction) to D (Not Satisfactory). The Board of Senior Secondary Schools describes this five point scale from Standard A to Standard E. The

present study numbered these standards from 1 - 5 to avoid any specific association with other scales.

Holistic criteria statements for this study were formulated by the researcher with consideration to the content and requirements of the grading exit criteria of the Board of Secondary School Studies and the grading criteria for AMEB pianoforte examinations.

The syllabus of the Board of Secondary School Studies considers the standards associated with exit criteria for Performance under the three areas of Literacy, Technique and Interpretation. These holistic statements deal with the contribution of each area to the standard of overall performance. During the practical sessions, participants worked on individual areas of performance which may relate to the consolidation of literacy, technical and interpretive skills. The holistic evaluative statements of the present study reflect these areas of performance.

The statements for holistic grading in the AMEB music examinations describe the performances mainly in terms of realising the syllabus objectives at a particular standard on the five point scale. As these objectives do not parallel the objectives of the practical sessions they have not been used in the Holistic evaluative statements of this study.

Swanwick's Criterion Statements for Musical Performance (1993 p.8) use an eight level hierarchy of performance abilities which address a wide range of performance

settings. However, for the present study they are considered too prescriptive. See Appendix C.

The researcher acknowledges that the individual components of a musical work are intrinsically related and aspects of performance can be influenced indirectly by working on separate parts. The writer also acknowledges that, although the process of developing individual concepts is of interest, the overall result must be considered in light of accepted performance standards and evaluation.

The researcher also acknowledges that the expectation on the performer to readily assimilate changes and immediately apply them to the instrument presents a challenge. The study, however, seeks only to ascertain if there is some improvement in expressive quality of performance following the activities and not to demonstrate that this improvement is radical.

It should also be considered that the focus of this study involves only five musical concepts which leaves a huge aspect of musicianship unreflected. Unless all parts of the whole (i.e. all musical concepts) are included, it could be argued that any evaluation of the holistic product could be unreliable. In its favour, the five musical concepts being used in the study contribute greatly to expressive performance and, as such, some changes to the interpretative quality of the performance may be expected.

The researcher acknowledges that any consideration of the expressive concepts and their effect on expressive performance, regardless of the type of approach, may effect an improvement in this area. To address this issue, participants were specifically

asked to consider the interpretative aspects of their performance prior to the working session. It was anticipated that they would come to the session with a performance that they considered to be expressively developed.

Furthermore, and in accordance with the opinion that those being evaluated should be conversant with the evaluation techniques and criteria to be used in evaluation (Queensland Board of Senior Secondary Studies 1995, p.47), copies of the evaluation design and criteria were made available to participants. The evaluative criteria are discussed in Chapter 5.8.

The participants' observation and interpretation of the process involved is of interest and relevance to the project. Some consideration should be given, outside of the more formalised collection of data for evaluation by a panel, to the opinion of the performer participating in the study - an element of qualitative research.

Each participant was given an opportunity to address the three key research questions. Whilst this information, which translates into a subjective appraisal of the process and product by the participant, was not formally used in the interpretation of the panel's results, it is included in the final discussion.

## 5.8 Evaluative Criteria

The criteria for evaluation involve segmented and holistic statements.

### 5.8.1 Segmented Approach

The panel evaluated the five areas of expressive performance specified for the purpose of this study as

- Beat
- Tempo
- Phrasing
- Dynamics
- Articulation

The evaluation involved criterion-referenced statements set against a rating scale to indicate the extent to which each performer responded to the criteria. These statements, without the rating scale, (see Figure 3, p.51) reflect an absolute standard of performance based on the areas worked on in the activities.

### 5.8.2 Holistic Approach

The panel evaluated the overall performances under the headings of Literacy, Technique and Interpretation using a five level hierarchy of performance ability. (See Figure 4, p.52)

See Appendix B for full Evaluation Sheets.

1. The tempo is appropriate to the style of the piece.
2. The pulse is regular, consistent and has a good sense of continuity and flow.
3. The choice of tempo facilitates a sense of ease in the performance.
4. Rhythmic division is clearly maintained throughout the performance.
5. In nuances of tempo, the performer demonstrates the ability to recall the original tempo.
6. The nuances of tempo (accellerando / ritardando) are effectively graded.
7. The performance demonstrates an appropriate and effective use of crusic, anacrusic and metacrusic beat.
8. There is a developed sense of the vertical and horizontal flow of the metre.
9. The performance demonstrates clearly and effectively the points of relaxation and impetus in the music.
10. The line of the phrases is clearly demonstrated.
11. The phrasing shows a natural sense of flow.
12. The dynamics are appropriately contrasted.
13. Stronger dynamic passages are effected by the increased use of energy and weight.
14. The rhythm remains controlled during changes of dynamic energy.
15. The dynamic nuances are effectively graded.
16. Staccato and legato passages are clearly and effectively articulated.
17. Articulation is appropriate to the style and character of the piece.
18. The articulation adds interest and expression to the piece.
19. The articulation supports the line of the phrase.

**Figure 3: Segmented evaluation criterion-referenced statements**

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**Literacy**

1. The reading of the score is consistently accurate producing a fluent and convincing performance.
2. The reading of the score is mostly accurate producing a mainly fluent performance.
3. The reading of the score is reasonably accurate producing an adequate performance.
4. The reading of the score is inconsistent which impedes the continuity of the performance.
5. The reading of the score is mostly inaccurate producing an incoherent performance.

**Technique**

1. Technical proficiency is consistently demonstrated at a high level of achievement.
2. Technical proficiency is substantial but with some deficiencies which do not significantly affect the overall performance.
3. Technical proficiency is adequate producing an acceptable overall performance.
4. Technical proficiency is basic with deficiencies that impede the overall performance.
5. Technical proficiency is lacking which significantly impedes the overall performance.

**Interpretation**

1. The interpretation is expressive, perceptive and sensitive and effectively conveys the mood, style and character of the music.
2. The interpretation is expressive and conveys with sensitivity much of the style and character of the music.
3. The interpretation conveys some of the style and character of the music.
4. The interpretation conveys little of the style and character of the music.
5. The interpretation does not convey the style or character of the music.

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**Figure 4: Holistic evaluation criterion-referenced statements**

## 5.9 The Evaluative Panel

The evaluative panel consisted of four experts in the field of music education in tertiary institutes. They were all experienced teachers and examiners with advanced skills in piano performance.

## 5.10 Pilot Study

A Pilot Study was conducted prior to the actual study to test the workability of the design. Two participants took part in the Pilot Study. The four performances of these participants were randomly placed on an audio CD and given to the panel to evaluate. As a result of these evaluations, two panel members made suggestions to improve the workability of the evaluation design. The following changes were implemented.

Instead of placing all performances at random on the CD, it was decided to place the first and second performance of each participant next to each other on the CD, but not necessarily in order of performance. This was to allow a degree of comparability between the two performances.

Instead of a segmented rating scale of 1 - 5 asking the panel to agree or disagree with the statements, it was decided to use a scale of 1 - 5 which allowed the panel to state to what extent the performance complied with the statement. The terms *"Not at all - Infrequently - Some of the time - Mostly - At all times"* were used in the final study in the place of *"Strongly disagree - Disagree - Neutral - Agree - Strongly Agree"*. As a result of the Pilot Study, it was decided to clarify the procedure prior to the commencement of the sessions. The participant would be invited to warm up on the

instrument but not to play through the chosen work so that the first recording was indeed the 'first performance'. However, in order to dispel performance anxiety, participants would be given the option of stopping and re-recording their work if they were uncomfortable with the performance.

As a result of the Pilot Study it was decided to only record the piano performances and interview questions using the digital recording equipment and to transfer these to an audio CD. Instructions and discussion during the practical activities were to be recorded using a portable recorder and audiotapes.

It was also decided that the logistics of setting up video recording equipment posed too many problems as the researcher could not operate the recorder and conduct the session. To have the presence of a technician filming in the studio during the sessions was contrary to the qualitative concept of studying events in their natural environment. It was decided that if, at a later date, footage of the sessions were required to illustrate the study, a session could be reconstructed for this purpose.

# Chapter 6.0 Data Collection

## 6.1 The format of the activities

Prior to the formal session, participants were to be welcomed by the researcher who explained the procedure for the session. The researcher attempted to create a relaxing and informal environment in accordance with the nature of observing qualitative study. It was pointed out that, although the two performances were to be recorded, the participant could stop and re-record their work if they felt their performance did not reflect their capabilities. Participants were invited to 'warm up' on the instrument.

The practical activities were conducted with consideration to the Dalcroze Learning Process (see Chapter 4.4) and to the vocabulary of movement used in the Dalcroze experience (see Chapter 4.3).

For each of the five designated concepts, participants were led through a five-stage process of experience.

1 Participants were asked to internalise *(inner hearing*) and play (*hear*) their prepared work.
2 A kinesthetic response was set up through gross motor action (*Move)* involving stimulation of the nerves, muscles and proprioceptors (*feeling and sensing).*
3 The participant was required to consider and/or verbalise this experience (*Analyse).*
4 If desired, the participant could write, draw or mark a visual representation of the internal image (*Writing / Reading).*
5 The participant returned to the piano and applied this imagery to the score changing and adapting as necessary to bring about the desired effect. (*Improvising: changing of material - Performance: consolidation of material).*

The participants were reminded of the vocabulary of movement as practised in their regular Eurhythmic classes and were invited to use all or any of this movement material to explore their prepared musical work.

After the first performance of the chosen work, the following activities were implemented. Activities, or parts of activities, could be performed more than once. An activity could be returned to and repeated during the course of the session.

Words in italic approximate the dialogue of the researcher. Dialogue, other than that noted, may be used to assist the participant in the execution of the activities.

## 6.2 Activity Sequence

The following procedure describes the general sequence of movement activities used in the data collecting process. The researcher, if she considers the participant needs assistance, may make suggestions to guide the participant's experience. This may include suggesting suitable props or movements for a given activity or direction if the participant demonstrates a misunderstanding of the musical content of the chosen work. In other words, the researcher will conduct the sessions in the role of teacher in order to facilitate the experience of the expressive content of the piece more clearly. Activites used by Greenhead (see Chapter 3.4) in workshops conducted at the Dalcroze International Summer Schools are cited to indicate where the researcher first observed this application. Activities not cited are considered to be more general activities used by eurhythmists in their teaching.

### 6.2.1 Tempo

- Hearing -Moving - Feeling - Sensing

  *You have just played your piece, would you now sing the piece inwardly to yourself, making as much or as little sound as you want, and move to show how you feel the tempo of this piece. You can walk, bounce on the mini-trampoline or use any movement that assists you in finding the tempo you require.*

Participant performs exercise.

- Analysing

  *Can you describe how the tempo feels?*

- Reading / Writing

  *Can you mark the music or draw an image on the paper to show how you felt the tempo?*.

- Improvising / Performance

  *Let's take that feeling to the piano and apply it.*

The participant plays the section.

### 6.2.2 Beat

- Hearing -Moving - Feeling - Sensing

  *This time, as you sing and step the pulse, would you use the ball to show where there is weight or accent in the music. If the weight goes down you might bounce the ball. If the weight goes up you might throw the ball. You can lift and lower the ball or you can hold the ball still if you sense those things in the music (*Greenhead 1998, 1999, 2000).

Participant performs exercise.

- Analysing

  *How did that feel?*

- Writing / Reading

  *Can you mark the music or draw an image on the paper to show how all or part of that felt?*.

- Improvising / Performance

  *Let's take that feeling to the piano. Can you play what the ball did?*

The participant plays the section.

### 6.2.3 Phrasing

- Hearing -Moving - Feeling - Sensing

  *This time, move through the space using any movement you like and show the line of the phrase with the scarf. Change direction if you sense the music changes direction or reaches the end of a phrase length.*

Participant performs exercise.

*Repeat the exercise inhaling before a new phrase and exhaling through the phrase.*

- Analysing

  *How did that feel?*

- Writing / Reading

  *Can you mark the music or draw an image on the paper to show how you felt all or part of the phrasing of the music?.*

- Improvisation / Performance

  *Let's take that feeling to the piano. Can you play what you did with the scarf?*

The participant plays the section.

### 6.2.4 Dynamics

- Hearing -Moving - Feeling - Sensing

  *Can you express the dynamic quality of the piece? If you feel the section should be played loud this may be shown by using more space as you move or by larger gesture. If the section is soft then you may use less space and perform smaller gestures. Explore the dynamics.*

Participant performs exercise.

- Analysing

  *How did that feel?*

- Writing / Reading

  *Can you mark the music or draw an image on the paper to show how you felt all or part of the dynamics of the music?*.

- Improvisation / Performance

  *Let's take that feeling to the piano. Can you use the same space, energy and weight to play the dynamics?*

The participant plays the section.

### 6.2.5 Articulation

- Hearing - Moving - Feeling - Sensing

  *Use the same phrasing but allow the scarf to show the articulation of the piece. Where the articulation is detached or sustained this may be shown in the action of the scarf.* (Greenhead 1998, 1999, 2000)

  Participant performs exercise.

- Analysing

  *How did that feel?*

- Writing / Reading

  *Can you mark the music or draw an image on the paper to show how you felt all or part of the articulation?*

- Improvisation / Performance

  *Let's take that feeling to the piano. Can you play what the scarf did?*

The participant plays the section.

The researcher notes that the notion of 'playing what the ball or scarf did' was introduced to her during Greenhead's sessions at the DISS (1998, 1999, 2000)

For information on the application of the musical concepts to kinesthetic experience see Appendix D

### 6.3 Interview questions

Immediately following the working session, participants were asked for their response to the three key research questions (See Chapter 4.3). Their responses were recorded for later consideration.

The practical sessions, as described in Chapter 6.0, were conducted over a two-week period. Digital recordings, criteria sheets and musical scores were given to the panel for evaluation. For titles of works presented by the participants see Appendix 10.8. The results and analysis of these evaluations are presented in Chapter 7.0.

## Chapter 7.0 Data Analysis

Following the data collection, the recordings of the participants were dispatched to the panel members, together with musical scores of the works performed, criteria sheets and instructions for evaluating the performances. (See Appendix B for examples of criteria sheets and instructions for panel).

Marks awarded by each panel member to individual participants for each of their first and second performances in the segmented categories were totalled. This process was repeated for each individual first and second performance in the holistic categories.

The researcher was then able to tabulate these results and define where the panel members perceived that second performances had improved following the working sessions.

It is reiterated that the statistical information issued in the following results should be regarded as a guide which assists in the comparison of the two performances of each participant and is not presented as absolute proof of differences. The sample of participants is too small for statistical procedures to be rigorously applied.

## 7.1 Panel evaluations

The results of the panel evaluations are presented in four categories in terms of

1. Overall results (which segmented and which holistic performances were awarded more, less or the same marks).
2. Segmented results (the combination of segmented marks awarded to individual participants for their first and second performances).
3. Holistic results (the combination of holistic marks awarded to individual participants for their first and second performances).
4. Combined results (the combination of segmented marks awarded to all first and all second performances of the whole group of participants and the combination of holistic marks awarded to all first and all second performances of the whole group of participants).

### 7.1.1 Overall segmented and holistic results

| | PT/ A | PT/ B | PT/ C | PT/ D | PT / E | PT / F | PT/ G | PT/ H |
|---|---|---|---|---|---|---|---|---|
| PANEL 1 | | | | | | | | |
| PANEL 2 | | | | | | | | |
| PANEL 3 | | | | | | | | |
| PANEL 4 | | | | | | | | |

**Table 1: Overall segmented and holistic evaluation results**

First performance better than second  Second performance better than first  Both performances same mark

PT = PARTICIPANT

From Table 1 it can be observed that, out of 32 evaluations (i.e. 8 performances evaluated by four panel members), 22 evaluations found the second performance to be better than the first, 9 evaluations found the first performance to be better than the second and one evaluation awarded the same mark to both the first and second performances.

In all cases the segmented and holistic evaluation of each performance concluded the same order of preference. Therefore, in Chapter 7.1.1, overall results are combined and Table 1 is a combination of the results shown in Tables 2 and 4.

Table 1 shows the following results.

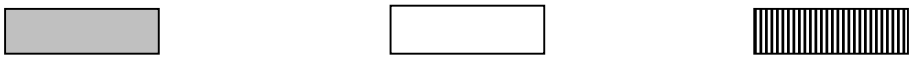
- The panel unanimously agreed that the second performances of participant B, C and F were better than the first performance.

- Three out of four panel members agreed that the second performances of participant A, D and G were better than the first.
- The panel unanimously agreed that the first performance of participant E was better than the second.
- Two out of four panel members agreed that the first performance of participant H was better than the second. A third panel member awarded the same mark to both performances.

### 7.1.2 Segmented results

| | | PT/ A | PT/ B | PT/ C | PT/ D | PT/ E | PT/ F | PT/ G | PT/ H |
|---|---|---|---|---|---|---|---|---|---|
| PANEL 1 | 1ST PERF | 68 | 66 | 50 | 67 | 75 | 51 | 52 | 72 |
| | 2ND PERF | 61 | 76 | 75 | 75 | 67 | 54 | 63 | 76 |
| PANEL 2 | 1ST PERF | 62 | 46 | 41 | 63 | 63 | 52 | 56 | 76 |
| | 2ND PERF | 73 | 61 | 58 | 76 | 55 | 57 | 65 | 70 |
| PANEL 3 | 1ST PERF | 67 | 57 | 37 | 70 | 68 | 63 | 53 | 78 |
| | 2ND PERF | 69 | 62 | 69 | 64 | 61 | 73 | 66 | 74 |
| PANEL 4 | 1ST PERF | 70 | 52 | 46 | 68 | 68 | 48 | 57 | 76 |
| | 2ND PERF | 76 | 54 | 56 | 72 | 63 | 57 | 53 | 76 |

**Table 2: Segmented evaluation results**



Second performance better than first  First performance better than second  Both performances same mark

The segmented marks awarded to individual participants for their first and second performances can be seen in Table 2. The bold shaded areas show where second performances were seen to have improved over first performances.

Table 2 shows the following results.

- Although one panel member found the first performance of Participant A to be better than the second performance, overall the second performance rated more highly.
- Although the first performance of Participant H was preferred by two panel members, the difference between the two performances overall is marginal.
- The first performance of Participant E was clearly preferred by all panel members.

| Participant | PERF 1 out of possible 380 | PERF 2 out of possible 380 | Performance 2 better than performance 1 by | Performance 1 better than performance 2 by |
|---|---|---|---|---|
| A | 267 | 279 | 12 marks (3%) | |
| B | 221 | 253 | 32 marks (8%) | |
| C | 174 | 258 | 84 marks (22%) | |
| D | 268 | 287 | 19 marks (5%) | |
| E | 274 | 246 | | 28 marks (7%) |
| F | 214 | 241 | 27 marks (7%) | |
| G | 218 | 247 | 29 marks (7%) | |
| H | 302 | 296 | | 6 marks (1%) |

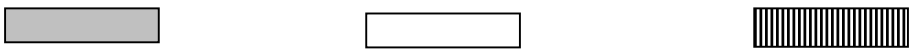
**Table 3: Combined segmented marks of individual performances**

When marks were totalled for each first and each second performance of the individual participants, six out of eight performances were seen to have improved following the working session indicating an overall success rate of 75%. These totals and results are noted at Table 3.

### 7.1.3 Holistic results

| | | PT/ A | PT/ B | PT/ C | PT/ D | PT/ E | PT/ F | PT/ G | PT/ H |
|---|---|---|---|---|---|---|---|---|---|
| PANEL 1 | 1ST PERF | 12 | 11 | 7 | 9 | 12 | 7 | 9 | 13 |
| | 2ND PERF | 10 | 11 | 10 | 11 | 9 | 9 | 11 | 14 |
| PANEL 2 | 1ST PERF | 12 | 6 | 6 | 9 | 9 | 6 | 7 | 15 |
| | 2ND PERF | 14 | 7 | 7 | 11 | 8 | 7 | 8 | 12 |
| PANEL 3 | 1ST PERF | 13 | 8 | 6 | 13 | 12 | 7 | 9 | 15 |
| | 2ND PERF . | 14 | 8 | 8 | 12 | 10 | 11 | 12 | 13 |
| PANEL 4 | 1ST PERF | 12 | 8 | 7 | 10 | 10 | 6 | 9 | 15 |
| | 2ND PERF | 14 | 9 | 8 | 12 | 9 | 7 | 10 | 15 |

**Table 4: Holistic evaluation results**



Second performance better than first  First performance better than second  Both performances same mark

The holistic marks awarded to individual participants for their first and second performances can be seen in Table 4. The bold shaded areas show where second performances were seen to have improved over first performances.

Table 4 shows the following results.

- Although one panel member found the first performance of Participant A to be better than the second performance, overall the second performance rated more highly.
- Although the first performance of Participant H was preferred by two panel members, the difference between the two performances overall is marginal.
- The first performance of Participant E was clearly preferred by all panel members.

| Participant | PERF 1 out of a possible 60 | PERF 2 out of a possible 60 | Performance 2 better than performance 1 by | Performance 1 better than performance 2 by |
|---|---|---|---|---|
| A | 49 | 52 | 3 marks (5%) | |
| B | 33 | 35 | 2 marks (3%) | |
| C | 26 | 33 | 7 marks (11%) | |
| D | 41 | 46 | 5 marks (8%) | |
| E | 43 | 36 | | 7 marks (11%) |
| F | 26 | 34 | 8 marks (13%) | |
| G | 34 | 41 | 7 marks (11%) | |
| H | 58 | 54 | | 4 marks (6%) |

**Table 5: Combined holistic marks of individual performances**

In terms of combining the holistic marks allocated to each first and second performance for each participant, the same observations as for the segmented marks is noted. Out of eight performances, six were seen to have improved following the working session indicating an overall success rate of 75%. These results are summarised at Table 5.

### 7.1.4 Combined results

Whilst the study does not set out to compare one performer against another, it was decided to total all the marks awarded (in separate categories of segmented and holistic) to first performances and all the marks awarded to second performances to

establish the overall degree of improvement, or otherwise, in second performances within the whole group. The combined results in the segmented category are seen in Table 6.

| | | PT/ A | PT/ B | PT/ C | PT/ D | PT/ E | PT/ F | PT/ G | PT/ H | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| PANEL 1 | 1ST PERF | 68 | 66 | 50 | 67 | 75 | 51 | 52 | 72 | 501 |
| | 2ND PERF | 61 | 76 | 75 | 75 | 67 | 54 | 63 | 76 | 547 |
| PANEL 2 | 1ST PERF | 62 | 46 | 41 | 63 | 63 | 52 | 56 | 76 | 459 |
| | 2ND PERF | 73 | 61 | 58 | 76 | 55 | 57 | 65 | 70 | 515 |
| PANEL 3 | 1ST PERF | 67 | 57 | 37 | 70 | 68 | 63 | 53 | 78 | 493 |
| | 2ND PERF. | 69 | 62 | 69 | 64 | 61 | 73 | 66 | 74 | 538 |
| PANEL 4 | 1ST PERF | 70 | 52 | 46 | 68 | 68 | 48 | 57 | 76 | 485 |
| | 2ND PERF | 76 | 54 | 56 | 72 | 63 | 57 | 53 | 76 | 507 |

**Table 6: Segmented evaluation results**

Combined total of second performances better than first performances

As seen in Table 6, second performances as a group were awarded more segmented marks than first performances.

Table 6 shows the following results.

- Panel member 1 awarded in total 501 points to first performances and 547 points to second performances resulting in second performances receiving 46 points more than first performances.

- Panel member 2 awarded in total 459 points to first performances and 515 points to second performances resulting in second performances receiving 56 points more than first performances.
- Panel member 3 awarded 493 points to first performances and 538 points to second performances resulting in second performances receiving 45 points more than first performances.
- Panel member 4 awarded 485 points to first performances and 507 points to second performances resulting in second performances receiving 22 points more than first performances.

| | 1ST PERFORMANCES out of possible 760 marks | 2ND PERFORMANCES out of a possible 760 marks | 2ND PERFORMANCES BETTER THAN 1ST BY A DIFFERENCE OF |
|---|---|---|---|
| PANEL 1 | 501 | 547 | 46 marks (6%) |
| PANEL 2 | 459 | 515 | 56 marks (7%) |
| PANEL 3 | 493 | 538 | 45 marks (6%) |
| PANEL 4 | 485 | 507 | 22 marks (3%) |
| TOTAL | 1938 (63.75%) | 2107 (69.3%) | 169 (5.5%) |

**Table 7: Combined segmented evaluation marks of all first and second performances**

As a total, first performances were awarded 1938 points and second performances were awarded 2107 points, a difference of 169 points in the favour of second performances. These figures are summarised in Table 7.

| | | PT/ A | PT/ B | PT/ C | PT/ D | PT/ E | PT/ F | PT/ G | PT/ H | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| PANEL 1 | 1ST PERF | 12 | 11 | 7 | 9 | 12 | 7 | 9 | 13 | 80 |
| | 2ND PERF | 10 | 11 | 10 | 11 | 9 | 9 | 11 | 14 | 85 |
| PANEL 2 | 1ST PERF | 12 | 6 | 6 | 9 | 9 | 6 | 7 | 15 | 70 |
| | 2ND PERF | 14 | 7 | 7 | 11 | 8 | 7 | 8 | 12 | 74 |
| PANEL 3 | 1ST PERF | 13 | 8 | 6 | 13 | 12 | 7 | 9 | 15 | 83 |
| | 2ND PERF. | 14 | 8 | 8 | 12 | 10 | 11 | 12 | 13 | 88 |
| PANEL 4 | 1ST PERF | 12 | 8 | 7 | 10 | 10 | 6 | 9 | 15 | 77 |
| | 2ND PERF | 14 | 9 | 8 | 12 | 9 | 7 | 10 | 15 | 84 |

**Table 8: Holistic evaluation results showing each panel member's allocation of marks to all first and second performances**

Combined total of second performances better than first performances

The combined results in the holistic evaluation are presented in Table 8. As can be seen, second performances as a group were awarded more holistic marks than first performances.

Table 8 shows the following results.

- Panel member 1 awarded 80 points to first performances and 85 points to second performances resulting in second performances receiving 5 points more than first performances.
- Panel member 2 awarded 70 points to first performances and 74 points to second performances resulting in second performances receiving 4 points more than first performances.
- Panel member 3 awarded 83 points to first performances and 88 points to second performances resulting in second performances receiving 5 points more than first performances.
- Panel member 4 awarded 77 points to first performances and 84 points to second performances resulting in second performances receiving 7 points more than first performances.

| | 1ST PERFORMANCES out of a possible 120 | 2ND PERFORMANCES out of a possible 120 | 2ND PERFORMANCES BETTER THAN 1ST BY |
|---|---|---|---|
| PANEL 1 | 80 | 85 | 5 marks (4%) |
| PANEL 2 | 70 | 74 | 4 marks (3%) |
| PANEL 3 | 83 | 88 | 5 marks (4%) |
| PANEL 4 | 77 | 84 | 7 marks (6%) |
| TOTAL | 310 | 331 | 21 marks (4%) |

**Table 9: Combined holistic evaluation marks of all first and second performances**

As a total, first performances were awarded 310 points and second performances were awarded 331 points, a difference of 21 points in the favour of second performances. These figures are summarised in Table 9.

### 7.1.5 Summary of data analysis

Overall, the panel awarded more marks, in both segmented and holistic evaluations, to second performances than to first performances.

In overall segmented and holistic categories, the panel found that

- 69% of second performances were better than the first performance.
- 28% of first performances were better than second performances.
- 3% of performances received the same mark for the first and second playing.

In both segmented and holistic categories, the panel found that

- 75% of second performances were better than first performances when individual marks for each participant were combined.

In segmented categories, the panel found that

- when marks of all first performances were combined and all second performances were combined, second performances were awarded 5.6% more points than first performances.

In holistic categories, the panel found that

- when marks of all first performances were combined and all second performances were combined, second performances were awarded 4.4% more points than first performances.

## 7.2 Researcher's observations

Observations, made by the researcher during the sessions and as a result of the panel evaluations, are recorded below.

### 7.2.1 Researcher's observations of participants during the sessions

The following general observations were noted by the researcher during the sessions.

- Although all participants had prior experience in eurhythmic training, they came to the session with different attitudes towards their involvement in applying this to their piano performance. Those with reservations did not appear to allow this to influence their participation. All eight participants appeared to cooperate to the best of their ability.

- All participants gave positive feedback after the session. All participants voiced that they had found the sessions valuable and perceived that their performances had improved as a result of working in this way. These comments are recorded in the transcripts of the interview questions in Appendix F.

- The researcher observed that some participants tended to work in only the small area of the studio closest to the piano. It was only with encouragement that these participants moved into the full space to work away from the piano.

- As the tapes recording the activities confirm and as observed by the researcher, it was found that, regardless of the standard achieved in the first performance, not one of the participants came to the session with a clear idea of the expressive content of their work. Although, in some cases, the performance was successful, the participants experienced difficulty verbalising how they had played the concepts. In particular, dynamic markings and phrasing had not been analysed and could not be described before working on them. Examples are noted below.

  **Example 1**

  The researcher asked a participant how many phrases were in a section of the music. The participant did not know. The participant looked at the score and was still unclear. Only after moving, whilst internalising the score, was an answer offered.

  **Example 2**

  Following an effective performance, the researcher inquired why the participant had decided not to follow the dynamic markings on the score. The participant stated that he had been unaware that the composer had marked specific dynamic markings on the piece and had, therefore, not considered them or adhered to them in any way. Whilst this could suggest that the

participant merely failed to read the score correctly, it should be remembered that participants were instructed to work on all aspects of the piece including expressive interpretation before coming to the sessions. The example serves to illustrate that this student had been unable to explore the dynamic interpretation without assistance. The participant proceeded to try these ideas out stating that the piece now made much more sense.

**Example 3**

One participant stepped a duple beat for her chosen work. As the piece was in triple time, the researcher asked what the time signature was. The participant was unable to answer the question. When stepping the beat, she discovered the metre of the piece.

- As the interview transcripts demonstrate, some of the participants found it difficult to put the findings of their session into words. Concepts involved with spatial imagery and movement are discovered through kinesthesia, and are not explored in conventional approaches to piano performance. These experiences were generally more difficult for the participants to define.

In summary, the researcher notes the positive involvement and positive feedback of all of the participants in the sessions. In all cases, participants arrived at the sessions without a clearly defined understanding of their performance. In many cases, participants had difficulty working in a non-traditional environment involving moving away from the confines of the piano and defining their performance in terms of spatiality and muscular sensation.

### 7.2.2 Categories of first performances evaluated higher than second performances.

It has been noted that 22 out of 32 evaluations found the second performance to be better than the first. The remaining 10 evaluations, which found that the second performance had not been improved by the working session, can be considered in four separate categories. These findings are tabulated in Table 10.

| | ST A | ST B | ST C | ST D | ST E | ST F | ST G | ST H |
|---|---|---|---|---|---|---|---|---|
| Panel 1 | Category 2 | | | | Category 1 | | | |
| Panel 2 | | | | | Category 1 | | | Category 2 |
| Panel 3 | | | | Category 3 | Category 1 | | | Category 2 |
| Panel 4 | | | | | Category 1 | | Category 4 | Category 2 |

**Table 10: Categories of non-improved performances**

**Category 1**

Four of the evaluations noted above were assigned to participant E who was observed by the researcher to demonstrate an unease and nervousness throughout the session, particularly when recording the performances. This resulted in the second recording not necessarily being indicative of the progress made during the session. Panel members felt that the second performance was played at too slow a tempo to be effective. This may have been brought about by the researcher's attempts to put the candidate at ease prior to recording the second performance. It may also have been brought about by the participant's limited movement skills, which hindered the ability to step the pulse at the required slow tempo. Suggestions were made to the participant to experience the tempo by transferring the weight from side to side instead of forwards. However, the researcher believed that this had not been as effective as transferring the weight forwards.

**Category 2**

Four of the evaluations noted above, were assigned to more advanced performances, in terms of standard of technique and level of interpretation, (Participant A and H)) where the issue of personal preference could become a consideration. In these performances, the researcher noted that the first performance was already of a very high standard, both technically and expressively, and was aware that any changes to the piece would not necessarily improve it becoming subject to the personal preference of the listener. This theory could be supported by the fact that one panel member assigned the same mark to the first and second performance of Participant H.

**Category 3**

One of the evaluations noted above, was assigned by one panel member to participant D. The recordings of this participant were used in the Pilot Study. It is of interest to note that, when evaluating these performances for the Pilot Study, this panel member found the second performance to be better than the first. When evaluating the same recordings for the final study, the panel member found the first performance to be better than the second. This has been documented to illustrate that, despite attempts to provide objective criteria, the issue of evaluating performance is to some extent dependent on human subjectivity, which is subject to change in itself.

**Category 4**

The remaining evaluation (Participant G by Panel member 4) is given a category of its own because there is no apparent explanation why this panel member preferred the

first performance to the second in contrast to the other members. It serves as a reminder of the subjectivity of the human critic.

### 7.2.3 Possible connection between levels of kinesthetic experience and improvements in performance

An interesting observation demonstrates itself in the combined segmented marks of individual performances (Table 3). There was a notable difference in levels of movement ability and kinesthetic response amongst the participants. The two participants with the most Dalcroze Eurhythmic experience, i.e. Participants A and D displayed an improvement between first and second performances but with a smaller difference between the two marks than the other participants who displayed improvements in their second performances. See Table 11.

| Participant | Performance 2 better than performance 1 by |
|---|---|
| A | 12 |
| B | 32 |
| C | 84 |
| D | 19 |
| E | N/A |
| F | 27 |
| G | 29 |
| H | N/A |

**Table 11: Correlation between Dalcroze experience and improved performance**

Participants with most Dalcroze experience and least improvement in performance

Participants with least Dalcroze experience and most improvement in performance

Not applicable

NB Figures reflect segmented evaluation marks.

This might suggest that these participants had already, consciously or unconsciously, applied kinesthetic response into their playing. Further research into the area of applying kinesthetic response to performance might include measuring levels of prior experience, measuring the ability to apply experience to instrumental performance and evaluating dominant learning systems.

### 7.3 Overview of interview responses

It should be noted that, although the interview questions were predetermined, it was sometimes necessary to ask further questions in order to clarify the question and to obtain answers. The general comments of the participants are noted below. Full transcripts are included in Appendix E.

**Question 1**

**Does experiencing the music through Dalcroze kinesthetic activities provide the performer with a more clearly defined image of how the music should be played?**

The participants stated that the kinesthetic approach had allowed them to 'feel' the concepts in the body and through the muscles. This provided them with a concrete experience of the concept as opposed to a mere mental idea of the concept. By moving through the space, some participants noted that they were able, not only to 'feel' the concepts in the body but, to 'see' the concepts in space. As they moved, they had something to see which allowed the concept to become a visual concept. By using the kinesthetic, auditory and visual senses, the concept became more defined and internalised.

The participants described a variety of images created by the kinesthetic activities. The concepts were aided by object imagery (e.g. elastic bands stretching), muscular sensation (e.g. contraction of muscles for soft dynamics and extension of muscles for loud dynamics), spatial imagery (e.g. horizontal and vertical lines, direction) and stories and characters. The participants found using props, such as balls and scarves, to have been of great assistance.

The imagery assisted the participants to define how the musical piece should be performed giving a clearer idea of the differences between the musical sections and greater ability to recall these differences while performing.

**Question 2**

**Do gross motor experiences provide an effective way of exploring expressive musical concepts separated from the constraints and technical demands of a musical instrument?**

The participants reported that the gross motor experiences had provided an opportunity to discover how they felt the music should be played even if, technically, they were not yet able to put this into practice. Separated from the technical demands, they found they were able, in a relatively short time, to see the music in terms of the bigger picture.

Some participants found they discovered things through the activities that they had not considered in the music before. When seated back at the piano, they reported a less mechanical and more flowing response to their performances as they allowed the expression of the music to become the central focus as opposed to the notation.

**Question 3**

**Can a series of specific Dalcroze Eurhythmic-type activities facilitate the understanding and performance of the underlying rhythmic and expressive content of a musical work?**

Participants felt the activities were logical and structured, allowing the individual to explore each concept and to make decisions concerning the performance of that concept. The piece became unified as the performer became aware of the separate concepts and how they affect each other when they combine in performance. The activities were considered to be sufficiently flexible to allow them to be used to explore expression in performance by any performer.

Defining the five concepts increased the participants' awareness of what is involved in expressive performance.

All but one participant felt that starting with tempo and pulse had laid the foundations on which they could build the remaining concepts. The other participant felt it would have assisted her to have started with a less regulated concept such as phrasing.

### 7.3.1 Summary of interview responses

Participants related how experiencing the music kinesthetically improved their ability to feel and see musical concepts in terms of something more than a mental idea. They reported that, separated from the technical demands of the instrument, they were able to explore the expressive content of the music to a greater degree than previously and

this enhanced the flow of their performance when they returned to the instrument. The activities enabled the participants to build on skills and to acquire a deeper understanding of the music.

The findings, conclusions and implications of the analysis of the data are considered in Chapter 8.00.

# Chapter 8.0 Findings, conclusions and implications

## 8.1 Restatement of aims, identified problems and research questions of current study

The current research sets out to determine the benefits of applying Eurhythmic techniques to the preparation of piano works by undergraduate musicians. It intends to demonstrate the potential of a kinesthetic approach to teaching music by

- establishing through an investigation of available literature the value of a musical training that involves the use of the whole body in response to musical concepts.

- applying these techniques to specific pianoforte performances which, evaluated by a panel, will ascertain the possible merits of using Dalcroze principles to improve expression in musical performance.

The current paper identifies three specific problems that the researcher associates with musical learning.

1. Music is abstract.

2. The pyrotechnical demands of learning a piece can prevent the exploration of expressive content.
3. For the majority of performers, it will be necessary to set up a program of specific activities designed to assist the emotive intuition to understand and apply expressive content to a musical work.

Three research questions have been specified to attempt to address these problems.

1. Does experiencing the music through Dalcroze kinesthetic activities provide the performer with a more clearly defined image of how the music should be played?
2. Do gross motor experiences provide an effective way of exploring expressive musical concepts separated from the constraints and technical demands of a musical instrument?
3. Can a series of specific Dalcroze Eurhythmic-type activities facilitate the understanding and performance of the underlying rhythmic and expressive content of a musical work?

## 8.2 Findings, conclusions and implications

The available literature discusses the historical background of, and the current trends in using the kinesthetic sense as a tool in musical learning. There appears to be a consensus of opinion amongst those involved in this area that kinesthetic learning has value and potential. There remains, however, a lack of substantial research in this area.

In Chapter 7.1.5, the evaluations of the panel are summarised. Overall, it was noted that the panel considered more second performances were better than first performances. When considering these results in terms of each individual performance, 69 % of second performances were considered better than the first. When totalling up the marks allocated to each performance by all panel members, a figure of 75% of second performances were found to be better than the first. Whilst these figures do not categorically demonstrate the case of the kinesthetic contribution, they do, nevertheless, point in its favour. As reported in Chapter 5.7, the study seeks only to ascertain if there is some improvement in expressive quality of performance following the activities and not to demonstrate that this improvement is radical.

Where marks of all participants were combined in terms of first and second performances, the marks are less convincing. The researcher has not omitted them as they serve a purpose. Second performances received 5.6% more points than first performances in combined segmented marks and 4.4% more points in the combined holistic marks. Combining the marks of different participants, in this instance, does not reflect the actual improvements found in the second performances due to wide differences in performance ability and, therefore, differences in mark allocation. First and second performances should, in this case, only be considered in relation to each other and not to other performances.

In light of the panel evaluations, the researcher concludes that, as a result of applying Eurhythmic techniques to the preparation of specific pianoforte performances, improvements were observed in the musical expression of the majority of the works.

In terms of feedback from participants, this was positive and unanimous in its agreement that applying eurhythmic techniques to the preparation of musical works had changed the perception of how the piece should be played. Participants were all of the opinion that, as a result of this work, their pieces had improved and their understanding of the expressive content of the pieces had become more defined.

The researcher believes there is sufficient evidence to suggest that Dalcroze kinesthetic activities have, in this instance, provided the performer with a more clearly defined image of how the music should be played. Throughout the sessions, participants verbalised that concepts were more clearly defined as a result of the activities. This was evidenced by the way in which the expressive content of the performances gained greater clarity and definition during the session and when evaluated by the panel.

In this instance, gross motor experiences appear to have provided an effective way of exploring musical concepts separated from the constraints and technical demands of the musical instrument. Throughout the session, participants were seen to discover concepts that they had previously not considered when confronted with the pyrotechnical demands of performance at the instrument. The feedback from the participants confirms this. Improvements in performance noted by the panel evaluations suggest that the experience provided an opportunity for improved expressive content.

The study confirms that using a series of specific Dalcroze Eurhythmic activities can facilitate the understanding and performance of the underlying rhythmic and

expressive content of musical works. The positive reaction to the series of activities used in this study by the participants, both in outcomes of performance and verbally, suggests that this series of activities was successful.

The researcher ascertains from the data analysis, the feedback from the participants and observations of the sessions that a positive outcome to the activities has been established.

The implications of these findings point to a need for more research in the bodily kinesthetic approach to musical learning, particularly in areas of instrumental performance.

The researcher views the present study as a possible pilot study for a longitudinal study over a longer period of time and involving a wider sample, which might include a variety of ages, experience levels, instruments, learning environments and backgrounds.

The researcher believes the notion of Eurhythmics, as applied to instrumental learning, would be enhanced with the addition of more substantial research into the field which may work towards a more comprehensive understanding of the role of kinesthetic learning amongst music educators.

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# Chapter 10.0 Appendices

## 10.1 Appendix A

**Lists of Books, Journal Articles and Theses taken from the Dalcroze Society (USA) website:**
http://www.dalcrozeusa.org/bibliography.htm (31 August, 2000)

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## 10.2 Appendix B Criterion statements

### 10.2.1 Segmented statements

**EVALUATION OF PERFORMANCE** _____
*(Please add appropriate letter)*

For each performance, indicate the extent to which you agree with the following statements by circling the number closest to your evaluation.

**1. The tempo is appropriate to the style of the piece.**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**2. The pulse is regular, consistent and has a good sense of continuity and flow**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**3. The choice of tempo facilitates a sense of ease in the performance**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**4. Rhythmic division is clearly maintained throughout the performance**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**5. In nuances of tempo, the performer demonstrates the ablity to recall the original tempo**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**6. The nuances of tempo (accellerando / ritardando) are effectively graded**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**7. The performance demonstrates an appropriate and effective use of crusic, anacrusic and metacrusic beat**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**8. There is a developed sense of the vertical and horizontal flow of the metre**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**9. The performance demonstrates clearly and effectively the points of relaxation and impetus in the music**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**10. The line of the phrases is clearly demonstrated**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**11. The phrasing shows a natural sense of flow**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**12. The dynamics are appropriately contrasted**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**13. Stronger dynamic passages are effected by the increased use of energy and weight**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**14. The rhythm remains controlled during changes of dynamic energy**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**15. The dynamic nuances are effectively graded**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**16. Staccato and legato passages are clearly and effectively articulated**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**17. Articulation is appropriate to the style and character of the piece**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**18. The articulation adds interest and expression to the piece**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |

**19. The articulation supports the line of the phrase**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A | Not at all | Infrequently | Some of the time | Mostly | At all times |