THE IMPACT AND LOCAL IMPLEMENTATION OF STANDARDS-BASED MUSIC CURRICULUM POLICY FRAMEWORKS AND MUSIC EDUCATION PROGRAMS FOR STUDENTS WITH DISABILITIES AND IMPAIRMENTS IN VICTORIA: A QUALITATIVE EVALUATION

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THESIS

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ABSTRACT
This study is in response to national, state and local curriculum issues. Curriculum work is taken to embrace curriculum research and theory, and curriculum development and implementation. This study is a critical reflection on current curriculum work as a day-to-day experience. This study is about the impact and local implementation of standards-based curriculum frameworks for students with disabilities and impairments. The focus is to develop an improved understanding of the extraordinary complexities that encompass standards-based music curriculum policy frameworks for these students in the State of Victoria. For most people, a better understanding of these extraordinary complexities may much reduce fear, unease and distrust. The phenomenon would seem logical.

This study explores ways in which public curriculum policy is developed and implemented in modern societies like Australia. This study is a critical reflection on moves to change curriculum, curriculum policy framework initiatives and the institutional contexts that shape the impact and implementation of curriculum. Public curriculum policy formation is challenged by competing pressures and limitations including an increasing emphasis on ‘partnerships’ and ‘networking’. There are difficulties and complex challenges to ensure that all students share in the benefits.

DECLARATION
This is to certify that

(i) the thesis comprises only my original work toward the PhD
(ii) due acknowledgement has been made in the text to all other material used
(iii) the thesis is less than 100,000 words in length exclusive of tables, maps, bibliographies and appendices

ACKNOWLEDGEMENTS
As an undergraduate teacher education student (nearly thirty years ago), I quickly developed a keen interest in curriculum development and implementation. It did not take long into my career as a teacher to be challenged head-on by what appeared to be entirely insufficient economic and political commitment to curriculum development and implementation for students with disabilities and impairments. There appeared to be an important story to tell.

There have been many people who have journeyed with me that must be thanked. It has been a privilege to work with many esteemed colleagues in the academic hotbed that is The Arts and Creative Studies Stream (formerly the Department of Language, Literacy and Arts Education) in the Faculty of Education in the University of Melbourne. First, Associate Professor Lee Emery, who acted as primary supervisor for this study. I was inspired by Lee’s work as primary co-writer in the development and implementation of national standards-based curriculum materials in *The Arts* in the early 1990s. Second, the late Dr. Pat Long, who acted as secondary supervisor for this study. Pat was an inspirational teacher of postgraduate courses in Special Education in the University of Melbourne (formerly Melbourne College of Advanced Education) during the 1980s and 1990s. Pat was a valued colleague on the state chapter of a national professional teaching association of teachers in the special education sector. It also seems fitting to thank Associate Professor John O’Toole and Dr. Neryl Jeanneret who agreed to supervise this study in its final stages.

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This study is dedicated to all curriculum workers including teachers, parents, students, administrators, policy makers and others whose work impinges on curriculum development and implementation. Heartfelt thanks to the students,
parents and staff at my workplace on whom I placed many so many demands throughout the research period. In particular, special thanks to Ann, Val and Carolyn for their continued support.

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CHAPTER 1
THE TEACHER-RESEARCHER

1.0 The Issue

In my view, special education work is challenging and exciting. The needs of students (and adults) with disabilities and impairments have become the shared responsibility of both educators and many other allied health professionals in recent years. The unique patterns of special education service delivery to students with disabilities and impairments will require special education teachers to work in multidiscipline teams that may include teachers across primary, secondary and specialist school settings and allied health professionals.

Special education teachers are often recognized as having highly developed specialized knowledge and pedagogical expertise. Some highly specialized attributes may only be demonstrated by the special education teacher (e.g., the special education teacher may work with students with severe, profound and multiple disability and impairment, students with hearing impairment or students with vision impairment). They keep abreast of and contribute to generalist and specialist learning and contribute to the professional learning of all team members.

The Student with Special Needs. The structure and functioning of the human brain includes the development and organization of the nervous system, brainstem function, motor control systems and sensory systems. Students with abnormalities in these processes present with a combination of challenging disabilities and impairments. These disabilities and impairments may lead to severe limitations of movement, problem-solving, socialization, and communication. Some students may require total care and be medically at risk. Epilepsy may be common and often not completely controlled by medication. They may have concomitant impairments such as hearing and vision loss. Physical abilities may vary considerably from well formed fine motor skills such as reaching, grasping, and manipulation to a complete lack of voluntary independent physical movement. Some students may seem unable to comprehend or adapt to unfamiliar environments and events manifesting in difficulty in transitions from familiar to unfamiliar situations. Similarly, these students may
not appear to demonstrate recognition of familiar people, including family,
teachers and therapists. They may vary considerably in their ability to understand
and communicate information. Some may be able to make use of simple language
or alternative communication systems, whilst others may be quite unable to
communicate needs or responses effectively.

Grossman (editor) (1983, p. 5) developed the most widely used and
accepted definition of intellectual disability:

… significantly subaverage general intellectual functioning existing
concurrently with deficits in adaptive behaviour and manifested during the
developmental period …

The American Association on Mental Retardation (2002), the American
Psychiatric Association (1994) and Baroff (1986) defined and described four
levels of intellectual disability and respective levels of support thus:

<table>
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<th>Level</th>
<th>Percentage of Population</th>
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<tr>
<td>mild</td>
<td>≈ 85% of the population with an intellectually disability</td>
</tr>
<tr>
<td>moderate</td>
<td>≈ 10% of the population with an intellectually disability</td>
</tr>
<tr>
<td>severe</td>
<td>≈ 3% to 4% of the population with an intellectually disability</td>
</tr>
<tr>
<td>profound</td>
<td>≈ 1% to 2% of the population with an intellectually disability</td>
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In late 2004, the Australian Bureau of Statistics estimated that about 4% to
4 1/2% of the population with an intellectually disability have severe, profound and
multiple disabilities and impairments. Severe, profound and multiple disabilities
and impairments may cause problems so extreme that they produce major
obstacles to even the most basic experiences of life.

Intellectual disability is not caused by a single factor. More than 200
causes have been identified, albeit that etiology is unknown in as many as 75% of
cases (Brantley 1988). Intellectual disability may be caused before birth
(prenatal), during birth (perinatal) or after birth (postnatal). More common causes
of intellectual disability include:
• infection and intoxication, e.g., Rubella, Syphilis, Meningitis, Encephalitis, drug and substance abuse such as alcohol, nicotine or cocaine
• trauma or physical agents such as prenatal, perinatal or postnatal traumatic brain injury such as car/motorcycle accident or physical abuse
• metabolism or nutrition such as metabolic, nutritional, endocrine or growth disorders such as Phenylketonuria (PKU), Galactosemia, Hurler Disease, Cretinism
• cranial abnormalities such as Microcephaly, Hydrocephaly, Apert Syndrome
• brain disease such as brain tumors, Neurofibromatosis (also known as Von Recklinghausen’s Disease)
• chromosomal abnormality (among genetic disorders that cause intellectual disability, chromosomal abnormalities are the most frequent) such as Down Syndrome, Fragile X Syndrome


Physical disability refers to abnormalities of the musculoskeletal system, extremities, spine and related structures. Development and advances in anaesthesia, antiseptics and surgical techniques and refinement of diagnostic equipment, e.g., x-rays, magnetic resonance imaging (MRI) and computerized tomography (CT scans) have changed the approach to the treatment of orthopaedic problems. More common physical disabilities include Cerebral Palsy, primarily caused by nonprogressive brain damage which results in difficulty related to movement, posture and muscle tone. The severity may range from minor coordination difficulties to such severe involvement that total care is required. It may include paralysis, weakness, poor coordination or other motor dysfunction. Respiratory and swallowing problems may occur. Damage may result in concomitant impairments including epilepsy, intellectual disability, speech disorders, learning disabilities and hearing and/or visual impairment (Barr 2000). Subclassification is according to the affected topography (monoplegia, hemeplegia, diplegia, triplegia, paraplegia and quadriplegia) and damage to related areas of the brain (spastic, athetoid, rigid, ataxic, tremor, atonic) (Haslem 2000).
Spina Bifida manifests in various types of congenital spinal chord and nerve root abnormalities (Garber 1991, Haskell & Barrett 1993). Muscular Dystrophies are hereditary neuromuscular disorders where progressive weakness of all muscles in the body attributed to a degeneration of muscle cells and their replacement by fat and fibrous tissue (Gordon 1993). Other categories of physical disabilities include Juvenile Rheumatoid Arthritis, Arthrogryposis and Osteogenesis Imperfecta.

Sensory perception (i.e., hearing, sight, taste, smell and touch) provides important information about the properties of the environment. Sensation and perception may initially seem simple, but turns out to be extremely complex. Sensory impairment includes different types and severities of hearing and visual loss. A conductive hearing loss often results from recurrent infection in the outer or middle ear. A sensorineural hearing loss often results from damage to the hair cells in the inner ear or to the auditory nerve (e.g., Presbycusis, Noise-Induced Hearing Loss, Tinnitus, Meniere’s Disease). Hearing loss differs in severity ranging from slight to extreme. In general, the greater the severity of loss, the greater the impact the impairment has on communication skills and language development. Total hearing loss is rare. More often, people with hearing impairment have some usable residual hearing. A congenital hearing loss is present at birth. Infection, trauma, loud noises or drugs may result in an acquired hearing loss. Prelingual (before acquisition of communication and language) hearing loss generally leads to greater speech and language deficits than postlingual (after acquisition of communication and language) hearing loss (Glattke 1980). A number of sensory aids include hearing aids, cochlear implants and assistive alert devices for telephone and television. Technology associated with these sensory aids is changing rapidly.

Visual impairment may be caused by disorders of eye movement (e.g., Nystagmus, Strabismus, AMAurosis, Cataract, Chorioretinitis, Retinoblastoma), Glaucoma, infections in the eye (e.g., Conjunctivitis, Trachoma, Keratitis), diseases of the retina (Rettinitis Pigmentosa, Retinopathy), optic nerve anomalies (e.g., Optic Nerve Aplasia, Optic Nerve Hypoplasia, Cortical Visual Impairment, Cortical Blindness) or injury. Just as with hearing impairment, visual impairment does not necessarily mean total absence of visual sensation (Getman 1992, Griffin & Webman 1996, Skaggs & Hopper 1996). Other categories of disability and
impairment include emotional and/or behavioural disorders (e.g., eating disorders), specific speech and language learning disorders, malignant diseases (e.g., Leukemia, Tumors, Lymphomas), Asthma, Cystic Fibrosis and Diabetes.

It appears that it is important that the teacher of students with disabilities and impairments acquire understanding of the manifestations of impaired patterns of growth and development in children. These are discussed further in the next chapter. Students need to move from involuntary to voluntary, from accidental to intended, from indifference to interest, from confined to expressive, from random to purposeful, from gross to fine, from exploratory to preconceived, from isolated to integrated, from solitary to individual. The need to develop basic skills of concentration, some vocabulary knowledge and other communication-language skills, and being able to cooperate in a group, are abilities that many teachers in mainstream primary school and secondary college settings assume of every student entering such settings. These early skills are often achieved in very modest, hard-won steps for students with disabilities and impairments, particularly those with severe, profound, and multiple disabilities and impairments. Furthermore, these skills may be more crucial than academic abilities to personal independence and social adjustment in the adult life of a person living with a disability or impairment. Special education teachers are adept at managing the range of complex and challenging behaviours which arise from disability and/or impairment.

*Focus on Music in Special Education.* Categories of potential research questions concerning trends and issues affecting special education are numerous. For example, it seems that whether one studies musicians and their music, the processes of music, the performer, the composer, or the teacher-researcher, writers commonly seem to observe that music aids in the establishment of desirable interpersonal relationships. Gaston (1968), Kaplan (1990) and Merriam (1964) suggested that the greatest potential of music appears to arise in group situations. The individual often subordinates his or her own interests to those of the group. Self expression becomes socially acceptable. Music appears to enhance the social situation. The other side of good interpersonal relationships is self esteem brought about through music making. Musicians are able to utilize the unique properties of music elements to energize and bring order. Without them there is no periodicity. There is little order and nearly always chaos.
Rhythm appears to be the most potent and dynamic music element. Thus, in music, there is a gentle insistent but dynamic persuasion to change behaviour and in doing so to achieve a happy confidence and satisfaction. Musical styles change. Musical functions do not. Pleasant diversions, a profound aesthetic, a symbolization of a nationalistic or religious ideal are all roles which music may fulfill. More is said of this in the section on the Past and Present Contexts of Music in the next chapter.

In a typical music program, musical thinking is unique and diverse. A student brings his or her experiences, strengths and weaknesses. Some students learn easily, others require much assistance. Some are well behaved, others mischievous. Some are friendly, others ill at ease with their peers. A student may have difficulty preparing, creating, and interpreting scores that use conventional music notation. A student may demonstrate technical competence, and artistic and aural awareness in playing a chosen instrument, but may find imaginatively selecting and combining music elements to improvise and compose musical works that clearly express ideas extremely difficult. Such variations contribute to the wonder of individual patterns of musical thinking.

The uniqueness and diversity increases when students with disabilities and impairments are members of a music program. Such students may be integrated into local mainstream primary school and secondary college settings and/or dual enrolled in specialist school settings. In many ways, students with disabilities and impairments are indistinguishable from gifted and talented students or students from multicultural backgrounds. Such students can participate in meaningful musical experiences. Such students are individuals with different personalities, tastes, skills and needs. Like all students, they present very different demands.

I had a few key issues for in-depth study:

- what are the strengths and weaknesses of standards-based music curriculum frameworks for students with disabilities and impairments?
- what is the overall effectiveness of such frameworks where the desired outcome is to enhance musical thinking for students with disabilities and impairments?
- how can standards-based music curriculum frameworks be improved for such students in Victoria?
- what do participants like and dislike?
The study will:

- indicate the degree of congruence of profiles of musical achievement for students with disabilities and impairments in relation to the profiles of musical achievement in the standards-based music curriculum framework in Victoria
- help substantiate the comprehensiveness of the content of a program for such students
- assist in determining the impact of a program on both the individual students and the group
- help monitor and reflect on the effectiveness of activities in relation to the extended profiles of student achievement for such students
- assist in the development of new programs, units of work, individual activities and tasks, and how to’s at the classroom level for such students

Personal insights and experiences characterize these issues.

An improved understanding of the extraordinary complexities that encompass standards-based music curriculum policy frameworks for these students demanded wide research and review of the literature relating to the nature of learning and teaching music. Foundation practical training and academic music studies (e.g., Practical Instrumental and/or Voice Study, Aural Training, Ensemble and/or Chamber Music, Group Music Skills, Music History, Music Analysis, Music Criticism and Aesthetics, Music Techniques, Composition, Orchestration, Conducting, Music Technology) are assumed.

National and international research and theory from topics in several academic disciplines are explored in Chapter Two. Topics in the core disciplines of Music Education (e.g., Music Psychology, Curriculum Studies, Systems of Music Education) and Music in Special Education and Music Therapy (e.g., Curriculum Studies and Music Methods in Special Education and Music Therapy) are explored.

Topics in Medicine and Health Sciences include Structure and Functioning of the Human Body; Nutrition, Digestion and Metabolism; Cardiorespiratory, Musculoskeletal and Sensorimotor Systems; Immune Mechanisms; Growth and Development and Medical and Paramedical Care of Children and Adolescents (Paediatrics). Topics in Psychology include Neuropsychology, Psychophysiology, Motivation, Awareness, Emotion, Attention
and Performance, Perception, Memory, Personality, Cognitive and Social Development and Social Psychology. Topics in Linguistics and Applied Linguistics include Phonology, Phonetics, Syntax, Semantics, Morphology and Language Acquisition.

Chapter Three examines national and international research and theory relating to qualitative inquiry and evaluation. Topics include The Research Context, History and Research Traditions, Theoretical Paradigms and Perspectives, Criteria for Judging Quality and Credibility, and Case Study and Action Research Strategies. Research methods in special education and music therapy are also considered. Approaches to the collection, display and analysis of qualitative data are considered. Ethical and political issues are explored.

Chapter Four develops a standards-based music curriculum policy framework that includes profiles of musical achievement for a defined classroom grouping of five students with disabilities and impairments aligned with the elements of the 1995 standards-based music curriculum framework in Victoria. A ten-week music program is developed and implemented with the defined classroom grouping of students from the extended standards-based music curriculum framework.

Comprehensive, systematic and in-depth assessment and reporting that describe patterns of musical thinking within and across in this defined classroom grouping in relation to the profiles of musical achievement are provided in case study format in Chapter Five (Brady & Kennedy 2005). The concluding chapter suggests future directions for the development and implementation of standards-based music curriculum policy frameworks for students with disabilities and impairments into the new millennium.
1.1 Towards Inclusivity: Notions of Inclusive Education, Integration and Normalization

Development and implementation of public policy may turn out to be quite contrary to the aspirations expressed in a public policy. Public policy may not provide guarantee of uniformity or quality of experience. Public policy may create quite different experiences for different individuals. Development and implementation of public policy and the study of society are inextricably linked. Public policy work is an economic, political, social and cultural construction which seems to typically serve the interests of particular social groups at the expense of others. Public policy work involves identifying these interests and informs more appropriate action.

Social and cultural theory appears to suggest that contemporary society and culture is extremely diverse (Lyotard 1984). For example, Derrida (1978) suggested that ideas about difference are considered to involve more than just respect for equal opportunity and diversity. Difference involves an extended understanding of otherness and the development of sensitivity to otherness that begins with a secure sense of self, location of our own social and cultural history. Ideas about difference are often established through use of language and appear to be inextricably linked not just to proliferation of meanings, but also to the development of individual and social identities over time. Language operates as a site of struggle among different groups, who for various reasons, police its borders, meanings, and orderings. Language provides the self-definitions upon which people act, negotiate various subject positions, and undertake the process of naming and renaming relationships between themselves, others, and the world. Language is used to frame and legitimate different meanings of the world. It is both a symptom and a cause of economic, political, social and cultural understanding. It is through language that people both name experience and act as a result of how that experience is interpreted.
In order to describe how language serves to marginalize certain social and cultural groups, Derrida deconstructed language by taking pairs of terms by which one may ascribe binary opposites. For example, masculinity is understood in opposition to understandings of femininity. Identity as Australian is understood in opposition to understandings of other world races and cultures. Homosexual orientation is understood in opposition to understandings of heterosexual orientation. Identity with a particular religious grouping is understood in opposition to understandings of other world religious groupings. So the terms disability and impairment are understood in opposition to understandings of whatever is defined as normal or typical.

Derrida thought of one of the pairs of terms as dominant - the Being. He took the side of the minor term - the Other - and asked the reader to imagine the minor infiltrating the dominant. He considered classification of terms arbitrary and suggested that hierarchies of terms can therefore be dismantled. Derrida coined the term ‘difference’ (from the French: *différance*) that keeps the ear alert to the call of the Other, not of the Being.

This social and cultural theory has challenged very powerful economically efficient and politically expedient values with social and cultural values centred on equal opportunity and diversity. For example, Clark (1996, p. 31) suggested that:

… marginalizers and those they marginalize … and advocated listening to … voices from the margin … voices which speak to the concepts of diversity and difference … voices that belong to individuals and groups long marginalized in modernism’s white, male universe of urban chic … in particular women, people of colour, ethnic minorities, gay and lesbians, the physically challenged, non-urbanites and those living anywhere in poverty ...

Social and cultural theory has called for those who advocate social and cultural values to emerge with voices that have produced very positive effects. For example, apparently the Australian poor in the early 1970s were overwhelmingly people who, for various reasons, were unable to receive satisfactory incomes from work (i.e., working people who could not afford health services, education, welfare services or decent housing and therefore depended on the social security system) (Henderson 1975). Henderson’s fundamental criticism
of the social and cultural impact of the postwar economic boom was that, despite the considerable benefits of full employment, sufficient generosity was not afforded to these poor. Henderson accordingly recommended a targeted redistribution of wealth, i.e., improved health, education and welfare services, and more public housing to the poor through the social security system.

Social and cultural theory has had a profound influence on social and cultural attitudes toward people with disabilities and impairments. Equal opportunity and diversity has meant increased support for many more students with disabilities and impairments in primary, secondary and specialist school settings. However, there have always been children with disabilities and impairments, but there has not always been special education. Crockett and Kaufman (1998) provided an insight into the various lenses throughout history through which children with disabilities and impairments have been viewed. For example, during the closing years of the eighteenth century, approaches to effective teaching were devised for teaching the blind and the deaf – those living with visual and hearing impairment. Jean Marc Gaspard Itard (1775-1838), a prominent French physician and authority on diseases of the ear and on education of those with a hearing impairment, is the person to whom most trace the beginning of special education as we know it today. Itard’s mentor, Philippe Pinel (1745-1826), also a prominent physician and an early advocate of humane treatment of the insane, advised him that his efforts would be unsuccessful.

Examination of nineteenth century views of children’s behavioural disorders suggested that prior to the American and French revolutions, the most that was given to such children was asylum from the cruel world into which they did not seem to fit, nor survive with dignity, if at all (e.g., Ball 1971, Kauffman 1976, Lane 1976). As the ideas of democracy, individual freedom and egalitarianism swept America and France, there was attitudinal change. Political reformers and leaders in medicine and education began to champion the cause of those living with disabilities and impairments, urging that these imperfect or incomplete individuals be taught skills that would allow them to be independent, productive citizens. These humanitarian sentiments went beyond a desire to protect and defend. The early leaders, most of whom were European physicians, sought to normalize such children to the greatest extent possible and restore to them the human dignity they seemed to lack. Many were young, ambitious
people who challenged the wisdom of the established authorities, including their own friends and mentors.

The first systematic attempts were made to educate idiot and insane children - those who today live with intellectual and emotional disability. Itard’s student, Edouard Seguin (1812-1880) had become famous as an educator of students with intellectual disability even though most social and educational critics of the day were convinced that such students could not be taught anything of significance. Seguin immigrated to the United States in 1848. The work of Seguin provided much of the foundation for the work of Maria Montessori (1870-1952), the first Italian woman to receive a medical degree, who not only became known as an advocate of early childhood education, but as an educator of persons with intellectual disability.

Among the young Americans concerned with special education was Samuel Gridley Howe (1801-1876), an 1824 graduate of the Harvard Medical School, physician, educator, political and social reformer and champion of humanitarian causes and emancipation. He founded the Perkins School for the Blind in Massachusetts (where Helen Keller was taught). Thomas Hopkins Gallaudet (1787-1851) was a Minister of Religion who travelled to Europe to learn about the education of persons with a hearing impairment. Upon his return to the USA in 1817, he established the first American residential school for the hearing impaired in Hartford, Connecticut.

Notions of inclusive education, i.e., integration, normalization and least restrictive environment were espoused by Wolfensberger (1972) and Wolfensberger and Zauha (editors) (1973) in the early 1970s. For example, the United Nations General Assembly proclaimed the year 1981 International Year of Disabled Persons in December 1976. It established an Advisory Committee for the International Year of Disabled Persons in 1977. In December 1980, the theme of the International Year of Disabled Persons was expanded to ‘… full participation and equality …’. The World Program of Action Concerning Disabled Persons was adopted by the United Nations General Assembly in December 1982:

… at least 10 per cent of children are disabled … they have the same right to education as non-disabled persons and they require active intervention
and specialized services… [but] … most disabled children in developing countries receive neither specialized services nor compulsory education … there is a great variation from some countries with a high educational level for disabled persons to countries where such facilities are limited or non-existent … there is a lack in existing knowledge of the potential of disabled persons … [furthermore] … there is often no legislation which deals with their needs and a shortage of teaching staff and facilities … disabled persons have in most countries so far not benefited from a lifelong education … significant advances in teaching techniques and important innovative developments have taken place in the field of special education and much more can be achieved in the education of disabled persons … [but] … the progress is mostly limited to a few countries or only a few urban centres … the advances concern early detection, assessment and intervention, special education programs in a variety of settings, with many disabled children able to participate in a regular school setting, while others require very intensive programs … (preamble to resolution 37/52, 37th regular session of the United Nations General Assembly, 3 December 1982)

In order to provide a time frame during which Governments and organizations could implement the activities recommended in The World Program of Action Concerning Disabled Persons, the General Assembly proclaimed 1983-1992 the United Nations Decade of Disabled Persons (General Assembly resolution 37/52).

By the end of the 1990s inclusive educational systems and improved practice in education systems included a variety of policy and program initiatives in response to notions of inclusive education for people with disabilities and impairments. Yell (1998) provided an overview of many of these policy and program initiatives. For example, in the USA such policy and program initiatives include Education of All Handicapped Children Act (Public Law 94-142) (Education of All Handicapped Children Act 1975), Towards Equity: Education of the Deaf (Commission on Education of the Deaf 1988), Procedures Governing Programs and Services for Children with Special Needs (North Carolina Department of Public Instruction 1993) and Individuals with Disabilities Education Act (IDEA) (Individuals with Disabilities Education Act 1997).

Visser and Upton (1995) provided insights into the impact of such policy and program initiatives in the English public education system, e.g., Warnock
They suggested that special educators have continually needed to examine how best to work with colleagues in mainstream primary school and secondary college settings to enable students with disabilities and impairments to gain access and success to a full curriculum. Special educators have not been silent about their need to be included in curriculum reform. However, teachers in mainstream settings so often seemed to be deskilled in so far as they were either told, or felt that they could not teach these students, often having to rely almost exclusively on their own resourcefulness and initiative in developing expertise.

Australian education has historically had a substantial concern with the education of students with disabilities and impairments. Education legislation and practice is essentially based on the principle of equality of access at all levels. The Australian Federal Government, in cooperation with Australian State and Territory Governments has played an increasing role in promoting equity and an education that reflects commitment to social justice. In particular, the Racial Discrimination Act (1975), Sex Discrimination Act (1984), Affirmative Action Act (1986a), Human Rights and Equal Opportunity Act (1986b) and Disability Discrimination Act (1992) protect the rights of all Australians against unfair treatment on the basis of race, sex, race, marital status, pregnancy, family and carer responsibilities and disability and impairment (Human Rights and Equal Opportunity Commission 1975, 1984, 1986a, 1986b, 1992).

Approaches to special education have changed over time. Typically, there has been separate provision of education (i.e., specialist school settings for students with disabilities and impairments). Since the early 1980s, there has been an increasing emphasis on integrating such students into mainstream schools and classes. Primary and even lower secondary education is provided in a few specialist school settings. The types of provision vary widely between the Australian States and Territories as Australian State and Territory governments have the constitutional and major financial responsibility for school education.

Long (editor) (1988, 1994) and Ashman (editor) (1988) provided insights into the impact of such policy and program initiatives in Australian public education systems, e.g., Collins (1984), Cullen and Brown (1992) and Cullen and

... much constructive thinking as well as considerable hot air ... successful integration of disabled students with disabilities and impairments has encompassed well publicized projects involving several schools, their teachers and students ... (to) ... individual placements managed without fanfare or government funding ...

The 1988 and 1994 volumes include discussion papers on integration perspectives, assistive technology, directions in assessment, cooperative strategies and post-school options.

Ashman (1988, p. v) commented that ‘… many problems being confronted by educators today are much the same as they were twenty years ago…’. Nonetheless, the challenges of inclusive education continue to assume a position of prominence in contemporary education. The volume includes discussion papers on issues in integration, service provision and research. Issues in integration include the non-restrictive environment, the difficulty of achieving integration in some school systems, similarities and differences in integration between Australia and the United States of America. Service provision includes the integration of young physically handicapped children, the integration of students with a hearing impairment, social skills training, developing curriculum and school organizations and the cry for inservice education for mainstream teachers.

Christensen and Rizvi (editors) (1996), Gill (1999), Seelman (2000), Skrtic (1995) and Swander and Lubeck (editors) (1995) described paradigms that have shifted the location of problems with disability and impairment from the individual to environmental responses to disability and impairment that evolved from the legacy of these scholars, activists with disabilities and impairments and their non-disabled allies. The paradigms frame disability and impairment from the perspective of a social and cultural minority group that is defined as a dimension of human difference and not as a defect. The goal for people with disabilities and impairments is not to eradicate their disability or impairment but to celebrate their distinctiveness, pursue an equal place in society and acknowledge that their differentness is not defective but valued.
Many education systems throughout the world have accepted responsibility for the education of all students irrespective of disability or impairment. Initiatives in special education sectors have led to more inclusive educational systems and improved practice in recent decades. Key challenges highlighted in these respective public laws, reports and reviews in response to notions of inclusive education, integration, normalization and least restrictive environment for people with disabilities and impairments include development and implementation of curriculum framework initiatives including those with the most severe, profound and multiple disabilities and impairments, teacher education and professional development programs. However, even at the end of the 1990s, the issue of mainstreaming appeared to have neither disappeared, nor become sufficiently integrated into practices they become little discussed facts of life that were no longer of concern to educators even after the passage of the respective public laws, reports and reviews.

As in earlier times of worldwide turmoil and opportunity, the early twenty-first century has been marked by acts of terrorism and war, financial chaos, uncertainty regarding climatic changes and concern over how to care for an ever-expanding population with limited resources. Many problems appear to defy solution. The early twenty-first century has also been a time of positive developments. Rapid international communication enables almost instantaneous attention to any part of the world. Evolving understanding of the human genome promises control and alleviation of many genetic disorders. Diseases that were once a death sentence upon diagnosis are becoming amenable to various pharmacological, surgical and therapeutic interventions.

The development and implementation of education system policy and program initiatives in response to notions of inclusive education, integration, normalization and least restrictive environment for people with disabilities and impairments has continued in Victoria into the new millennium. For example, the Department of Education, Employment and Training Victoria Public Education: The Next Generation (more commonly known as the PENG Review 2000) was commissioned (Department of Education, Employment and Training Victoria, 2000). The PENG Review (2000) endorsed the development of standards-based curriculum frameworks to meet the needs of students with disabilities and impairments, including continued access to special schools. It recommended that
funding arrangements for students with disabilities and impairments be reviewed to ensure an appropriate separation between the assessment of students and the provision of support services; a focus on defined education need; provision of funding contingent upon evidence of the development of an individual educational program for students and increased accountability for student progress.

Professor Luanna Meyer, Pro Vice-Chancellor of Massey University College of Education in New Zealand, was commissioned to submit a discussion paper containing an analysis of current arrangements for students with disabilities and impairments in Victoria, comparison with international best practice, and recommendations for future directions. *Better Services, Better Outcomes in Victorian Government Schools: A Review of Educational Services for Students with Special Education Needs* was a report published and released for discussion and response to the education community in Victoria in response to Professor Meyer’s analysis of current arrangements, comparisons and recommendations for future directions (Lake 2001).

Lake renewed a commitment of the Victorian Government to an inclusive educational system and current best practice in special education. I was particularly encouraged by the way in which the report suggested approaches for special educators to best work with colleagues in mainstream primary school and secondary college settings enabling students with disabilities and impairments to gain access and success to a full curriculum. However, the report continually renewed a very strong commitment to enhanced economically efficient and politically expedient values of ‘accountability’, ‘quality’ and ‘effectiveness’ in the special education sector.

At the time of writing, this policy and program initiative had not been endorsed by the relevant Minister. Reform in response to this policy and program initiative stalled late in 2003. Staffing numbers in the Student Wellbeing Unit which administered such programs and policies dropped from 33 to 6 in a
department-wide purge of jobs. Vital expertise and experience was apparently lost in successive rounds of redeployment and redundancy.

However, a revised policy and program initiative for defining students with disabilities and impairments and corresponding resource distribution for the 2005 academic year was developed in the fourth (spring) term of 2004. Led by strong and intense political opposition from the professional association representing principals of Specialist School settings in Victoria and the principal sector of the Australian Education Union (Victorian Chapter), the revised policy and program initiative was withdrawn. The previous policy and program initiative for defining students with disabilities and impairments and corresponding resource distribution for the 2005 academic year was restored (Thomas, media release, 27 January 2005; Thomas, media release, 9 February, 2005; Australian Education Union, Victorian Branch, 9 February 2005).

A ministerial working group report into future directions for the Better Services, Better Outcomes in Victorian Government Schools: A Review of Educational Services for Students with Special Education Needs policy and program initiative was tabled in April 2005. The report expressed profound concern that once innovative policy and program initiatives in response to notions of inclusive education for people with disabilities and impairments was apparently ‘… unravelling …’. Recommendations for changes were made. In response, the minister set a timetable into 2008 ‘… for reform to Victoria’s troubled program for students with disabilities and impairments … the department is now ready to act on various recommendations [of the Lake Report, 2001] …’ (Miller 2005)

There is apparent need for more research in the special education context, critical analysis of existing research and improvement of the quality of research in special education sectors. Research often lags behind practice. Experimental research necessarily sacrifices some reality in the interest of control. Teachers repeatedly find themselves face-to-face with students with disabilities and impairments who need an appropriate education for which an adequate research and theoretical base is lacking.

The fundamental assumption of this study is the importance of music (indeed The Arts) education for all students: the belief that every child in Victoria,
indeed Australia, should have access to comprehensive music education curriculum frameworks (Hanshumaker 1980, 1986; Hardesty 1979). A growing body of music research and theory attested to the importance of music education in the special education sector, e.g., Adamek and Darrow (2005), Davis, Gfeller and Thaut (1992), Erdonmez (1991), Lathom and Eagle (1984) and Lathom-Radocy (2002) provided a very comprehensive literature review pertinent to the efficacy of music a therapeutic medium for people with disabilities and impairments.

*The Report of the Music Education Committee of Review* (Ray, 1990) (more commonly referred to as the Ray Report) commented on the importance of music education in the special education sector as widely acknowledged yet music studies were not part of special education courses. The Ray Report (p. 6) recommended:

... that the Statewide Music Education Committee ... investigate ways in which music, including music therapy, can be used to assist the development of children with disabilities, impairments and problems in schooling ...

The Statewide Music Education Committee was disbanded in late 1992.

The Australian Government through the Department of Education, Science and Training set up the *National Review of School Music Education* in 2004. It was the first review of school music education undertaken by a Federal Government. The purpose of the review was to investigate the quality and status of music education in primary and secondary schools and to make recommendations about how school music education in Australia might be improved to the benefit of all young people. A team of researchers from Murdoch University in Western Australia assisted by a steering committee, a circle of critical friends and other stakeholders and interested parties commenced the review process in August 2004. Music educators were encouraged to put forward views as submissions:

‘… as a chance in a lifetime to influence and to educate the Australian Government, State Governments, the wider teaching profession, school communities and the general public about the benefits of music education in schools and the need for greater support and better strategies to
implement effective music education programs in schools …’ (Bulletin, newsletter of the Australian Society of Music Education (Victorian Chapter), vol. 15, no. 1, p. 2)

The final report was launched in November 2005. The National Review revealed findings about the strengths and weaknesses of music learning and teaching. The Federal Government’s initiative provided an opportunity to observe, analyze and act upon all those things which trouble music education in Australia. Certain things were deduced from the findings, especially about the training of music teachers in general and specifically about those intending to embark on a career as a music teacher in the secondary school sector school. The training of music teachers intending to embark on a career in the primary school sector was also of concern, but considered beyond the scope and breadth of the ministerial review. The terms of reference in the ministerial review made no specific reference to specialist sector school settings. No specific reference was made to the training of those intending to embark on a career as a music teacher in the special education sector. The ministerial reviews presented findings and recommendations, and then, one would earnestly hope, implement the findings and recommendations. These findings are actually ideas or concepts with which every music teacher, classroom or studio, are familiar. None of this information is new, none of it is original. However, it is worthwhile taking the opportunity in this study to recall and reaffirm the case for worthwhile and purposeful music education in our schools for all.
1.2 Standards-Based Curriculum Policy Frameworks

The development and implementation of national and state level public standards-based curriculum policy frameworks may turn out to be quite contrary to the aspirations expressed in the policy. Curriculum policy may not provide guarantee of uniformity or quality of experience. Development and implementation of curriculum policy may create quite different experiences for different individuals. Curriculum policy work and the study of society are also inextricably linked. Curriculum policy work is also an economic, political, social and cultural construction which seems to typically serve the interests of particular social groups at the expense of others. Curriculum policy work also involves identifying these interests and informs more appropriate action.

Development and implementation of national and state level public standards-based curriculum policy frameworks are the collaborative achievement of many sectors of an education community that embody the aspirations that the education community holds for the next generation of students: teachers, educators, subject specialists, researchers, professional teaching associations and community groups. Successive consultation phases are mandated to ensure that learning outcome descriptors are transparent for students, teachers, and parents. Learning outcome descriptors in standards-based curriculum frameworks make it clear what students should know and be able to do. Standards-based curriculum frameworks ought to be a robust framework for program development and implementation, assessment and reporting, and testing in economically efficient, politically expedient, and socially and culturally effective ways (e.g., Brady & Kennedy 2003, Reid & Thompson 2003).

By the end of the 1990s, a variety of standards-based curriculum policy frameworks in education systems throughout the world had been developed and implemented in the wake of a long wave of recession and economic stagnation, and political conservatism of the 1980s that marked the end of the postwar economic boom. For example, in the USA standards-based curriculum policy frameworks include No Child Left Behind Act: Public Law 107-110 (No Child Left Behind Act: Public Law 107-110 2001).
The government in England developed and implemented a series of national standards-based curriculum policy frameworks in public education system schools for all students of compulsory school age including specialist schools in 1995. The National Curriculum in England is organized into eleven important and distinct Subjects (i.e., English, Mathematics, Science, Design and Technology, Information Technology, History, Geography, Modern Foreign Languages, Art, Music and Physical Education) (Department for Education 1995). Notably, music is a discrete subject. Each subject sets four key stages (levels) of student achievement.

As in many like western countries, Australians and New Zealanders have felt the full effects of policies of privatization, deregulation and user pays in the name of efficiency, assets sales programs, commercialization and corporatization of social services, welfare, and housing, restructuring of the labour market, and attack on unions through Workplace Agreements since the mid 1980s. From apparently being considered so-called social laboratories of the western world in the 1930s in terms of social welfare provision, Australia and New Zealand appeared to have been represented as successful examples of complete historical reversal in political philosophy and policy development becoming neo-liberal experiments in the 1980s and 1990s. A number of powerful world organizations, such as the World Bank, the IMF and the OECD pointed to small populations and geographical confinement making Australia and New Zealand ideal countries for social experiment.

For both Australia and New Zealand, it appeared that the real costs of strategies pursued in the name of economic efficiency and political expediency have been disproportionately borne by those already oppressed, the disadvantaged and the unemployed with the tendency to concentrate wealth and power in the hands of a few. Welfare and social provision, now based upon user pays, had sacrificed the principles of universal provision to a set of principles based upon targeting and the notion of safety net. Education in Australia and New Zealand had probably been regarded as a form of welfare wedded to principles of universal provision performing a range of economic and social functions.
In the late 1980s, there was increased concern regarding the links between employment and education. Government policy and programs in Australia at all levels appeared to embrace the very powerful economically efficient and politically expedient values that signaled changing requirements for a productive work force. Australian State, Territory, and Commonwealth Ministers of Education met in Hobart (in the State of Tasmania) in April 1989. The Hobart Declaration on Schooling (more commonly known as the Hobart Declaration 1989) (Ministerial Council on Education, Employment, Training and Youth Affairs 1989) was ratified.

Over the following four years, work proceeded on the development of a series of National Statements and Profiles in eight important and distinct Key Learning Areas (i.e., The Arts, English, Health and Physical Education, Languages Other Than English (LOTE), Mathematics, Science, Studies of Society and Environment (SOSE), and Technology). Music was not a discrete Key Learning Area, but one of five disciplines in The Arts Key Learning Area. Statements and profiles set four Bands (levels) of student achievement in each Key Learning Area. These curriculum documents formed the basis of standards-based curriculum policy frameworks in Australian schools today (Emery 1995, 1997; Watson 1995). Standards-based curriculum policy frameworks were developed and implemented in Victoria in 1995 (i.e., The Curriculum and Standards Framework 1995) (CSF 1995) (Board of Studies 1995). Separate companion CSF 1995 Course Advice curriculum policy documents providing exemplary sets of examples of Units of Work corresponding to each Key Learning Area were distributed in 1996.

Many education systems throughout the world continue to appear to be entirely consumed with the development and implementation of economically efficient and politically expedient standards-based curriculum policy frameworks accompanied by close and continuous mandatory assessment and reporting, and testing into the new millennium. For example, the crux of No Child Left Behind Act: Public Law 107-110 (No Child Left Behind Act: Public Law 107-110 2001) in America appears to be massive and constant standards-based assessment and reporting, and testing. This key educational reform required that all public schools test students between grades three and eight in reading and mathematics. Scores determine whether schools are ‘… in need of improvement …’. There is
also a huge league table according to categories such as racial grouping, socioeconomic status, limited English proficiency, gender and special education needs. A school is placed on a list of schools that may require greater support if any of these categories do not demonstrate ‘… adequate yearly progress …’. It has been suggested that these schools may ultimately be tendered to the private school sector.

Australian State, Territory, and Commonwealth Ministers of Education met again in Adelaide (in the State of South Australia) in 1998. Ministers agreed that it was timely to review the goals to take account of the significant economic, technological, social and cultural changes which had occurred over the last decade, as well as preparing for new challenges which would face schools in the future. The *National Goals for Schooling in the Twenty-First Century* (more commonly known as the *Adelaide Declaration 1999*) was endorsed in April 1999 (Ministerial Council on Education, Employment, Training and Youth Affairs 1999).

Education Ministers also affirmed their commitment to national assessment and reporting on comparable educational outcomes and agreed that the *National Goals for Schooling in the Twenty-First Century* should provide the appropriate framework for such assessment and reporting. As part of this commitment, Ministers agreed to the reporting of outcomes in literacy; numeracy; student participation, retention and completion; vocational education and training in schools; science and information technology. The meeting also noted the need to develop performance indicators for civics and citizenship education, and enterprise education. A National Education Performance Monitoring Taskforce was established to undertake work on the national assessment and reporting of educational outcomes.

A revised standards-based *Curriculum and Standards Framework II* (CSF II 2000) was developed and implemented by the Department of Education, Employment and Training in Victoria (Board of Studies 2000). Developments reflected the *Adelaide Declaration on National Goals for Schooling in the Twenty-First Century* (1999). The CSF II 2000 was organized into the same eight *Key Learning Areas*. Each Key Learning Area of the CSF II 2000 curriculum framework set six *levels* (profiles) for student achievement. A companion CSF II
2000 Course Advice providing sets of examples of Units of Work corresponding to each Key Learning Area was distributed in a CD-ROM format. A proforma for the development of the Unit of Work from the CSF II 2000 was also incorporated into the CD-ROM. The CSF II 2000 described:

… what students should be able to do in eight key areas of learning at regular intervals … provides sufficient detail … to be clear about the major elements of the curriculum and the standards expected of successful students … each school works out the best way to organize its own teaching and learning program taking into account government policies and the school community’s priorities, resources and expertise …
(Curriculum and Standards Framework II The Arts, Board of Studies, Carlton, 2000, p. 1)

The CSF II 2000 attempted to form a sequence of expected student performance, reflect the breadth, depth, and complexity of the curriculum policy and reflect available benchmarking data.

The Department of Education, Employment and Training Victoria

Blueprint for Government Schools: Future Directions in the Victorian Government System was launched late in 2003 (Department of Education, Employment and Training Victoria, 2003). A series of Ministerial Roundtables and Key Leadership Groups brought together key education practitioners, experts, teachers, principals and academics to assist in the consultation and research process. In the forward of the Blueprint, the Minister stated that ‘… every Victorian is entitled to the benefits of a quality school education …’. The Blueprint outlined a reform agenda for the government school sector.

Three priority areas for reform were identified:

- Recognizing and Responding to Diverse Student Needs
- Building the Skills of the Education Workforce to Enhance the Teaching-Learning Relationship
- Continuously Improving Schools

Strategies and initiatives for implementation over the next three to five years included Student Learning, Developing a New Resource Allocation Model,
Building Leadership Capacity, Creating and Supporting a Performance and Development Culture, Teacher Professional Development, School Improvement and Leading Schools Fund.

In launching the *Blueprint* in 2003, the Minister directed the Victorian Curriculum and Assessment Authority (VCAA) (the successor statutory curriculum authority to the Board of Studies, Victoria) to develop and implement a standards-based curriculum framework of essential learnings that ‘… ensure that all students have access to essential learning areas for all government and non-government sector schools in Victoria …’ (p. 14). The revised standards-based curriculum framework of essential learnings was to be based on research experience that provides fresh understanding of the learning process and the development of competent performance in different intellectual domains. Teaching and learning was to be focused on the application of knowledge to different contexts. To complement this curriculum framework, guidelines to assist with school-based decision-making in areas of curriculum development, pedagogy, and assessment and reporting were developed in 2004 (p. 14). Guidelines supporting principles of learning and teaching were developed to support teachers in such areas as diversity of thinking styles and student-teacher relationships. In addition, a knowledge bank of exemplary practice to ensure that best practice is shared across the system is to be developed and implemented on the World Wide Web (p. 15).

The *Blueprint* stated that ‘… assessment and reporting provides relevant and accessible information about what [a student] knows and can do and how future learning will be supported and extended …’ (p. 15). VCAA was directed to develop and implement reporting and assessment processes against which defined standards of learning at key points of schooling can be measured.

Furthermore, the *Blueprint* acknowledged that research experience demonstrated that a good performance and development culture improves student learning outcomes, i.e., targeted professional development (p. 20). The *Blueprint* acknowledged that there are ‘… [some] excellent professional development practices across the system … however there are not enough opportunities to share these [opportunities] between teachers …’ (p. 20).
Very powerful economically efficient and politically expedient values such as accountability, quality and effectiveness appear to have been expressed, shaped and endorsed in the curriculum frameworks of education authorities throughout the world in the quest to optimize the (education) system’s performance (Watson 2003). Furthermore, Dean (1997), Foucault (1983a, 1991a, 1991b, 1991c), Gordon (1991), Green (1998), Henman (1997), Kendall (1997), O’Farrell (1997) and Rabinow (editor) (1991) suggested that power and knowledge are conjoined in the institutionalized practice of governmentality. For example, students in England were ranked against learning outcome descriptions at each of the four key stages of The National Curriculum (Department for Education 1995). Schools were ranked on gigantic league tables on the basis of the tested achievements of their students. They have apparently learned to worry about their position in the columns of near-identical results, regardless of the lack of statistical significance of all but the largest distinctions (Office for Standards in Education, Department for Education 1997).

Students in government education system school settings in Victoria are also tested in relation to the learning outcome descriptions in literacy (the English Key Learning Area), and numeracy (the Mathematics Key Learning Area) in the fourth year of schooling (Year 3), sixth year of schooling (Year 5), and eighth year of schooling (Year 7) of the CSF II (2000). This cycle of testing is known as the Achievement Improvement Monitor (AIM).

Government management closely and continuously monitors data from AIM. The results:

… provide a source of information that is used to develop and implement new programs for students to ensure they continue to develop these important skills … at the same time, this information is a useful source of feedback and guidance for students, parents and teachers … (retrieved from http://www.vcaa.vic.edu.au)
1.3 Standards-Based Curriculum Policy Frameworks: For Students with Disabilities and Impairments Too?

Educational reform in the context of change in philosophical perspective may be confusing, messy and unclear but cannot be denied or ignored. All educators, including special educators and music educators, are constantly immersed in this change. Yet, special educators and music educators may not have generally paid much attention to this shift in philosophical perspective. Perhaps there was the tendency to let the larger world of philosophy largely go its own way unnoticed preferring to keep at the sidelines of the culture of which both disciplines are a part. Perhaps special educators and music educators tended to suffer from being parochial to their respective interests; perhaps narrowness of thought and action; perhaps singled minded concentration on techniques and methods. Perhaps both disciplines have lost sight of the broader issues. Perhaps those engaged in the broader issues have lost sight of possible contributions from special education and music education. It is not good to be as isolated from intellectual life as sometimes appears to be the case. It is also not good for our society or culture to miss out on the valuable perspectives that can be offered from the vantage point of such expertise. Perspectives need to be heard in the market of ideas. For this to occur, special educators and music educators must be knowledgeable about the currents of intellectual thought swirling around.

Curriculum policy frameworks always seem to be in a state of flux. Change agents move quickly. There always seems to be need for reform because the status quo never quite adequately meets the needs of the school community. Educational fads have come and gone along with the accompanying educational consultants hawking their wares. Curriculum policy frameworks are sites for continual struggles to organize knowledge, values and social relations so as to legitimate and reproduce particular ways of life that are neither ideologically innocent nor politically neutral. Curriculum policy frameworks are expressions of epistemology and ways of knowing. The goal of education becomes empowerment and raising consciousness. Curriculum policy frameworks become the means. It may be argued that the development, implementation and evaluation of standards-based curriculum policy frameworks appear to have been reduced to principles of economic efficiency and political expediency.
By the end of the 1990s, socially and culturally effective values appeared to have gradually challenged the powerful economically efficient and politically expedient values in the process of the development and implementation of curriculum policy frameworks for students with disabilities and impairments in education systems throughout the world. Some noteworthy attempts had been made to design curriculum policy frameworks from which teachers develop programs to enhance thinking in all Key Learning Areas in students with disabilities and impairments. For example, the Curriculum Corporation (1994) developed a useful Towards Band 1 with an extended profile (level) of student achievement in each Key Learning Area ‘… with additional performance descriptions to describe progress towards level 1 of students with disabilities …’.

In 1996, the Board of Studies worked with the Directorate of School Education in Victoria to produce a document entitled Guidelines for Implementing the CSF (1996) for Students with Disabilities and Impairments supporting the principle that individual programs should be developed in conjunction with program support groups for students with disabilities and impairments (Board of Studies 1996). There appeared to be a compelling case for programs to be clearly related to the CSF 1995 curriculum policy framework. However, programs should be tailored to individual circumstances. Some students may not be able to achieve some examples within a level and some strands may be more difficult for students with particular disabilities and impairments. The terms describe, recount, tell, retell, paraphrase, talk, say, speak, discuss, explain, ask and converse are understood as including all forms of verbal and nonverbal communication including signed communication (e.g., Auslan, Signed English) and communication aids (e.g., compic pictographs, compic communication boards, Canon communicator). Similarly, the word oral includes signed communication and communication aids. The terms listen, look, read and watch include forms of communication such as lip reading and watching signed language. Students with a visual impairment may need materials and books in formats such as Braille, audio tape, large print and tactile symbols. The concept visualize may be expressed physically. References to read include resources such as Braille and talking books.
Some noteworthy attempts have continued to design standards-based curriculum policy frameworks from which teachers develop programs to enhance thinking in all Key Learning Areas in students with disabilities and impairments into the new millennium. For example, In England, the Qualifications and Curriculum Authority developed a particularly useful standards-based curriculum framework with profiles of musical achievement in all Key Learning Areas (subjects) for students with disabilities and impairments (Qualifications and Curriculum Authority 2001a, 2001b). The general guidelines recognized that:

… most schools work with students across a full range of ability … including those aged five to sixteen years with severe and profound special educational needs who are unlikely to achieve at or beyond key stage 1 of the National Curriculum …

The performance descriptions in each of 11 extended levels outlined the types and a range of behaviours that such students might characteristically demonstrate in each Key Learning Area (subject) (Byers & Rose 2004).

In Victoria, the Curriculum and Standards Framework II: Overview (Board of Studies 2000, p. 11) stated that:

… the CSF is designed for all Victorian students … it provides the curriculum framework for the development of individual programs for students with disabilities and impairments … these programs should be developed at the school level in conjunction with program support groups … individual programs should be tailored to individual circumstances … reporting of student achievement will be decided at the local level … all such programs, however, should be designed within the curriculum described in the CSF …

An almost identical paragraph in the Victorian Essential Learning Standards: Overview (Victorian Curriculum and Assessment Authority 2005a, p. 12) stated that:
… the Standards are designed for all Victorian students … they provide a whole school planning document for the development of individual programs for students with disabilities and impairments … these programs should be developed at the school level in conjunction with program support groups … individual programs should be tailored to individual circumstances … reporting of student achievement will be decided at the local level … all such programs, however, should be designed within the curriculum described in the Essential Learning Standards …

Disappointingly, VCAA also issued a consultation paper Victorian Essential Learning Standards: Students with Disabilities Guidelines that seemed only to repeat much of the material in the Victorian Essential Learning Standards: Overview (Victorian Curriculum and Assessment Authority 2005b).

The Office of the Board of Studies in New South Wales (BOS NSW) (the equivalent statutory curriculum authority in the State of New South Wales) employs a Senior Project Officer (Special Education) at the level of Senior Education Officer (Grade 2) responsible for advice to the Board on K-12 curriculum, assessment and cruddentialling in the area of Special Education, for the development of curriculum materials for students with disabilities and impairments and managing these projects on behalf of the Board. The BOS NSW developed a curriculum document Life Skills Years 7-10: Advice on Planning, Programming and Assessment in conjunction with the Years 7-10 curriculum documents (Board of Studies NSW 2004). This very useful document contains sample units of work in each Key Learning Area, i.e., teaching, learning and assessment activities and links to the ‘… life skills …’ (extended outcome descriptors).

Thompson and Thurlow (2001) considered that standards-based curriculum frameworks have led to improvements in educational opportunity for students through the alignment of educational practice to desirable educational outcomes. However, difficulties and complex challenges surround such a large and unwieldy movement. The difficulties and complex challenges are most apparent for students with disabilities and impairments. Special educators appear to be outside of the development and implementation of existing standards-based curriculum frameworks. Teacher feedback regularly indicates the apparent inflexibility of standards-based curriculum frameworks and its perceived inability to cater to different learning styles. The unique and diverse qualities and
characteristics in patterns of thinking observed in students with disabilities and impairments somehow appear to be obscured and smothered by the pursuit of universality and generalizability of standards-based curriculum frameworks. Behavioural indicators that may seem particular, irrational, or even unnatural, but may define thinking in students with disabilities and impairments somehow appeared to be marginalized. This in turn appears to result in the devaluing, perhaps the eradication of, qualities and characteristics not able to be assessed and reported, or tested in relation to profiles of student achievement. Standards appear to become insensitive to the diverse qualities and characteristics that may be observed in students with disabilities and impairments.

Yet, all educators cry for the development and implementation of curriculum policy frameworks in all domains of thinking for students with disabilities and impairments at different developmental levels (Damer 1979, 1982). Like many teachers who work with students with disabilities and impairments, I continued to use my own resourcefulness and initiative when developing and implementing music programs, and then assess and report the unique and diverse qualities and characteristics in musical thinking. Students with whom I have worked simply do not seem to fit in the same way as a normal or typical student. The various combinations of challenging disabilities and impairments have demanded that the very different needs and the very different styles of musical thinking are taken into account.

Social and cultural theory appears to offer a discourse with which to liberate and empower pedagogy: the science of thinking and learning, and corresponding approaches to teaching practice, e.g., Aronowitz and Giroux (1991), Collins (1989), Giroux and McLaren (1989) and Giroux (1988, 1990). For example, adopting Derrida’s approach, special educators and music educators can attempt to deconstruct the role of language that is used to influence the development and implementation of music curriculum frameworks for students with disabilities and impairments to take the side of those with disability or impairment - the Other. These key social and cultural theorists have attempted to break the boundaries and the hidden ways in which people with disabilities and impairments are subordinated, excluded, and marginalized. These views have allowed such people to emerge with a voice in the shaping of curriculum policy frameworks. From the perspective of a music educator of some twenty years in
specialist education settings, this study perhaps pushes boundaries in the discipline of special education by engaging with the language and forms of pedagogy with which to develop an understanding of the extraordinary complexities that encompass music curriculum policy frameworks in Victoria for students with disabilities and impairments long subordinated, excluded and marginalized.
CHAPTER 2

LITERATURE REVIEW: THE THEORETICAL CONSTRUCT

2.0  The Multiple Intelligences

Informed understandings of national and international music research and theory enhance a broad understanding of the extraordinary complexities that encompass the development, implementation and evaluation of standards-based music curriculum policy frameworks. The task demands wide research and review of the process of learning music. An examination of music research and theory literature indicates a breadth of influence of researchers and theorists from an increasing number of fields that have contributed to the vast array of knowledge about the psychology of musical behaviour that help to enhance individual’s musical abilities, sensitivities and enjoyment. First, topics in Medicine and Health Sciences, Psychology and Linguistics and Applied Linguistics are explored in this section.

A great many major influential researchers and theorists have turned their attention to the nature of human intellectual competencies and the essential characteristics that seem to underlie them. The intelligence also includes contextual characteristics. Characteristics of the intelligence are exercised across the many roles that humans play in a multiplicity of distinctive ways. All are implicated in and determinants of the ways individuals are able to be intelligent. This is only the tip of the iceberg. Since the 1960s or even earlier, the idea that intelligence is a single entity measurable simply by IQ tests, e.g., Wechsler Intelligence Scale for Children (1992) have been challenged. Such tests seemed to be a limited approach to student ability. They primarily measured linguistic and mathematical ability. Other abilities were overlooked and/or not valued. The notion of a diverse intelligence rather than a singular notion of intelligence has been expressed, acknowledged and gained power over the ensuring decades by influential researchers and theorists in a variety of fields. Thinking is conceived of as comprising relatively distinctive, autonomous modes of intelligence.
For example, Phenix (1964) identified six distinctive, autonomous modes of intelligence. He called them symbolics (languages and language-like systems), empirics (sciences dealing in empirical truths), aesthetics (primarily The Arts), synnoetics (direct awareness, personal or relational knowledge), ethics (moral meaning expressing obligation) and synoptics (comprehensive, integrative meanings as in history, religion and philosophy). Eisner (editor, 1985) argued several distinctive, autonomous modes of intelligence including the aesthetic, interpersonal, intuitive, narrative-paradigmatic, formal, practical and spiritual. Collins (1998, pp. 94-96) referred to the notion of multiple intelligences as ‘… seven kinds of smart …’.

No doubt the most widely known argument for the notion of a diverse intelligence is that of Gardner (1993a, 2000). Gardner was Co-Director of Project Zero at the Harvard Graduate School of Education (retrieved from www.pz.harvard.edu/Pls/HG.htm). He cited more than thirty important views of intelligence over the centuries and more than forty general characteristics that have been attached to it, e.g., imagination, culture, individuality, opportunity, the body and feelings. He took the position that there are at least seven distinctive, autonomous modes of intelligence: the linguistic, the musical, the logical-mathematical, the spatial, the bodily-kinesthetic, the interpersonal and the intrapersonal. Later Gardner added the naturalistic and possibly the existential or spiritual modes of intelligence. Furthermore, the idea of multiple intelligences appears to integrate well with other ideas such as Bloom’s Taxonomy of Educational Objectives (1956), Krathwohl, Bloom and Masia’s Taxonomy of Educational Objectives: The Classification of Educational Goals (Handbook II: Affective Domain) (1964) and De Bono’s Thinking Hats (1974, 1991, 1992, 2000).

Research and theory regarding the nature of intelligence in students with disabilities and impairments is viewed within the context of broader research and theory regarding the nature of intelligence. For example, coming from a background in special education and associate of Gardner at Harvard Project Zero, Armstrong (1980, 1987a, 1987b, 1988, 1993, 1997, 1999a, 1999b) was one of the first educators to write about the theory of multiple intelligences in the special education context. For Armstrong, multiple intelligence theory ‘… provided a language for talking about the inner gifts of children, especially those
students who had accumulated labels such as “LD” (learning disability) and “ADD” (attention deficit disorder) during their school careers …’ (Armstrong 2000, p. vii). Table 2.1 shows the multiple intelligences (Gardner 1993a) and the links to the Key Learning Areas and Strands in the *Curriculum and Standards Framework* (1995).
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It appears that researchers who work with adults have long recognized intelligence in the *psychomotor domain* (the spatial and bodily-kinesthetic intelligences). Mature forms of intelligence in this domain include dance, acting and athletics (Harrow 1972). However, relatively little has been definitely established about this competency in children. Contrary to Gardner, Piaget viewed intelligence in the psychomotor domain as part and parcel of intelligence in the logical-mathematical domain. Psychologists Jerome Bruner and Kurt Fischer have embraced the idea of the intelligence in the psychomotor domain that suggests the building up of more elaborate and flexible motor skills. Young children certainly appear to relate music and body movements naturally, finding it virtually impossible not to also engage in some accompanying physical activity (e.g., Dainow 1977; Gilbert 1979, 1981). Most accounts of the evolution of music tie it closely to primordial dance. Many of the most effective approaches to music teaching attempt to integrate voice, hand and body.

Bruininks (1974), Cratty (1974, 1975), Ratick (1973) and Wolfe (1980) suggested that children who present with impaired patterns of growth and development of bone, muscle, soft tissue and joints will frequently experience difficulties with control of movement patterns and sequences. Physical fitness, fine and gross motor control, posture and stamina is:

… frequently at a lower level than those of their normal peers on physical tasks requiring strength, endurance, coordination, running speed, flexibility, and reaction time … (Davis, Gfeller & Thaut 1992, p. 78)

Physical abilities may well vary considerably from well-formed fine motor skills such as reaching, grasping, and manipulation to little or no voluntary independent physical movement (e.g., Carr & Shepherd 1998, Rhodes & Pflanzer 2003). Motor activity may simply be reflexive. Physical disabilities such as Cerebral Palsy and Spina Bifida (referred to in Chapter 1) may hinder, even prohibit development of gross motor skills. Individuals may suffer from damage to the motor cortex and spinal column. Where the central nervous system has developed slowly or incompletely, voluntary movement may be difficult or impossible. Certain groups of children and adults with chromosomal disorders, e.g., Down Syndrome (referred to in Chapter 1) may be short and obese and exhibit hypotonia or low muscle tone (Davis, Gfeller & Thaut 1992, p. 165).
Lathom-Radocy (2002, p. 28) suggested that music activities and experiences provide many possibilities for movement ranging from the simple to the complex, e.g., offers the motivation and energy to start and stop movement. Movement accompanied with music with others becomes an enjoyable game rather than tedious exercise. For students with severe, profound and multiple disabilities and impairments, early developmental behaviours may still need attention even in the early, middle and even latter years of schooling.

Because it is time-ordered, music activities and experiences may be an ideal stimulus to help coordinate and master basic psychomotor movement such as nodding the head, tapping a foot, head extension and body alignment as difficult as it may be (e.g., Raucher, Shaw & Ky 1993 and Raucher, Shaw, Levine & Ky 1994). Initial attempts are more important than successes. For example, the music teacher, therapist or director may use maracas, tambourines or other instruments while singing simple songs to provide an interesting stimulus for the student to lift his or head to an upright position, focus on the source of a sound or sound effect and/or turn his or her head to follow a moving sound or sound effect. As the student becomes more comfortable, the music teacher, therapist or director encourages more coordinated movements with the music. Imitation of standing, sitting, swaying, walking, running, jumping, hopping, skipping, marching, galloping and movement of the arms and head can be encouraged, albeit at a less sophisticated level than their normal peers. Students may demonstrate brief moments of synchrony to the beat of live or recorded music. Thaut (1985) suggested that gross motor activities such as folk dancing will strengthen large muscles and help to develop coordination and balance. In turn, these skills are associated with improvements in body image, balance, locomotion, agility, flexibility, strength, laterality (side-to-side movement) and directionality (up-down, right-left, back-forth). These skills are particularly critical in the teaching and learning of orientation and mobility in students with a visual impairment (referred to in Chapter 1).

Fine motor control which involves smaller muscles and greater precision, including eye control, reach, grasp-release, manipulation, exploration, experimentation, wrist-hand-finger motion, eye-finger coordination, object in one hand-manipulate with the other, may also be promoted with music activities and experiences. Students may draw attention to, and/or point, request or reject a
musical instrument. For example, the music teacher, therapist or director may use maracas, tambourines or other instruments while singing songs to provide an interesting stimulus for the student to reach for, manipulate, explore, hit and shake an instrument. They may learn to hold, blow, strum or pluck an instrument. They may even push, drop or throw an instrument.

Perhaps more than other modes of thinking, one encounters a tremendous range of ways of intellectual competency in two recognized forms of intelligence in the personal domain (the intrapersonal and interpersonal intelligences). The intrapersonal intelligence refers to internal aspects of a person: the capacity to access one’s range of affects or emotions. The interpersonal intelligence turns outward to other individuals. The core competency is the ability to notice and make distinctions in other individuals, in particular, moods, temperaments, motivations and intentions. These two forms of intelligence could be described separately, but to do so would involve unnecessary duplication and artificial separation. Under ordinary circumstances, apparently neither form can develop without the other.

Observations of infants within and across cultures and comparisons with primates demonstrate that there is a set of universal facial expressions displayed by all children that express experiences of excitement and or pleasure or pain. The infant has no way of labeling how he or she is feeling or why he or she is feeling this way. They begin to discriminate among and initiate facial expressions of other individuals. They begin to distinguish mother from father, parents from strangers and happy expressions from sad or angry ones. Differentiation between self and others is established by the early years of schooling with mastery of different roles adopted by other individuals and an increasingly clear understanding that he or she is a discrete individual with his or her own needs, desires, projects and goals. There is a continuing trend toward greater social sensitivity, a keener sense of others’ motivations and a fuller sense of one’s own competencies and lacks in middle childhood. Children invest more deeply in friendships and will go to considerable lengths to maintain a personal relationship. With the onset of adolescence, individuals demonstrate more sensitivity to underlying motivations of other individuals and to their hidden desires and fears. Relationships are based on psychological support and understanding. The individual must come to terms with personal feelings,
motivations and desires (e.g., Brown 2000, 2001; Hewstone & Stroebe 2001; Hogg & Vaughan 2002; Smith & Mackie 2000).

Breakdown of intelligence in the personal domain takes different forms. Moreover, what might be considered pathological in one cultural setting can be deemed normal in another. All indices point to the frontal lobes as the structures of greatest importance in the development of the various forms of the personal intelligences. Injury to frontal lobe regions of the brain can interfere with development and cause various pathological forms of the intrapersonal and interpersonal intelligences that exert only relatively minor effects on the level of performance of an individual’s cognitive skills (the logical-mathematical intelligence). Injury to the orbital (lower) area of the frontal lobes is likely to produce hyperactivity, irritability, insouciance and euphoria, whilst injury to the convexity (higher regions) of the frontal lobe is more likely to produce indifference, listlessness, slowness and apathy (e.g., Comer 2001, Davidson & Neale 2001, Frude 1998, Pretzer & Beck 2005).

One of the most important goals for students with disabilities and impairments may be to modify inappropriate personal behaviours that may particularly manifest in students with intellectual disability (e.g., Down Syndrome, Fragile X Syndrome) and pervasive developmental delay (e.g., Autism Spectrum Disorder, Asperger’s Syndrome, Rett Syndrome and ADHD) (referred to in Chapter 1). Davis, Wiesler and Hanzel (1983), Jellison, Brooks and Huck (1984), Madsen, Greer and Madsen (1975) and Martin (1979) suggested that behaviour modification based on the principles of B.F Skinner (1953 and 1971), i.e., positive reinforcement, differential reinforcement, time out and contingent reinforcement are used widely and have been successful in reducing maladaptive behaviours and improving social skills. Inappropriate behaviours, e.g., out-of-seat behaviour, short attention span, low frustration tolerance and hyperactivity may be reduced or even completely eliminated with positive reinforcement (Bruscia 1981). Immediately after the student demonstrates an appropriate response, he or she may receive a desired reward: a smile, a hug, a pat on the back.

The pleasure of participating in a musical activity or experience may often be a powerful reinforcer and usually captures attention and cooperation.
Wimpory (1995) suggested that structured musical activities and experiences may provide a stimulating environment in which appropriate social skills and processes can be learned, i.e., may provide a foundation for developing active and informed members of society capable of managing the interactions between themselves and their social, cultural, organizational, physical and natural environments. As young students grow and develop, they may consider the challenges faced as they form and negotiate relationships with family, friends, partners and in groups in a musical context. Musical activities and experiences may challenge students to consider effective relationships and ways of managing transitions and changing demands, responsibilities and roles; to understand and deal with often competing and contradictory expectations that young people experience; and to emphasize that a person’s capacity to deal with these changes is variable and dependent on a sense of trust and security, opportunities and skills to communicate effectively and a sense of self as a capable and worthwhile person.

Music may be an excellent medium for group experiences that affords interaction at a non-verbal level allowing non-threatening participation of different levels and different kinds regardless of severity of disability or impairment as students develop musical ideas (e.g., Gaston 1968, p. 51). Because of the group nature of music teaching, activities and experiences can be structured to promote early intrapersonal and interpersonal skills, e.g., becoming comfortable with familiar people, musical objects, and the musical environment; watch and show interest in the musical activity of others. However, students may be very happily engaged in the same activity or experience next to or parallel to each other, yet cooperation and interaction is rare. Activities and experiences can be structured to promote more advanced social skills and processes, e.g., cooperation, sharing, taking turns and learning appropriate ways to greet people.

A group musical activity or experience may require a student to anticipate a musical cue. They may demonstrate great excitement as they anticipate a turn. The music teacher, therapist or director can help improve attention span by providing structure and motivation with the use of aural cues. The music teacher, therapist or director can increase attention span by gradually increasing waiting time. Musical activities and experiences may incorporate learning to follow a sequence of simple one, two, or three step commands. An interesting musical
activity or experience will help establish and maintain eye contact between student and music teacher, therapist or director. The duration of eye contact can be systematically lengthened.

Intelligence in the *cognitive domain* (the logical-mathematical intelligence) has attracted the imagination dating back to the classical discoveries of Pythagoras. Intelligence in the cognitive domain is associated with scientific, mathematical and technological skills and processes. Intelligence in the cognitive domain is about reasoning strategies, concepts, skills and processes. It focuses on the capacity to investigate and analyze problems and issues logically and carry out operations, e.g., observing, hearing, tasting, feeling, smelling, listening, discussing, writing, reading, cooperating, recording, measuring, manipulating, classifying, comparing, contrasting and posing questions (e.g., Booker, Bond, Sparrow & Swan 2004, Clements 1985, Cross 1996). In developing a portrait of intelligence in the cognitive domain, Gardner built upon the research of developmental psychologist Jean Piaget.

The study of music shares many features with cognitive practices such as interest in proportions, ratios and recurring patterns. At a relatively basic level, appreciation of the operation of rhythm requires basic numerical competence. Cognitive thought at a somewhat higher level is required when it comes to an appreciation of music elements and how they can be repeated, transformed, embedded or otherwise played off against another, e.g., make choices about the musical elements when performing, improvising and composing. Design, measurement and estimation, chance, handling and interpreting data about relationships between the constituent musical elements are characterized by the science and art of patterns that can be used to make predictions, e.g., conventional and graphic ways to clearly and accurately convey musical ideas. Students use informal and formal vocabulary to describe attributes and dimensions of the constituent musical elements. Students describe musical objects and relationships between the musical elements. Students develop knowledge and skills necessary for and use a range of simple and complex technologies to produce quality products that create and communicate musical ideas and effectively either solve a complex and varied musical problem or meet a musical need.
However, students with disabilities and impairments, e.g., those with intellectual disability and pervasive developmental delay (referred to in Chapter 1) may find it difficult to apply skills and processes in the cognitive domain. Skills and processes in the cognitive domain apparently develop in the same sequence as their non-retarded peers, albeit at a slower rate with less retention of information. Difficulties may include a short attention span, difficulty with short term memory, inability to abstract concepts and difficulty in generalizing a skill learned in one setting such as a classroom and applying it to a different setting such as in the home (e.g., Dunn & Fait 1989, Isern 1959). Early schemata with which to respond and attend to the musical environment, e.g., object permanence and predicting cause-effect relationships may not be apparent. Development of these skills and processes in students with hearing and/or visual impairment is apparently similar to that of normal students unless there is a concomitant intellectual or physical disability.

Students may simply receive, orientate to and discriminate obvious differences in the constituent music elements, or simply fixate on and track the source of a sound or sound effect. They may begin to predict a cause-effect effect relationship. Students may communicate with music elements in more intentional ways. For example, they may respond with bodily movements (rocking, nodding, seesawing, swaying and bouncing, seesawing, nodding the head, raising and lowering the heels, moving the knees backwards and forwards). They may demonstrate clear attempts to carry out dance movements with other people. There may be some early signs of co-ordination between music and movement. They may demonstrate synchrony of movement to the rhythm of the music for short periods of time. They may begin to develop the ability to discriminate obvious differences in the constituent music elements, e.g., short/long, high/low, loud/soft, and fast/slow. They may imitate and improvise rhythmic and melodic patterns. They may make use of short term memory as they recall and perform rhythmic and melodic patterns as they participate in small group improvisation. They may begin to demonstrate the ability to pitch match when singing with their natural voice.

Active and effective participation in society depends on an ability to speak, listen, read and write with confidence, purpose and enjoyment in a wide range of contexts, i.e., intelligence in the linguistic domain (the linguistic intelligence). Linguistic conventions of speaking and listening, reading and
writing for communicative and expressive purposes involves sensitivity to the meaning of words (semantics), to the order among words and the capacity to follow rules of grammar (syntax) and to the sounds, rhythms, inflections and meters of words (phonology) (e.g., Chomsky 1957, 1965, 1968, 1975; Vygotsky 1962). Furthermore, different modes of communication and language are required in different contexts, i.e., each Key Learning Area in the curriculum places different demands of speaking, listening, reading and writing on students. Musical activities and experiences also require thinking in the linguistic domain. Music can serve as a way of capturing feelings, knowledge about feelings, or knowledge about the forms of feelings, communicating them from the performer to the attentive listener. Music can provide a satisfactory and socially acceptable means of communicating (e.g., Wolverston 1991).

Students demonstrate an extraordinary array of contextual understanding, linguistic structures and features and strategies in the linguistic domain. Principles of language acquisition include grammatical, semantic and pragmatic development from pre speech through the school years. Theoretical models of language acquisition suggest variability and individual differences. The roots of spoken language can be found in babbling. By the beginning of the second year of life, the toddler demonstrates punctuated utterance of single words (protowords) (e.g., “mummy”, “doggy”, “cookie”) then pairing of words into phrases (e.g., “byebye mummy”, “eat cookie”) (Gardner 1993a, p. 79). The preschool child begins to utter more complex phrases that may include questions and negations and sentences with clauses, e.g., “When I get up?”, “I no want to go to sleep”, “Have milk before lunch, please”. By the age of four or five, children have corrected these syntactic errors and can speak with considerable fluency in ways that closely approximate adult syntax. They are able to come up with appealing figures of speech, tell stories about their own adventures and those of characters whom they have invented, alter the register of their speech depending upon whether they are addressing adults, peers, toddlers younger than themselves and even engage in simple metalinguistic banter, e.g., “… what does X mean? …” (e.g., Clark 2003).

In right-handed individuals, language is intimately tied to the operation of certain areas in the left hemisphere of the brain. If large or indeed entire areas of
the left hemisphere are removed for medical reasons in early life, the child will often still be able to speak quite well. Apparently, language is sufficiently important that it will develop in the right hemisphere, even at the cost of compromising visual and spatial functions normally localized in the right hemisphere. However, such individuals may demonstrate the ability to decode sentences in the light of meanings of the principal lexical items, whilst proving unable to utilize cues of syntax such as word order. It also seems that such individuals may manifest poor speech production and vocabulary comprehension.

Children with intellectual disability and pervasive developmental delay (referred to in Chapter 1) nearly always exhibit difficulties in the linguistic domain. Such children follow the normal sequence of communication-language development, but generally lag based on the severity of the disability. Delay in language-communication acquisition will often interfere with self-esteem and social relationships with others. Apparently all children learn language according to the outlined scheme outlined. However, there are clearly vast differences, e.g., the kinds of words that children utter first, the extent to which children imitate, and not least, the rate and level of skill with which children master these central aspects of language.

These students may demonstrate a range of unique personal responses. They may be quite unable to comprehend or adapt to unfamiliar environments and events. Barber, Goldbart and Munley (1995), Coupe, Barton, Barber, Collins, Levy and Murphy (1985), Goda (1960), Hewett and Nind (1998), Jones (1980), Nind (1996), Nind and Hewett (1994, 2001), Park (1997a, 1997b) and Rowland (1990) suggested that attempts at social interaction are frequently extinguished because of the absence or irregularity of social signaling. Interactions may be extremely brief. They may occur on average only once every 12-13 minutes. They are less likely to receive initiations which expected a response. Students’ behaviour may rarely be responded to. Such students may not be given the opportunity to initiate interactions. A sneeze may be more likely to be responded to than other behaviours! These students may not demonstrate recognition of familiar people including family, teachers and therapists. After looking at objects, a referential look to a caregiver is apparently less frequent. They may vary considerably in their ability to understand and communicate. Establishing a topic
of conversation, even the ability to communicate needs or responses effectively, may be difficult.

These students may have difficulty with a very short attention span, e.g., remaining seated in a comfortable position in chair ready to participate in an activity, establishing and maintaining eye contact in response to name being called or in response to the command “look”, responding to their own name by discontinuing activity; and looking at the person who has called their name. They may have difficulty focusing on a simple task due to inability to filter irrelevant stimuli.

Communication of personal responses of these students may become more intentional. Responses will include facial expressions, natural gestures (nodding, shaking, waving, pointing), vocalizations and verbalizations (protowords, phrases and sentences within known vocabulary). A student may draw attention to a musical instrument; they may point to an instrument; they may request an instrument; they may reject an instrument. Behaviour may be very persistent. They begin to follow simple (one, two, or three step) directions, e.g., ‘... stand up ...’, ‘... stand up, and pick up the tambourine ...’ or ‘... stand up, pick up the tambourine and give it to Bob ...’. Some may make use of augmented forms of communication such as gesture, objects, photographs, compic pictographs, communication boards, voice output speech devices, micro-switch technology and computers (e.g., Schweigert 1989).

Children who exhibit a background of mediocre or poor performance in other intellectual domains may exhibit language thinking that has been relatively spared. For example, individuals with an autism spectrum disorder (referred to in Chapter 1) may display a surprising ability to master core syntactic and phonological aspects of language. Such children may prove able to read at an astonishingly early age. Whilst reading normally begins at the ages of five or six, these children are able to decode texts as early as two or three. However, these children may have relatively little of significance to utter and are often restricted to echolalic modes of language. They may enter a room, seize any reading material and begin to read it aloud in a ritualistic fashion. The reading is so compulsive that it is hard to stop. It proceeds with the child’s total disregard of
Children with a hearing impairment, but born of hearing parents will develop simple natural gestures that exhibit basic syntactic and semantic properties exhibited in early communication of a hearing child. However, Gfeller (1990) and Gfeller and Darrow (1987) suggested that those so often socially isolated due to hearing and/or visual impairment may also display inappropriate behaviours that interfere with learning and interacting appropriately, e.g., out-of-turn behaviour, out-of-seat behaviour, short attention span, low frustration level or hyperactivity often resulting in poor self-esteem and social relationships with others. They may miss out on many interactions with others. With limited communication-language skills, they may find it difficult to understand instructions, ask questions and express concerns or frustration. They may demonstrate immature behaviours or revert to socially unacceptable ways of expressing themselves such as tantrums. They may have little or no interest in an activity.

Children may exhibit specific language difficulties. Some children may show insensitivity to syntactic factors. Given sentences to imitate, such individuals may effect simplifications, e.g., “… they won’t play with me …” may be simplified to “… they no/not play with me …”. Difficulty may arise from poor auditory discrimination evident in decoding a string of phonemes. Such individuals may not only have problems in comprehension, but may also articulate improperly. Such individuals may prove quite normal in solving all manner of other problems providing that the oral-aural channels of communication can be bypassed. The ability to process linguistic messages rapidly apparently depends upon an intact left temporal lobe. So injury to, or abnormal development of this neural lobe is generally suffice to produce language impairment.

Apparently lesions that cause specific learning difficulties with phonological discrimination, pragmatic uses of speech, and semantic and syntactic aspects of language can be specified. Moreover, each of these aspects of language can be destroyed in relative isolation. Hence one may confront for
example, individuals whose syntax is impaired, but whose pragmatic and semantic systems are relatively preserved, or individuals whose ordinary communicative language is largely impaired in the face of selective preservation of their syntactic powers. It has also been clearly established that written language (reading and writing) is dependent on oral language (speaking and listening). So, for example, if oral-auditory language areas are destroyed, it normally may be possible to continue reading. It is possible to learn to read by at least two alternative routes, so children with a specific learning difficulty ought to be able to exploit other routes. Oral-auditory elements remain integral to the development of the linguistic intelligence, albeit that humans, both skilled and those with disabilities and impairments, exploit language heritage for communicative and expressive purposes in an amazing variety of ways.

Thus, research and theory relating to multiple intelligences suggest complex relationships between brain mechanisms and behaviour. The human brain is an extremely complex organ. There is apparently no question that hemispheric specializations exist in humans, but the cerebral hemispheres are not at war with each other (e.g., Gates & Bradshaw 1997a, 1997b; Leng, Shaw & Wright 1990; Radocy 1978, 1979; Schlaug, Jancke, Huang & Steinmetz 1995). Mostly, diverse parts of the brain are used as the occasion arises, acting together. However, the consequence of brain injury may destroy or indeed spare thinking in a particular domain. Individuals may demonstrate a highly uneven profile of thinking. An individual may demonstrate a more highly developed level of performance in one domain against a background of mediocre or poor performance in another (e.g., Miller 1989). There may be poor performance in a particular domain; e.g., an individual with an autistic spectrum disorder may demonstrate poor intrapersonal and interpersonal competencies, while an individual with a specific learning disorder may demonstrate poor spatial-perceptual competencies.

Each child’s abilities are viewed in terms of a profile of strengths and weaknesses. Thinking entails multiple sets of skills that enable an individual to resolve genuine problems or difficulties that are encountered. Thinking creates an affective product and entails the potential for finding and creating new problems
thereby laying the groundwork for the acquisition of new knowledge. The key to teaching is to recognize and honour these distinctive, autonomous modes of thinking and their interrelationships. Nurturing intelligence requires that the parts be made whole by immersing meaning into interrelationships. For example, Vaille and Perry (2002) suggested that students who may not have mathematical ability or be able to read at an advanced level still have intelligences that need nurturing. The theory of multiple intelligences in the special education context appears to imply a changing role for the special education teacher that may include identifying students’ strongest intelligences, focusing on the needs of specific students, developing and implementing a curriculum that includes a full spectrum of intelligences, increased self esteem and increased understanding and appreciation of such students (e.g., Armstrong 2000, p. vii).
2.1 The Musical Intelligence

*The Arts* of the Curriculum and Standards Frameworks (1995) identifies six arts forms, i.e., Dance, Drama, Graphic Communication, Media, Music and Visual Arts (Board of Studies 1995, *Curriculum and Standards Framework: The Arts*, Carlton, Victoria, p. 9). The notion of a diverse intelligence is made by advocates of *The Arts* attempting to convince people that *The Arts* have utilitarian value, that artistic-aesthetic modes of knowing lead to better modes of knowing in mathematical, spatial or verbal modes of knowing:

… the arts involve the conscious and systematic comparison and organization of forms … the arts then are responsible for the elaboration of these forms whether verbal or visual … once elaborated, this language of forms is then available for the more declarative representation of objects and events … the arts develop, elaborate and refine language and then the language is used for representation … in this way, art precedes and leads both ordinary and scientific cognition … (Olson 1983, p. 36)

Of all the modes of thinking with which individuals may be endowed, apparently none apparently emerges earlier than the musical (e.g., Bamberger 1991). Musical activities and experiences offer a wide range of ways to be intelligent. Musical thinking indeed requires involvement of right hemisphere, left hemisphere or both depending on the nature of the musical task and the experience of the musical performer or listener. A diverse set of descriptors relevant to the musical intelligence has existed for a very long time. Gardner (2000) used a long list of synonyms that serve as descriptors of the general characteristics attached to the musical intelligence. He suggested that an understanding of music may be central to understanding all human thinking. Few music educators would not feel ennobled by such a bold and breathtaking claim, valuing music as we do. Few would be quite so ambitious about music’s nature and value. Intuitively, many would appreciate that music is more central to humankind than generally thought, struggling to explain why, stopping short of identifying music as the one sure clue to unraveling the mysteries of the human mind. Certainly Gardner’s work brought more widespread attention to this concept than any other single theory. His major contribution has been description of the musical intelligence in a way that is indeed a manifestation of thinking.
Reimer (2003, p. 201) argued that the ‘… human intelligence … is better understood as constituted not of frames conceived as stable mental structures, but rather of roles …’. He argued that Gardner’s position is entirely correct, but does not go far enough. Gardner’s notion of the musical intelligence may not be sufficiently descriptive of the diverse ways thinking is manifested in the musical intelligence and how the musical intelligence is manifested in other modes of thinking. It is not sufficient to posit a generalized musical intelligence. Beneath the surface are different musical roles, e.g., performance, improvisation and composition, music theory and listening and musicology that give a broad sense of the multiplicity of ways that the musical mind discriminates and interrelates. Each of these roles call on particular yet related ways that characterize the musical intelligence.

What are the qualities and characteristics of musical thinking in students with disabilities and impairments? What is the nature of the development of musical thinking, including the nature of responding to music in students with disabilities and impairments? What can young students with disabilities and impairments do musically? How does what students with disabilities and impairments do musically change over time?

It may bear repeating that special education is about multidisciplinary teamwork, i.e., the needs of students (and adults) with disabilities and impairments have become the shared responsibility of both educators and many other allied professionals in recent years. One of the most urgent tasks for the music teacher, therapist or director may be to develop, implement and evaluate extended profiles of musical achievement in standards-based music curriculum frameworks for students with disabilities and impairments. The task demands wide research and review of the process of learning music. An examination of music research and theory literature indicates a breadth of influence of researchers and theorists from an increasing number of fields, e.g., psychologists, educators, therapists, music theorists, composers and performers have contributed to the vast array of knowledge about the psychology of musical behaviour that help to enhance individual’s musical abilities, sensitivities and enjoyment. Music research and theory literature regarding students with disabilities and impairments is examined within the context of the broader music research and theory literature (e.g., Eagle 1978, p. vii). This study includes some of the contributions to music
research and theory literature from the disciplines of *Music Education* and *Music in Special Education and Music Therapy*.

The music research and theory literature includes contributions from *Music Education* (e.g., Music Psychology, Curriculum Studies, Systems of Music Education) that focus on investigations into approaches to music teaching practice, i.e., underlying philosophical issues, principles of music teaching practice, curriculum planning and implementation, major systems of music education and techniques, selection of material resources, testing and evaluation.

Much music research is basic developmental research. Music theory is scattered, usually not replicated and often based on short-term period(s) in the field. Implications must therefore remain tentative. Much of the music research and theory literature focuses on the psychological foundations of musical behaviour, theories of learning and memory of music and the neurological processing of musical information, psychological responses to music from *Music Psychology*. Contributions describe the psychological foundations of performance, improvisation and composition; the psychological foundations of rhythm, melody, harmony and other elements of music; affective behaviours and musical preferences; and music as a phenomenon of people, society and culture. This music research and theory represents the confluence of the disciplines of cognitive-developmental psychology and the psychology of music in the mid 1970s. Gaps in the existing literature clearly needed to be filled. On one side of this gap could be placed the vast majority of psychological research on the theory of music. On the other side was the experience and insight of the musician. However, this new discipline did not appear to relate to what musicians actually did. Many psychologists studying music may not have received extended musical training, and so had a limited range of musical insights to guide their work. Even psychologists with musical expertise often seemed to detach their work from their musical knowledge.

Perhaps only since the mid 1980s has research and theory that is well-grounded in both psychology and music begun to construct psychologically
pertinent research into musical functioning which might be capable of unifying
and giving direction to a wide range of theoretical endeavour. Researchers and
theorists in this field have tended to address themselves either to the professional
psychologist or to the music educator and educational researcher. There appears
to have been little fruitful dialogue between psychologists and practicing
musicians.

Graduate courses and doctoral programs in Music Psychology are
provided in academic institutions in countries including England, USA, Canada,
Poland, Hong Kong, Austria and India. In Australia, the University of Melbourne
offers a semester-long course in Music Psychology that is currently normally only
available to students enrolled in the Music Therapy stream of the undergraduate
degree of Bachelor of Music or the Graduate Diploma in Music Therapy program.
Courses and programs span the study of the psychology of music education,
developmental and social psychology of music, early childhood music education,
choral music education, music in therapy and special education, development of
musical ability, psychology of performance, research methods in the Music
Psychology, music perception and cognitive development, music and emotion,
and cognition and culture.

The music research and theory literature includes contributions from
Music Therapy and Music in Special Education (e.g., Curriculum Studies and
Music Methods in Special Education and Music Therapy). Music Therapy is a
behavioural science. A music therapist’s major goal is to modify behaviour.
Unwanted, uncomfortable and unhealthy behaviours are replaced with more
adaptive behaviours (e.g., Billingsley, Fox & Jones 1979). Skillful, planned and
creative use of music and/or its musical elements, i.e., rhythm, melody, harmony
and other elements are used as a medium to facilitate and promote healing and
personal growth of individuals with identified physical (movement and physical
co-ordination; rehabilitation), cognitive (learning; memory; imagination and
thought processing), social (relationships; contact; cultural and spiritual identity;
emotional support through times of change or crisis, loss, grief and pain; reducing
stress and tension) and communication-language (interaction; self-awareness;
self-expression) needs (e.g., Alley 1979, Lathom & Eagle 1984).

In the past, music therapists have most frequently worked with those with
an intellectual disability or psychiatric illness. Today they work with people of
all ages and abilities, from children and their families to the frail elderly. Music therapists may work with individuals and groups and in many different settings. There is a broader emphasis, e.g., preventative health care, integrating students with disabilities and impairments into local school settings, elderly populations, pain control, stress management, infant stimulation, adult day care, nursing homes, wellness programs, childbirth, prisons and medical care (e.g., Michel 1985, Nordoff and Robbins 1982).

Bruscia (1998) suggested that music and therapy are both difficult to define. When fused together into a single discipline, many complications arise. He took an in-depth look at the unique problem of defining music within a therapeutic context and defining therapy within a musical context. Over 40 definitions of music therapy were examined and compared. Davis, Gfeller and Thaut (1992, p. xv) described the principles and processes of music therapy and the use of music as a therapeutic medium:

… in a broad range of health and human services … such as special education, medicine, nursing, occupational therapy, physiotherapy, psychology, recreation, counselling, gerontology, social work and human development …

Bruscia (1991) presented 42 case studies about the process of music therapy. The case studies included children, adolescents, and adults receiving individual and group therapy in a range of psychiatric, medical, educational and community settings. With authors from nine countries, the text details a broad spectrum of approaches and techniques in music therapy. It is used as a reference and as an introductory textbook to the field of music therapy in the training of students of music therapy, but also very useful text for music teacher, therapist or director.

Deutsch (1999, p. xv) acknowledged the ‘… considerable progression in the [music research and theory literature] … since the publication of the first edition [of her text in the early 1980s] …’. Several factors appeared to have contributed to this development. First, the advance of the technology to generate,
analyze and transform sound. Second, advances in the field of neuroscience that has profoundly influenced thinking about the way that music is processed in the brain. Third, closer collaborations between psychologists and musicians only beginning to evolve in the early 1980s, now quite common.

Radocy and Boyle (2003, p. v) remarked that

… we have learned a lot about human musical behaviour … [however] … much remains to be learned regarding how people create, perceive, organize and employ musical sounds …

Reimer (2003, p. ix) also remarked that:

… in the intervening years [almost 35 years between the first (1970) and the third (2003) edition of his text] a great deal of good work [has been] accomplished in the cognitive sciences … that needed to be incorporated [into the third edition] …

Common components in many music curriculum frameworks appear to include singing, playing, improvising, composing and arranging, notation skills, understandings, listening, evaluating, understandings of relationships of music to other arts and other disciplines and understandings of music in historical and cultural contexts:

• singing a varied repertoire of music, alone and with others
• performing a varied repertoire of music on instruments, alone and with others
• improvisation of melodies, variations and accompaniments
• composing and arranging music
• reading and notating music
• listening to, analyzing and describing music
• evaluating music and music performance
• understanding relationships between music, the other arts and disciplines outside The Arts
• understanding music in relation to history and culture

These components are included in a standards-based music curriculum policy framework that was developed in the United States of America by the Music Educators National Conference (1986, 1994, 1996a, 1996b).
The standards-based National Curriculum (Music) (1995) curriculum policy framework developed in England includes description of content for two attainment targets (substrand organizers), i.e., Performing and Composing and Listening and Appraising for the end of each of four key stages.

The standards-based Music Strand of The Curriculum and Standards Framework (The Arts) (CSF 1995) is defined as composed sound that has both an expressive and communicative purpose. Students use musical instruments, voices, objects and electronic sources and techniques and processes to perform, improvise and compose. In addition to involvement in their own music, students experience and evaluate a range of familiar and unfamiliar music from different styles, genres, times and cultures. The Music Strand of The Arts CSF 1995 recognizes instrumental and vocal music programs as specialist components of music education. Ensemble groups such as choirs, percussion ensembles, concert bands, orchestras and stage bands are an essential part of the learning process in music education. Three key substrands are organizers for program development and integral in the Music Strand. The substrands are interrelated. They show the different ways in which people engage in the arts: as makers or producers, performers or presenters, audience members, critics or theorists. A balanced program will include activities associated with each substrand.

Contributions to music research and theory offer a broad understanding of the complexities that encompass the development and implementation of extended profiles of musical achievement in music curriculum frameworks for students with disabilities and impairments. However, constraints of time, space and resources necessarily limited the scope and breadth of the literature review in this study. The relevant music research and theory literature is thus clustered into three themes aligned to the substrand organizers that are key elements in the structure of the CSF 1995 (The Arts):

- Creating, Making and Presenting Music
  Exploring and Developing Musical Ideas
  Using Music Skills, Techniques and Processes
  Presenting
- Music Criticism and Aesthetics
- Past and Present Contexts of Music
2.2 Creating, Making and Presenting Music

In Creating, Making and Presenting Music,

... students learn to generate and develop musical ideas using many starting points to extend understanding of the potential of music to express, challenge, stimulate and shape meaning ... they work with a range of musical processes as they develop, select, decide upon and refine ideas ... students acquire music skills, techniques and processes by experimenting with and observing techniques followed by practice and experimentation with tools, materials and processes ... students share the musical work by performing ... involvement in presentation and performance enables students to reflect on their own works as well as those presented by others ... (Board of Studies 1995, *Curriculum and Standards Framework: The Arts*, Carlton, Victoria, p. 11)

2.2.1 Creative Musical Thinking: The Psychological Foundations of Performance, Improvisation and Composition

Serious inquiry into the psychology of creative musical thinking apparently began following Guilford’s presidential address to the American Psychological Association (Guilford 1950). Research and theory in this subfield flourished for the next two decades then became more sporadic. Several summaries and anthologies of the large and complex research literature in this field have been published. Fundamental problems that trouble researchers in the field appear to have a great deal to do with problems of definition. Hounchell (1985) apparently concluded that no clear definition of creativity exists. Imagination and creativity are often used synonymously. The terms are distinct, but related. Imagination is understood to precede the creative act. A creative musical work is understood as the outward expression of imagination. It is thought that there may be various types of imagination and stages or levels of imaginative development. It is relatively young work. It is tentative, experimental and in need of replication and expansion.

Musical creativity can be conceived of as a distinctive mode of musical thinking. Oehrle (1984) cited inconsistency between the relative absence of genuine creative activities and the philosophical endorsement of such activities. Nonetheless, creative musical approaches are ways of saying things that are personal to the individual. Creativity requires qualities of imagination, originality, divergence, ingenuity, openness, inventiveness, nonconformity, innovation, novelty, uniqueness, fluency, flexibility and the like. Musical
creativity implies the freedom to explore chosen musical materials. The individual is engaged in the process of selecting, rejecting, evaluating and confirming of musical material. Creative musical approaches are essentially experimental musical works that encourage children and young people to thoroughly explore their own music. Torrance (1953, pp. 43-44) pointed out that ‘… an act is creative if the thinker reaches a solution … that necessarily implies some novelty …’.

Dufrenne (1973) identified several important aspects of artistic creativity essential to creative role that music plays. For example, the only people who qualify to be called creative are the world renowned, historically eminent exemplars whose achievements have altered the course of their domain’s history (e.g., Csikszentmihalyi 1988, p. 325). Such people demonstrate creativity with a capital C. They are the ones to whom we should look to in defining creativity. All others are not really creative, although they may enjoy some of the pleasures of doing what really creative people do. Their creativity is definitely small c:

… the definition that most people usually agree on is that creativity is a new idea or product that is socially acceptable, valued and which is brought to fruition … that is creativity with a big C … creativity that changes the culture … then we can talk also about creativity which is a more personal experience which affects the way one experiences life with originality, openness and freshness … creativity with a small c the personal creativity is what makes life enjoyable, but it does not necessarily result in renown or success … it’s true that we can’t all be Einsteins, we can’t all be Beethoven … if we think creativity includes success and recognition, then it’s true, we can’t all do it … but each one of us can experience the feeling of discovery that these people had … and at that level that kind of creativity is what makes life very full and worth living …

Gardner (1993b, pp. 34-36) described the creative person thus:

… the creative individual is a person who regularly solves problems, fashions products or defines new questions in a way that is initially considered novel, but that ultimately becomes accepted in a particular cultural setting …
Johnson (1993) and Kieran (1996) argued an ethical dimension for performers, improvisers and composers. Musical respect is given to a person who is trustworthy, competent at the appropriate level and cooperative. For example, a composer must trust that performers will pay due regard to and bring the musical ideas embodied in a musical work to fruition. The spirit of mutual dedication in group performance depends on trust that all will fulfill their role conscientiously. Performers in ensembles must trust each other to devote the required energy to the task at hand. Trust between performers and the music teacher, therapist or director reflects psychological, emotional, musical and educational dependence. Solid confidence, built on personal and professional trust, is an absolute requirement if music is to be created successfully. A lack of mutual trust can spell disaster. Audiences must have trust in performers and conductors that they are presented with the fruits of conscientious, honest musical work. Performers and conductors place trust that their audiences will attend regularly, respond appropriately and give all due regard to their efforts. Trust is the bedrock on which musical enterprise rests making an ethical demand on all involved in it.

In every musically creative role, there is an expectation that individuals will have attained and maintain an acceptable, if not high level of ability to do what is musically required of them. All group efforts require cooperation. Cooperation calls on a choice willingly made to give oneself to a task in which others also have a stake. Music is steeped with a dependence on a cooperative ethic. Musical creativity calls on the individual’s willingness to risk, to be open to the unexpected and the not-yet-known and to be up to and worthy of dealing with the challenges of risking.

Development of creative approaches to musical problems through practical projects that include performance, improvisation and composition skills, techniques and processes has become more widespread as teachers discover its value in thinking about music. Creative approaches to performance, improvisation and composition are unique ways of knowing music. Students are required to engage with musical skills, techniques and processes in creative ways.
Musical ideas are developed from a range of starting points. Personal experiences, ideas, feelings and understandings are explored. Projects may include performing, improvising and composing accompanying music to a story or poem. Paynter and Aston (1970, p. 1) gave two examples. A six-year-old student moves stealthily across the classroom – a wolf creeping out of a deep, dark forest. A pattern of mysterious taps and scraping sounds tell us that the wolf and the forest are sinister and fearful. The student has chosen the drum, and decided how the wolf’s music should go. As the student creeps slowly across the room, he or she is lost in the world of imagination, intensified by music-making.

A group of students in their early teens are on a camping holiday. They have just returned from an exhausting hike and are sitting with steaming mugs of cocoa around the glow of a campfire. Someone is strumming a guitar. The others are singing. They know the song well. It’s been sung at previous campfires for as long as anyone can remember. Not everyone is singing the tune. Now and again the music breaks into parts, the harmony enriching the melodic line. None of the students has heard of a dominant seventh or a perfect cadence and most of them cannot read music. They are responding to the harmonic implications of the melody, composing other parts around it.

Bruscia (1987), Nordoff and Robbins (1977), Nordoff (1990) and Plach (1996) suggested that performance, improvisation and composition may afford the opportunity for students with disabilities and impairments to demonstrate spontaneity, creativity and freedom of expression, playfulness and a sense of identity. Performance, improvisation and composition are useful in helping the music teacher, therapist or director to establish a medium of communication with such students. Students are given the opportunity to express feelings that may be difficult to express verbally. Performance, improvisation and composition provide a safe means of experimenting with new behaviours, roles or interactional patterns whilst also developing the ability to make choices and decisions within established limits. Students are given the opportunity to organize their decision-making, learn selectivity and commitment, develop economy of means, identify and develop themes, document inner thoughts and feelings and have tangible evidence of personal achievements.
Baker and Wigram (editors) (2005), Bruscia (1987), Nordoff and Robbins (1977), Nordoff (1990), Plach (1996) and Wigram (2004) provided comprehensive guides that may assist in developing and implementing a range of performance, improvisation and composition skills, techniques and processes in students with disabilities and impairments as an expressive stimulus for promoting and exploring new behaviours in individuals in a group setting. Guidelines include basic principles of performance, improvisation and composition in music programs for such students; a detailed synopsis of more than twenty-five models that have been applied over more than thirty five years; observation skills; assessment of entry skills in individuals and/or group; developing learning outcome descriptors; developing and implementing activities; assessment and reporting of learning outcomes descriptors for individuals and groups; and professional ethics and the role of the director, leader, teacher or therapist in the education and/or multidisciplinary team.

Creativity in music teaching recognizes the needs of students and the importance of an optimal learning environment. Such approaches also accommodate differences in working styles and musical background. The music teacher, therapist or director’s role involves a concern for strengthening engagement between students and music. The music teacher, therapist or director assists students to not passively tolerate limited musical idioms, but to actively and willingly engage in music from a range of styles and contexts. Creative musical work is not controlled by the music teacher, therapist or director. Rather, the music teacher, therapist or director sets off trains of thinking to help the student develop critical powers and perceptions. The music teacher, therapist or director’s role is one of facilitator and guide.

• an introductory stage, e.g., improvisation incorporating story creation (e.g., an image, feeling, story, movement, dramatic situation); music teacher, therapist or director proposing ideas; students request ideas
• formulation of lyrics, e.g., brainstorming themes; words spontaneously suggested
• development of music, e.g., improvised melody over structured harmonic structure (e.g., a jazz accompaniment based on a 12-bar blues sequence); students create melody and/or harmony
• writing down a song, e.g., lyrics only; lyrics and melody; lyrics, melody and harmonic structure; lyrics, melody, harmony and accompaniment (full version)
• performing as soloist or participate in a duet, trio or ensemble that may include the music teacher, therapist or director and/or other students within their capacity
• recording of performance/improvisation/composition

Chapter 4 discusses the development of performance, improvisation and composition in the ten week music program with the specific classroom grouping of students for this study. Chapter 5 discusses the implementation and evaluation of the performance, improvisation and composition program. What follows is some the basic research and theory relating to the psychological foundations of the important musical roles of performance, improvisation and composition that, until recently, appears to have been neglected.

Performance. Performing music, i.e., bringing previously composed and notated music to completion is an important musical role. Performers are faced with unique demands. The act of performance demands inherent creativity. They start with the product of a composer’s creativity. Creative decisions may range on a continuum from an attempt to be as completely true to the composer’s intention as possible (but never entirely possible) to an attempt to alter the composition to make it conform to an agenda that is not the composers that a performer must make. The performer must discriminate the particularities of each sound. Performers must make creative decisions with the materials (composition) with which they are engaged. Performers are creative in imagining and producing musically expressive sounds.

Gabrielsson (1999), LeBlanc (1994) and Steptoe (2001) suggested that performance is a psychomotor behaviour that involves complex skills, e.g., performance planning and practice, sight reading and memorizing music, rehearsal techniques, motor skill, performance anxiety and physical,
psychological and social factors. A series of complex patterned motor movements, based on experience, are aroused. However, as suggested earlier, those living with disabilities and impairments will frequently experience difficulties with control of movement patterns and sequences.

Furthermore, Juslin (2001) and Sloboda and Davidson (1996) suggested that the expert performer is one who has mastered many of these skills, all of which he or she may marshal in service of a musical goal. A series of patterned movements, based on experience, are aroused during musical performance. There appears to be three general principles of expert performance. First, the expert performer is aware of musical groupings within the composition, e.g., combinations of tonal and rhythmic material. The inexpert performer will give inordinate attention to local aspects of the musical structure. Second, the expert performer employs flexible, unconscious procedures for solving problems, e.g., a technically difficult passage. Conscious attention is devoted to the longer range plan. The inexpert performer must give full conscious attention to the local problem. Third, the expert performer monitors the performance as it evolves and takes corrective action when necessary to prevent inappropriate deviation from the performance plan, e.g., fine tuning of pitch, rhythm or loudness.

Stough (1994) investigated the notion of expert performance, i.e., Dreyfus and Dreyfus (1986), Juslin (2001), Sloboda and Davidson (1996) and Sloboda (1988) in four handbell choirs of individuals with intellectual disability and/or developmental delay with a control handbell choir of non-disabled individuals. Groups with intellectual disability and/or pervasive developmental delay appeared to require that the music teacher, therapist or director to assume more direct monitoring, a greater amount of support to attend to cues and greater detail required in the development and implementation of the program.

Instrumental and choral ensembles have enjoyed increased popularity in schools serving as the primary means of formal music education for tens of thousands of students spanning several generations. Morrison (2001) presented an excellent discussion on the notion of culture in ensembles. He clearly explained the many ways school performance groups constitute genuine cultures with all the musical and human benefits these cultures provide for their members. Hylton (1983), Kennedy (2002), Nelson (1983), Pitts and Davidson (2000) and
Shehan Campbell (1995) suggested that one of the chief goals of music education programs is the development of lifelong musical attitudes and understandings. An ensemble program is thus the catalyst for the development of such attitudes and understandings.

Instrumental and choral ensembles offer students the opportunity to develop music skills, techniques and processes from an early stage. In many cases, instrumental and choral ensemble experience is a student’s only musical activity. Such experience serves as the only forum for the broad development of aural-visual perceptual and sight reading skills (e.g., Clarke 1988, Grutzmacher 1987, Smith 1984, Whitener 1983). In general, this research indicated that time spent on the development of aural-visual perceptual and sight reading skills does not always fit into the traditional model of ensemble rehearsal, yet remains essential to musical growth and understanding.

It is not entirely clear why certain individuals remain in an ensemble program while others drop out. For example, Koutz (1987) demonstrated that interest in music and enjoyment of the social aspects of a program appeared to contribute to higher retention rates in musical organizations. Other variables have been identified as statistically significant which seem to predict which students will remain in a musical organization, e.g., Bailey (1975), Frakes (1984), Gordon (1986) and Kovacs (1985) suggested that higher intelligence quotient test scores appeared to contribute to higher retention rates in musical organizations. Hill (1987) and McCarthy (1980) noted that socioeconomic status did not predict dropout rate from an elementary school instrumental program. Variables found not to correlate significantly include general motor development (e.g., Baer 1987), various physical measurements and overall physical growth (e.g., Cramer 1958, Lamp & Keys 1935) and lateral dominance (e.g., Schleuter 1978). Research into why certain students with disabilities and impairments remain in an ensemble program while others may drop out is required.

However, Atterbury (1990), Gfeller, Darrow and Hedden (1990), Gilbert and Asmus (1981), Hughes, Robbins, Smith and Kinkade (1987), Jackson, (1975),
Krout (1983), Rosene (1976 and 1982) and Smith (1987) suggested that students with disabilities and impairments are less frequently engaged in performance ensembles. Clark and Chadwick (1980) and Elliot (1982) suggested ways in which musical instruments may be adapted for students with disabilities and impairments. Furthermore, information and computer technology, e.g., digital imaging, desktop publishing, multimedia and music authoring software may have great potential to impact on artistic skills (e.g., Aland 1994, Brown 1994, Conant 1988, Dreyfus & Dreyfus 1986, Hickey 1997, MacGregor 1994 and Stevens 1994). Drake and Grant (1987), Ellis (1990) and Junker and Fallon (1996) suggested that assistive peripherals to support the use of standard music authoring software may have great potential to impact on musical skills in students with disabilities and impairments. Activated through a switch box, assistive peripherals may include micro jellybean switch, banana keyboard and SoundBeam. The development of the ten week music program for the specific classroom grouping of students with disabilities and impairments in this study that includes the use of assistive peripherals to support standard music authoring software is discussed in Chapter 4. Chapter 5 and Chapter 6 discuss the implementation and evaluation of the use of this information and computer technology with the specific classroom grouping.

Limitations need not exist with appropriate teaching-learning strategies. Cox (1986, 1989), Durrant (2000) and Montgomery (1986) suggested that teaching-learning strategies in which there is a balance of varied musical activities and intensity levels, including high levels of positive reinforcement, seem to improve student attention to tasks and to the teacher. In my experience, high levels of positive reinforcement are an absolutely necessary component of a successful music education program for students with disabilities and impairments.

Variation in conducting technique will affect students’ attitude (e.g., Yarbrough 1975). Students may become oblivious to most gestures if inconsistent or otherwise inappropriate conducting technique is employed. Young children may not be able to interpret many typical conducting gestures (e.g., Cohen 1980). Students may need some sense of the art of conducting before they are able to respond to it. Hence, familiarization with conducting technique may be helpful (e.g., Kelly 1993). In my experience, familiarization with conducting
technique is also an absolutely necessary component of a successful music education program for students with disabilities and impairments.

Darrow (1985, 1993), Darrow and Gfeller (1988), Edwards (1981a, 1981b), Folts (1983) and Sposato (1982) suggested that many people assume that hearing-impaired people cannot hear or gain enjoyment from music performance. In fact, music performance can be a meaningful art form as well as an excellent tool for therapy as long as the auditory limitations are accommodated. Musical instruments that have frequency ranges matching students’ residual hearing may need to be used, e.g., people with sensorineural hearing loss often have better hearing acuity in lower frequencies so musical instruments in the baritone and bass range and the piano (lower octaves) may be good choices. Poor auditory acuity can be accommodated by selecting rhythmic instruments with large vibrating surfaces such as drums, pianos, baritone and bass tone bars and xylophones. The rhythmic pulses of these instruments can be felt as well as heard.

Complex instructions and explanations given to hearing-impaired students may also be difficult to comprehend, e.g., terms such as modes or harmony are abstract descriptions of complex constituent elements of music. In contrast, fast and slow are examples of more concrete terms that are more easily demonstrated and more readily understood. Because hearing loss can result in delays in communication-language, the music teacher, therapist or director needs to communicate with language that is within the developmental level of the student, e.g., suitable lyrics to songs that have new words carefully chosen and explained. Instructions should be simple and clear. Concepts can be clarified with visual aids and/or augmented system(s) of communication, e.g., fingerspelling, Signed English.

Bruscia and Levinson (1982), DeGarmo (1990), Levinson and Bruscia (1983) and Zimmermann (1998) suggested that teaching-learning strategies that will promote and enhance performance skills for students who have visual impairments include recognizing early signs of interest; learning styles of students with visual impairments; teaching students with visual impairments who also have concomitant additional disabilities; getting started; providing lessons and practice schedule with an appropriate ensemble; choosing an appropriate instrument that
may include non-Western and non-classical instruments; the voice; access to appropriate repertoire in large print music and/or braille music format; other aids to learning; playing by ear; and assessment and reporting of progress. Usage of words such as dark, blue, yellow or other visually based language concepts may be inappropriate for visually-impaired students.

Teaching-learning strategies for students with specific learning disabilities need to be based on principles sourced from the psychological and educational research literature. Principles include matching approaches to effective teaching to preferred learning style; access to appropriate repertoire; use of symbols and visual representation; adapting to uneven rates of learning; short sessions at more frequent intervals; incorporating use of reinforcements to enhance motivation; and avoiding perceptual overload.

*Improvisation.* Performance may involve improvisation. Bash (1983), Briscuso (1972), Burnsed (1978) and Damron (1973) indicated that improvisation skills, which are important to general musical development, can be successfully taught in an instrumental or choral ensemble program. The performer improvises music as they play or sing. Improvisation shares the characteristic of physicality of performance. In improvisation, the performer makes substantive decisions about what the musical sounds might be and become in the very act of performing them. Improvisation is the combination of the generation of musical ideas and the simultaneity of doing so with a performance, i.e., the performer generated musical ideas during the act of performing. Each improvised performance, even of the same piece, is expected and created to be different form every other performance. The improviser attempts a distinctive exploration.

Many great composers were excellent improvisers, e.g., Bach, Handel, Mozart, Beethoven and Schubert. Performances from the Baroque era were essentially improvisations allowing the performer to create music extemporaneously, i.e., embellish the provided melodic and rhythmic structures as suggested by a figured bass. The embellishment depended on the performer’s musical expertise and technical virtuosity.

Improvisation in the Western music tradition has roots in early monophonic vocal music, in early polyphonic music and in the Renaissance and
Baroque eras. It appears that the traditions of improvisation dramatically declined into virtual extinction during the Classical and Romantic eras. Pressing (1984a, 1984b) suggested that improvisation has many different artistic traditions, ranging from traditional Japanese music (virtually no improvisation) to free jazz (highly improvised) with many forms in between.

Most people associate improvisation with jazz. The performer draws upon musical vocabulary for the improvisation, e.g., 12-bar blues made up from a particular set of rhythmic, melodic (scales) and harmonic (chords) patterns. Many pop and folk musicians’ performances include improvisations. True improvisations are not rehearsed. People who prepare improvisations by creating, revising, memorizing and then performing a given set of patterns for a piece are really engaged in something more akin to composition than improvisation.

Pressing (1984, 1987, 1988) and Sloboda (1988) suggested that improvisation engages creative thinking about the organization and structure of the musical performance, e.g., improvisation involved:

… a continuing series of highly complex neurological processes including complex electrochemical signals among the nervous, endocrine and muscle systems; complex physical actions; monitoring of the actions through sensory systems; producing and monitoring musical sounds; cognitive evaluation of these sounds and cognitive processing to generate and design the next action sequence … (Pressing 1988, p. 130)

Systematic study of children’s improvisation and their characteristics include Moorhead and Pond (1978), Pond (1981) and Wilson (1981). These studies pointed to measurable changes in the manipulation of musical elements. Young children were observed working doggedly to match or re-create the musical utterances of their peers until the exact pitches and rhythms were found. One can sense the child’s mind struggling with the mental sound image that was retained in memory: each gesture organizing and adapting musical schemata. Creative musical thought is captured by intense observation of and interaction with the improvisation process. There is a strong tendency to endorse the naturalistic research methodology, i.e., careful observations during improvisation, structured and unstructured interview techniques with subjects after the improvisation, audio-visual recordings and field notes to determine processes of creative musicality involved. For example:
… everything about (this) research was completely ad hoc … completely empirical … it had to be … I wanted to learn … I could only learn from the children … from their spontaneous behaviour … (Pond 1981, pp. 6-7)

Such research methodology was not only rich in findings, but executed long before the current interest in ethnographic research and in the systematic study of musical creativity. All findings were regarded as quite tentative and required replication with larger samples. Valuable longitudinal results, e.g., Cohen (1980), Flohr (1979, 1984, 1985) and Freundlich (1978) suggested developmental stages of improvisational ability. Systematic study of improvisation and its characteristics, e.g., longitudinal research regarding developmental stages of improvisational ability in students with disabilities and impairments would seem very useful.

Burland and Davidson (2001) suggested that students challenge each other’s musical ideas and often new musical concepts emerge as students defend their original ideas or seek to reach compromise. The quality of musical outcome in the task may be influenced to some degree by the quality of social interaction in the grouping and thus impact on personal sense of achievement and enjoyment of the task. In recent years, music educators have become less concerned with assessment and quality of individual improvisations and more concerned with improvisation as a collaborative group experience. Group improvisation experiences may be analogous to conversations that have three basic characteristics (a) unpredictability and collaboration (b) use of structures and (c) generation of a product. For example:

… the group collaborations of group improvisation can potentially make it beneficial in a wide range of skills … not only musical skills … but social skills like collaboration, group problem solving and collective creativity … (Sawyer 1999, p 193)

… musical improvisation … because of its parallel with everyday conversation … can teach children how to engage in collective social action … it could teach them collaborative abilities … it could teach them how to solve problems in group settings or to brainstorm with others to come up with a creative group innovation … it could teach them how to
coordinate their own creations and insights with the constraints and
limitations of the evolving social world … (Sawyer 1999, p 203)

McPherson (1993) argued a balance between visual, aural and creative aspects of
performance, i.e., that developing instrumentalists should create music through
improvisation.

Research regarding the nature of improvisation as a collaborative
experience in students with disabilities and impairments, e.g., how students
challenge each other’s musical ideas, how new musical concepts emerge, quality
of musical outcome and quality of social interaction would also be very useful.
However, improvisation has always been recognized as having a natural place in
the how-to toolbox of the music teacher, therapist or director to facilitate the
development of thinking in the psychomotor, personal, cognitive and linguistic
domains, e.g., develop sensory-motor skills, learn how to use the voice or produce
sounds on an instrument, imitate rhythmic and/or melodic patterns, maintain
reality orientation, learn adaptive behaviours, develop group cohesiveness,
identify with the feelings of others, work cooperatively towards common goals,
encourage social interaction (e.g., Baker & Wigram (editors) 2005, p. 11; Bruscia

**Composition.** Composition is a creative musical act. Composition
requires an attempt to formulate a particular combination of musical sounds that
have potential meaning. Composition is thought to have two stages: an
inspirational stage, where the composer’s idea or theme becomes conscious
(exploring and developing a musical idea), and an execution stage, where the
theme or idea is subject to a series of conscious and deliberate processes of
extension and transformation (using skills, techniques and processes) (e.g.,
Sloboda, 1988, p. 116). Emmerson (1989) suggested that composition has three
aspects:

- action (creating and combining sounds)
- test (listen and determine whether they sound right together)
- accept (store) or reject (modify as new action)

Nearly all composers begin as performers. Some performers begin to
compose in the first decade of life, perhaps experimenting with pieces that they
were performing, rewriting them, changing them, turning them into something
other than they were, decomposing them. So, composition begins at the moment when a musical idea - anything from the simplest rhythmic or melodic fragment to something considerably more elaborate - begins to crystallize and assume significant shape. An initial musical idea may stimulate a contrasting or complimentary musical idea that bears some relationship. Once the musical idea is developed, the process of elaboration apparently follows with surprising naturalness.

Composition involves all forms of musical invention, not merely works that are written in notated form. Composition is the act of making and creating a musical work by assembling sound materials in an expressive way. There may or may not be experimentation with sounds as such. A composer may know what the materials will sound like from past experience in the idiom. Whatever the form may take, the prime value of composition in music education is not that more composers are produced, but the insight that may be gained by engaging with music in this particular and very direct mode.

The composer is provided with a guide, often with particular expectations regarding the conversion of written symbols to sound. A student may be engaged in performance of a particular composition, which may be learned either by rote and performed from memory or learned from notation and performed either from memory or from notation, utilizing the full potential of cognitive resources. It appears that composers use different strategies, and some composers use more than one strategy. Furthermore, each composer’s cognitive and affective processes and experiences are unique.

Just as improvisation, composition is recognized as an important musical activity through which children can learn music. Systematic study of children’s composition and their characteristics has received surprisingly little attention in comparison to the systematic study of children’s performance and improvisation. What resources of skill and musical experience has the student drawn on throughout the composition process? To what extent has the student learned to recognize and avoid mechanical responses to find expressive meaning? What exploratory composition processes has the students learned to use and with what results? To what extent has the student learned to articulate a personal musical style? To what extent can the student control the process of composition
independently of the director, leader, teacher or therapist? To what extent can the student appraise his or her own work in terms of development and future needs?

The limited amount of research and theory is ethnographic. Data are primarily based on systematic observation of children’s compositional processes and strategies, interactions among students working on group compositions, student records and interviews. What work has been done is largely limited to monophonic composition. Glover (2000) provided a very useful overview of approaches to composing and research. The work of Doig (1941, 1942a, 1942b) has historical significance for its systematic reporting of experiments in group composition with children long before any heritage of such research was evident. General conclusions about melodic development across ages were made, but it is difficult to interpret these results given that the music was constructed in groups rather than individually. Doig was the only judge of the compositions and it is unclear how the teacher-researcher may have influenced the final products.

Results of longitudinal studies (e.g., Younker 1998, 2000; Kratus 1985a, 1985b, 1989a, 1989b, 1990a, 1990b, 2001) and Stauffer (1999) indicated distinct differences in the use of musical elements with respect to age in the composition process. Developmental differences in tempo, meter, rhythm and tonality perception and organization have been reported. With experience, young children came to consider themselves as composers and ‘… became increasingly fluent at developing expressive ideas in their music …’ (Stauffer 1999, p. 93). Such systematic work is important for further understanding of creative musical thinking and its development over time. Problem solving processes and strategies are also thought to be very important components. Students engage in metacognitive activity that raises the depth and scope of musical awareness.

Focus is more on process. The primary concern is to provide children with opportunities to explore and structure sounds into a musical whole. Most approaches encourage children to use pitched instruments, non-pitched instruments and computer-generated sounds to create music individually or in groups. Just as for improvisational experiences, collaborative experiences appear
to be an important mode for learning through composition (e.g., Barrett 1996, Green 1990, Hamilton 2000, Miell & MacDonald 2000, Kaschub 1997, Marsh 1995). Research regarding the process of composition in students with disabilities and impairments would be very useful.

2.2.2 The Psychological Foundations of Rhythm, Melody, Harmony and Other Elements of Music

There is relatively little dispute about the principal constituent elements of music. Most central are rhythm (sounds grouped according to a prescribed system) and pitch (sounds emitted at certain frequencies). Rhythm is more central in certain cultures, e.g., African rhythms that can reach dizzying metrical complexity. Pitch is more central in Asian societies that make use of tiny quarter-tone intervals. Part of the organization of music is a horizontal contour produced when relations among the pitches unfold over time (melody). Part of the organization is a vertical structure produced when two or more sounds are emitted at the same time (harmony). Next in importance is timbre (e.g., Risset & Wessel 1999).

Aural perception is part of all music activity, i.e., singing, playing, improvising, composing, listening, analyzing, feeling. The aspect of aural perception that is of greatest importance to the music educator is the ability to perceive, remember and interpret musical relationships and structures. Contributions to music research and theory have a long history of concern with this ability including descriptions of the complex mental processes and representations of musical relationships and structures. Three forms of general behaviour are observed (i) recognition and recall of previously learned patterns (ii) the identification and storage of new patterns and (iii) ongoing comparisons of patterns experienced with recalled patterns.

There are many valid ways to describe music perception. Much is learned from observation of clapping, moving and spontaneous song. Students develop knowledge of and use the constituent elements of music. Musical works are developed by imagining, experimenting, planning and applying the elements. There are demonstrated differences in ability both between and within individuals.
Experienced music educators will be very familiar with the philosophies, approaches to and material resources of Orff, Kodály Choral Method and Dalcroze Eurythmics systems of music education. Carl Orff (1895-1983) noted that music, movement and speech were inseparable. In 1924, he collaborated with German dancer Dorothea Günther to establish the Günther Schule [Günther School] to train physical education teachers in movement. His goal was to develop and stimulate creativity by using improvisation through speech, movement, singing and playing a variety of pitched and unpitched instruments. Children begin with repetition and imitation and then gradually proceed to improvisatory activities. Orff compiled five volumes of rhymes, songs and improvisational arrangements for teachers to follow, e.g., melodic and rhythmic ostinato patterns (e.g., Orff 1966, Wuytack 1970).

Zoltán Kodály (1882-1967) was a noted Hungarian music educator and composer. He was appalled at the level of music literacy he found in students entering the Zeneakademia – the highest music school in Hungary. Not only were these students unable to read and write music fluently, but in addition they were totally ignorant of their own musical heritage. His interest in music education began at the teacher training level, but soon led him to become involved in the music education of young children.

The Kodály Choral Method relies on utilizing only the highest quality of folk and composed music and should be utilized as pedagogical resources and materials. Kodály believed that (a) singing is the most important foundation of music education, (b) singing experiences should begin at a very young age, and (c) the music curriculum framework should use the indigenous songs of the child’s own culture as the source of early music learning because of their inherent simplicity of musical style and language. The Kodály Choral Approach makes extensive use of rhythm syllables in developing early rhythm skills. Pentatonic folk songs are best suited for the melodic experiences of pre-school and kindergarten age children. Melodic development should rapidly progress to diatonic and chromatic structures.

Kodály had been interested in the collection and analysis of Hungarian folk music since the early 1900s. With Béla Bartók, he collected thousands of
children’s songs, holiday and festival songs, courting songs, wedding songs and laments. They were analyzed and classified according to mode, scale and type into several volumes of the *Corpus Musicae Popularis Hungaricae*. In the early 1920s, Kodály began composing works for children’s choirs to bridge the step between folk music and art music. His work continued over the next three decades with the publication of a three volume *Methods of Sight-Reading and Notation* in 1953 by a former student, Erzsébet Szönyi.

Furthermore, the Kodály Choral Method relies on a tonic sol-fa system and *movable* doh. Kodály borrowed handsigns developed in England by John Spencer Curwen (1816-1880) to provide symbolic association that represent a visualization of the high-low relationship, reinforce intervallic knowledge and develop cognitive knowledge of notation (e.g., Choksy 1974).

International awareness of the method perhaps began with conferences of the International Society for Music Education (ISME) in Vienna (1958) and Tokyo (1963). Reports on the method were presented. At the conference of ISME in Budapest (1964), Kodály gave a keynote plenary address and was elected honorary president.

The Kodály Choral Method has been practised in schools of Eastern and Western Europe, Japan, Australia, North and South America. Adaptations and expositions of the method have been published in Estonian, Polish, Swedish, Japanese, French, German, Latvian, Spanish, Russian, and English (e.g., Hoermann 1972, 1980, 1982; Hoermann & Bridges 1984).

Dalcroze Eurythmics is an approach to music education developed and implemented by Swiss musician and educator Emile Jaques-Dalcroze. The method encompasses the notion that the source of musical rhythm is the natural locomotor rhythm of the human body, helping students to become aware of and develop the expressive possibilities of their own bodies. This approach to music teaching involves improvisation. Much stress is placed upon the ability to improvise rhythmic movements. Children move freely (*eurythmy*) in bare feet to
music that is improvised at the piano to create different movement feelings for every exercise and spontaneously accompany specific movements improvised by the children. Separate body limbs mark the underlying beat and the phrase rhythm. Students sing intervals, sing songs with syllables and improvise with the voice and other melodic instruments. Dalcroze asserted that solfège with a fixed doh should be used in order to develop sense of musical pitch, awareness of tonal relationships and tonal memory (e.g., Jaques-Dalcroze 1915, 1921).

Originally designed as a system of music education, the Orff-Schulwerk system has been widely used in music therapy. Many music educators have used also used the Orff-Schulwerk system in teaching music to special needs students (e.g., Bitcon 1976, Dervan 1982, Lehrer-Carle 1971, McRae 1982 and G. Orff 1980). Hurwitz (1975) advocated the use of the Kodály Choral system of music education in teaching music to special needs students. Ogletree (1977) advocated the use of the Dalcroze Eurythmics system of music education in teaching music to special needs students. However, actual systematic evaluation of systems of music education for students with disabilities and impairments in which clear research and theoretical questions are hypothesized and tested appears to be all too rare. It was considered beyond the scope of this study to formulate research and theoretical questions about systematic evaluation of these systems of music education for students with disabilities and impairments.

The Suggested Learning Activities in Chapter 4 outlines musical activities and experiences in the music program for this study included:

- repetition, imitation and improvisation with sound effects in the spirit of the Orff-Schulwerk system
- intervals of the minor third and fourth and a movable doh in the composition of the song material in the spirit of the Kodály Choral Method approach
- improvised rhythm with body movements in the spirit of the Dalcroze Eurythmics approach

What follows are contributions to music research and theory relating to the psychological foundations of knowledge and use of elements (rhythm, melody,
Rhythmic Foundations. Rhythmic skills include concepts of beat and accent; rhythm patterns (including rests) in words and movements; repeated rhythm patterns; same, longer and shorter note values; meter, same and different rhythmic phrases; simple 2:1 and 3:1 note value relationships; compound meter; dotted note values; syncopation; anacrusis; triplet; and change of meter. Rhythmic skills range from simple tapping of the toe in time with the beat to the sightreading of intricate rhythm patterns.

Apparentley, perception of rhythm emerges before any equivalent perception of pitch or melodic contour. Rhythmic information is, if anything, apparently more fundamental to music cognition than pitch or contour information. Familiar tunes can be recognized from rhythmic patterns alone. For example, the opening phrase of the children’s action song See Saw, Up and Down would be recognized from the rhythmic pattern 1 1 1−1 1.

Research relating to the rhythmic dimension of music constitutes a very large body of work. Clarke (1987a, 1987b, 1999) and Clarke and Krumhansl (1990) provided a thorough overview of this work. Some literature dates back to the early 1900s. Research and theory is mostly developmental (longitudinal or cross-sectional) or experimental (examination of the ability to keep time with the beat of the music and/or the ability to repeat or perform a given rhythmic pattern) (e.g., Deutsch 1980).

Chang and Trehub (1977), Davidson and Colley (1987), Jones (1976) and Rainbow (1981) suggested that in early childhood, infants are observed to respond to obvious differences in rhythm patterns. When a change occurs, they may respond, e.g., rapid eye movement or increased heart rate. Infants between three and six months will respond with bodily movements, e.g., rocking, nodding, seesawing, swaying and bouncing. In the second year, there is an increase in the amount of physical response to music, including seesawing with one foot, nodding the head, raising and lowering the heels, moving the knees backwards and forwards. These young children show clear attempts to carry out dance
movements with other people. There are some early signs of co-ordination between music and movement at about eighteen months. They may begin to match their movements to the rhythm of the music for short periods of time. Music and singing are often incorporated into imaginative play, e.g., singing and round games. Preschoolers are increasingly likely to sit and listen attentively to music. With development, the variety of movements increases, as does the co-ordination between different movements into recognizable dance steps. It appears, in general, that these young children increasingly internalize their response to music.

Atterbury (1983), Buker (1966), Freeman (1986), Moog (1979) and Stratford and Ching (1983) suggested that students identified under a generic classification such as intellectual disability may demonstrate very different rhythmic skills for a variety of reasons, particularly when the cause of the intellectual disability has a significant impact on motor functioning, e.g., spastic cerebral palsy. Accuracy of recall and subsequent production of rhythmic patterns by students with an intellectual disability is impacted by poor attention span. Furthermore, the overall rhythmic performance of students with a mild intellectual disability was significantly more accurate than that of students with a moderate intellectual disability. In comparison to non-disabled students who tend to anticipate beat, students may tend toward a delayed beat response to a rhythmic activity that might be improved through teaching strategies such as use of visual cues and visually clear conducting styles.

Bilir (1995) suggested that individuals with a hearing impairment often cite the rhythmic aspects of music as their entry point to musical experience. Some composers, e.g., Scriabin have translated their works into rhythmic series of coloured forms. Stravinsky stressed the significance of seeing music performed, whether by an orchestra or a dance troupe. Darrow (1979, 1984) and Korduba (1975) demonstrated that children with hearing impairment perceive rhythmic information more easily than melodic or harmonic information. In fact, children with hearing impairment perform at least as effectively as normal-hearing children on rhythmic tasks especially if tactile and/or visual cues are available in
reproducing a rhythmic pattern, e.g., feeling the beat of the drum on the wooden frame of the instrument, watching another person play a drum while imitating a rhythmic pattern or keeping time with a blinking light on a metronome.

Boyle (1968, 1987) and Coffman (1949) demonstrated that the effects of a variety of rote training programs, e.g., activities like counting aloud, tapping, use of metronome, use of words (rhythm syllables) and movement (eurythmics) to develop rhythmic skill do not appear to produce a statistically significant increase in rhythmic skill. Behrens (1984), Bengtsson and Gabrielson (1982) and Gabrielson (1982a, 1982b, 1993) demonstrated that more research and theory is clearly necessary before one can draw definite conclusions regarding whether rhythmic development is a function of age or development or whether it can be fostered through training. However, conventional wisdom tends to support the view that movement somehow interacts with and facilitates rhythm perception and performance (e.g., Galvao & Kemp 1999). Effective music teaching for young children should include songs in mixed and unusual meters. Perhaps the most important issue is that some systematic approach to rhythmic development should be employed rather than leave it to incidental learning as part of a music curriculum framework.

**Melodic Foundations.** Melodic skills include concepts of melodic contour (ascending and descending phrases); high and low sound patterns; steps, leaps and repeated sounds; higher and lower melodic phrases; same, different and similar melodic phrases; melodic sequences; tonal centre; changes in tonality; treble clef; key signature; sharps, flats, naturals; major, minor and pentatonic modes; and octaves (e.g., Burns 1999, Deutsch 1999, Rasch & Plomp 1999).

Research and theory related to development of melodic skills is primarily developmental, i.e., studies of children’s abilities to accomplish certain melodic tasks at various age or developmental levels (e.g., Aiello 1994; Cuddy 1991; Dowling 1991, 1994; Edworthy 1985; Flowers & Dunne-Sousa 1990; Fox 1990; Krumhansl 1990, 1991). The understanding of melody has been studied through observation of a variety of activities, e.g., how melodic patterns and tonal structure are spontaneously created and reproduced through song. Each child’s melodic development is thought to be subject to general laws of maturation. Observations have resulted in descriptions of an orderly sequence of development in which the earliest features mastered are melodic phrase contours, followed by
intervals and tonality. However, attempts to develop a taxonomy of melodic skills immediately encounter difficulties.

In early childhood, infants are observed to respond more actively to melody somewhere between three and six months, rather than just passively. They begin to turn towards the source of the sound and demonstrate manifest pleasure and astonishment. Infants demonstrate a startle response to obvious changes in the contours of melodic pattern. Such response, however, is not evident when the contour of the melodic pattern is maintained, but melodic variations, e.g., transposition up or down a minor third, transposition into other keys, altering intervals while preserving contour, altering octaves of individual notes, are presented. In summary, this series of investigations suggest that infants are sensitive to melodic contour (i.e., they can discriminate between ascending and descending patterns), but are insensitive to individual pitches and intervals (e.g., Chang & Trehub 1977, Cohen, Thorpe, & Trehub 1987, Cohen, Trehub, Thorpe & Morrongiello 1989, Trehub, Bull & Thorpe 1984, Trehub, Thorpe and Morrongiello 1987).

The next clear development in early childhood is vocalization to music. Moog (1976a, 1976b) noted the development of melodic contour in spontaneous and learned singing. Non-musical babbling occurs first, seen as a precursor of speech. Musical babbling occurs as a specific response to music heard, consisting of sounds of varied pitch, produced either on one vowel or on a few syllables. For example, very young infants are observed to engage in vocal play, exploring the range of pitches accessible to their voice, and attempting to imitate some of the pitches they hear. These abilities are put to use in the construction of rudimentary outline songs. The spontaneous songs of the two-year-old tend to consist of brief phrases that are repeated over and over again, i.e., discrete pitches, melodic contours and rhythmic patterns that remain more or less constant, repetitions that are likely to vary in pitch, overall pitch level that wanders, and interval sizes between the different notes that wander. Spontaneous song of a child at 32-months often incorporates repetitions of the same contour at different pitches (melodic sequence). Spontaneous song of a child at 42 months incorporates similar repetitions of the same contour at different pitches (melodic sequence) as well as some early signs of harmonic organization. These observations illustrate
how even very young children exert increasing schematic control over their spontaneous song through repetition and variation.

Davidson (1985b, p. 38) noted strong evidence for the power of contour as an organizing and processing strategy in melodic behaviour:

… throughout the development of tonal knowledge, there is a consistent pattern … once a set of high and low boundaries has been established and integrated into a stable contour scheme, that scheme is used in relation with others to reflect the tonal material of a given song more accurately …

Young children develop behaviours related to melodic direction and shape, i.e., melodies move up, move down, repeat tones, move by steps or skips, move in sequences. The initial pitch-related concept that teachers try to develop in children is that of high and low, or more properly, higher and lower, since pitch is a relative concept.

Sato (1960) and Zenatti (1975) conducted research specific to the development of melodic skills in students with disabilities and impairments. Melodic discrimination on a same-different task of a three-or-four-note melodic pattern in students with an intellectual disability was found to be inferior to that of nondisabled students of the same chronological age, but approximated that of nondisabled students of the same mental (intellectual) age.

Ford (1985) demonstrated that melodic skills of hearing-impaired children may lag behind those of normal-hearing children. These skills are stronger in those with a mild hearing loss than those with a severe or profound hearing loss. Pitch discrimination improves with increased intensity (loudness) and is more accurate for lower pitches, e.g., the lower half of the piano keyboard. Larger intervals, e.g., perfect fifth are more easily perceived. However, even children with severe hearing loss have been trained to recognize small intervals, e.g., minor third.

The mastery of pitch and melodic contour is apparently largely accomplished by the end of early childhood. Children’s melodic perception
operates within an increasingly stable tonal system. The main features of melodic development in the early years of schooling are those concerned with the accurate representation of pitch-interval relationships, i.e., the formal characteristics of the tonal system. A tone’s pitch is located on a high-low continuum. Placement on that abstract continuum in relation to other tone pitches is learned skill or behaviour - a psychological property. A universal chant is thought to exist, produced by children of all cultures, characterized by the presence of the descending minor third, and frequently includes the fourth. Awareness of interval size, particularly the minor third, occurs during the fourth year at the expense of tonal freedom. Sinor (1984) described awareness of interval size in seven stages. The first stage features the pattern so-mi, a descending minor third. In the second stage, the characteristic tonal pattern expands to la-so-mi, often with the stress on la. Doh is added in the third stage, la-so-mi-doh, although it does not function as a tonic. A pentatonic scale, la-so-mi-re-doh, appears in the fourth stage. The fifth stage adds the octave doh, so the characteristic tonal relations are now based on doh-la-so-mi-re-do. A half-step is introduced in the sixth stage as the syllable fa extends the pentatonic scales to a hexachord, doh-la-so-fa-mi-re-doh. With the addition of the leading tone ti in stage seven, the diatonic scale is complete.

Harmonic Foundations. Harmonic skills include concepts of several melodies together; variety of accompaniments; presence or absence of accompanying sounds; chords; harmonic texture; hearing chord changes; hearing the need for chord changes; and harmonizing songs. There is probably nothing special about western tonality in the sense that children growing up in other cultures are likely to acquire the tonality of their own culture in a similar manner. Butler and Brown (1994), Bharucha and Krumhansl (1983) and Thompson and Cuddy (1989, 1992) suggested that in early childhood young infants are observed to respond to obvious changes in harmonic progression. In the early years of schooling, 5-year-olds are observed to detect changes in key signature (pitch transposition where both melodic contour and interval were retained), but not changes in interval size. Most 6-year-olds appear to have little concept of the place of perfect cadence in tonality (progression from the dominant (V) chord to the tonic (I) chord). However, there was significant improvement by the age of eight. Children seemed to recognize the difference between the tonic (I) chord and the dominant (V) chord at this stage, and to grasp the function of the perfect cadence. 7-year-olds can reliably detect key changes in the middle of familiar
tunes, and 8-year-olds can detect changes from major to minor scales. Furthermore, 8-year-olds are able to detect both key changes and interval changes (tonal transposition where melodic contour was preserved but some interval sizes changed). By the age of ten, the half-cadence (progression from the tonic (I) chord to the dominant (V) chord at the close of the phrase) had also been grasped.

A young child will need experiences which help develop harmonic awareness. Harmonic awareness begins with a variety of accompaniments to known songs (piano, guitar, recorded instrumental backings, tuned or untuned percussion), including the presence/absence of accompanying sounds. For example the first and third verses of a song may be accompanied: the second verse sung unaccompanied. Vocabulary used may include unaccompanied, chords, chord changes, harmonization, harmonic texture (several melodies together).

**Other Elements of Music.** Other elements of music include expression, timbre (tone colour), style and form. Concepts include dynamics and tempo; contrasts in dynamics and tempo; gradual and sudden change in dynamics and tempo; expression marks, tempo and dynamic symbols; identification of instruments (source of sound, e.g., wood, metal, skin, string, voice, electronic, and method of production of sound, e.g., blowing, strumming, plucking, bowing, hitting); legato and staccato sounds; and different styles and mood of music. The element of form includes concepts of phrases; same and different phrases; introductions and codas; repeated and contrasting sections; repeat signs; binary (two-part) and ternary (three-part) form; rondo form; suite; and theme and variations (e.g., Narmour 1999). Developmental and experimental research and theory includes Krumhansl and Jusczyk (1990), Krumhansl, Bharucha and Castellano (1982), Krumhansl, Bharucha and Kessler (1982), Loucks (1974) and Todd (1989, 1992).

**Conservation of Music Elements.** Swiss psychologist Jean Piaget (e.g., Gindburg & Opper 1969; Piaget 1950, 1952; Piaget & Inhedler 1969, Wadsworth 1971) considered that a major milestone in the development of cognitive behaviours was his concept of conservation. The biggest and most controversial area of the Piagetian research is that relating to the transition from the pre-operational (later stages of early childhood to the very early years of schooling) to
the concrete operational stage (ages 7-11, i.e., later stages of the early years of schooling to the early stages of the middle years of schooling). In the practical context, the concrete operational stage is best described in terms of the acquisition of conservation abilities, particularly in the realm of the development of mathematical knowledge in young children, i.e., conservation of number, volume, classification, space, distance, time and speed.

Pflederer Zimmerman (1964, 1967, 1970, 1971, 1981, 1982, 1984, 1985) devised a range of tasks to investigate the phenomenon of conservation of music elements based on the writings of Piaget. Five types of music conservation were identified (i) identity, where thematic material maintains its essential characteristics across various permutations (ii) metrical groupings, in which the listener recognizes and discriminates among meters despite changes in note value distribution within measures (iii) augmentation and diminution, i.e., recognition that respective lengthening and shortening of note values in a melodic passage does not change the basic tonal relations (iv) transposition, where a change in frequency level does not alter perception of tonal configurations and (v) inversion, where the listener recognizes an inverted simultaneous or successive interval.

Children were played a four-bar phrase from Bartok’s *For Children* (1946), followed by variations of the phrase, e.g., variations in style or instrumentation, rhythm (augmentation or doubling in time value), key change, and harmonization. Broadly speaking, the results from this research supported Piagetian theory. Pflederer Zimmerman found that 8-year-old subjects (concrete operational stage: the later stages of the early years of schooling) were generally able to recognize the constant (conserved) aspects of the melody, albeit that other properties of the phrase were varied, whereas 5-year-old (pre-operational stage: the very early years of schooling) subjects were not.

Pflederer Zimmerman continued to conduct research along these lines, and her efforts stimulated others to do likewise (e.g., Hildebrandt 1987; Perney 1976; Pflederer Zimmerman & Sechrest 1968; Serafine 1975, 1983). Success on music conservation tasks does seem to improve with age. There may be a plateau at the age of nine or so. Conservation of rhythmic patterns seems to appear earlier than that for melodic patterns. Variations of rhythm, mode and melodic contour are apparently recognized earlier than those of harmony, instrumentation and tempo.
All aspects of development must occur. However, development varies greatly with individuals. Furthermore, Ashbaugh (1983), Foley (1975) and Jordan-DeCarbo (1989) suggested that music conservation abilities could not be trained in pre-operational stage children, i.e., in early childhood. Empirical research in this area has generally supported the validity of music conservation tasks. However, attempts to accelerate conservation appear to be highly questionable. In a music program with students with disabilities and impairments, it would not seem that a musical activity, e.g., leading the singing of rounds that assume conservation of rhythmic and melodic elements, would not be at all successful until the student/s demonstrate an intellectual age of seven or eight years of age.

**Symbolic Development and Visual Representation.** One way of defining music is to think of music as a symbol system (e.g., Gardner 1982). The musical symbol system is a system of symbols of communication or language with its own conventions, codes, practices, and meaning structures (e.g., Bates, Benigni, Bretherton, Camaioni & Volterra 1979). The work of Piaget greatly influenced research into symbolic development and visual representation as children acquire an ever-increasing understanding of the nature of the basic elements of sound in music. The acquisition of what Piaget called the semiotic or symbolic function is a major developmental milestone. Symbolic development assimilates and accommodates symbols and signs such as a visual image or word that makes reference to an object.

Students develop an understanding of and use discipline (music) specific visual symbols. Much knowledge about musical perception has been built from observation of children’s ability to reproduce sequences of simple rhythms, short melodies, harmony and other elements of music using graphic notations (e.g., Davidson & Scripp 1988). Experiments have been conducted in which children of different ages have attempted to represent musical stimuli by drawing, and (conversely) to produce musical representations of graphically represented stimuli. Explanations can shed light on musical development. Several representative experimental examples follow.

Goodnow (1977) presented sequences of taps to children and asked them to write them down. Preschool children were unable to make any spatial representation of the time intervals. Most simply drew one dot or one circle for
each tap or just an (uncounted) collection of dots or circles. Around the age of five (the early years of schooling), children began to produce what Goodnow called action equivalents of the sequences, e.g., drawing the first group of dots, pausing, and then drawing the second group without any spatial interval. Examples are shown in figure 2.1 (a) and (b). Between the ages of five and seven, children start to use size, position and gaps in order to represent time intervals. Examples are shown in Figures 2.1 (c), (d), (e), (f) and (g).

FIGURE 2.1: Children’s graphic representations of tapped sequences (Goodnow 1977)
Bamberger (1982) and Bamberger, Brofsky, Brody and Vazquez (1988), working in conjunction with the Harvard Project Zero group, developed a more sophisticated and musically oriented developmental description of the representational strategies children employ, based on experimental tasks very similar to those of Goodnow (1977).

FIGURE 2.2: Bamberger’s typology of children’s drawings of rhythmic patterns (Bamberger 1982)
The type O example, ‘rhythmic scribbles’, is essentially pre-representational. There may be some representation of the continuous pulse of clapping, but there is no symbolic representation of the one-to-one-correspondence between the sound and the action. The drawing is ungrouped and unvaried.

The type F1 example is a representation of the rhythm in a continuous zig-zag line which bears no relation to the temporal pattern of the sequence. The type M1 example also demonstrates the child’s effort to capture each separate clap as a unit (circle) on the paper, yet still bears no relation to the pace of the sequence. The F2 type example demonstrates an attempt to vary the size of the unit (circle) to indicate relative duration: large and small circles stand for slow and fast actions respectively, albeit that claps 5 and 10 are represented incorrectly (these ought, by musical criteria, be large circles). The M2 type example demonstrates an attempt to overcome this limitation: all units are now correct with respect to relative duration. The M3 type example demonstrates units (circles) anchored to a fixed, underlying pulse.

Bamberger found that most 6 and 7-year-olds (the early years of schooling) produced F1, M1 or F2 drawings. Most 11 and 12-year-olds produced
F2 type or M2 type drawings. Very few produced M3 type drawings. In general terms, Bamberger suggested that musically untrained adults and children over the ages of eight or nine tend to spontaneously produce fully developed figured drawings, whereas only those trained in standard music notation are likely to produce fully developed metric drawings.


Data relating to the development of symbolic development and visual representation in children with Down Syndrome appeared to support the claim that skills in this area develop in a similar developmental sequence as their non-disabled peers, albeit at a lower rate (e.g., Beeghley & Cicchetti 1987). Snyder-McLean (1987) suggested that difficulties in the development of symbolic development and visual representation in students with specific language difficulties may actually reflect concomitant difficulties that these students may have due to short attention span. Sigman and Mundy (1987) and Wimpory (1995) suggested that young students with an autistic spectrum disorder may demonstrate difficulties that appear to lie at the intersection of social and symbolic development and visual representation. Increased interpersonal contact and attention to symbols and visual representation is encouraged in combination with musical activity. According to Zimler and Keenan (1983), congenitally blind and sighted adult and student subjects’ performances on paired-associate, free-recall and imaging tasks presumed to involve symbolic development and visual representation are apparently remarkably similar to the sighted challenging previous explanations of performance.

Full-scale symbolic and visual representation function is apparently at its height in the preschool period. Therefore the majority of toddlers will not demonstrate development of this milestone. Hence it would seem unreasonable to
expect that symbolism and visual representation have intent and meaning for the majority of toddlers. Students with severe, profound and multiple disabilities and impairments do not appear to demonstrate development of this milestone. Likewise, it would seem unreasonable to expect that symbolism and visual representation to have intent and meaning for such students.

However, a preschool child is likely to begin to learn to match symbols and visual representations. Similarly, students with mild and moderate disabilities and impairments may begin to learn to match symbols and visual representations, e.g., photographs, compic pictographs. Therefore the director, leader, teacher or therapist encourages such students to use and interpret a limited range of appropriate symbols and visual representations to represent musical elements. Thus young children use idiosyncratic symbols (graphic notations) to encode their experiences in music. These symbols may be viewed as vehicles for conveying meaning and are precursors to the development of the culturally agreed symbol systems (conventional notations). Data suggests that as children become more experienced in encoding their meaning, recordings become less context-bound and more concerned with ideas and concepts (e.g., Barrett 1997, 2000).
2.3 Music Criticism and Aesthetics

In Music Criticism and Aesthetics,

... students listen to, talk and write about musical works ... they learn how social and cultural values and meanings are constructed, challenged and reconstructed ... they engage in music criticism as they describe, analyze, interpret, evaluate, develop preferences and the ability to discriminate between musical works and to challenge ideas ... they reflect on and respond to their own musical works and those of others (Board of Studies 1995, Curriculum and Standards Framework: The Arts, Carlton, Victoria, p. 11)

Listening is an act of reconstruction of musical meaning (e.g., Hedden 1981, Knieter 1971). The power of music to make us feel and to know through feeling is probably its most defining characteristic. This characteristic of music makes it so central, so significant that music penetrates to the core of all cultures (e.g., Reimer 1989, Reimer (editor) 2002 and Reimer & Wright (editors) 1992). Farnsworth, Block and Waterman (1934) suggested that responses to music are largely covert and therefore inferred from observation of an individual’s behaviour. Manifest responses to music are filtered through feelings, values and beliefs (e.g., Rosenberg & Hovland, 1960). These concepts are corroborated by work of Best and Kahn (1989), Killian (1985), Sloboda (1985) and Sparshott (1994). To better understand this characteristic of music, extensive reviews of the literature relating to responses to music are reported in Radocy and Boyle (2003).

Definitions suggest a psychological component together with a substantial affective component. Furthermore, responses to music appear to be significantly influenced by experience. Responses to music cover a very wide range of human experience, therefore it is hardly surprising that, given this diversity, the study of responses to music is scattered throughout the areas of cognitive sciences, philosophy, physiology and neurosciences. Contributions provide insights into the complex amalgam of workings of the intellect, intelligence and emotion previously thought to be separate. Terms are not used consistently in the literature.
Affective behaviours include those which have a significant feeling component (e.g., Miller 1992, Price 1986). Young (1973) recognized eight classes of affective behaviours; e.g., simple pleasant-unpleasant type responses; organic type responses (hunger, thirst); enthusiastic-aversion type responses to activity; aesthetic responses; mood responses (cheerfulness, elation, anxiety, grief); pathological responses (deep depression, apathy, hostility); emotional responses (fear, anger, laughing, agony, embarrassment); temperamental responses (vivaciousness, cheerfulness, moodiness). Moreover, there appears to be an affective dimension to all musical experience.

Emotional response is considered one type of affective behaviour, e.g., tension or emotion may be aroused with a deceptive cadence from V7 - VI rather than the expectation of an authentic cadence from V7 - I, or rapid I - V7 - I - V7 - I in a coda section (e.g., Meyer 1956, pp. 13-32).

Aesthetic response is another particular type of affective behaviour and is the outcome of aesthetic experience (e.g., Reimer 2003). Aesthetic experience is the term most often used to describe subjective, personal response to beauty or the aesthetic qualities of an object, event or phenomenon and can be defined in the broadest possible terms. Reflections of aesthetic experience can range from a like/dislike reaction to a current pop record to a music critic's critique of a performance of a Beethoven symphony. Knieter (1971, pp. 3-20) cited five characteristics of an aesthetic experience:

- Focus: An individual must devote attention to the artwork [music] and respond thereto
- Perception: The process through which sensory data are received and through which the individual becomes aware of the artwork [music]
- Affect: Concomitant physiological change in blood pressure, respiration and electrodermal response and feelingful reaction
- Cognition: The intellectual processes involved, e.g., analysis, synthesis, abstraction, generalization and evaluation)
- Cultural Matrix: The aesthetic values learned within a cultural context

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Radocy and Boyle (2003, pp. 318-319) cited several additional definitions that also suggest a psychological component together with a substantial affective component:

- **Attitude**: Implies a positive or perhaps negative (avoidance) behaviour toward a musical activity. Interest suggests feelings of concern, involvement and curiosity toward a musical activity
- **Taste**: Suggests an element of connoisseurship, reflecting some agreement with the experts regarding quality and excellence
- **Preference**: Involves the act of making choices and indicating them in some overt manner
- **Appreciation**: Appears to be used in a broad sense that includes knowledge of musicians, notation, literature, instruments and history, and a narrow sense that places more emphasis on an individual’s sensitivity to aesthetic qualities
- **Sensitivity**: Implies perception of and responsiveness to sensory stimuli and reflects both cognitive (subtle discriminations) and affective (subtle feeling) responses

Implicit in the views of Knieter (1971), Meyer (1956), Miller (1992), Price (1986) and Radocy and Boyle (2003) is that aesthetic experiences impose psychological involvement with an art form, perception and cognition of the interacting elements in the art form and feelingful response.

What is good music is, of course, a matter of judgment. Reasons for individuals judging particular music superior to other music may include the use of musical elements, extramusical associations, and social and cultural variables. Rhythmic, melodic, harmonic and other music elements will arouse people in different ways. Musical responses can be explained on the basis of the use of musical elements. Responses may depend on the mood of the individual, background, training, experience, prejudices, and beliefs. Some people want complexity. Some want simplicity. Some preferences are predictable; others are not. It depends on the person making the choice. All music exists on a continuum between highly stimulating, invigorating music, and soothing sedating music. Certain music may be soothing or relaxing. Other music makes an individual feel happy or sad or elicits feelings of frustration or agitation. A detached, percussive rhythm may provide a strong energizing element to stimulate and arouse listeners. Loud music may stimulate greater response than softer music. Sustained, legato melodic passages with a regular, quiet, and steady, and
subdued rhythm may soothe, calm or tranquilize listeners (e.g., Meyer 1956, Reimer 2003).

An individual's associations with music, e.g., a popular movie track, opera or musical comedy, may influence responses to it that provide individuals with a mechanism for re-experiencing many significant events of their lives. Music of one’s childhood or adolescence may evoke feelings from those years associated with that music. Lovers may recall special occasions through their song (e.g., Langer 1957).

The variety of responses to music is great. Generally, studies involving physiological measures present musical stimuli as an independent variable and polygraph data that traces various physiological variables (e.g., Berlyne 1971, Boyle, Cole, Cutietta & Ray 1982, Hodges 1996, Ries 1969, Sternbach 1966). The most frequently studied physiological variables include heart rate, respiration rate, respiration amplitude and electrodermal activity. The underlying hypothesis of most studies is that the frequency and/or amplitude of various bodily processes controlled by the autonomic nervous system correlate with various responses to music (e.g., Watson 1973). However, attempts to examine correlations appear to have presented difficulties. Research design problems needed to be resolved. It may be that responses of the autonomic nervous system are sufficiently unique to each individual who brings a unique musical background to the measurement situation make predictions or generalizations about responses to music on the basis of physiological measurements inappropriate. Kuhn (1980, p. 6) appeared to have correctly predicted that ‘… research in this area will likely wane …’.

A second approach to the study of response to music is through the use of adjectival descriptors. What follows are two examples of the adjective checklist. Hevner (1935, 1936, 1937, 1939) developed an adjective circle grouping of 67 adjectives into eight clusters, each cluster containing adjectives of approximately the same meaning.
<table>
<thead>
<tr>
<th>1</th>
<th>awe-inspiring</th>
<th>dignified</th>
<th>lofty</th>
<th>sacred</th>
<th>serious</th>
<th>sober</th>
<th>solemn</th>
<th>spiritual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>dark</td>
<td>depressing</td>
<td>doleful</td>
<td>frustrated</td>
<td>gloomy</td>
<td>heavy</td>
<td>melancholy</td>
<td>mournful</td>
</tr>
<tr>
<td>3</td>
<td>dreamy</td>
<td>longing</td>
<td>plaintive</td>
<td>pleading</td>
<td>sentimental</td>
<td>tender</td>
<td>yearning</td>
<td>yielding</td>
</tr>
<tr>
<td>4</td>
<td>calm</td>
<td>leisurely</td>
<td>lyrical</td>
<td>quiet</td>
<td>satisfying</td>
<td>serene</td>
<td>soothing</td>
<td>tranquil</td>
</tr>
<tr>
<td>5</td>
<td>delicate</td>
<td>fanciful</td>
<td>graceful</td>
<td>humorous</td>
<td>light</td>
<td>playful</td>
<td>quaint</td>
<td>sprightly</td>
</tr>
<tr>
<td>6</td>
<td>bright</td>
<td>cheerful</td>
<td>gay</td>
<td>happy</td>
<td>joyous</td>
<td>merry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>agitated</td>
<td>dramatic</td>
<td>exciting</td>
<td>exhilarated</td>
<td>impetuous</td>
<td>passionate</td>
<td>restless</td>
<td>sensational</td>
</tr>
</tbody>
</table>
However, Farnsworth (1954) observed that several clusters of the Hevner Adjective Circle did not appear to describe internally consistent mood patterns. He rearranged 50 of Hevner’s adjectives into ten more consistent categories.

**FIGURE 2.4: Farnsworth’s modification of the Hevner Adjective Circle (Farnsworth 1954)**

Granlund, Ollsen and Karlan (1991), Grant (1989), McDonald and Simons (1989) and Standley and Madsen (1990) suggested that communication of personal responses of students with severe, profound and multiple disabilities may include a vocal response, e.g., a smile, a wiggle, or a coo and/or a physical response, e.g., a startle, a change of facial expression, an arm gesture. For such a student, a musical activity or experience may be bright and cheery. The activity or experience may be depressing and melancholic; calm or vigorous; whimsical or even pathetic (e.g., Hevner 1935, 1936, 1937, 1939). The intent and meaning of a student’s effort to communicate a personal response is assigned.

Semantic differential techniques have attempted to measure subjects’ views, perceptions or concepts of various phenomena by use of a series of bipolar adjectives between which students make a response on a five or seven point continuum:
One of the most elaborate applications of this technique is a multidimensional instrument for the measurement of critical and aesthetic responses to music. Called the 9-Affective Dimensions (9-AD), Asmus’ (1985) technique yielded nine dimensions of effect.

Third, works of Berlyne (1970), Hargreaves (1982, 1984, 1986), Hargreaves and Castell (1986), Hargreaves and Coleman (1981), Meyer (1957) and Walker (1980) attempted to establish links between musical responses and philosophical and psychological phenomena. One example of such approaches is that of Sluckin, Hargreaves and Colman (1992) (Leicester Aesthetics Research Group) shown in figure 2.5. They demonstrated the existence of an inverted-U quadratic function, such that response to completely new, unfamiliar music is initially negative. As the music becomes more familiar, response becomes more positive, reaching a peak at some optimum familiarity level. Further increase in familiarity gives rise to a decline in positive response, which eventually becomes negative at very high levels of familiarity.
The effects of gender, socioeconomic status, musical achievement, musical aptitude, race and other potential variables on response to music have neither been documented well enough nor replicated to establish any reliable relationships. People vary in their responses to any sensory experience in which they have a choice, e.g., certain foods, paintings, home decor, clothing, and music. Responses are rooted in individual biological needs, cultures, training and experience. Responses are not always consistent and they can be modified.

Music means whatever a person experiences when involved in music. What seems clear is that students develop increasingly sophisticated critical and aesthetic behaviours. Piaget’s influence is easy to detect in studies of the development of critical and aesthetic responses to music, frequently explained in terms of cognitive-developmental stages. For example, in a broad-ranging investigation of children’s critical and aesthetic responses to pictures, poems and music, Gardner and Winner (1978) found that responses of the youngest children (4-7-year-olds) were concrete and mechanistic in that they reflected a primary concern with the mechanics of making musical works, i.e., the skills, techniques and processes involved in doing so. Children in the middle age group (8-12-year-olds) began to conceive musical works as striving toward realism. They judged the musical works by reference to external standards rather than to their own
viewpoints, also demonstrating concern with standards of fairness. Responses were often literal. The responses of the older children (14-18-year-olds) revealed an understanding of the complexities and difficulties of making musical works, of the stylistic differences between them, and of the use of elements.

McMahon (1987) and Parsons (1976) described critical and aesthetic responses to music in four developmental stages. Between the ages of four to eight, the aesthetic qualities of a musical work are defined in terms of the child’s own experience, that children of this age group confuse what is perceptually present with what is not, that their critical and aesthetic perception is egocentric in that they cannot distinguish others’ view form their own. From eight years to adolescence or so, the child relies on sets of rules and conventions. Properties of musical works are not dependent on one’s own point of view, but are judged according to public rules; and their appeal depends on whether or not they adhere to these rules. Beginning at the onset of adolescence, the child acknowledges that a wide variety of possibly conflicting sets of rules might be used to evaluate musical works. Evaluations begin to be based on formal criteria, including style and composition. It is acknowledged that different styles might employ different rule-systems. Although the emphasis on the music elements increases, judgments are still essentially relative. They are made by reference to the artist's intentions, or to the observer’s personal opinion.

Abeles and Chung (1996), Bartlett (1996), Bruscia (1987, 1991), McMullen (1996) and Plach (1996) suggested that students with disabilities and impairments may be engaged in listening activities and experiences that focus on physical, emotional, intellectual, aesthetic or spiritual responses to live or recorded music. They may be activated or soothed by these listening activities and experiences. Some listening activities and experiences may be relaxing, reduce stress, or manage pain. Other listening activities and experiences may be arousing, energizing, and reassuring. Students demonstrate a wide variety of human feeling, emotion and subjective responses to musical activities and experiences. Students may be engaged in listening experiences that focus on physical, emotional, intellectual, aesthetic, or spiritual responses to live or recorded music. Bruscia and Groke (editors) (2002) suggested guided imagery as an approach to music teaching practice that engages students with disabilities and
impairments in listening activities and experiences that focus on physical, emotional, intellectual, aesthetic and spiritual responses to live or recorded music.

Teaching music immerses students in the realm of perceptual, sensory and affective modes of knowing. Knowing in this way is knowing music by perceiving and discriminating its relevant details above and beyond any generality. This kind of knowledge is directed to fine detail and extreme sensitivity to the slightest graduations of similarities and differences. Music education exists to nurture people’s potential to gain deeper, broader and more significant musical meanings. Music educators help students experience the meaning of music by immersing them in the music they make and respond to yield the mysteries of direct and personal musical meaning.
2.4 Past and Present Contexts of Music

Students gain a sense of human progress and how people have organized themselves into societies over time. They acquire knowledge skills and values to enable them to participate as confident, responsible and active citizens in a democratic society which functions in a global context. In Past and Present Contexts of Music,

… students study the social, cultural and historical contexts in which music is produced … they reflect on the value and meaning that different cultures and societies assign to music and musical works … they learn about the construction of music histories and the relationship between social and cultural issues and music practices … they develop skills in analyzing, researching, interpreting and questioning to expand their understanding of music in past and present contexts (Board of Studies 1995, *Curriculum and Standards Framework: The Arts*, Carlton, Victoria, p. 11)

Armstrong (1975), Blacking (1973), Brothers (1997), Damasio (1994) and Geertz (1974) suggested that music contributes meanings through its specifically and meaningfully organized sounds in all cultures. Every culture and subculture achieves musical meaning in its own particular way. Music thereby contributes to making each culture what it is; just as each culture contributes to the shaping of what it music turns out to be. Neglecting the role of music in culture skews full understanding of music. Neglecting the role of music in culture throws our understanding of both culture and about music out of balance. A more synergistic understanding is achieved when both the unique qualities of music as music and the culturally grounded constructs of music.

Social and cultural variables appear to have a very great influence on behaviours of individuals when responding to music. Each culture defines various musical roles. For example, Merriam (1964) suggested that music essentially serves similar roles, regardless of society, culture, or level of sophistication. Music as emotional expression provides a vehicle for the expression of ideas and emotions which might not be revealed in ordinary discourse. Although the debate about the real meaning of affective, emotional, and aesthetic functions will continue, music as aesthetic enjoyment essentially involves contemplating and responding feelingfully. Making music and responding to its beauty, meaning, or power appear important to most people.
Music functions as entertainment, but needs to be distinguished from aesthetic enjoyment. Popular music of the last half of the twentieth century, in the broadest sense of the term, apparently is intended to serve as an entertainment function, while art music is intended to serve an aesthetic function.

Music’s function as communication is perhaps the least understood. Merriam contended that music is shaped in terms of the culture of which it is a part. Its communicative meaning particularly depends on the extent to which individuals within the culture have shared experiences regarding the musical idioms, and what they convey. However, it is unlikely that individuals with shared experiences will derive the same meaning from a given musical experience. As suggested previously, any mood or emotion, a listener’s personality and other factors may affect communication resulting from a musical experience.

A national anthem which may symbolize a nation’s values and traditions; a school song; or a theme song of an organization, individual performer, a radio or television show, or products promoted in advertising jingles have symbolic function. Every society uses music to elicit physical response, e.g., dance.

Enforcing conformity to social norms is one of music’s major functions. Many songs for young children, including traditional folk songs, serve to reinforce the values and ideals that parents, schools, and society wish to instill in young children. Closely related, is the use of music to validate social institutions and religious rituals, e.g., traditional songs of organizations such as the World Association of Girl Guides and Girl Scouts and church hymnody that establish and preserve traditions and ideals. These functions contribute to the continuity and stability of culture, and integration of society. In summary, all of these functions draw people together, inviting, encouraging, and in some instances almost requiring individuals to participate in group activity, e.g., choral or band experience.

Gaston (editor, 1968) essentially believed that whilst music serves similar functions in nearly all cultures, individuals usually respond only to functional music of their own culture, i.e., they learn the music of their own culture and generally respond to it in terms of the way their particular society reacts to it.
There is an integral relationship of music and religion evident in virtually every culture, drawing and bonding individuals into a group. The importance of music as communication is its value as nonverbal communication.

He viewed music as a source of gratification, particularly apparent in children and adolescents, although adults certainly attain a sense of gratification from musical experience. Gratification is a product of achievement, rather than competition. Music provides opportunities for achievements in non-competitive situations. The self-esteem that results from musical accomplishment contributes greatly to an individual’s state of well-being.

Gaston suggested that the potency of music may be greatest in the group. He noted that music is a social phenomenon which invites and encourages participation in group activities, which may bring together individuals who otherwise might not come in contact with one another. Group musical experience provides people with opportunities to interact in intimate, yet ordered and socially desirable ways. Classroom music education programs provide not only the opportunity for music learning, but also social learning.

Kaplan (1990) basically regarded music as a mode of critical and aesthetic knowing that is based on ‘… originality in putting (sounds) together in ways that have not been done before …’ (p. 20). Music may be the collective possession of a state, church or other organization, where music may be useful in some ritual, or commemorate some special event. Music as personal experience may provide the opportunity for relaxation, memory, fragmentary or sustained enjoyment, contemplation, or any other subjective mood or need. Music may teach ‘… proper responses or attitudes towards values and institutions of the society …’ (p. 32). Music may be viewed as an indicator and forerunner of social change. Music both shapes and is shaped by society.

Social and cultural values also appear to have much influence on behaviours in students with disabilities and impairments at different developmental levels when responding to music. They gain a sense of human progress and how people have organized themselves into societies over time. They acquire knowledge skills and values to enable them to participate as confident, responsible and active citizens in a democratic society which functions
in a global context. Students thoroughly enjoy popular music when a disco activity is organized, eliciting a physical response, i.e., dance. Students appear to be aware of the symbolic function of music, e.g., a national anthem, a school song, theme song of an organization, popular individual performers, radio or television shows and products promoted in advertising jingles. Most students are well aware of the function of music for celebrations, e.g., birthdays, Christmas. Many students appear to enjoy choral or band experiences. They appear to attain a sense of gratification and achievement in a non-competitive music teaching situation. The self-esteem that results from this musical accomplishment apparently contributes greatly to the individual’s state of well-being. The group musical experience appears to provide these students with opportunities to interact in intimate, yet ordered and socially desirable ways.

Whilst Gaston (1968), Kaplan (1990) and Merriam (1964) examined behaviours of individuals when responding to music from differing perspectives, many commonalities exist among the functions they describe, e.g., providing a vehicle for the expression of ideas and emotions; entertainment; communication; contributes to the continuity and stability of culture, and integration of society; providing opportunities for achievements in non-competitive situations; and inviting and encouraging participation in group activities. The various functions are not discrete. Given that musical experiences may serve different functions for different individuals, and even more than one function for a given individual, the important point is that musical experiences serve a variety of functions for most people in virtually every culture and society. Whatever music’s origin, music appears to be a human behaviour that occurs within a social and cultural context.

There appears to be consensus that society and culture have much influence on the musical behaviours of individuals. The ever-presence of music, whether in the concert hall, supermarket, home, church, school, commercial media, or elsewhere, reflects music’s place in contemporary society. Because people create music, they presumably create it for some purpose, i.e., music serves some function within the society in which it was created. Perhaps more accurately, the musical experience, rather than the music per se, is functional.

It is not surprising that a mistake that the music teacher or therapist or director tends to make is about music chosen to engage students. Earlier
philosophical thinking in music education tended to emphasize the understanding of the unique qualities of music as music, especially music of the Western classical tradition. It would be a mistake to abandon the continuing attempt to understand the unique qualities of music as music. The mistake is to assume that this is sufficient. One thing that music educators can and should do is to provide a diversity of world musical traditions. This is especially the case when a global culture that is interlinked and interdependent exists and sure to develop in the future. Music education should offer musical opportunities that include but go beyond those readily available in the culture, include but go beyond what the culture typically provides and include but go beyond the generally available music that students are involved within their culture(s). Every particular type and kind of music across a broad spectrum of cultural imaginings provides its particular way to bring musical meaning into existence. Each particular tradition of world music provides its characteristic musical meanings. Improvement in creative musicianship, providing the opportunity to refine the ability to gain musical meanings and expansion of students’ repertoire of musical meanings is the basic, primary and foundational obligation of music education. The need for meaning, significance and sharing experiences of feeling are met universally through music and enhanced through music education.

At the core of the idea of multicultural music education, issues of authenticity, teaching in culturally grounded ways, availability of materials, teacher education, use of community resources, defining often ambiguous terms, bi and multimusicality, curriculum goals and objectives, providing appropriate environments and proper and improper repertoire have arisen and been either well, moderately well or poorly addressed.

What appears to be needed is not a swing of the pendulum to a similarly unbalanced position emphasizing the culturally grounded constructs of music, but a recognition that the two are not in opposition. Both are necessary dimensions of the nature of music and its significance in human experience. Both the unique qualities of music as music and the culturally grounded constructs of music must be represented in a balanced approach to music education.

A person making a choice may well consider opinions of other persons who are significant in his or her life, as well as cultural messages in and about the music. Of particular interest to music directors, leaders, teachers or therapists are
studies relating musical response with age and peer group membership. For example, Denisoff (1976), Greer, Dorow and Hanser (1973), Greer, Dorow and Randall (1974) and Greer, Dorow, Wachhaus and White (1973) demonstrated an increasing interest in rock music with advancing grade levels. Furthermore, Alpert (1982) and Dorow (1977) suggested that the music teacher, therapist, director and other significant adults’ approval may influence elementary school students’ responses! More importantly, Schuckert and McDonald (1968) suggested that musical responses may be altered and expanded through formal instruction, but the direction is not always predictable. An expansion of responses may be a preferred outcome, rather than a reordering of musical responses in some arbitrary direction. The philosophical question of whether or not responses should be altered is not answered satisfactorily. Interesting times indeed!
2.5 Summary

Influential contributions to music research and theory seemed to contribute to a broad understanding of the nature of musical thinking and learning qualities and characteristics of musical thinking and learning at different developmental levels, including corresponding approaches to music teaching practice regarding students with disabilities and impairments. Music research and theory literature regarding students with disabilities and impairments was examined within the context of a considerable amount music research and theory literature regarding the wider population. There appears to be a paucity of music research and theory literature regarding students with disabilities and impairments. Contributions perhaps represent some of the most profound challenges facing the music director, teacher, therapist or director.

Development of musical thinking in students with disabilities and impairments appeared to have important and integral links to the development of thinking processes in the psychomotor, social, cognitive and linguistic domains. One may observe uneven outcomes depending on the requirements associated with each musical task. Development of musical thinking in students with disabilities and impairments appears to vary greatly depending on the particular category of disability and the musical task. The largest proportion of research has focused on students with an intellectual disability. Students with an intellectual disability fall below their chronological peers in many motor, social, cognitive and communication-language tasks. A student’s intellectual age may be a better predictor of development than chronological age. In contrast, there is little about the development of musical thinking in students with other types of disabilities and impairments. Development of musical thinking may not only vary greatly from one category of disability to another, but also within each category of disability, depending on the severity of the condition as well as the particular musical task. Students with disabilities and impairments appear to demonstrate development of musical skills in a similar sequence as their non-disabled peers throughout their years of schooling, albeit at an uneven and/or lower rate. Furthermore, approaches to music teaching practice may vary greatly among settings.
CHAPTER 3

THE RESEARCH CONTEXT,
METHODOLOGY AND
ETHICAL AND POLITICAL
CONSIDERATIONS

3.0 The Research Context: Conceptions of Other and Self

This chapter examines national and international research and theory relating to inquiry and evaluation to provide insights into contributions that social researchers can make to contemporary understandings of the social world. The researcher conceptualizes, guides and constrains the work that is done in a specific study. A phenomenon, theme or issue or set of phenomena, themes or issues for a specific study is a unique, bounded system (e.g., Stake 1988, 1995, 2005; Smith 1978). The issue in this study was defined as an understanding of the extraordinary complexities that encompass standards-based music education curriculum policy frameworks for students with disabilities and impairments.

The majority of students with disabilities and impairments in the State of Victoria are educated in mainstream schools. There are approximately 6,600 students with disabilities and impairments in the State of Victoria educated in nearly 100 public education system special school settings such as Day Special Schools, Special Developmental Schools, and schools and facilities for the deaf and blind. The number has been steadily increasing in the past ten years (e.g., Victorian Institute of Teaching, 2004, p. 1). The context of this study begins with description of the setting, i.e., the physical environment within which the music program took place with sufficient detail to permit the reader to visualize the setting. The setting was a public education system specialist school setting that caters for students aged between 5 and 18 years of age who have significant physical disability and/or health impairment. Many students demonstrated severe, profound and multiple disabilities. Some students were integrated into local mainstream primary school and secondary college settings for between one half and four days a week. At the time of the study, the school setting had an enrolment of approximately 100 equivalent full time students.
The context of this study continues with description of the participants (stakeholders), i.e., the other and self. Rossi, Freeman and Lipsey (1999) provided a review of the types of participants and their roles that might be considered in research. They note that participants should be thought of as those people not only affected by a policy and/or program, but also those involved with the evaluation of the policy and/or program. Approaches to inquiry and evaluation of policy and/or programs in recent years have supported the active engagement of participants in all phases of research.

3.0.1 The Setting

The school setting was set on a large property, with attractive, well-maintained grounds contained within a large airy building part-leased to the Victorian state government education department from a not-for-profit non-government organization well known in Melbourne, Victoria and around Australia that provided extensive paramedical and other services and facilities for persons with physical and multiple disabilities and impairments.

An early intervention centre and kindergarten setting was also located on the property, but geographically quite separate from the main building. The setting serviced a mix of preschool children also with a combination of challenging intellectual, physical, and multiple disabilities and impairments from a wide geographical area and local regular preschool children. Many of the preschool children with intellectual, physical and multiple disabilities and impairments at the early intervention centre and kindergarten subsequently enrolled at and attended this particular specialist school setting.

Students travelled daily to the school setting from their respective homes, and returned via coaches modified for wheelchair access. Transport for students at the school setting was contracted by the state government education authority to two local coach companies.
The school was divided into six mini-schools. The age range of students varied from year to year.

<table>
<thead>
<tr>
<th>Junior Primary</th>
<th>early years (preparatory year)</th>
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<tr>
<td>Primary</td>
<td>early years (years 1 and 2)</td>
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<tr>
<td>Middle Primary</td>
<td>early years (years 3 and 4)</td>
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<tr>
<td>Middle Years</td>
<td>middle years (years 5 and 6)</td>
</tr>
<tr>
<td>Secondary</td>
<td>middle years (years 7 and 8)</td>
</tr>
<tr>
<td>Transition/VCAL</td>
<td>later years of compulsory schooling (years 11 and 12)</td>
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Victorian Certificate of Applied Learning (VCAL) is an alternative learning path for students in the later years of compulsory schooling (years 11 and 12).

The school aimed to develop in each student the attitudes and skills required to function as happy, independent, productive and integrated members of society to the greatest extent possible. This was achieved through delivery of the highest quality educational programs in partnership with the well-known not-for-profit non-government organization as the paramedical provider. The school community believed that all students have the right to an education that enhances self-esteem, confidence and a sense of dignity; provided an environment that offers support, understanding and information to families and the wider community; and provided an environment which values and promotes a multi-disciplinary approach to service delivery for each student.

School curriculum policies and programs were developed and implemented in the context of current standards-based curriculum frameworks in Victoria. They included sensory focused and early learning stages of motor, social, cognitive, and communication-language development.

Facilities included a fully equipped Art Room. From time to time, students’ artworks were displayed at an annual community relations display in a local major shopping centre. There was a fully equipped Music Room. The school setting hosted an annual combined regions specialist schools music festival. From time to time, students participated in a variety of other cluster, regional and state school music festivals. Facilities for programs in English included a library of a range of print, audio, and visual texts. Facilities for
programs in *Health and Physical Education* included a 25m purpose-built indoor heated swimming pool, apparently the site of many students’ favourite program. Students were selected to participate in an off-campus *Riding for the Disabled* program that was developed, implemented and evaluated by a senior physiotherapist staff member. Each mini-school section was fully equipped with facilities to conduct homecrafts programs, also generally popular with students.

Over the years, students appeared to have thoroughly enjoyed a range of many very successful whole-school theme days. A favourite theme day was always an Australian Rules Football ‘Football Day’ held during the winter term. Students seemed to very much enjoy dressing in team colours, decorating wheelchairs and walkers, and parading with fellow team members to their team theme song. From time to time, it had been a thrill to meet league-grade football team players in person.

Facilities also included a computer laboratory that houses approximately 20 computers, a range of mainstream early learning and junior primary level software and many types of peripherals that allowed access to the software in addition to the conventional keyboard and mouse. Peripherals were also commonly used across other areas of the curriculum, e.g., micro-switch technology was used to activate a blender in a homecrafts program.

Teachers and therapists used a collaborative multi-disciplinary team approach to assess and report achievement of each student. They developed, implemented and evaluated programs that supported each student in reaching his or her maximum potential. Programs were developed, implemented and evaluated to allow for individual behaviours, learning styles and educational needs of the students. To accommodate the wide range of abilities and the unique communication techniques of some students, a wide range of alternative and augmented communication systems were incorporated into programs.

Physiotherapists joined in the swimming program with the view to develop and implement a range of motor skills in a water environment.
Occupational therapists joined in the swimming program with the view to develop and implement undressing-dressing skills as an activity of daily living. They joined in the technology program with the view to provide advice regarding appropriate choice of adaptive peripheral to access computer software. Speech pathologists joined a classroom program with the view to providing advice regarding appropriate choice of augmented communication systems that were integrated across the curriculum, e.g., gesture, objects, photographs, compic pictographs, communication boards, voice output speech devices, micro-switch technology and computers. Some of these communication systems were accessed with a micro-switch peripheral. Positioning of the micro-switch was critical for success.

The school employed a number of teacher assistants to support the development and implementation of both education and therapy programs. The not-for-profit non-government organization also employed a number of therapy assistants to support the development and implementation of both education and therapy programs. Teaching staff, paramedical staff, teacher assistants, therapy assistants often developed, implemented and evaluated both education and therapy programs together as small, often very close-knit interdisciplinary teams based in the mini-schools. Education and therapy programs were also very much supported by an army of community volunteers, some of whom had supported the programs in many ways for many years.

The cycle of assessment and reporting of students’ progress was reviewed at the beginning of the year, mid-year and end-of-year. Teachers and therapists prepared an Individual Education Plan at the beginning of the year. The Mid-Year Review reported and assessed student progress toward learning outcome descriptors set in each Key Learning Area in the Individual Education Plan. The End-of-Year Review reported and assessed student progress for the academic year and began to develop a new Individual Education Plan for the following academic year.

A Program Support Group was convened for all students each academic year to review the Individual Education Plan. Program Support Group members
included parents/caregivers, a parent advocate (if requested), the student (where appropriate), the classroom teacher and the paramedical therapy coordinator. The group could be convened at any time to address issues that may arise during the year. Parents, students, teachers and therapists shared information and exchanged ideas about how to best support students achieve their learning outcome descriptors.

3.0.2 Participants

The participants (stakeholders) in this study were a defined classroom grouping of students and staff of the school community (i.e., the other) and teacher-researcher (i.e., self).

*A Defined Classroom Grouping*. The defined classroom grouping for this study was five students with disabilities and impairments in their middle and later compulsory years of schooling enrolled in the specialist school setting selected purposefully (e.g., Patton 2002, p. 45). This defined classroom grouping appeared to have distinct potential interest. The five individual students seemed to demonstrate very significant (maximum) variation in qualities and characteristics in musical thinking both within and across categories of disability and impairment (e.g., Patton 2002, p. 234).

The unique and diverse characteristics in musical thinking observed in this classroom grouping seemed to vary from that typically expected of students in the very early years of schooling to that typically expected of students in very early childhood. They were chosen because it is believed that an understanding of them would lead to a better understanding of the extraordinary complexities that encompass inquiry and evaluation of music education curriculum policy frameworks and programs for students with disabilities and impairments.

*Prior* to the research period, it was observed that one student in this specific classroom grouping seemed to communicate with, even made informed decisions about creating, making and presenting music; music criticism and
two students in this specific classroom grouping demonstrated mild and moderate disabilities and impairments. They seemed to communicate about creating, making and presenting music; music criticism and aesthetics; and the past and present contexts of music in more intentional ways. Two students in this specific classroom grouping demonstrated severe, profound and multiple disabilities and impairments. They seemed to possess unique ways of demonstrating personal responses to creating, making and presenting music; music criticism and aesthetics; and the past and present contexts of music. Responses were assigned. The five individual student participants in the classroom grouping were:

- **Aaron (not his real name):** a male student with a significant degenerative physical/health disability
- **Beverley (not her real name):** a female student with multiple disabilities, i.e., concomitant physical disability, speech and language impairment, perceptual-motor impairment, and visual impairment
- **Carol (not her real name):** a female student with a chromosomal disorder, resulting in degeneration of functional attention, cognitive, motor, and language-communication skills; significant degeneration of general health; hearing impairment; and visual impairment, and
- **Dennis, and Eric (not their real names):** male students with traumatic brain injury resulting in multiple disability, i.e., intellectual disability, speech and language impairment, visual impairment. (Traumatic brain injury is an injury to the brain caused by an external physical force, or by internal event such as stroke, or aneurism, resulting in total or partial disability in the areas of cognitive, motor, and language-communication skills. The term does not include brain injury that is congenital or degenerative, or brain injury that is induced by birth trauma)

**Staff of the School Community.** Staff of the school community, whether they be teacher, therapist, teacher assistant, therapy assistant or community volunteer who assisted me in the process of the development, implementation and evaluation of the classroom music program included:

- **Wendy (not her real name):** a female teacher assistant
- **Gordon (not his real name):** a male therapy assistant
- **Martin (not his real name):** a male personal attendant carer to Dennis
- **Donna (not her real name):** a female replacement teacher

**Teacher-as-Researcher: Valuing Teacher Experience.** Quite commonly, interest in, and a problem for research develops through ordinary involvement in the daily life of a setting. The researcher may already be a participant before formally deciding to conduct research in a setting. For example, Jorgensen (1989)
quoted one researcher who worked for a period of time in the beer bottling industry prior to making “Boring Work” the topic of a study. The researcher was able to assume easy access to the setting, providing sufficient access to phenomena of interest.

Much is written about the role of the teacher-researcher in the development, implementation and evaluation of educational initiatives. Increased attention has been given to the practice of the teacher-researcher in recent years (e.g., Britsch 1995; Hargreaves 1992, 1992b; Wagner 1990). Elliot and Adelman (1973b) suggested that teachers’ research in the classroom be encouraged. Teacher-researchers perform leading roles in curriculum policy framework and program development, implementation and evaluation in special education sectors (e.g., Fawns 1984).

Interest in the key issues for this study certainly developed, at least in part, through ordinary involvement in the daily life as a music educator in specialist education settings in a teaching career that has spanned some twenty years before formally deciding to conduct this research as the teacher-researcher. I could assume access to the setting as the classroom music teacher. I had sufficient access to phenomena of interest.
3.1 Methodology: Locating the Field in a Qualitative Approach to Evaluation

There are no perfect research designs. Limited resources, limited time and limits of the human ability to grasp the reality of the extraordinary complexities of an issue or set of issues necessitate trade-offs. Furthermore, research about people with disabilities and impairments has always presented its own special set of challenges. Not only is there a need for more research in the special education context, but there is a need for critical analysis of existing research and improvement of the quality of such research. There is a great need for empirically based data in the special education context. This would assist in decision making for those who set policy, for those who implement and administer programs, for those who teach students and for those who advocate for people with disabilities and impairments at the federal, state and local government level as well as for those in the private and not-for-profit sectors.

For example, a principal of a special education setting needs to report the impact of a new state policy on students with disabilities and impairments in the local school cluster. A class teacher wants to know how a new program will improve the performance of students. A local parent advocacy group wishes to share their apparently successful results of a shift in relationship policy with a local school cluster with other parent advocacy groups. A local university faculty member wants to gather evidence about aspects of a program that might need improvement to enhance performance of students with disabilities and impairments on assessment tasks. The researcher selects a phenomenon, theme or issue or set of phenomena, themes or issues, i.e., research questions to emphasize. The challenge is to determine the extent to which it is desirable to study one or a few phenomena, themes or issues in great depth or to study many phenomena, themes or issues in less depth (e.g., Guba 1978). Key issues for in-depth study in the research design for this study were stated in Chapter One.

The notion that anything that exists must exist in some degree and therefore be capable of being measured has exerted strong influences resulting in a long history of development of tests and measures. Traditional quantitative approaches in the general psychological research and theory literature has had the most profound influence on music research and theory. Of the approximately 110
music research and theory texts that have been published since the early 1860s, 11 have dealt with measurement and evaluation of musical behaviours (e.g., Boyle 1992, Boyle and Radocy 1987, Colwell 1970). Driven by a desire to construct formal measurement and evaluation protocols in music, these approaches use both intellectual and personality traits.

Historically important quantitative approaches to measurement of creative musical thinking include Baltzer (1988, 1990), Barron (1969), Guildford (1967), McPherson (1995) and Webster (1983a, 1987b, 1989, 1992). Protocols take a descriptive approach by presenting participants with statements about themselves and asking for a rating of the extent to which the statement seems true. For example, an item might be worded ‘I am curious’ to which the subject must respond ‘no’, ‘to a small extent’, ‘average’, ‘more than average’, ‘definitely’. The profile of responses is validated with a set of criteria that might include teacher ratings or evidence of real-life creative achievement. These protocols return subscores for imagination, independence or confidence as well as an overall creative index (e.g., Webster 1987b).

Quantitative measurement of musical aptitude and achievement (e.g., Bentley 1966a, 1966b; Bergendal & Talo 1969; Colwell 1969a, 1969b, 1970, 1979; Gordon 1965, 1979, 1982, 1987, 1989, 1991; Seashore, Lewis & Saetveit 1960; Wing 1961) have attempted to describe the breadth and diversity of responses to music that reflect a value hierarchy. Trehub, Thorpe and Trainor (1990) investigated infants’ perception of good and bad melodies. Flowers and Jellinson (1990), Kuhn, Sims and Shehan (1981) and LeBlanc (1982) suggested a relationship between listening time and like-dislike rating scales in students with disabilities and impairments. However, quantitative measures of musical preference are notoriously imperfect (e.g., Flowers 1981, Kuhn 1980, LeBlanc 1986). People may not respond honestly to questions regarding their preferences. Reasons for attending live performances selectively include non-musical ones. Examining collections of recordings may be useful, but individuals vary in the extent to which they can afford an extensive collection. Possessing a recording tells little about how often the owner listens to it.

Thurlow, Ysseldyke and Silverstein (1993, p. 3) summarized the status of knowledge about accommodations of test protocols in traditional quantitative
approaches to assessment and reporting in students with disabilities and impairments thus:

… there does not currently exist a set of guidelines about acceptable accommodations in testing students with disabilities and impairments that is based on comprehensive, empirical research …

Pitoniak and Royer (2001) provided a review of nearly 100 published articles related to this issue since 1993. Categories for accommodating assessment and reporting strategies for students with disabilities and impairments that might be used include motivational instructions, assistance prior to assessment, flexible scheduling, accommodations in implementation of instructions, assistance during assessment, aids such as adaptive technology and changes in format or content such as might be required for those with physically disabilities or visual impairment. Concerns relating to accommodations of test protocols for such students also included legal and legislative considerations.

The American Educational Research Association, American Psychological Association and the National Council on Measurement in Education (1999) include approaches for accommodating assessment and reporting strategies for students with disabilities and impairments, e.g., modification of presentation format such as Braille or large print for those with visually impairment or signed directions for those with hearing impairment, modification of response format, modification of timing such as extended time and/or frequent breaks, modification of test setting. The National Council on Measurement in Education (1999) cited examples when accommodations may be inappropriate. Further helpful resources for accommodating assessment and reporting strategies for students with disabilities and impairments may be found at http://ag.arizona.edu/fcr/fs/evaluation/adapeval.htm.

Applebaum, Engle, Koegel and Imhoff (1979), Bennett and Ragosta (1988), Bixler (1968), Ellis (1982), Heim (1963), Ianocone (1977), McLeish and Higgs (1982), Nocera (1981) have adapted various test protocols in traditional approaches to measurement of musical aptitude and achievement for students with disabilities and impairments. Musical aptitude and achievement appears to vary across and within specific skill areas in students with disabilities and
impairments. Success in testing is influenced by the differential requirements of the test items given negative effects of poor attention span, distractibility and difficulty with complex instructions. Adaptations in administration may be necessary in order to obtain data that is truly representative of musical aptitude and achievement in students with disabilities and impairments. Conclusions based on such limited research and theory is unwise. However, despite differences in testing philosophy, research and theory using these measures, it appears that the musical aptitude and achievement of children with disability and impairment is more similar to that of non-disabled children of comparable mental age than chronological age.

One direction for future research and theory may be the norming of test protocols in pre-existing measures of aptitude and achievement for students with disabilities and impairments. Another option is the construction of new test protocols designed specifically for children with disabilities and impairments, e.g., the criterion-referenced Test of Rhythmic Responsiveness (e.g., Kaplan 1977) to assess response to beat, tempo change, metric accent, durational pattern and ostinatos.

It seems to have been clear for some time that traditional quantitative approaches to the planned and systematic process of assessment and reporting about students’ musical thinking are useful only to a point. Existing quantitative approaches simply do not report and assess what students have learned. Time and funding are generally not available to develop appropriate test protocols for students with disabilities and impairments. Assessment and reporting about students’ musical thinking is regarded as far more than test scores. The study of the nature of the musical intelligence and the constituent components of musical thinking require application of learning theories to learning and teaching music. Recent years have seen extensive reviews of knowledge, continued interest in multiple intelligence theory and a growing desire to know more about the generative processes in music (e.g., Davies 1978, Hargreaves 1986, Howell, Cross & West 1985, Reimer 2003, Sloboda 1985).

What are reasonable accommodations to make in standards-based curriculum frameworks to ensure that such students can demonstrate musical
knowledge and skills in the cycle of assessment and reporting of students’ progress? What approach to the planned and systematic process of assessment and reporting about students’ musical thinking would be most appropriate for this study? What forms of assessment and reporting are reliable, valid and fair? Researchers must be able to inform policy makers and practitioners, as well as parents and advocates about effective assessment and reporting practices for students with disabilities and impairments.

The socially situated researcher enters into the depth and complexity of traditional and applied qualitative research perspectives. A qualitative approach seemed to best fit the focus of this study (i.e., study of people’s experiences and meanings in the context of the social-interpersonal environment). A qualitative approach allowed the research process to adapt, change and mould to the key issues. This study was socially constructed. Qualitative research has a great deal of interest in the uniqueness of the individual case. Relationships and what is studied are stressed. Situational constraints of the everyday social world are confronted. For example, the phenomenon in this study could not always be easily distinguished from the context. It was not always easy to determine when an activity started or ended (e.g., Goode & Hatt 1952). The study had to construct at least some sense of the context, e.g., the learning environment, the classroom climate, and classroom interaction. Why did I respond to the class in that way? Just what did motivate Jimmy? How did Jane feel when asked to ... ? How did an announcement on the public address system affect ... ? When interruptions occur ... ? I had to be flexible enough to utilize unpredicted events and occurrences that so often arose in the teaching context. Decisions about design, measurement, analysis and reporting in a qualitative approach all flow from the focus of research. Such decisions become evident when examining alternative purposes along a continuum of categories in qualitative research. Anything worth knowing in an inquiry and evaluation of policy and program frameworks should be understood in a naturalistic context.

3.1.1 History and Research Traditions
Qualitative inquiry and evaluation has become a discipline in its own right with a long and distinguished history in the social science fields (e.g., Greenwood & Levin 2005). The work of the University of Chicago School of Sociology in the 1920s and 1930s established the importance of qualitative inquiry and evaluation for the study of human group life. Denzin and Lincoln (2005) charted the fieldwork methods of anthropologists Boas, Mead, Benedict, Bateson, Evans-Pritchard, Radcliffe-Brown and Malinowski wherein an observer went to a foreign setting to study the customs and habits of another society and culture. Qualitative inquiry and evaluation crosscuts disciplines, fields and subject matters. It has separate distinguished histories in education, social work, communications, psychology, history, organizational studies, medical science, anthropology and sociology. It does not take long to discover that the field of qualitative research has undergone quantum leaps, particularly since the early 1990s. This approach to inquiry and evaluation has emerged as a serious approach, evolving from that of an upstart, marginal and often pariah stepchild to a respected member of the research community (e.g., LeCompte, Millroy & Preissle (editors) 1992).

The social sciences and humanities appear to have drawn together in a mutual focus on an interpretive qualitative approach to research and theory. However, this discipline has constantly been characterized by tensions, contradictions, diversity and conflict. These tensions, contradictions, diversities and conflicts do not exist in a unified arena, e.g., qualitative researchers in nursing and communications are decidedly different from those of researchers in cultural anthropology. Symbolic interactionist sociologists deal with different questions from those of interest to critical theorists in educational research. Disciplinary networks of qualitative researchers do not necessarily cross each other, speak to each other or read each other.

Early qualitative researchers wrote objective accounts of field experiences with alien, foreign and strange other, e.g., qualitative research in sociology and anthropology was born out of concern to understand the other. Preoccupation with the representation of the other remains. New epistemologies from previously silenced others have emerged. Essentially, qualitative inquiry and evaluation is multimethod in focus involving an interpretive, naturalistic approach to its subject matter. Practices in qualitative inquiry and evaluation attempt to make sense of or
to describe and interpret a set of phenomena in terms of the routine and problematic process and meanings people bring to them. The concept of the aloof researcher has been abandoned with more action-activist orientated research; social criticism and social critique; and more local, small scale investigation into specific problems and specific situations.

Those who conduct research concerning people with disabilities and impairments must be aware of the challenges of their work. For example, Gaylord-Ross (1990-1992), Mertens and McLaughlin (2004) and Switzky and Heal (1990) explored the adaptation of research methods in the special education context. Standley and Prickett (editors) (1994) and Wheeler (editor) (1995) discussed the many challenges of research in the music therapy context. These texts were intended as supplementary texts alongside the more comprehensive research methods texts. They did not purport to replace the major research methodology texts. No approaches to the construction of a research design are unique to research with people with disabilities and impairments in either of the abovementioned contexts.

During the early days of professional inquiry and evaluation, faith was put into large-scale quantitative studies, e.g., Follow Through, Head Start, Income Maintenance. Definitive findings would demonstrate which programs worked the best and serve as the basis for mandates by central government to reform inefficient social services. In time, these large-scale studies proved to be extremely disappointing. One problem was the logistics of the overwhelming amounts of data collected. Timely reports could not be produced. Studies were reduced to a fraction of original size by reducing the number of sites and variables. More seriously, the anticipated clear-cut results could not be generalized. For example, variance of outcomes within programs was about as great as variance of outcomes across programs. If the given program was implemented at six sites, two sites might demonstrate good outcomes, two sites might demonstrate mediocre outcomes and two sites might demonstrate poor outcomes.

Thus, Kuhn (1970, pp. 184-185) suggested that academic and disciplinary resistances and challenges to qualitative approaches to inquiry and evaluation are
many. Qualitative design follows a completely different logic from quantitative research. Qualitative approaches to inquiry and evaluation imply emphasis on the qualities of entities and on process and meanings, not experimentally examined or measured in quantity, amount, intensity or frequency. Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied and the situational constraints that shape inquiry. Qualitative researchers translate social experiences and construct narratives.

The empirical methods produced in a qualitative approach to inquiry and evaluation are regarded by many quantitative researchers as unreliable, impressionistic and not objective. Quantitative researchers abstract from this world. Carey (1989), Denzin (1997) and Huber (1995) suggested that textual narrative is rejected. They seldom study it directly. They seek a nomethic or etic science based on probabilities derived from the study of large numbers of randomly selected cases (e.g., Polkinghorne 1995). Findings stand above and outside the constraints of everyday life. Such researchers are unconcerned with thick, rich descriptions because such detail interrupts the process of developing generalizations, usually writing findings in impersonal, third-person prose. The points of difference reflect commitments to different styles of research, different epistemologies and different forms of representation. Each approach represents traditions governed by its own set of genres; each has its classics; its own preferred form of representation, interpretation, trustworthiness and textual evaluation.

Points of difference inform and highlight different ways of addressing the same set of phenomena, themes and issues. Both are concerned with the individual’s point of view. However, qualitative researchers think they can get closer to the individual perspective through detailed interviewing and observation. Qualitative researchers are more likely to confront the constraints of the everyday social world. They see this world in action and embed findings in it. Such researchers are committed to an idiographic, emic position that directs attention to the specifics of particular cases. They believe that thick, rich descriptions in first person prose of the social world are valuable.

3.1.2 Paradigms and Perspectives: The Teacher-Researcher as Bricoleur
Qualitative researchers are philosophers in that ‘… universal sense in which all human beings … are guided by highly abstract principles …’ (e.g., Bateson 1972, p. 320). Denzin and Lincoln (2005) argued that principles in the social sciences ultimately must be engaged with at a worldview level that, for its holder, defines the nature of the world, the individual’s place in it and the range of possible relationships to that world and its parts:

… [interpretive] paradigms [and perspectives] deal with first principles or ultimates … they define the worldview of the researcher-as-interpretive bricoleur [the qualitative researcher] …

Successive waves of theory and research have crosscut historical moments or periods. Qualitative inquiry and evaluation has meant different things in each of these historical moments or periods. The qualitative researcher is located in a particular historical moment or period, simultaneously guided and constrained by the historical moment or period in any specific inquiry and evaluation. For example, disciplinary traditions and interdisciplinary efforts in the postmodern moment have had profound and transformative effects on how all varieties of qualitative social science are conducted. Ellis and Bochner (1996) suggested that the postmodern period (1990-1995) was defined by a concern for composing ethnographies in new and experimental ways, e.g., literary and rhetorical tropes, narratives and storytelling. This moment is marked by multivocality, emancipation, contested meanings, controversies, new textual forms and perhaps the freedom from the confines of a single regime of truth and the habit of seeing the world in one color (e.g., Hargreaves 1994, Packwood & Sikes 1996). It appears that qualitative researchers are already in a post postmodern moment. The initial stormy impact of postmodern influences upon the interpretive nature of qualitative social sciences appears to have blown over. Many have learned how to write differently including how to locate themselves in texts. Years of postmodern debate now appear to have receded as riveting and controversial academic debate characterized by distinct signs of exhaustion as a fashion that has gone on far too long.

Preoccupation with the representations of the other remain. New epistemologies from previously silenced groups emerge. The concept of the aloof
researcher has been abandoned with more action activist orientated research. Grand narrative has been replaced by more local, small scale research fitted to specific problems and situations. Throughout its history, qualitative researchers were still talking seriously about problems of description of the other in qualitative research up to twenty five or thirty years ago. Today, no one take such talk seriously. Its disappearance as a category of concern is scarcely remarked upon. In its place looms the other, whose voice researchers now struggle to hear.

Paradigms in qualitative approaches to inquiry and evaluation embrace controversies and contradictions. At points, they have emerging confluences. The blurring of the genres is likely to continue so long as proponents continue to come together to discuss differences whilst seeking to build on those areas where they are in agreement (e.g., Guba & Lincoln 2005).

Qualitative inquiry and evaluation is a set of interpretive activities. An interpretive paradigm nets a ‘… basic set of beliefs [values] that guides action …’ (e.g., Guba 1990, p. 17). Major paradigms in qualitative inquiry and evaluation include positivism, postpositivism, critical theory, constructivism and participatory genres. Positivism has dominated formal discourse in the physical and social sciences for some 400 years. The positivist paradigm includes the work of Hesse (1980) and von Wright (1971). Whilst remaining within essentially the same set of basic beliefs, postpositivism represents efforts of the past few decades to respond in a limited way to the problematics of positivism. The postpositivist paradigm includes the work of Cook and Campbell (1979), Glaser and Strauss (1967, 1970) and Strauss and Corbin (1990). Kincheloe and McLaren (2005) traced the history of critical theory from the Frankfurt School through to more recent transformations into poststructural, postmodern, feminist, critical pedagogy and cultural studies theory. The critical theory paradigm includes the work of Burns (1978), Giroux (1988), Grossberg and Pullock (1998), Hall (1996), Ladson-Billings and Donnor (2005) and Olesen (2005). Schwant (2000) offered a carefully nuanced, complex and subtle analysis of the interpretivist and hermeneutic techniques in the constructivist paradigm. Constructivism denotes an alternative paradigm whose breakaway assumption is the move from ontological realism to ontological relativism. The constructivist paradigm includes the work of Carr and Kemmis (1986), Guba and Lincoln
(1989) and Reese (1980). The participatory paradigm includes the work of Heron (1996) and Heron and Reason (1977).

A paradigm is a worldview, a way of thinking about and making sense of the complexities of the real world. Differences in paradigm assumptions cannot be dismissed as mere philosophical differences. These positions have significant and important implications for the everyday practical and material conduct of an inquiry and evaluation.

The researcher must understand the basic epistemological, ontological and methodological assumptions of each paradigm and perspective. He or she must identify his or her ontological, epistemological and methodological worldview. Lincoln (1997, 1998a, 1998b) suggested that the sharpest shift has perhaps been in the constructivist and participatory paradigms. Ontology asks: ‘What could be known about the real world’: ‘how things really were’, ‘how things really worked’, ‘real existence’, and ‘real action. Ontology raises basic questions about the nature of reality. What is the form and nature of reality and what can be known about it? A real world is assumed, and what can be known about how things really are and how things really work. This study adopts relativist ontology in the tradition of the constructivist and participatory paradigms.

Reality is captured in the form of multiple, sometimes conflicting, socially based constructions. Elements are often shared among individuals and even across cultures. Multiple constructions coexist. Constructions are not more or less true, but simply more or less informed or sophisticated. In contrast to the traditions of the positivist and postpositivist paradigms, it was important to capture the time and context of the way things were in the real world.

Epistemology asks: ‘How did we know the real world?’ ‘What was the relationship between the known (participants), and the knower or would-be-knower (researcher)?’. Epistemology for the construction of a research design in qualitative inquiry focuses on an understanding of an issue with at least some sense of the impact of the processes from the insiders’ viewpoint. Epistemology raises basic questions about how we do we know the world. What is the nature of the relationship between the inquirer or the would-be-knower and the known? Reality is assumed to exist. This study adopts a transactional epistemology in the tradition of the constructivist and participatory paradigms. The inquirer and the
participants are assumed to be interactively linked. Findings are literally created as the inquiry and evaluation proceeds. However, there are very particular challenges, opportunities and consequences of conducting qualitative inquiry and evaluation when the role of teacher and researcher are combined in the work of a single individual. In the tradition of the critical theory paradigm, inquirer and the participants are also assumed to be interactively linked. Furthermore, the values of the inquirer inevitably influence the inquiry and evaluation. In contrast, the traditions of the positivist and postpositivist paradigms emphasize that the inquirer and the participants are assumed to be independent entities. The inquirer is assumed to be capable of studying the participant without influencing or being influenced.

*Methodology* asks: ‘How do we know the world or gain knowledge of the world?’ ‘How can the knower or would-be-knower (researcher) go about finding out whatever he or she believes can be known?’ Methodology focuses on how knowledge about the world is gained. How can the inquirer (would-be-knower) go about finding out whatever he or she believes can be known? As the conventional distinction between ontology and epistemology disappears, the variable and personal nature of the social constructions suggests that knowledge is elicited and refined only through interactions between and among investigator and subjects in the tradition of the constructivist and participatory paradigms. Multiple constructions, including the etic construction of the investigator are interpreted using conventional hermeneutical techniques and are compared and contrasted through dialectical interchange. The criterion for progress is that, over time, knowledge accumulates through the formation of ever more informed and sophisticated constructions of content and meaning of key issues. One important mechanism for transfer of knowledge from one setting to another is often supplied by case study reports.

In contrast, the traditions of the positivist and postpositivist paradigms assert that questions and/or hypotheses are stated in propositional form and subject to empirical testing. Knowledge consists of the verified and nonfalsified hypotheses that can be regarded and/or accepted as probable facts or laws. Generalizations to a population of settings may then be made with predictable confidence.
The qualitative researcher is an interpretive bricoleur (e.g., Harper 1987, p. 9; Nelson, Treichler & Grossberg 1992, p. 2), a ‘… jack of all trades professional do-it-yourself person …’ (e.g., Lévi-Strauss 1966, p. 17). The researcher makes choices from a range of theoretical paradigms and perspectives, research strategies, methods of collection and analysis of data, and practices of interpretation and presentation depending on the questions that are asked, the context, what is available in the context, and what the researcher can do in that setting. The product of a bricoleur’s labour is a complex, dense, reflective collage-like orchestration that represents the researcher’s images, understandings and interpretations of the real world or phenomenon under analysis (e.g., Weinstein & Weinstein 1991, p. 161).

Cronbach (1982, p. 231) observed that:

… [the] design of an inquiry and evaluation is as much art as science … the art includes creating a design and gathering information that is appropriate for a specific situation and particular decision-making context … there is no single, ideal standard … beauty is in the eye of the beholder and the evaluation holders include a variety of stakeholders, e.g., decision-makers, policymakers, funders, program managers, staff, program participants and the general public … any given research design is an interplay of resources, possibilities, creativity and personal judgments … there is no single best plan for an evaluation …

There will be no single conventional paradigm to which a researcher will ascribe. The qualitative researcher may work between, and within competing interpretive paradigms. It is possible to blend elements of one paradigm into another in order to engage in inquiry and evaluation that represents the best of both worldviews. The positivism and postpositivism are clearly commensurable. In this study, elements of interpretivist-postmodern critical theory, constructivist and participativist paradigms seemed to fit comfortably together.

3.1.3 Strategies of Qualitative Approaches to Evaluation: Ethnography, Case Study and Action Research

The research design for a qualitative inquiry or evaluation describes a set of strategies, i.e., a bundle of skills, assumptions and practices which put a
particular interpretive paradigm or perspective into motion. Qualitative inquiry and evaluation does not have a distinct set of methods practices that are entirely its own. Usage of strategies involves a clear focus on the purpose of an inquiry and evaluation, e.g., ‘… what information will most appropriately answer specific research questions … which strategies are most effective for obtaining it …’ (e.g., LeCompte & Preissle 1993, p. 30). Strategies may include phenomenological, ethnographic and ethnomethodological techniques; participant observation; case study; survey research; grounded theory; hermeneutics; feminism; rhizomatics; deconstructionism; interviews and life story (biography, autobiography); psychoanalysis; cultural studies; historical, action and narratives (e.g., Cheek 2005). Qualitative researchers use semiotics, discourse, archival and phonemic analysis, even statistics, tables, graphs and numbers among others. All of these strategies ‘… provide important insights and knowledge …’ (e.g., Nelson, Treichler & Grossberg 1992, p. 2).

It seemed appropriate to adopt an ethnographic strategy for this study. Ethnography does not emulate the traditional paradigms of empirical science, but has become a principle strategy for policy and program evaluation, and applied education research. Ethnography is value-bound, not value free. The assumption of an ethnographic strategy is that multiple realities are socially constructed, rather than a single objective reality that can be repeatedly replicated. Multiple realities were constructed using a planned selection of assessment and reporting tools (multiple sources of evidence) to systematically gather information about the nature of musical thinking in the five individual student participants from a range of teaching and learning contexts to create at least some sense of the viewpoint of participants, i.e., students, support staff of the school community and me (the insiders). Multiple realities coexisted. Realities were subject to continuous revision as they become more informed and/or sophisticated. Knowledge accumulated through the formation of ever more informed and sophisticated constructions. Ethnography means ‘… learning from people …’ (e.g., Spradley 1979, p. 3).

Ethnography has been subject to controversy, but in practical terms, it usually refers to forms of social research that have a substantial number of the following features:
• a strong emphasis on exploring the nature of a particular social phenomena, rather than setting out to test hypotheses about them
• a tendency to work primarily with unstructured data, i.e., data that have not been coded at the point of data collection in terms of a closed set of analytic categories
• investigation of a small number of cases, perhaps just one, in detail
• analysis of data that involves explicit interpretation of the process and meanings of human interactions, the product of which mainly takes the form of verbal descriptions and explanations with quantification and statistical analysis playing a subordinate role at most

Ethnography is appropriate for a wide range of problems pertinent to human existence, especially when the process and meaning people use to define and interact with their ordinary environment are central issues. It focuses on human interaction and process and meaning viewed from the insiders’ viewpoint in everyday life situations and settings. In the course of daily life, people continually make sense of the world around them. They give it meaning and they interact on the basis of these meanings. The world of everyday life constitutes reality for its inhabitants, natives, insiders or members. The insiders’ conception of reality is not directly accessible to aliens, outsiders, or non-members, all of whom necessarily experience it initially as a stranger. It is not possible to acquire more than a crude notion of the insiders’ world until one comprehends the culture and language that is used to communicate its processes and meanings.

Researchers have variously described everyday life activities from the perspective of members of fishing communities in Chesapeake; the insiders’ conception of laboratory science; the meanings of seminary life from the standpoint of insiders; and meanings and experiences of professional hockey players. The strategy seeks to uncover, make accessible, and reveal the meanings (realities) people use to make sense out of their everyday lives; to provide direct experiential and observational access to the insiders’ world of meaning (e.g., Jorgensen 1989).

Ethnography is concerned with dependable and trustworthy findings that may be checked in a number of ways: Ethnography requires the researcher to collect multiple forms of evidence relating to key issues. The researcher is obliged to fully describe and discuss relationships between procedures used to
collect information, including advantages and disadvantages of these procedures and the results obtained, e.g., conflicts and disagreements over the processes and meanings of key issues. Procedures used to collect information are subject to public debate and testing in the light of experience and judgment of everyone reading the final report. Consistency of results is more likely to be obtained when the procedure is simple, routine and standardized.

Ethnography stresses concept reliability: whether or not the research has been able to gain direct access to the insiders’ world of process and meaning. It is extremely important to ask whether or not and the extents to which procedures have provided access to the insiders’ world. Limited access generally results in less valid and reliable findings. The real world in this study was to be understood from the viewpoint of multiple observers: the students, support staff of the school community, and me, socially and experimentally based, local and specific in nature, although elements of the construction were often shared among the many individuals, not more or less true in any absolute sense, but simply more or less informed and/or sophisticated (e.g., Fetterman 1989). Participants were assumed to be interactively interlocked and linked, each affecting each other through the process of their mutual interaction in the classroom so that knowledge about the real world was literally created as the study proceeded.

Ethnography provides an opportunity to make use of an action research method and case study format for in-depth and detailed description and analysis of a phenomenon, theme or issue or set of phenomena, themes or issues. It may bear repeating that much is written about the role of the teacher-researcher in the development, implementation and evaluation of educational initiatives. Increased attention has been given to the practice of the teacher-researcher in recent years. Elliot and Adelman (1973b) suggested that teachers’ research in the classroom be supported. Teacher-researchers perform leading roles in curriculum policy framework and program development, implementation and evaluation in special education sectors.

The concept of action research method had its origins in the work of social psychologist Lewin (1946). The value of collective action and understanding was recognized by Brock-Utne (1980), Cory (1949a, 1949b, 1953), Elliot (1976-1977, 1978), Elliot and Adelman (1973a) and Van Manen (1984). Influential Australian contributions to action research method include Brown, Henry, Henry and
Action research method is a form of collective self-reflective approach undertaken by participants in order to improve understanding of practices and the context that encompass these practices (e.g., Kemmis & McTaggart 1988). The dominant feature of action research method is the image of a spiral of cycles of self-reflection, i.e., planning a change, acting and observing the process and consequences of the change, reflecting on the processes and consequences, replanning, acting and observing again, reflecting again and so on. Figure 3.1 shows the spiral of cycles of self-reflection (e.g., Kemmis & McTaggart 2005, p. 564).

FIGURE 3.1: The spiral of cycles of self-reflection (Kemmis & McTaggart 2005, p. 564)

Action research method is a social, collaborative and participatory process, i.e., engages a group of participants in the inquiry process. In an educational setting the group of participants may include teachers, students, principals, parents and other community members. Kemmis and McTaggart (2005) suggested that action research method is also practical, emancipatory and critical. Thus, this study also made use of elements of action research method. As previously stated, a defined classroom grouping, staff of the school community and the teacher-researcher are collectively engaged in the inquiry process in this study.
This study describes the beginning stage of a spiral of self-reflective cycles. The findings, understandings and explanations of contributions of the music research and theory informed the development of a standards-based music curriculum policy framework and music program, i.e., planning a change. The process is more fully discussed in the next chapter. It seemed important to write about what was taking place to enhance the quality and credibility of the development of the extended music curriculum policy framework for this study. I asked three colleagues to compare and cross check the consistency of the (near final) draft of the extended levels of student achievement (Levels A and B) that I had developed with the early years of schooling levels of student achievement (Levels 1 and 2) reproduced directly from the CSF 1995 (The Arts KLA music discipline).

The three colleagues were:

- a respected teacher colleague from within my school setting
- a senior manager of the statewide curriculum project team with whom I had recently worked
- an academic colleague on the statewide curriculum project team with whom I had recently worked

I requested that they compare and cross check:

- the purpose and subject matter and that the values, attitudes, and assumptions were consistent across the four levels
- the characteristics of the linguistic structures and features, e.g., print elements (letters, words, spelling, paragraphs, punctuation, layout and presentation) and textual and grammatical aspects (sentence structure and vocabulary) were consistent across the four levels
- techniques or approaches included to assist the reader, e.g., key words, content were consistent across the four levels

The three colleagues were presented with a draft copy of the extended framework and requested to act as proof readers of the copy, primarily to look for consistency across the four levels. The copies were all returned to me within approximately fourteen days marked with suggestions for improvement to consistency. The overall response was very encouraging and positive. Suggestions were readily incorporated and integrated into the final draft of the profiles of musical achievement (Levels A and B) that I had developed for the extended framework. The full extended framework developed for this study is reproduced in the Appendix.
Case study format continues to be a principal method in evaluation in the social sciences deployed in such diverse topics as business and organizational issues, education, child development and youth policy, family studies, international affairs and the development of information and computer technology (e.g., Gilgun 1994, Ghauri and Grønhaug 2002). Indeed, the definition of case study method appears to defy full specification (e.g., Kemmis 1980). However, the practice of case study method is widely established and shared with an intended audience, e.g., scholars, policy makers, program decision makers or practitioners. The tone, length, form, structure and format will depend on the audience and purpose.

Case study format provides rich, in-depth and detailed description and analysis of at least some sense of the impact of the processes and meanings of a program and/or policy on individual participants (e.g., Geertz 1973). Case study format was well defined as a methodology in the literature generated at the University of Chicago School of Sociology in the 1920s and 1930s. In the 1950s, the Harvard Business School defined case study format as a form of descriptive reporting. Since the 1970s, case study has been revitalized as a method of organizing and pursuing data.

Worthwhile text references on case study format include Yin (2003). A case study format could be based on a single case or multiple cases. A single case format focuses on a single case only. Hamilton (1980), Kemmis (1980) and Stenhouse (1979) were among those who advanced an epistemology of the particular. The researcher’s first and foremost responsibility consists of doing justice to each individual. It appears that the researcher is faced with tension between the particular and the universal: reconciling an individual’s uniqueness with the need for more general understanding of processes. A multiple case format includes two or more cases. One aim of studying multiple cases is to increase generalizability. Findings become more relevant and applicable to similar situations (e.g., Herriot & Firestone 1983, Schofield 1990). Moreover, a case study format could be exploratory, descriptive, or explanatory. An exploratory case format is aimed at defining the questions and hypotheses of a subsequent inquiry or at determining the feasibility of the desired research procedure. A descriptive case format presents a complete description of a
phenomenon within its context. An explanatory case format presents data bearing on cause-effect relationships, i.e., explaining which causes produced which effects. A case study format can thus fall into one of at least six (2x3) basic types of case study format.

Yin (2003) described a famous descriptive study titled *Street Corner Society* (Whyte 1955) that traced a sequence of interpersonal events over time and described key phenomena such as career advancement of lower income youths and their ability (or inability) to break neighbourhood ties. Examples of case study method in the context of special education include Ferguson (1992) and Koppenhaver and Yoder (1992).

Every child with special needs is unique. Description of one individual cannot be understood without knowing about the other individuals. Description of the five individual students in this study was organized into a multiple, descriptive case study format (n=5) (e.g., Yin 2003), i.e., assessment and reporting of patterns of musical thinking in relation to the extended profiles of musical achievement within and across the five individual student participants observed over the ten week research period using pattern matching logic in Chapter Five (acting and observing the process and consequences of the change). The case studies also included in-depth and detailed description and analysis of the phenomenon within its context, e.g., the learning environment, the classroom climate and classroom interaction to help the reader begin to get the feel of the place and time not unlike the reader would make themselves had they been there (e.g., Becker 1992; Merriam 1998; Schön 1983; Stake & Eastley 1978; Stake 1978, 1983, 1988, 1995, 2005; Yin 1993). Cross-case analysis deepened exploration, description, explanation and prediction of patterns of musical thinking (e.g., Glasser & Strauss 1967, 1970).

The beginning stages of the spiral of self-reflection are complete with reflection on the processes and consequences in the concluding chapter. Broad areas are considered for replanning, acting and observing again, and reflecting again.
3.1.4 Collection and Analysis of Data: Ideas for Assessment and Reporting

There has been a substantial growth in multicase designs, often using multimethods (e.g., Louis 1982, Yin 1993). The qualitative researcher relies on multiple ways of capturing as much of reality as possible. Qualitative inquiry and evaluation is ‘… inherently multimethod in focus…’ (e.g., Flick 1992, 1998). The use of multiple types and sources of data reflects and attempts to secure an in-depth understanding of the phenomenon, themes or issues in question. However, Guba, (1990) disputed the notion of triangulation (e.g., Denzin 1989a, 1989b; Eisner 1998). Reality can never ‘… be fully captured, only approximated …’ (e.g., Guba 1990, p. 22). Multimethods are:

… not a strategy of validation, but an alternative to validation … but best understood as a strategy that adds rigour, breadth, complexity, richness and depth to an inquiry and evaluation … the writer tells the same tale from different points of view … (Flick 1998, p. 230-231).

No single type or source of data can be trusted to provide a comprehensive perspective. Each type and source of data has strengths and weaknesses. A combination of types and sources of data enhances quality and credibility as the strengths of one approach can compensate for the weaknesses of another (e.g., Bradshaw 1999, Keating & Krumholz (editors) 1999, Patton 2002, Yin 2003). Data should be stable over time and across researchers and methods (e.g., Goetz & LeCompte 1984, Kirk & Miller 1986, Smith & Robbins 1984). There has been interest in the use of a variety of assessment and reporting tools in the special education context, i.e., the planned and systematic process of gathering information about what young students with disabilities and impairments can do rather than exclusive reliance on single scores on traditional quantitative approaches. Thompson and Thurlow (2001) provided an excellent overview of a range of qualitative tools to measure the progress of students with disabilities and impairments. The qualitative researcher crafts a montage of images about the context that surrounds the phenomenon, themes or issues or set of phenomena, themes or issues from the multiple types and sources of data. The montage is not crafted from sequential images, one at a time, but rather from multiple images about the context that are reflected and refracted simultaneously. Readers and audiences are invited to become immersed in, and comprehend competing images.
Change was to be expected. A multi method focus was thus adopted to enhance the quality and credibility of data collection and analysis about students’ musical thinking in this study. The many ways in which the five individual student participants in this defined classroom grouping responded to a musical activity or experience were recorded, however particular, irrational, or even unnatural the behaviour may have seemed. No single behavioural indicator could possibly fully illustrate achievement, nor can achievement be fully demonstrated by engaging in just one musical activity or experience. However, it was recognized that behaviours may be difficult to interpret. The multiple types and sources of data in this study attempted to be congruent with the focus of the study and the features of the research design.

The multi method focus attempted to track changes in musical thinking within and across the five individual student participants through the 10 week research period. There appears to be no hard-and-fast rule that says how long a researcher should stay in a field setting to collect data. The researcher should stay long enough to observe key phenomena, themes or issues. Prolonged engagement provides scope. Persistent engagement provides depth. When the researcher has the confidence that key phenomena, themes or issues are repeating instead of extending, it may be the time to leave the setting. Guba (1978) described a stay in a field setting as moving back and forth between discovery mode and the verification mode like the ebb and flow of a wave. Research involves moving in and out of periods when the researcher is open to new inputs, generative data and opportunistic sampling to periods when the researcher is testing out hunches, fine-tuning conceptualizations and sifting ideas. As fieldwork draws to a close, the researcher is increasingly concerned with verification of already collected data and less concerned with generating new inquiry leads. Furthermore, Lincoln and Guba (1985, p. 301) suggested that trustworthiness of an inquiry and evaluation is enhanced if the researcher appears to spend sufficient time during a stay in a setting to learn the culture, test for misinformation introduced by distortions either of the self or of the respondents and build trust.

Decisions rest with the researcher. The researcher must find the most effective way to tell the tale and convince the audience of the meaning of the study. Whilst collection and analysis of qualitative data is highly creative, there are challenges because of the subjective nature of qualitative data. There is a
technical side that is rigorous, replicable and systematic. However, the qualitative researcher has an obligation to be methodical in reporting sufficient detail to permit others to judge quality and credibility. Data for this study was collected over the period of a ten-week teaching term. I felt confident that data collected in such a period was sufficient to highlight the key issues about the musical thinking in each of the five individual students in the defined classroom grouping. Longer, and the key issues would have simply repeated rather than been extended.

However, I had to be prepared to moderate judgments, e.g., sometimes secure consensus on description of the changes, but maybe not on the interpretation of the changes. At other times, differ on description, but agree on interpretation of the changes. The multiple types and sources of data, including collection of documents and records, participant observation, visual images and work samples are described explicitly and in detail in the following subsections that can be followed like an audit trail, i.e., to make steps as organized as possible and to conduct the data collection in the field as if someone was always looking over your shoulder (e.g., Guba & Lincoln 1981, LeCompte & Goetz 1982, Schwandt & Halpern 1988).

**Documents and Records.** Collection and analysis of documents and records provided a potentially unique behind-the-scenes perspective. Documents and records refer to a wide range of written, visual, and physical material relevant to an inquiry and evaluation, and may include novels, newspapers, songs, and diaries, symbolic materials such as writing and signs, and non-symbolic materials (e.g., LeCompte & Preissle 1993, Merriam 1998). Patton (2002, p. 4) described documents and records as:

… written materials and other documents from organizational, clinical or program records, memoranda and correspondence, official publications and reports, personal diaries, letters, artistic works, photographs, memorabilia and written responses to open-ended surveys … data consists of excerpts from documents captured in a way that records and preserves context …

On one hand, documents and records may be prepared for personal use, rather than for official reasons, and may include diaries, memos, letters, and field notes. On the other hand, they may attest to some formal transaction, such as
marriage certificates, driving licence, building contracts, and banking statements (e.g., Lincoln & Guba 1985, p. 277). In special education research, documents that might also be important may include report cards, special education files, discipline records, IEPs, IEP meeting minutes, curriculum materials and test scores.

Mertens and McLaughlin (2004) suggested that it is especially important for researchers in special education to precisely describe the type and severity of the disabilities of participants, e.g., point(s) of motor control in physical disability. Type and severity of concomitant impairments must also be specified (e.g., Ashcroft 1963, Barr 2000). Some disabilities may be so mild as to be of no concern. Some may require modification of the physical environment, augmented modes of communication or aids to instruction or locomotion. Epilepsy can be controlled with medication, but the effects of the medication on a student’s ability to participate in research must be considered, i.e., medication for epilepsy can affect coordination, vision, attention and memory. Hearing impaired children may present special challenges for researchers because of well documented delays in academic skills, language development and socioemotional skills. Participants with mild loss may have some intelligible speech. Those with profound loss may rely on manual communication (sign language). Some may not have intelligible speech. Partially sighted participants may need to make some use of assistive materials when participating in research, e.g., read large type materials, hold pages closer, use magnifying devices. Totally blind individuals may depend on their tactile and auditory senses, e.g., use Braille books and computers, audiotapes, raised line drawings, three dimensional models, talking calculators.

Descriptive profiles with factual and historical background and chronological organization of the five individual student participants, e.g., medical aetiology (type and severity of the disabilities and/or impairments), family circumstance and educational history were created for the case studies from collection and analysis of documents and records, but with only limited interpretation (e.g., Denzin 1989a, 1989b; Lincoln & Guba 1985). Documents and records in confidential school files held on the five individual student participants provided valuable insight. Review of this documentation yielded already existing comprehensive and historical information. There is little bias in
such information. They included the cycle of assessment and reporting prepared and written by teaching and therapy staff, and a miscellany of reports, memos, and correspondence (Visiting Teacher Service staff; teaching staff of regular school settings; a miscellany of allied health professionals, e.g., vision clinicians, hearing clinicians, psychologists, social workers, dietitians; and a miscellany of medical practitioners and medical specialists). However, such documents and records have limitations. They were notoriously variable in quality and completeness, great detail in some and virtually nothing in others.

**Participant Observation.** The ethnographic strategy adopted in this study relied primarily on participant observation in the tradition of anthropology (e.g., Bruyn 1966; Gold 1958; Jorgensen 1989; Spradley 1980; Whyte 1955; Woods 1985). Participant observation was created during the late 19th century as a field method for the study of small homogeneous cultures. Participant observation is appropriate for studies of almost every aspect of human existence (e.g., Peshkin 1986; Wiley 1987). Increased attention has been given to the practice of teacher-researcher as a form of participant research in recent years (e.g., Britsch 1995, Wagner 1990). The definition of participant observation has been less controversial, but its meaning is no easier to pin down.

Participant observation seemed especially appropriate for this study:

- little was known about the phenomenon
- there were important differences between the views of insiders as opposed to outsiders
- the phenomenon was somehow obscured from the view of outsiders
- the phenomenon is hidden from public view

Furthermore, certain conditions were present:

- the research question was concerned with human meanings and interactions viewed from the insiders' perspective
- the phenomenon of inquiry was observable within an everyday life situation or setting
- easy access to an appropriate setting
- the phenomenon was sufficiently limited in size and location to be studied as a case
- the study questions seemed appropriate for case study
- the research problem could be addressed by qualitative data gathered by direct observation and other means pertinent to the field setting
Though no less scientific than other strategies, the methodology of participant observation strategy is non-linear. For example, it may be described in terms of a spiral of self-reflective cycles, i.e., planning a change, acting and observing the process and consequences of the change, reflecting on the processes and consequences, replanning, acting and observing again, reflecting again and so on (e.g., Kemmis & McTaggart 2005). Participant observation is a social process, participatory, practical and collaborative, emancipatory, critical, reflexive and aims to transform both theory and practice. Participant observation strategy affords the opportunity to exercise a wide variety of skills, make judgments, be creative and interpret the many salient issues that may influence an inquiry. Participant observation strategy aims to generate practical and theoretical truths. Exploratory and descriptive in nature, the results of participant observation strategy can lead to generalizations useful for suggesting new theory as well as testing existing theory. This strategy had the potential to provide a flexible, open ended and opportunistic logic throughout the research process beginning with the immediate experience and making the most of whatever opportunities presented. The logic requires definition of the problem of study, yet be constantly open to its redefinition based on field experience, observation, and information collected and analyzed in the field.

Participant observation strategy is not appropriate for every qualitative study, e.g., questions relating to large populations; the precise causal relationships among limited sets of variables; and measurable amounts of something that are better addressed by other methods. However, participant observation strategy is especially appropriate for exploratory studies, descriptive studies and studies aimed at generating theoretical interpretations. Findings of participant observation strategy are certainly appropriate for critically examining theories and other claims to knowledge.

Philosophical, ethical and methodological strands intertwine through ethnography-participant observation to form particular schools or subtypes, e.g., structural functionalism, symbolic interactionism, cultural and cognitive anthropology, feminism, Marxism, ethnomethodology, critical theory, cultural studies, postmodernism. Postmodernism has both stimulated new ideas, and provided a new slant on old themes and a new critical edge to recurrent methodological tensions between disinterested observation and political
advocacy; between the scientific and the humane, between the objective and the aesthetic.

Another area of debate in recent years revolves around the contribution of knowledge derived from participant observation strategy that is aimed at solving practical social problems. Such work may ultimately contribute knowledge of wide public relevance, though not necessarily immediate or specific, valuable for its own sake. Ethnographers usually wish to address issues beyond the boundaries of their disciplinary communities, and engage in advocacy on behalf of the people they have studied, involving a representation of the other. The context in which advocacy is to take place is a complex one. It is not composed simply of an oppressed group, but of a diversity of individuals, and motivated by various ideals and interests, and pursuing various political strategies. The group to be represented is not always homogeneous and is rarely democratically organized. There is often genuine uncertainty about what is, and what is not in the interests of the group and of the members in it.

The strategy of participant observation rejects the conventional conception of and distinction between subjectivity and objectivity. Gaining access to the subjective reality of everyday life - the world as it is experienced and defined by insiders - is required for accurate and truthful findings. Objectivity, defined as truth, cannot be achieved without coming to terms with the insiders’ world.

Participant observation strategy seemed to have the potential to provide a sense of the insiders’ viewpoint, albeit no more than a crude sense, with a special interest on process and meaning from the perspective of the participants and a sense of the everyday life located in the here and now, the world of everyday life, the ordinary, usual, typical, routine, and natural environment of the situation and setting for this study. This strategy gathered information about how a curriculum framework actually operates, particularly about processes. Operations of the framework as it was actually occurring were observed. This strategy adapted to events as they occurred. Observation strategy minimized disruptions and intrusions providing the means of conducting fairly unobtrusive observations. Observation strategy had the flexibility to yield insights into new procedures or
new ways of looking at the old procedures for assessment and reporting of musical thinking in students with disabilities and impairments.

Participant observation strategy has been characterized as ‘… the fundamental base of all research methods …’ (e.g., Adler & Adler 1994, p. 389) and as ‘… the mainstay of the ethnographic enterprise …’ (e.g., Werner & Schoepfle 1987, p. 257). For example, studies based on interview strategy may employ observational strategy to note body language and other gestural cues that lend meaning to the words of the persons being interviewed (adding rigour, breadth, complexity, richness and depth). Participant observation strategy enjoys the advantage of drawing the reader into the complexity of the phenomenon where connections, correlations and causes can be witnessed as and how they unfold. Patton (2002, p. 4) described participant observation strategy as:

… fieldwork descriptions of activities, behaviours, actions, conversations, interpersonal interactions, organizational or community processes or other aspect of observable human experience … data consists of rich, detailed descriptions including the context within which the observations were made …

Examples of participant observation strategy have been adapted to the special education context. Mertens (1991a) began a study of ways to encourage gifted deaf adolescents to enter science careers with a focus on instructional strategies used in science classes. However, emerging patterns in the data suggested the importance of examining administrative practices that facilitated the acquisition of competent interpreters or teachers and staff who were deaf. This change of focus is acceptable and to be expected in qualitative inquiry, but should be documented. This strategy was also documented in a special education setting by Davis and Ferguson (1992).

Keller (1993) observed a girl with Down Syndrome from January through June of one year, made more than 80 contacts with the school or staff over the six month period and shared the narratives from field notes with two other peers involved in the school. Data collected included observations in classrooms, planning sessions, staff meetings, parent-teacher meetings, and IEP meetings; teaching in the classroom of the student in the study; interview with the student,
mother, a teacher from a former school setting; conversations with regular and special education teachers and the principal of the school setting.

Qualitative researchers are assumed to be competent observers who can report on their own observations about the ordinary activity of the social world. Qualitative researchers blend their observations with observations provided by the participant or participants. Observers have argued that, unlike experimental psychology or medicine, the people with whom the observer interacts are not at all like the subjects of an experiment or the respondents of survey research. The observer interacts with people under ordinary conditions of their daily lives much like any other participant.

Most major texts in qualitative inquiry and evaluation focus on participant observation strategy (e.g., Berg 1989, Douglas 1976, Glesne & Peshkin 1992, Hammersley & Atkinson 1983, Jorgensen 1989, Loftland & Loftland 1984). A distinction is sometimes drawn between participant and non-participant observation strategy. Participant observation strategy refers to observation carried out when the researcher is playing an established participant role in the scene studied. This dichotomy is not very useful, not least because it seems to suggest that the non-participant observer plays no recognized part at all. This can be the case, but it need not be. In a sense, all social research may be a form of participant observation, because we cannot study the social world without being part of it. Participant observation strategy is a mode of being-in-the-world characteristic of researchers.

The distinction between participant and non-participant observation has been described in a fourfold typology: complete observer; observer-as-participant; participant-as-observer; and complete participant (e.g., Gold 1958, Junker 1960). Spradley (1980) describes the distinction between participant and non-participant observation in a fivefold typology: non-participation; passive participation; moderate participation; active participation; and complete participation. In complete participation, the researcher becomes a natural participant. Agrosino (2005) argues that all observation involves participation. There is no pure, objective, detached observation. The effects of the observer’s presence can never be erased. Observers function as collaborative participants in inquiry settings. Dilemmas may arise as a result of the multiple roles performed by the researcher,
e.g., teacher-as-researcher. It may be difficult to separate the role as researcher from other roles. Roles and responsibilities may overlap.

Involvement in this study was overt (very much with the knowledge of the insiders). I established and maintained good relationships with participants. I gained a comfortable degree of rapport with them and the setting (e.g., Jorgensen 1989). Direct involvement in the here and now of the participants’ daily lives as they were engaged in the music education program provided a point of reference for the strategy. Rather than trying to create an objective distance, I was able to directly experience the phenomenon being studied.

As the teacher-researcher, I now did more than observe (e.g., Atkin 1992, Eisner 1986). I very much played a part in it. It is important that the researcher sees clearly into the field and be able to analyze and interpret observations critically. This can be accomplished by becoming the phenomenon and experiencing it existentially, achieve observational advantage, but one must be able to switch back and forth between the insiders’ perspective and an analytical framework.

The insider’s perspective was gained through systematic, purposeful, regular and repeated observation across a range of teaching and learning contexts over the ten week teaching term. I attempted to enhance the generalizability with the widest range of observational consistency. Tacit knowledge of the five individual student participants was applied to assess and report students’ musical achievement. Observational diary notes of observed behaviours of the five individual student participants as an activity was implemented from a range of teaching and learning contexts over the ten-week research period were kept.

There are no hard and fast rules for taking observational diary notes. Many options existed for taking observational diary notes (e.g., Holly 1987). Procedure and organization was according to style and purpose. A proforma for was constructed in relation to the three substrand organizers of the current music curriculum framework:

1. **Creating, Making and Presenting Music**: How did [name] generate and develop musical ideas using many starting points? How did [name] work
with a range of musical processes as they developed, selected, decided upon and refined ideas? How did [name] experiment, observe and practice music skills, techniques and processes? How did [name] share the musical work?

- **Music Criticism and Aesthetics**: How did [name] listen to, talk and write about musical works? How did [name] learn how social and cultural values and meanings? How did [name] describe, analyze, interpret, evaluate, develop preferences? How did [name] discriminate between musical works and to challenge ideas? How did [name] reflect on and respond to their own musical works and those of others?

- **Past and Present Contexts of Music**: How did [name] respond to the social, cultural and historical contexts in which music is produced? How did [name] reflect on the value and meaning that different cultures and societies assign to music and musical works? How did [name] construct music histories and the relationship between social and cultural issues and music practices? How did [name] develop skills in analyzing, researching, interpreting and questioning to expand their understanding of music in past and present contexts?

Participant observation strategy can be marred by researcher biases. These are consistent and known. Without other types and sources of data to enrich and confirm analysis, this strategy potentially become more susceptible to bias from subjective interpretation, hence legitimating work to a scholarly audience. There are measures to overcome this problem. To add rigour, breadth, complexity, richness and depth to this strategy for this study, I provided ongoing training and support to team members (multiple observers) on how and what to observe, i.e., staff of the school community, whether they be teacher, therapist, teacher assistant, therapy assistant or community volunteer who assisted me in the process of the development, implementation and evaluation of the classroom music program (e.g., Adler & Adler 1987, Denzin 1989a, Phillips 1985). This work with colleagues assisted in the comparison and moderation of judgments about student achievement. Lincoln and Guba (1985, p. 314) considered this to be a most critical technique for establishing quality and credibility of findings. Mertens and McLaughlin (1995) used multiple observers to enhance quality and credibility whilst collecting and analyzing data in the construction of their research design in a special education setting.

I asked the staff to write observational diary notes of behaviours of each individual student participant as an activity was implemented. What people said, direct quotes, the nature and intensity of observer’s own feelings and reactions to the experience, reflections about personal meaning and significance of what has been observed, insights, interpretations, initial analyses and judgments provided
the emic (insiders’) perspective which is at the heart of most ethnographic research (e.g., Fetterman 1989, p. 30).

Staff very happily obliged, mostly immediately following each lesson. Particularly at the beginning of the research period, this required time and patience to ease anxieties. It emerged that some staff seemed to have only very basic literacy skills that, in turn, seemed to increase their anxiety, e.g., ‘... what do you want me to write, Helen ... is that what you want, Helen ...?’ After several weeks of writing, they mostly demonstrated a greater degree of confidence.

It also emerged that there was not always a consistent pattern of staff personnel available for the music program from week to week throughout the ten-week research period for a variety of reasons. From time to time, I had to very quickly induct replacement (supply) team members that had not been part of the music program throughout the ten-week research period into the process of writing the observational diary notes. Furthermore, as the research period went on, I found that more and more that I had to deal with the issue of motivation in the team. The weather got colder and we began to tire. Students and staff were ill with winter colds and influenza. We began to look forward to the coming winter holiday break.

Lincoln and Guba (1985, p. 308) suggested that the researcher meets with team members who are free to pose questions regarding substantive methodological, legal, ethical or other matters in order to increase the researcher’s self awareness of these matters. Giving feedback can be part of the verification process. So, as far as possible, all participants in this study were provided with verbal and informal feedback with descriptions and analysis including reactions as part of the data. Participants appeared to be fascinated by such information. Much was learned from reactions to descriptions and analyses. The completed proforma provided valuable evidence of knowledge, concepts, understandings and skills in relation to the curriculum focuses and learning outcome descriptors of the extended standards-based music curriculum framework, e.g., strengths, areas in which further assistance may be needed, the ability to work cooperatively and/or independently, the ability to concentrate and follow through a task.
**Folios, Visual Images and Work Samples.** Folios provided evidence of an individual students’ achievement of one or more musical outcome descriptors. The use of folios assisted to construct a developmental story of what and how they think. Folios also assisted in the process of reflection on music teaching practice. Above all, folios were a means of telling the same tale from a different point of view. Here was both promise and trouble (e.g., Hay & Moss 2005).

On one hand, critics like Reimer argued that the first obligation of Arts Education is to provide students with a considerable factual knowledge of Western arts history and culture. On the other hand, Brandt (1987), Wolf (1986, 1987, 1989) and Zessoules (1988) contended that from the earliest age, folios assist students to learn to process characteristics, i.e., how to question, investigate, think and write. Process includes self-knowledge and reflection that engages the student as spontaneous imaginer and inexorable critic all at once. Folios are valuable for the reporting and assessment of a student’s ability to work through and resolve musical ideas, solve musical problems, apply musical elements, be imaginative and expressive.

Folios for this study included visual images. Prosser (1998) and Harper (2005) explored the very successful application of visual images in qualitative research in anthropology, sociology and psychology including photography, film, the World Wide Web and interactive CD-ROMs. These forms of visual representation represent different ways of recording and documenting what passes as social life and influence the meanings of images and their relationship to words and sounds. Visual images are not only representations of the objective world, but also to communicate our deepest feelings:

… over the last three decades qualitative researchers have given serious thought to using images with words to enhance understanding of the human existence … taken cumulatively, images are signifiers of a culture … taken individually, they [images] are artifacts that provide [us with] very particular information about [our] existence … images provide researchers with a different order of data … (Prosser 1998, p. 1)
Visual images have spanned the evolution of humankind from ancient cave drawings to photographs of distant galaxies. Visual methods include the recording, analysis and communication of social life through photography, film, video, drawing, cartoons, graffiti, maps, diagrams, signs and symbols. Furthermore, the World Wide Web and virtual reality, notwithstanding the emerging technology to alter photographic, film and video images have offered new connections between human existence and visual perception. Technological improvements are reflected in everyday visual communication beginning with the use of natural dyes on limestone walls to illustrate a hunt to a single camera capable of making both still photographs and videos of family events.

Visual images seemed to have the potential to provide evidence of musical skills. Just prior to the research period, I negotiated with therapy assistant Gordon to assist with the research project by preparing the video equipment ready for operation for the beginning of each lesson. He did so very willingly and happily. However, it was not possible to have a support staff member available simply to operate the video camera. I simply activated the camera at the beginning of a lesson period and stopped it at the end of a lesson period. I had to be satisfied with a global, still view of the classroom and its busy-ness. At the beginning of the research period, I also negotiated with individual support staff members of the team to assist in the research project by taking a series of photographic records throughout the research period. They did so very willingly and happily. An extraordinary quantity of visual material was generated in a very short time.

However, Gold (1989) suggested that the possibility of anonymity (and therefore privacy and confidentiality) is almost surely compromised when visual media such video and photographic records are published, even with special effects such as blurring. He noted the potential for harm beyond that of the text because it is seen as definitive, especially if no associated explanation is provided. Hence, it was therefore considered prudent that none of the visual material generated during the study was published.

Folios for this study included work samples. Wolf (1989) suggested that a folio may also include work samples to enlarge the view of what has been learned, providing the opportunity to gain new views of thinking that captures growth over time just as thinkers and inventors will keep longitudinal collections of their
ideas, drafts and questions. Work samples can be messy. They are intimate and subjective. They are hard work. For example, any musical work unfolds over time starting with the development of a musical idea, changing into notes, undergoing revision, settling into its near-final form and zigzagging between these different moments. Students were encouraged to value trialling of ideas and to explore a variety of techniques through analysis, evaluation and reflection. Students were encouraged to take responsibility as they learn to assess and report their own progress as thinkers. Work samples demonstrated characteristics of the works, what has changed with time, what still remains to be done. With time, experience and conversation, students’ ability to understand their own thinking develops. Work samples provided a useful and generative portrait of musical development. Work samples for this study included samples of computer generated scores from MIDI files and a group collage.

3.1.5 Interpretation and Evaluation

The role of the qualitative researcher demands a presence, attention to detail. Throughout the process, quality and credibility are judged according to certain logical concepts including trustworthiness, confirmability and dependability (e.g., US General Accounting Office, 1990). The qualitative research literature contains many valuable and useful treatments on the issue of quality and credibility that form an important part of research design (e.g., Denzin 1989a, 1989b; Eisner 1998; Guba 1981; Kidder & Judd 1986; Miles & Huberman 1994; Patton 2002; Yin 2003).

Quality and credibility in research text comes about to the extent to which a reader is able to locate in its subject matter the qualities the researcher addresses and the meanings he or she ascribes to them: when the reader is able to see what they would have missed without the researcher's observations (e.g., Eisner 1998). The style of narrative was intended to draw the reader closely into the world of
the five individual student participants, and contain a high degree of internal coherence, plausibility, and correspondence with what the reader would recognize from their own experiences.

Quality and credibility in research text comes about to the extent to which one can generalize the results to other situations. The burden of transferability is on the reader to determine the degree of similarity between the study site and the receiving context. The researcher’s responsibility is to provide sufficient detail to enable the reader to make such a judgment through extensive and careful thick description of time, place, context, and culture within the narrative (e.g., Guba & Lincoln 1989). Being there in the research text may be even more difficult than being there in the field.

The narrative had to rely on persuasiveness and utility rather than proof. The goodness and quality of the inquiry will be judged on trustworthiness (credibility, transferability, dependability and confirmability), and authenticity (fairness; an authenticity that enlarges personal constructions; an authenticity that leads to improved understanding of constructions of others; an authenticity that stimulates action; and an authenticity that empowers action). The concept of authenticity to enhance quality and credibility refers to interpretation and presentation with a balanced view of all perspectives, values, and beliefs. Has the researcher been fair in presenting views? Several criteria to judge the authenticity of investigations conducted within a constructivist-interpretivist paradigm have been identified. Fairness is the extent to which different constructions and their underlying value structures are solicited and honoured in the research process. In order to be fair, the researcher must identify the subjects and how information about their constructions was obtained. Conflicts and value differences should be displayed. There should also be open negotiation of the recommendations and agenda for future actions. Research can be judged fair if the varying viewpoints, both for and against are included in the narrative (e.g., Guba & Lincoln 1989, Mertens & McLaughlin 1995).

Miles and Huberman (1994, pp. 277-280) suggested improved and more rigorous techniques and methods that improve quality and credibility. For example, external validity deals with the dilemma of whether a study’s findings are generalizable beyond the immediate study (e.g., Flippen 2001). The
association is not automatic. Great care was taken not to make extravagant generalizations and claims. This study was limited to a specific context, but could possibly be replicated in other contexts (e.g., Lincoln & Guba 1995). Characteristics of the context of this study were intentionally illustrated with thick description in an attempt to encourage broader applicability.

The greatest attention in the empirical social research literature has been given to the criteria of internal validity (e.g., Campbell & Stanley 1966, Cook & Campbell 1979, Kvale 1989b). The threats to internal validity is only of concern for causal or explanatory research designs, e.g., when a research is trying to determine whether an event $x$ led to event $y$. This concern does not apply to a descriptive or exploratory research designs that are not concerned with making causal claims. However, multiple types and sources of data discussed in full detail later in this chapter in this study assist to produce generally coherent findings. LeCompte and Preissle (1993) argued that description should be consistent with readers’ experience. Data from the multiple types and sources of data are used to corroborate, support or may indeed contradict interpretation and presentation of findings, e.g., agreement among the competent others about description and interpretation of a context. One may secure agreement on description, but not interpretation. One may differ on description, but agree on interpretation and so forth. If not, is there a coherent explanation? Rich and thick, meaningful narratives in this study are important (e.g., Connelly & Clandinin 1990, Denzin 1989b, Geertz 1973, Van Maanen 1988). The aim is a meaningful understanding of the phenomenon.

The researcher will seek to demonstrate patterns in the data relating to the phenomenon, themes or issues. Coding was a method used in the analysis that assisted to demonstrate patterns in the extraordinary amounts of data collected, i.e., to dissect the data meaningfully whilst keeping relationships between the parts intact. Codes are tags or labels that assist in the complex task of categorizing the extraordinary amounts of data. Coding assigned units of meaning to the data collected during a study, e.g., words, phrases, sentences or whole paragraphs of text. Codes were used to retrieve and organize the data, i.e., quickly find, pull out and cluster segments of the data relating to a particular research question, hypothesis, construct or theme. Clustering assisted to generate meaning from the data collected, i.e., noting patterns in the data when drawing
and verifying conclusions (e.g., Miles & Huberman 1994, p. 59). Matrices of codes assisted in the complex task of demonstrating patterns in the data relating to the musical thinking in each of the five individual students in the defined classroom grouping in the extraordinary amounts of data collected in this study.

Qualitative researchers may use statistical measures and methods as a way of locating groups of subjects within a larger population, e.g., Lincoln and Guba (1985, pp. 198-199) asserted that:

… qualitative methods are stressed within the naturalistic paradigm not because the paradigm is anti quantitative but because qualitative methods come more easily to the human-as-instrument … there are many opportunities for the naturalistic investigator to utilize quantitative data …

The qualitative researcher will seldom report findings in terms of complex mathematical models, statistical tables and graphs. However, patterns in the data relating to phenomena, themes or issues may be greatly assisted by the inclusion of displays that compress and order data, e.g., visual formats that present information systematically permitting the reader to draw coherent conclusions whilst guarding against overload and potential for bias that appears when analysis of extended and unreduced text is attempted (e.g., Miles & Huberman 1994, p 105). Formats can be various but fall into two categories, i.e., matrices with defined rows and columns (a format for analyzing data on a major variable or domain of interest), and networks of series of nodes with links between them.

It seemed helpful to include a series of checklist matrices to assist in contrasting, comparing and noting relationships, patterns and themes in musical thinking within the five individual student participants. Criterion-referenced measures of achievement (evidence of what knowledge and understanding may not be apparent, emerging, consolidating or what indeed may be established) in relation to the learning outcomes of the extended music curriculum policy framework were developed (e.g., Armstrong 1994, Brant 1987, Zerull 1990). To assist in contrasting, comparing and noting relationships, patterns and themes in musical thinking across the five individual student participants, a series of descriptive variable-by-variable matrices were included (e.g., Miles & Huberman 1994, p. 219).
There was no one best system. The extraordinary amounts of data collected for this study were organized and analyzed in relation to the three substrand organizers in the structure of the CSF 1995 (The Arts):

- Creating, Making and Presenting Music
  *Exploring and Developing Musical Ideas*
  *Using Music Skills, Techniques and Processes*
  *Presenting*
- Music Criticism and Aesthetics
- Past and Present Contexts of Music

The researcher soon begins to compile extraordinary amounts of data from a multiplicity of data sources. Challenges appear. Data management is needed for a systematic, coherent processes of data collection, storage and retrieval aimed at ensuring high quality, accessible data, documentation of just what analyses has been carried out and retention of data and associated analyses after the study is complete. Approach(es) to data analysis and interpretation should be considered before collection of data. Data analysis and interpretation is an ongoing process that occurs before data collection, during study design and planning, during data collection as interim and early analyses are carried out and after data collection as final products are approached and completed.

A large range of diverse tasks for the collection of data were performed for this study, e.g., collecting documents and records; observation; writing observation diary notes; compiling folios of visual images and work samples; analyzing tables, graphs and numbers to intensive self-reflection and introspection. Extraordinary amounts of data from a multiplicity of data sources were compiled. The cumulative range of qualitative tools was gradually transformed into the five case studies (research text) that attempted to make sense of what was learned about the students’ musical thinking (e.g., Plath 1990, p. 374; Sanjek 1990, p. 386). The reader interacts with the research text, actively reconstructing the researcher’s and the participant’s experiences through integrating the emotional, analytical and evidential material provided by the writer (e.g., Atkinson 1990, p. 91).

Writing of the case studies was rigorous and demanding work:
‘… the writing of research text (case studies) takes personal discipline and time … it is all too easy to put off actually writing notes for a given day and to skip one or more days … the actual writing of the notes may take as long or longer than did the observation … expect and plan to spend as much time writing notes as one spent in observing …’ (Loftland 1971, p. 104)

A basic rule of thumb was to begin to write the case studies promptly. Writing the case studies was an intensely interpersonal experience. Ensuring that interpretation, evaluation and representation are accurate is a cardinal principle of codes of ethics and professional conduct. Fabrications, fraudulent materials, omissions and contrivances are both unscientific and unethical. Research text is always about persons and directed by persons. It is not unusual for qualitative researchers to discuss what it was like to conduct a study and how it has changed them as individuals. The purpose of this is to establish a human context for the study in terms of the meaning it held for the researcher. Discussing personal difficulties and triumphs often engages the reader in the research text and provides important methodological information that helps the reader judge the quality and credibility of the findings. Kvale (1988, p. 97) cautioned great care. Research text may not contain context or crucial nonverbal data. He argued that transcriptions are transformations of one mode (a conversation or oral discourse) into another mode (a narrative discourse). There are dangers of superficial coding, decontextualization, missing what came before and after an account and what the larger conversation was about. Analysis in this study was aided with memoing and annotations of reflections about context and/or crucial nonverbal data.

Traditionally, qualitative researchers have carried out the mechanics of analysis by hand. A wide variety of useful tools are now available to support many different approaches to qualitative research. Researchers began using information and computer technology to do statistical analysis of texts in the 1950s, e.g., Pool (1959). Sieber’s 1976 review of seven well respected texts on field methods found that less than five to ten percent of their pages were devoted to analysis per se. Since the mid 1980s, qualitative researchers have come far from that state of affairs. Miles and Huberman (1984) had less than half a page on information and computer technology as a means for data storage and retrieval. Pfaffenberger (1988) evaluated microcomputer applications in qualitative research. Tesch (1990) classified types of qualitative research and described six

The array of software available to support the work of qualitative researchers continues to emerge. Optical scanning technology potentially makes light work of converting scanned texts into a readable wordprocessing format. Emergent voice recognition technology potentially makes light work of transcribing open-ended interviews. There are new journals, several handbooks, conferences on qualitative issues, special interest groups and new software packages. Weitzman and Miles (1994, p. 330) argued that the issue is:

… understanding a program’s properties and presuppositions and how they can support or constrain [analytical] thinking …

The analysis of qualitative data involves creativity, intellectual discipline, analytical rigor and a lot of hard work. Computer programs facilitate the work of analysis, but they can’t provide the creativity and intelligence that make qualitative analysis unique. I found the use of the software application QUALPRO particularly helpful in the writing of the case studies. The application managed search and retrieval of codes and memo and annotate reflections about context and crucial nonverbal data.
3.2 Ethical and Political Considerations

This study is value-laden in nature. Values have pride of place. They are seen as ineluctable in shaping, even creating outcomes. This study was very much shaped by a personal commitment to a basic set of values that guided action. Values must be accepted simply on faith. There is no way to establish ultimate truthfulness. They are not open to proof in the conventional sense.

There is no way to elevate one over another. One must be comfortable with blurring of the lines. Some values may be taken for granted, only assumed; others may be highly problematical and controversial. Personal value statements in the study included:

- all students can learn, and be taught; and
- the entire process of the development, implementation, and evaluation of the music education curriculum policy and program required an active partnership between members of the school community

The extended standards-based music curriculum framework needed to:

- be broad and comprehensive;
- be relevant to students’ physical, intellectual, and social/emotional needs;
- be age appropriate;
- be part of the continuum of learning for life;
- offer opportunities, challenges, and choices;
- encourage independence, whilst recognizing the inter-dependence of members;
- value individual learning styles, and preferred learning styles;
- provide for different rates of learning;
- enhance students’ self-esteem, worth, identity, and dignity;
- provide a range of opportunities for individual and group learning of skills, knowledge, and attitudes;
- provide a broad range of experiences, processes, and approaches;
- have realistic, achievable, and clearly stated goals; and
- anticipate students’ future needs

Qualitative researchers emphasize the value-laden nature of inquiry and evaluation:

… personal, cultural, moral and political values cannot be eliminated … what social scientists choose to investigate [is chosen] on the basis of values … (Weber 1949a, p. 21)
At the core of qualitative inquiry is an understanding of the phenomena, themes and issues from different perspectives from the inside (emic) and outside (etic). Experience affects perspective. Perspective shapes experience. Even if it were possible, excluding values would be inimical to the interests of the powerless and at risk participants whose original (emic) constructions deserve equal consideration with those of the other more powerful inquirer (etic). Christians (2005), Foley, Levinson and Hurtig (2001), Levinson and Holland (1996) and Villenas and Foley (2002) contended that the age of value-free inquiry and evaluation in the human disciplines is over and a growing disenchantment with the notion of an objective social science that produces value-free paradigms and perspectives. Qualitative approaches seek answers to questions that stress how social experience is created and given meaning. Proponents of quantitative approaches to inquiry and evaluation claim that their work is done within a value-free framework. Quantitative approaches to inquiry and evaluation emphasize measurement and analysis of causal relationships between variables surrounding the phenomena, not processes.

What values the qualitative researcher should be committed to can only be settled by discussion. Regular dialogue and ongoing negotiation and renegotiation may be needed. In doing qualitative research, the researcher needs to consider what values of the researcher as well as other participants are involved, and what implications these values hold for truthful and objective findings. Furthermore, these questions must be addressed constantly during all phases of the research from conceptualization of a problem to the final report of findings.

There is no necessary conflict between personal, subjective interests or values and the scientific goal of truth. For example, Jorgensen (1989) cited a study that reported an interest in wife battering arising from related personal experience. The study was a participant observation of battered women and the shelter movement. There is no indication that the objectivity of the study suffered because of this combination of interests. On the contrary, the researcher’s battering experiences enabled the researcher to establish rapport with battered women quickly and very satisfactorily. Personal values hold the potential for new insights and inspire emotional and intellectual creativity. Rather than denying personal values, the methodology of qualitative research requires an awareness of
how these thoughts and feelings influence research. By reporting personal values, other people are able to evaluate their influence.

There has always been a somewhat pragmatic tradition in qualitative inquiry and evaluation that holds that it is healthy to just ‘… knock on doors … troop the streets … join groups … [and] … get on and do real research …’ (e.g., Atkinson 1977, p. 32; Burgess (editor) 1982, p 6). With such a complex and contradictory history in qualitative inquiry and evaluation, there are voices that alert and warn about the profound implications for inherent ethical and political tensions, controversies and dilemmas that are generated. Lincoln and Guba (1985) suggested that ethics and politics (perhaps more correctly termed axiology, i.e., that branch of philosophy dealing with ethics, aesthetics and religion) guide the research process in many ways: choice of problem, choice of paradigm and perspective to guide the problem, choice of theoretical framework, choice of major data-gathering and data-analytical methods and choice of format(s) for interpreting and presenting findings.

The researcher must also confront situational and trans-situational ethics and politics that apply to any given research act (e.g., Christians 2005). The typical research design is full of these tensions, controversies and dilemmas, e.g., having to face a choice between two, where choosing one can mean, to some degree, forgoing the other, validity versus avoiding harm, anonymity versus visibility, scientific understanding versus individual rights, detached inquiry versus help, help-giving versus confidentiality, freedom of inquiry versus political advantage. Ethical and political decision making depends largely on the individual researcher’s awareness and interpretation, but in many cases the issues lack clarity required for resolution. Issues encountered in social research are subtle and complex, raising difficult tensions, controversies and dilemmas that often require the researcher to strike a delicate balance between the requirements of the methodology, and the human rights and values potentially threatened by the research. In short, it is the researcher’s responsibility as the ethical and political decision maker to create roles that are mutually clarified and compatible, and, in creating them, to affirm general ethical and political norms governing human research. The underlying guiding principle is to proceed both ethically and politically without threatening the validity of the research. It is essential that researchers continually ask how to conduct themselves ethically and politically
and still make sound progress throughout the research process. Furthermore, it is clear that ethical and political responsibility is essential at all stages of the research process: that researchers are aware of and anticipate the rise of issues and hence in the position to be proactive in negotiating potential solution(s) to issues as they arise that do not seriously impair either the validity of the inquiry, or the respect for its participants. Judgments concerning the positive and negative attributes of an inquiry and evaluation must be made by the researcher, the very person who believes the research to be worthwhile. Given that individuals systematically differ in the ways they formulate their ethical and political appraisals of research, perfect consensus regarding ethical and political issues of a particular investigation cannot be expected.

Deyhle, Hess and LeCompte (1992) and Flinders (1992) contended that specific ethical issues are nested in larger theories of how we decide that an action is right, correct, or appropriate. For example, Mill (1865a, 1865b, 1893, 1957, 1969, 1978), who wrote in the field of the philosophy of the social sciences, specifically credits influence of the work of sociologist Auguste Compte (1798-1857):

… the idea [of the distinction between social statics and social dynamics] was entirely new to me when I found it in Compte … but for him I might not soon [if ever] have arrived at it … (Mill 1969, p. 126)

Mill’s philosophy was explicitly developed in his *Examination of Sir William Hamilton’s Philosophy and of the Philosophical Questions discussed in his Writings* (1865b). Mill is typically characterized by the principles of French Positivism developed by Auguste Compte in his influential work *A System of Logic, Ratiocinative and Inductive: Being a Connected View of the Principles of Evidence and the Methods of Scientific Investigation* (1893).

Compte’s aim was to create a naturalistic science of society which would both explain past development of mankind and predict its future course. The social science must be studied in the same scientific manner as natural science. The study of social dynamics and social statics at any given historical moment, i.e., of progress and order, of change and stability are the twin pillars of his system. *Système de Politique Positive* (original work published in 1848) was translated and condensed into three volumes as *The Positive Philosophy of*...
Auguste Compte by Harriet Martineau in 1853. The volumes were personally approved by Auguste Compte and are generally available in academic libraries.

Sociologist Emile Durkheim (1858-1917) was more explicit and direct about causality in both the social and natural sciences. His central concern was with institutional arrangements that maintain the cohesion of social structures. He unequivocally argued that the task of social science as discovering the causal links between social facts and personal behaviour. The main thrust of his work insisted that the study of society must avoid reductionism and consider social phenomenon sui generis. Durkheim’s philosophy was explicitly developed in his major works *The Rules of Sociological Method* (1950), *Sociology and Philosophy* (1953), *The Division of Labour in Society* (1956) and *Suicide: A Study of Sociology* (1966). In contrast, the primary focus of Max Weber (1864-1920) was on the subjective meanings that human actors attach to their actions in their orientations within social-historical contexts. Weber’s philosophy was explicitly developed in his major works *The Methodology of the Social Sciences* (1949) and *Max Weber on Universities* (1973).

Writing in the midst of the European holocaust in the 1940s when issues of morality dominated the intellectual scene, Dietrich Bonhoeffer (1961) suggested that ethical behaviour is not the scrupulous observance of some code of ‘… morally permitted behaviour …’: that we cannot live in blind adherence to such codes. For Bonhoeffer, the ethicist’s job is ‘… to help people to learn to share in life … and not to withhold themselves from the processes of life …’. To cite Bonhoeffer, codifications that reduce professional ethics into sets of morally permitted behaviour, is probably, at best, inadequate. Ethical obligations that typically need constant attention before, during and after a qualitative study, float beneath the surface of any qualitative inquiry, but receive little public attention within and beyond the research community.

Since World War II, ethical and political issues in the social sciences have become a topic of growing concern, as researchers try to ensure that their studies are directed toward worthwhile goals and that the welfare of their subjects and
their research colleagues is protected. Scientific and social mechanisms and collective guidelines have evolved to provide assurance both to investigators within social science disciplines, and to the general public that the resolution of ethical and political issues in research will be morally acceptable.

Root (1993) critically interpreted the intellectual legacy of Bonhoeffer, Compte, Durkheim, Mill and Weber. It appears that ethical thinking has become more compatible with scientific thought. For example,

\[\text{… one validated an ethical position by hard evidence … one could abandon metaphysical or theological factors which made ethical and political questions scientifically undecidable … (Taylor 1982, p. 129)}\]

There appears to be widespread agreement that researchers should avoid unethical behaviour requiring careful consideration and preparation before entering the field. Unethical behaviour has no place in qualitative inquiry and evaluation. For example, ‘… naivete [about ethics] in itself is unethical …’ (e.g., Mirvis & Seashore 1982, p. 100). If the matter was quite so simple, the need for books, chapters in books and scholarly articles on ethical and political issues in social research would be unnecessary. Fonow and Cook (1991), Grossberg, Nelson and Treichler (1992) and Reinharz (1992) suggested that these issues are perhaps best described as a swamp rather than providing a map. The qualitative researcher must consider the rightness and wrongness of actions in relation to the people whose lives are studied, to colleagues, and to those who may sponsor an inquiry or evaluation. Much discussion centres on the value of human life and rights of the individual.

Christians (1997a, 1997b, 1998, 2005), Christians, Ferre and Fackler (1993), Guba and Lincoln (1989) and Punch (1986) suggested that the nature of qualitative inquiry and evaluation is also political. Researchers must identify their position as to the use of research for political purposes. Politics may mean everything from the micropolitics of personal relations to the cultures and resources of research units and universities, the powers and policies of government research departments, and ultimately the hand (heavy or otherwise) of state and national governments. To a greater or lesser extent, politics suffuses all social scientific research. Langenbach, Vaughn and Aagaard (1994) identified two ideological views prevalent in the research community as status quo and
Kvale (editor) (1989a) suggested that the question of pragmatic validity of a policy and program evaluation cannot be avoided, i.e., what the study does for its participants and for its consumers. Gummesson (1991) suggested that public sector managers and private consultants alike rely on qualitative studies. Policy and program evaluation needs to be practical. Watkins (1991) suggested that action research is designed to solve particular local problems. Patton (2002, p. 469) suggested that policy and program inquiry and evaluation is:

… the systematic collection of information about the activities, characteristics and outcomes of policies and/or programs to make judgments about the policy and/or program, improve policy and/or program effectiveness and/or inform decisions … [furthermore] … the ultimate test of credibility of a [policy and program inquiry and evaluation] report is the response of decision makers and information users to that report …

However, Carr and Kemmis (1983, 1986), Hesse (1980) and Von Wright (1971) suggested that action and/or advocacy expand the researcher’s role beyond reasonable expectations and competence. Action and/or advocacy are not viewed as the responsibility of the researcher. Action and/or advocacy may even threaten validity and objectivity. Furthermore, the researcher is cast in the role of the expert, a situation which may seem to award special, perhaps even unmerited privilege to the researcher.

Dealing with ethical and political issues effectively involves awareness and anticipation of specific issues that will benefit from advance thinking at all phases of the research process. However, this does not mean deluding oneself that all issues can be pre-solved. Moreover, Christians et al. (1993, p. 18-32, 41-44) suggested that ‘… ethics [and politics] must be embedded within, not external
Virtually all social research is governed by structures of institutional review boards (IRBs) engaged in research involving human subjects (Lincoln 2005). For example, the United States National Commission for the Protection of Human Subjects in Biomedical and Behavioural Research was established in 1978. They have grown out of federal and state regulations beginning in the 1960s.

An Australian Code for the Responsible Conduct of Research (1997) is the joint work of the National Health and Medical Research Council (NHMRC) and the Australian Research Council (ARC) intended to be used as the standard for responsible conduct of research across all disciplines in Australia (Australian Research Council, 1997; National Health and Medical Research Council 1992a, 1992b). The NHMRC/ARC code provides guidance on specific practices that promote responsible conduct of research:

- research data and records management
- supervision
- publication and dissemination of research findings
- authorship
- peer review
- conflict of interests
- collaborative research
- handling of allegations of research misconduct

At the time of writing, the NHMRC/ARC code was being revised.

The work of assessment and review of human ethics in the University of Melbourne is undertaken by the Human Research Ethics Committee (HREC) and three discipline-based sub-committees established in the areas of Health Sciences, Behavioural and Social Sciences, and The Arts and Education. The composition of each sub-committee is in accordance with NHMRC/ARC guidelines. The two paradigms and perspectives …’. Ethical and political obligations were intrinsic for this study particularly because of the value-laden nature of the study. Maranto (1990) suggested that only a relatively small number of published music research contains explicit reference to ethical and political issues.
primary codes of ethics and professional conduct used by the HREC and its sub-committees are:

- the University’s *Ethical Principles Governing Human Research and Experimentation*
- the NHMRC’s *Statement on Human Experimentation* (1992) and *Supplementary Notes to the Statement*

The HREC and its sub-committees refer researchers to the requirements of the University’s Statute 9.9 (*Code of Conduct for Research*). Furthermore, other codes of ethics and professional conduct may be adopted by the HREC and its sub-committees in considering research projects involving humans as participants of the research, e.g., the many professional, academic and scholarly associations that have well-defined codes of ethics and professional conduct for researchers that have evolved as a result of various abuses, some of them dramatic, which have been committed by researchers. For example, the Victorian Institute of Teachers has recently adopted a Code of Ethics for teachers. The Institute has a statutory obligation to investigate complaints against a teacher relating to serious misconduct, serious incompetence, lack of fitness to teach, disclosure of a conviction or finding of guilt for an indictable or a sexual offence.

Special education has had a strong code of ethics and professional conduct since its inception. When research participants are people with disabilities and impairments, they are considered to have a higher degree of vulnerability. The Council for Exceptional Children (1997) developed a formal code of ethics and professional conduct that addresses the specific ethics of conducting research with special education populations. The code of ethics and professional conduct states that special education professionals are required to protect the rights and welfare of the participants, interpret and publish research results with accuracy and high quality scholarship, support a cessation of the use of any research procedure that may result in undesirable consequences for the participants and to exercise all possible precautions to prevent misapplication or misuse of a research effort. Special education researchers must be alert to the implicit value commitments, e.g., balance general principles that apply to special education populations with the values and interests that characterize individual cases.

Examples of codes of ethics and professional conduct for academic and scholarly associations include the American Evaluation Association (1995) and the American Psychological Association (2002). Codes of ethics and professional conduct are contained in most relevant professional journals. Furthermore, research funding may also be dependent on researchers’ ascribing to code of ethics and professional conduct guidelines (e.g., Maranto 1981). Such code of ethics and professional conduct recognize that each case involves a different set of considerations for and against research in relation to ethical and political issues.

Thus, an ethics proposal for this study was prepared, submitted to and subsequently approved by the relevant Human Research Ethics sub-committee in The University of Melbourne. The proposal required applicant and research details, i.e., project title, name of principal researchers, Department-School-Faculty, degree for which research is undertaken, proposed commencement of research, proposed duration of project. The proposal provided a brief outline of the study in language that was able to be understood by the general public. The outline argued the worth of the study. Detail included the significance of the study to a broad domain that was obliged to be congruent with its overtly value-laden nature. Detail included proposed methodology in the study and a full explanation of what participants would be required to do.

Researchers are obliged to take special care in recruiting participants who may have a dependent relationship with the researcher. Some common examples of dependant relationships include lecturer-student, teacher-student, doctor-patient, health care professional-client. Supplementary Note 2 *Research on Children, the Mentally Ill, Those in Dependant Relationships or Comparable Situations Including Unconscious Patients* to the NHMRC Statement on Human
Experimentation provide guidelines that oblige researchers to take particular care in recruiting participants from such groups. The proposal provided detail of number, type and age range of participants, the source of the participants and the means by which the participants were to be recruited.

Researchers need to be aware of various national and state privacy legislations, e.g., Commonwealth Privacy Act 1988, the NHMRC Guidelines for the Protection of Privacy in the Conduct of Medical Research if the study involved the use of personal information obtained from a Commonwealth or State department or agency. This study collected personal information about the student participants from the school setting that is an agency of a State government authority.

One of the great strengths of qualitative inquiry and evaluation lies in the ease with which researchers can gain entrée to a setting. It is unobtrusive and can be conducted inconspicuously. Qualitative inquiry and evaluation may take place in a public or semi-public setting. A setting may be publicly visible, but not necessarily open to public inspection. The researcher may venture into places to gather data that are normally inaccessible to the general public. Gaining access to a setting may require creative engagement by the researcher: interpersonal skills, creativity and commonsense decision making. Gaining acceptance as participant in an unfamiliar setting requires the researcher, at least initially, to be as unobtrusive as possible, e.g., dress and behave in such a way as to not call attention to oneself. Gaining acceptance may be learning a different culture or subculture. Deyhle, Hess and LeCompte (1992) and Punch (1986) suggested that subtle deception such as projection of a fake persona or coercive and/or unauthentic relationships with subjects cannot be ignored or defined away. In weighing the balance between overt-covert and between openness and not-so-open, researchers should take into account the consequences for the subjects, the profession and for themselves. Without exception, codes of ethics and professional conduct emphasize underlying values, e.g., autonomy, courtesy and respect. Although one of its great strengths, qualitative inquiry and evaluation also renders it liable to abuse of these underlying values. It was especially important to protect the student participants who may not be autonomous, i.e., particularly those in the classroom grouping with severe, profound and multiple disabilities and impairments. Every effort was made to protect the autonomy of
all individual participants in this study with courtesy and mutual respect. Actions in this study emphasized issues of attachment, caring and respect, perhaps invoking one or more universal rules, e.g., would I like this action to be applied to everyone including me?

What is my relationship with the people I am studying? Am I telling the truth? Do we trust each other? Researchers should be honest and trustworthy. Honesty and trust are not absolute, rather matters of degree: more or less honest and more or less trusting. One will most likely develop very honest and trusting relationships, even intimate relationships and friendships with a few people; maintain good, but less intimate relationships with others; and casual relationships involving limited honesty and trust with still others. The researcher needs to cultivate the skill to read or interpret social interactions. Relationships based on honesty and trust is dynamic, but constantly problematic. Honest and trusting relationships among the researcher and the subjects are necessary for unobstructed access to the setting and for accurate, dependable, high-quality information. The researcher must constantly interpret and evaluate information in terms of the relationships.

Honesty and trust involve negotiation and exchange between the researcher and participant. Clearly, the researcher wants something: access to the subjects’ way of life, the opportunity to participate and observe and information. Subjects may or may not have anything to gain, individually or collectively by trusting and cooperating with the researcher. They commonly do not share the researcher’s conviction that knowledge resulting from research will be valuable in some way to members of the setting. What does the researcher have to offer people in exchange for trust, cooperation, information, and friendship? One may encounter members not in the least awed by any would-be prestige; or members who may demonstrate a healthy skepticism of would be do-gooders. Often it is advisable to be direct and extremely candid.

As the teacher-researcher, I believe that I developed and maintained honest and trusting relationships with all participants in the study and cultivated the skill to interpret social interactions. The process of developing honest and trusting rapport with the participants in this study very much mirrored how one goes about making friends in everyday life, except that it is more deliberate and
self-conscious e.g., being caring, sympathetic and willing to listen. Rapport requires that social barriers and distance be bridged by initial participation in routine activities, discovering and sharing common life experiences, participating together to create shared experiences.

Researchers agree that people should not be harmed by the research act. Codes of ethics and professional conduct uniformly oppose harm. However, it is wise to consider in advance ways of reducing the likelihood of harm. A study should be designed to minimize harm to participants in research. Harm can come in many varieties from blows to self esteem, looking bad to others, threats to one’s interest, position or advancement on up to being sued or arrested. Subjects may need to be reassured that you will not harm them or their interests.

The Human Research Ethics Committee has adopted a three-category scheme for research projects using human subjects:

- the classification Category R applies to research which may involve risk to participants above the everyday norm
- the classification Category MR refers to projects where participants are considered not to be exposed to physical, psychological, social or legal risk above the everyday norm, but which may contain an element of slight risk to participants
- the classification Category P refers to non-invasive projects using normal participant populations where there is no risk to participants and where participant’s identity is not known to the researcher

The purpose of the scheme was an administrative aid to identify the degree of risk to which participants may be exposed. The researcher is in no way absolved from conducting research in an ethical manner.

What might this study do to hurt the participants involved? The proposal required that all risks that may be encountered in the normal course of a day, real and potential and however slight had to be identified. It was not acceptable to state that there was no risk. The proposal assessed the level of risk to participants as minimal risk (Category MR) and identified risks, real and potential and however slight.

The proposal explained how to protect against and/or minimize the possibility of risks. Steps included awareness of:
practices and behaviours that were fair and free from all forms of discrimination and harassment

current principles of ethical practice i.e., demonstrate and promote exemplary ethical behavior of openness, honesty, accountability, objectivity and courage leading to better decision-making and resolving dilemmas in good faith in the public interest

current principles of health, safety and welfare, e.g., using voice and instruments in a way that avoid strain and injury; adequate lighting and ventilation; appropriate floor surfaces designed to prevent injury; provide and maintain safe entrances and exits; ensure safe use, handling, storage and transport of equipment; provide information, instruction, training and supervision to the team necessary to ensure health, safety and welfare; consultation to facilitate the team to contribute to decisions affecting health, safety and welfare; and adopt a risk management approach to health, safety and welfare

Researchers should only attempt to undertake research in areas in which they have expertise. Expertise from the daily life as a music educator in specialist education settings in a teaching career that has spanned some twenty years was dedicated to this study. However, the study necessarily involved research, supervision, training and consultation. Expert help was made available at most any time in administering the proposed procedures and in dealing with any emergencies or contingencies that may have arisen.

Consistent with the legacies of Bonhoeffer, Compte, Durkheim, Mill and Weber and commitment to individual autonomy, social scientists insist that research participants have the right to be informed about the nature and consequences of research in which they are involved. One significant guideline in codes of ethics and professional conduct is the concept of informed consent by which participants of research agree to participate voluntarily, i.e., without physical or psychological coercion. Agreement must be based on full and open information about the nature of the research. Informed consent must specify that the participant may withdraw from the research project at any time.

Informed consent is considered by many as the central norm governing the relationship between the participant and the researcher. Originally developed for biomedical research, informed consent may not be as readily applicable to social research. It is often difficult to identify the degree of risk involved (which, for the most part, is far less dramatic than for biomedical research) and the extent to which participants are truly informed.
Since most applied social research is conducted in natural settings, the impact of informed consent may be a less serious problem than in a laboratory setting. The adverse impact of informed consent on applied social research may be negligible. There are no easy answers to these situational dilemmas. The key issue may not be informed consent, but rather privacy and confidentiality. Eisner (1998), Reiss (1979), Wax (1982) suggested that reciprocity may be far more important than informed consent.

Clause 8 of the NHMRC *Statement on Human Experimentation* (1992) states that:

… the [researcher] is responsible for providing the [participant] with sufficient information about the purpose, methods, demands, risks and inconveniences and discomforts of the study at his or her level of comprehension …

Every effort was made to ensure that everyone was informed of and collaborated in this study as far as possible. Every effort was made to ensure that participants were not manipulated, exploited or controlled against their interests in any way. Reassurance that measures were taken to ensure that consent to participate has been informed and freely given was provided in the proposal. Participants were reassured that their cooperation was voluntary. There was an overall effort to collaborate with the student participants, the parent or guardian of the student participants and adult participants in the school community including the school principal with written information in plain language about the purpose, methods, demands, risks, inconvenience and discomforts of the study.

When investigating students with disabilities and impairments, difficulties arise from their differential status, limited possibilities of articulation and understanding to make adequate judgments about the purpose, risks and other aspects of an inquiry and evaluation. These limitations threaten the adequacy of the informed consent process and increase the danger of subtly, perhaps unintentionally, coercing relatively powerless individuals into social research. Concern about how consent is to be gained when an aspect of an inquiry or relevant technical information is too complex for a participant’s immediate
understanding and evaluation puts an added responsibility on the researcher to ensure adequate comprehension at the individual level.

It seemed unlikely that truly informed consent could be obtained from this defined classroom grouping of student participants. Students with severe, profound and multiple disabilities and impairments in the defined classroom grouping demonstrated a range of unique personal responses. They may not have grasped the entire situation. Indeed, intent and meaning of a student’s effort to communicate a response was assigned. Efforts of students with mild and moderate disabilities and impairments in the defined classroom grouping were more intentional, e.g., change of facial expression, natural gesture (nodding, shaking, waving, pointing), vocalization and verbalization (protowords, phrases and sentences within known vocabulary).

The HREC required that consent in writing be obtained where participants in the study are in a dependent relationship with the researcher. Where participants were minors (under the age of eighteen), parental/guardian consent should normally be obtained. Consent forms were signed by relevant parents/guardians and adult participants in the school community. All participants were given the option to withdraw from the study at any time. Consent was also needed from school officials if research is carried out in a school; hence, written permission from people in authority (school principal and Victorian state government education department authority) was gained. A copy of the written information in plain language and the consent form provided was attached to the proposal. Fortunately, this appeared to raise few problems.

The close personal interactions required by the methodology in qualitative inquiry and evaluation had the potential to produce special and often sticky problems of confidentiality and anonymity. Research efforts often required the researcher to collect data concerning individuals’ economic and social status, home and family relationships, and mental and physical well-being over extended periods of observation. Codes of ethics and professional conduct generally prohibit violations to peoples’ right to confidentiality. International codes of human rights (such as the United Nations' Universal Declaration of Human Rights and the European Convention on Human Rights) specify the right to confidentiality. Confidentiality guidelines in codes of ethics and professional
conduct recognize individuals’ right to the assurance that the information they provide remains confidential. These are ethical issues crucial to social researchers who, by the very nature of their research, frequently request individuals to share with them their thoughts, attitudes, and experiences. Subjects may need to be reassured that any information will remain confidential.

Invasion of confidentiality can take two forms: venturing into private places and misrepresenting oneself as a member. By the nature of its inconspicuousness, researchers can venture into places to gather data that are inaccessible to the general public, e.g., to observe deviant behaviour or other socially sensitive concerns. Researchers may misrepresent themselves in a disguised or covert way, deliberately misrepresenting oneself as a member in order to gain access to a setting. The researcher may be unknown to those being observed (e.g., Loftland 1971; Humphreys 1970, 1972. Special ethical and moral problems in settings can the face researcher, e.g., breaching confidentiality to report illegal behaviour or difficulties in defining the appropriateness of a researcher's role as an expert witness in a legal case. It is contradictory for a researcher to utilize methods and procedures that are contrary to the organization's objectives.

The HERC provides guidelines on *Data Collected in the Course of Research involving Human Subjects*. The proposal described a variety of procedures that were developed for this study to ensure confidentiality. For example, one of the researcher’s primary responsibilities is to fulfill individuals’ expectation of anonymity, i.e., lack of identifiers and information that would indicate which individual(s) or organization(s) provided which data. Anonymity, where the individual does not expect to be personally identified, needs to be protected. Anonymity is lost if information or data were used in a way that led to identification of individuals. Subjects may need to be reassured that their identity will remain anonymous. A breach in this regard increases the possibility that individuals may be harmed. Safeguards need be in place to protect the identity and places of a research setting and individuals in an inquiry. As Bulmer (editor) (1982, p. 225) expressed it:
data collected are held in anonymized form, all data is kept secure and identities, locations of individuals and places are concealed in published results …

The claim that data obtained from individuals ought to be kept anonymous is commonly justified, in part, by the assumption that enhanced credibility and validity should result. It appears that some potential individuals in research on sensitive topics will refuse to cooperate when assurance of privacy and confidentiality is weak, vague, not understood, or thought likely to be breached. The usefulness of information and data in sensitive research areas may be seriously affected. Kimmel (1988) suggested that the researcher’s ability to provide a credible assurance of privacy and confidentiality do not appear to affect cooperation rates in innocuous inquiries.

Data collections from this study were held in anonymized form. The setting in this study would not be identifiable. Participants in this study were identified with the use of pseudonyms. Anonymity and other ways of fictionalizing research texts were important tools to assist to manage these ethical concerns. Confidentiality also refers to physical security of data. The proposal described protocols that were developed for this study to ensure physical security of the data including hardcopy, audiotapes, video tapes, and transcripts. Data collections from this study were kept physically secure. Physical protection of data was also provided by reducing the possible number of persons with access to the data. This obligation can also require considerable ingenuity in these days of computer hackers, i.e., data stored on password secured hard drives. The University of Melbourne statutes also require that data collections are kept for physical safekeeping in the department/faculty for several years post passing of a thesis.

Perhaps the most serious harm encountered in social research is that involving unintended, adverse (iatrogenic) consequences of an inquiry and evaluation, e.g., where a preventative technique may actually harm participants. Changing the focus of the preventative technique represents one way a researcher can approach the problem of iatrogenic consequences, without reducing research on new preventative techniques. Researchers may need to take more care in considering the importance of timing of their preventative technique. A
consideration of potential iatrogenic consequences of research highlights the necessity for considerable preparatory work prior to implementation. Iatrogenic consequences can be avoided or reduced if researchers take care to apply rigorous evaluation methods to the development, planning, and implementation of a program, including careful definition of the problem, specifying the target participant population and timing of preventative techniques.

Thus, the proposal for this study was required to include any procedure that may be beyond already established and accepted techniques. The overwhelming majority of music studies do not involve dangerous, harmful, volatile or hazardous risk to participants. However, Maranto (1990) cautioned that there appears to be a lackadaisical attitude concerning the need to protect subjects against apparently innocuous music programs. The research design for this study did not involve investigation of new approaches and systems of music education that may have presented ethical problems involving unintended, adverse (iatrogenic) consequences. Conventional approaches and systems of music education were developed and implemented in the research design for this study.
4.0 Standards-Based Music Curriculum Policy Frameworks and Music Programs

Special education is about recognizing and catering for the diversity of individual learning needs through multiple learning connections and pathways for students who may fail to realize the importance of social reasoning, who may be without language skill or who simply may learn at a different rate. Clear goals for learning and education access for individual students are identified and acted upon through individual education programs. They provide ever changing platforms of education to promote life long learning and teaching for students who want to engage with their community appropriately and effectively, but seem to fall short of the many expectations imposed on them. Such connections and pathways provide the special educator with unique insights. Special educators believe that they can and do make a difference in the education of special needs students.

Development, implementation and evaluation of curriculum frameworks and music programs for students with disabilities and impairments needs to be concerned with enabling such students to participate in fundamental human experiences at many different developmental levels. Several music educators have used resourcefulness and initiative to develop and implement music curriculum for students with disabilities and impairments (e.g., Andress 1986; Beal & Gilbert 1982; Beal 1980, 1982; Brown, Branston, Nietupski & Pumppian 1979; Hardesty 1979; Jellison 1979; McCavera 1991; Purvis & Samet (editors) 1976). Most have been developed and implemented for specific self-contained classes of students with disabilities and impairments. However, none appear to have been intentionally developed and implemented with any degree of congruence in relation to profiles for student achievement in respective music curriculum policy frameworks. There are also existing very useful resource guides containing collections of individual musical activities and tasks at the classroom level with an emphasis on practical how to’s available to assist in the development and implementation of units of work for such students, e.g.,

The development of musical thinking, like the development of thinking in other domains, emerges at somewhat different times from child to child (e.g., Boswell (editor) 1985, Bower & Hilgard 1981, Buckton 1982, Donaldson 1978). Nevertheless, the developmental milestones appear to occur in a relatively predictable sequence. Probably the best-known existing theory that describes the process of child development is that of Swiss psychologist Jean Piaget, who outlined four primary stages of child development (e.g., Flavell 1963, 1985). Hawn (1975), Strockbine (1982) and Warrener (1985) suggested that, whilst Piaget did not specifically address the development of musical thinking in his writings, it seemed appropriate to adapt Piaget's Theory of Play when developing a modified music education curriculum policy framework for students with disabilities and impairments.

Students with disabilities and impairments apparently develop in a similar sequence as their non-disabled peers throughout their years of schooling, albeit at an uneven and/or lower rate, perhaps musical thinking that occurs prior to that described in the first level of the CSF 1995 (The Arts KLA music strand). Students with severe, profound, and multiple disabilities and impairments seem to truly enjoy and were challenged in many ways with the musical ideas and skills, techniques and processes of a music program as a form of sensory-motor stimulation (e.g., Bridger 1961; Greenberg 1974, 1976). Students may be aroused by the musical environment. Students may be orientating to the musical environment. The musical environment may become stimulus for subsequent intentional actions and ultimately for the further development of musical thinking. They seem to possess unique ways of demonstrating personal responses to a music program. The student may be quite unaware of the communicative nature of his or her behaviour. They may simply respond to internal states without communicative intent. Hence, the intent and meaning of such responses were assigned. Musical thinking in these students seems to be exemplary of a sensory-motor stage of musical thinking typically expected of a majority of young infants and toddlers, perhaps up to two to three years of age.
Students with mild and moderate disabilities and impairments seem to communicate with musical ideas and skills, techniques and processes of a music program in more intentional ways. They may make personal responses to a music program in more intentional ways. Musical thinking in these students seems to be exemplary of an early pre-operational stage of musical thinking typically expected of a majority of preschoolers, perhaps up to four to five years of age.

However, some students with disabilities and impairments may communicate with musical ideas and skills, techniques, and processes and make personal responses to a music program in conventional ways, even make informed decisions. Development of musical thinking in these students seems to be exemplary of qualities and characteristics in the development of musical thinking described in relation to curriculum focus statements and learning outcome descriptors in the early years of schooling (levels 1-3) in the CSF 1995 (The Arts KLA music strand):

- a late pre-operational stage of musical thinking typically expected of a majority of students at the end of their first year of schooling (level 1: end of Preparatory Year), perhaps up to five or six years of age
- an early concrete stage of musical thinking typically expected of a majority of students at the end of their third year of schooling (level 2: end of Year 2), perhaps up to seven or eight years of age
- a late concrete stage of musical thinking typically expected of a majority of students at the end of their fifth year of schooling (level 3: end of Year 4), perhaps up to nine or ten years of age

Students with disabilities and impairments may be integrated into local mainstream primary school and secondary college settings. Such students may indeed demonstrate qualities and characteristics in the development of musical thinking described in relation to curriculum focus statements and learning outcome descriptors in the middle years of schooling (levels 4 and 5) or even the later compulsory years of schooling (level 6).

This chapter describes the beginning stage of a spiral of self-reflective cycles. In the following sections, the findings, understandings and explanations of contributions of the music research and theory informed the development of a standards-based music curriculum policy framework and music program, i.e.,
planning a change. Principles of curriculum design are applied to the development of extended profiles of student achievement. The music curriculum policy framework is intentionally developed with a high degree of congruence with the standards-based CSF 1995 (The Arts). A ten-week music program is developed and implemented with a defined classroom grouping of students in the second (autumn) term of 1999 from the extended standards-based music curriculum policy framework, including the design and modification of resources for the defined classroom grouping of students.
4.1 An Extended Standards-Based Music Curriculum Policy Framework

Music is essentially an aural art form. Music in education reflects many of the ways that music is used in society. Students use musical instruments and voice to perform, improvise and compose. They listen and respond to their own music and that of others. Students experience, reflect upon and evaluate music of different styles, times and cultures.

The extended standards-based music curriculum framework for this study is structured in substrands and levels. Substrands are key organizers for program development. They show the different ways in which people engage in music: as makers or producers, performers or presenters, audience members, critics or theorists. As the substrands are related, students will often engage in the substrands in the same learning activity. A balanced program will include activities associated with each substrand. Table 4.1 shows the major areas of content and processes of the extended standards-based music curriculum policy framework organized into substrands aligned with the CSF 1995 (*The Arts* KLA music strand).
TABLE 4.1: Substrands of the extended standards-based music curriculum policy framework aligned with the CSF 1995 (*The Arts* KLA music strand)

<table>
<thead>
<tr>
<th>Substrands</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Creating, Making and Presenting Music</strong></td>
<td>Students generate and develop ideas using many starting points to extend their understanding of the potential of music to express, challenge, stimulate and shape meaning. Students work with a range of musical processes as they develop, select, decide upon and refine ideas.</td>
</tr>
<tr>
<td><strong>Exploring and Developing Musical Ideas</strong></td>
<td>Students develop skills and techniques. Their skills may be acquired by experimenting with and observing techniques, followed by practice and further experimentation with tools, materials and processes. Students extend, learn and refine their skills.</td>
</tr>
<tr>
<td><strong>Using Music Skills, Techniques and Processes</strong></td>
<td>Students share the work they have created. Involvement in presentation and performance enables students to reflect on their own works as well as those presented by others.</td>
</tr>
<tr>
<td><strong>Music Criticism and Aesthetics</strong></td>
<td>Students listen to, talk, read and write about musical works. Social and cultural meanings are constructed, challenged and reconstructed. Students engage in music criticism as they describe, analyze, interpret, evaluate, develop preferences and the ability to discriminate between musical works and to challenge ideas. They reflect on and respond to their own musical works and those of others.</td>
</tr>
<tr>
<td><strong>Past and Present Contexts of Music</strong></td>
<td>Students study the social, cultural and historical contexts in which musical works are produced. They reflect on the value and meaning that different cultures and societies assign to music and musical works. Students learn about music histories and the relationship between social and cultural issues and musical practices. They develop skills in analyzing, researching, interpreting and questioning to expand their understanding of music in past and present contexts.</td>
</tr>
</tbody>
</table>

The CSF 1995 (*The Arts* KLA music strand) provided seven levels for the assessment and reporting of student achievement. Table 4.2 shows the four levels of achievement provided in the extended standards-based music curriculum policy framework.
TABLE 4.2: Four levels of achievement provided in the extended standards-based music curriculum policy framework

<table>
<thead>
<tr>
<th>early childhood</th>
<th>Level A</th>
<th>toddler</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(students with severe, profound and multiple disabilities and impairments)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>early childhood</th>
<th>Level B</th>
<th>preschooler</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(students with mild and moderate disabilities and impairments)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>early years of schooling</th>
<th>Level 1</th>
<th>end of preparatory year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(students with very mild disabilities and impairments)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>early years of schooling</th>
<th>Level 2</th>
<th>end of year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(students with very mild-borderline disabilities and impairments)</td>
</tr>
</tbody>
</table>

The first two (early childhood) levels (Levels A and B) of the extended framework were extended levels of student achievement to the continuum of the seven levels set in the CSF 1995 (The Arts KLA music strand). Each of these levels was also broadly associated with two years of development, i.e., infants and toddlers (perhaps up to three years of age) (Level A) and preschoolers (four and five years of age) (Level B). The second two (early years of schooling) levels (Levels 1 and 2) of the extended framework were reproduced directly from the first two early years of schooling levels of the CSF 1995 (The Arts KLA music strand).

It is possibly worth repeating that early skills are often achieved in very modest, hard-won steps for students with disabilities and impairments, particularly those with severe, profound, and multiple disabilities and impairments. Students do not learn at uniform rates. Some students will achieve intended learning outcome descriptors at particular levels earlier, some later. The structure of the extended standards-based music curriculum policy framework cannot be a strait jacket. The final year of schooling in Victoria for students with disabilities and impairments is mandated at the chronological age of eighteen years. In their last two years of schooling (years 11 and 12, i.e., at the chronological age of seventeen and eighteen years), students often participate in
intensive programs that concentrate on practical activities of daily living, e.g., functional literacy and numeracy relating to areas like training in the use of community transport, access to recreational programs, catering, cookery and health requirements. These programs are intended to lead to appropriate placement in one of the state government funded post-school programs for young adults with disabilities and impairments.

At the chronological age of eighteen years, students with severe, profound, and multiple disabilities and impairments may continue to truly enjoy and still be very much challenged in many ways by music as a form of sensory-motor stimulation. Students with mild and moderate may continue to demonstrate the ability to communicate with music in more intentional ways. These students may continue to demonstrate qualities and characteristics in the development of musical thinking that seems to be exemplary of the qualities and characteristics in the development of musical thinking and learning that occurs in early childhood prior to that described in the CSF 1995 (The Arts KLA music strand).

Some students with disabilities and impairments may continue to demonstrate the ability to communicate musical ideas, and skills, techniques and processes and make personal responses to a music education program in more conventional ways, even make informed decisions: qualities and characteristics in the development of the musical intelligence described in relation to curriculum focus statements and learning outcome descriptors and corresponding indicators in the early years of schooling (Levels 1-3) in the CSF 1995 (The Arts KLA music strand). Other students with disabilities and impairments may indeed demonstrate qualities and characteristics in the development of the musical intelligence described in relation to curriculum focus statements and learning outcome descriptors in the middle years of schooling (Levels 4 and 5) or even the later compulsory years of schooling (Level 6). Hence, unlike the CSF 1995, it seemed totally meaningless to set levels to be achieved within any particular defined period of schooling, particularly for students with severe, profound and multiple disabilities and impairments.

The extended standards-based music curriculum policy framework provided a basis for the assessment and reporting of student achievement with a
strong focus on teaching and learning (curriculum focus statements) and clear descriptive statements of what students should know and be able to do at regular intervals (learning outcome descriptors). The curriculum focus statements at each level for each substrand describe sequential patterns of discrete experiences, skills and understandings that students would be expected to develop in each substrand at each successive level. They outline the major content to be covered and describe appropriate contexts for course development. Curriculum focus statements do not constitute a syllabus and do not prescribe specific teaching methods or program detail.

Learning outcome descriptors relate specifically to the curriculum focus statements for each substrand. They identify expected student achievements for each substrand at each level. It is expected that by the end of the level, students will have achieved the specific learning outcome descriptions. Learning outcome descriptors reflect the breadth, depth and complexity of the curriculum and are stated in terms that are measurable. A specific learning outcome descriptor may be achieved in a variety of ways.

All learning outcome descriptors need to be accompanied by examples that illustrate some of the ways students demonstrate achievement of the learning outcome descriptor. No single example fully encompasses a learning outcome descriptor. A learning outcome descriptor cannot be successfully attained by doing only one activity. Teachers will use a range of valid and reliable tools to assess and report factors such as ease with which a learning outcome descriptor is achieved, degree of autonomy or direction, range of contexts and capacity to repeat the learning outcome descriptor at later times. The range of assessment and reporting tools used in this study were described in the previous chapter.

The curriculum focus statements and learning outcome descriptors in the extended standards-based music curriculum policy framework for this study were informed by the music research and theory. Level A was informed by music research and theory in relation to the development of musical thinking and learning at a sensory-motor stage of early childhood expected of a majority of infants and toddlers, typically up to three years of age and observed in many students with severe, profound, and multiple disabilities and impairments with whom I have worked. Level B was informed by music research and theory in
relation to the development of the musical intelligence at an early pre-operational stage of early childhood expected of a majority of preschoolers, typically four and five years of age and observed in many students with mild and moderate disabilities and impairments with whom I have worked. Level 1 was reproduced directly from the CSF 1995 (The Arts KLA music strand) curriculum policy framework. This level was informed by music research and theory in relation to the development of the musical intelligence at a late pre-operational stage expected of a majority of students at the end of their first year of schooling (end of Preparatory Year), typically perhaps six years of age. Level 2 was reproduced directly from the CSF 1995 (The Arts KLA music strand) curriculum policy framework. This level was informed by music research and theory in relation to the development of the musical intelligence at an early concrete stage of musical thinking and learning expected of a majority of students at the end of their third year of schooling (end of Year 2), typically eight years of age.
4.2 A Unit of Work: A Music Education Program from the Extended Standards-Based Music Curriculum Policy Framework

At the start of an academic year, units of work were developed, implemented, and evaluated from the CSF 1995 by multi disciplinary teams of generalist class teachers, specialist teachers of some of the strands of KLAs, therapists, teacher assistants and program (therapy) assistants from a scope and sequence of integrated curriculum units. Age appropriate themes for integrated curriculum units were chosen as starting points.

It was the start of another academic year. I was the specialist teacher in the music strand of The Arts KLA on a multi disciplinary team in the Secondary mini-school section in which I chose to conduct my research. Students were grouped in four small composite classes of years 7, 8, 9 and 10 (middle years and later compulsory years of schooling). Themes chosen as starting points for the integrated curriculum units during the particular academic year of the research period were

- "Water" (summer term), based on the Chemical Science strand-discipline of the Science Key Learning Area
- "The Human Body" (autumn term), based on the Health of Individuals and Populations strand-discipline of the Health and Physical Education Key Learning Area
- "Sport" (winter term - Australian Rules Football has a cult following during the Melbourne winter), based on the Movement and Physical Activity strand-discipline of the Health and Physical Education Key Learning Area
- "Our community" (spring term), based on the Society and Environment strand-discipline of the Studies of Society and Environment Key Learning Area

It was the second ten-week (autumn) term of the academic year in the Secondary mini-school section in which I chose to conduct my research. My next task was to develop and implement a unit of work in the music strand of The Arts KLA from the theme (starting point) of the integrated curriculum unit “The Human Body” for one of the four small composite classroom groupings.
A proforma for the development of the Unit of Work from the CSF 1995 suggested a format with several sections

- a **Unit Focus** section of a unit of work that provides a summary of the main skills, knowledge, processes, and general patterns of learning
- a **Relevant Learning Outcomes** section that concisely describes what students may typically achieve in a substrand organizer at a particular level
- a **Suggested Learning Activities** section that typically provides an introductory activity, followed by several other activities associated with the theme, or starting point
- a **Resources** section that provides guidance and suggestions for facilitation of the preparation of materials and environment, derived from individual abilities, experiences, and preferences as the class teacher, including information and communication technology that has dramatically changed access to knowledge across the curriculum, together with the techniques for applying that knowledge

The extraordinary challenge in developing the Unit of Work for this defined classroom grouping of students was to consider the significant variation of skills, knowledge, processes and general patterns of thinking in the individual students, predict what each individual student may achieve in relation to the curriculum focuses and learning outcome descriptions of the extended framework, implement a sequence of suitable age appropriate activities and provide a range of adapted materials and classroom environment.

### 4.2.1 Unit Focus

The Unit Focus for this unit of work was a composite of the very broad range of skills, knowledge, processes, and general patterns of musical thinking that are typically expected of students across the continuum of development of musical thinking and learning in early childhood and the early years of schooling. Furthermore, effective music teaching strategies that I developed and implemented were examples of effective music teaching strategies that are also typically developed and implemented for students across the continuum of early childhood and into the early years of schooling (e.g., Beer, Bellows & Frederick 1982).
4.2.2 Relevant Learning Outcome Descriptors

Learning Outcome Descriptors were developed in each of the four levels in each substrand of the extended standards-based music curriculum framework for this study (*The Arts* KLA music strand).

4.2.3 Suggested Learning Activities

*Creating, Making and Presenting Music.* The unit of work featured two sound effects related to the theme or starting point. Suggested learning activities typically included musical performance, improvisation and composition with the two mystery sound effects taking into account understandings of some of the key music research and theory in early childhood and in the early years of schooling in the area of performance, improvisation and composition.

The unit of work very much featured the use of continually emerging learning technologies that assisted students to overcome difficulties that they experienced with psychomotor skills as the classroom grouping explored and experimented with ways of performing, improvising and composing with the sound effects. More is said of the use of the assistive learning technologies in the preparation of materials and environment for the music education program in the *Resources* section to follow.

Students were encouraged to maintain and develop social skills as they used the learning technologies as an appropriate technique and process to perform, improvise and compose with the sound effects as a soloist, or participated in a duet with another student for a variety of purposes and audiences to create their own music and accompaniments to communicate musical ideas and feelings.

I encouraged spontaneity, creativity, freedom of expression, playfulness, and a sense of identity; provided the opportunity to express feelings which are difficult to express verbally; and provided a safe means of experimenting with new behaviours, roles or interactional patterns.
I helped students to perform and improvise by preparing two songs for the unit of work related to the theme or starting point as ongoing musical accompaniment to stimulate and guide sound production. Where appropriate, students were engaged in the easier aspects of the composition of the songs, i.e., suggesting lyrics for the song. I then took responsibility for the more technical aspects.

The songs were learned by rote and performed from memory. I included many opportunities to practice the song repertoire in every lesson. Students were engaged in recreating these songs: learning how to use the voice; accurate recall and performance of the rhythmic, melodic, and word patterns.

Students were engaged in the use of a range of processes and techniques that involved recreating musical works: producing the sound effects on learning technologies, specifically music-authoring software; imagining, experimenting with, planning, and applying knowledge of the expressive qualities of the sound effects. Students composed musical works in the record mode on the learning technology, affording the opportunity to develop sensory-motor skills, learn adaptive behaviours, maintain reality orientation, identify with the feelings of others, and work cooperatively towards common goals.

The preparation of the song repertoire took into account understandings of some of the key music research and theory in relation to the development of rhythmic behaviours and melodic behaviours in early childhood and in the early years of schooling in Chapter 2. Rhythmic patterns mainly featured simple use of only the crotchet and quaver, but for a little more interest and challenge, also included use of the dotted crotchet with the intention to create obvious change in the rhythmic pattern. The songs featured the use of only a la-so-mi range in the melody. I maintained the contour of the melodic pattern, but deliberately created obvious changes, e.g., continually transposed the key of the song. To create a little more interest and challenge, I introduced a so-fa-me-re-do melodic pattern to the last line of the two songs. This particular pattern was intended to be performed ad lib with the intention to create an obvious change in tempo. The song repertoire was composed in a simple call-and-response form of four short lines. The word patterns were simple and contained much repetition. For this grouping of student participants, it did not seem that learning activities such as
rounds that assume conservation of rhythmic and melodic elements would be at all successful.

Students were given opportunities to create and use appropriate symbols. The lessons of weeks 9 and 10 were planned to give students an opportunity to reflect on what they had learned in the unit of work for the term in a more informal, relaxed climate, as we concurrently worked together, as a group, to create and make a visual representation/collage of the unit of work for display, overlapping with other arts forms.

Students were encouraged to achieve individual learning outcome descriptors in this strand from the extended standards-based music curriculum framework for this study (The Arts KLA music strand).

**Responding to Music: Music Criticism and Aesthetics and the Past and Present Contexts of Music.** Students were engaged in listening experiences that focused on the affective, emotional, and aesthetic aspects of their own and others’ performances, improvisations, and compositions. They were encouraged to respond to and talk about the musical ideas and works.

Each lesson provided much opportunity to repeat and practice skills, knowledge, and processes. Suggested Learning Activities were planned and developed to promote individual musical thinking. Students were encouraged to achieve individual learning outcome descriptors in these strands from the extended standards-based music curriculum framework for this study (The Arts KLA music strand).

4.2.4 Resources
The preparation of materials and environment for the music program was very much derived from my individual abilities, experiences and preferences as the class teacher together with the application of knowledge reflecting the impact of personal professional development activity.

The unit of work featured the use of continually emerging learning technologies, specifically music-authoring software that I had successfully implemented to enhance musical thinking and learning as the student participants were engaged in the practice of and responding to music. The initial purchase was a very humble second-hand Apple Mac Classic II, a small MIDI keyboard (two octaves only), a MIDI interface, a simple notator application (Band-in-a-Box), and a sequencer application (MicroLogic). School Council subsequently approved funding for a much updated computer, hardware and software for the music program.

I had worked with staff of the Soundhouse Association of Australia to assist in the research and development of a locally (Melbourne) engineered banana keyboard peripheral for students with disabilities and impairments. The assistive peripheral allows access to the software through a switchbox for access with micro-switch technology. The banana keyboard peripheral is a shallow (approx 5 cm deep) aluminium box fashioned in a large banana shape. Thirteen large coloured perspex keys, corresponding to one dichromatic octave, are mounted on top of the banana shaped aluminium box. The banana keyboard or a micro-switch is easily mounted on a wheelchair tray.

Students can hence activate the full range of sounds or sound effects available on the MIDI keyboard by pressing any one of the coloured perspex keys. Students can also activate the full range of sounds or sound effects with a micro-switch when plugged into the switch box. Micro-switches are access devices that are commonly used in special education settings across many areas of the curriculum, e.g., plugged into a switch box, students can safely activate a blender in a homecrafts program with a micro-switch. They require only a minimum of pressure to activate.

Up to five micro-switches can be simultaneously plugged into the sockets of the switch box of the banana keyboard. Each socket is designed to correspond
to one of the five chromatic tones, that is, C#, D#, F#, G#, and A#, on the banana keyboard. The sound or sound effect will hence be generated at different tones. For example, I could place one micro-switch in the socket that corresponded to a sound, or sound effect, being generated at the pitch of C#, and the other micro-switch in the socket that corresponded to a sound, or sound effect, being generated at the pitch of A#. Thus, I could create a large interval of a sixth, as opposed to smaller interval of a third. By creating a large interval, I maximized the opportunity for students to accurately discriminate between the pitch of the sounds effects as they were generated. I created ongoing musical accompaniments with the notator and sequencer applications to stimulate or guide performance and improvization. Figure 4.1 shows the banana keyboard.

**FIGURE 4.1: The banana keyboard**

The school parent club also subsequently approved funding for an EMS Soundbeam, a peripheral for students with disabilities and impairments researched and developed in Bristol, United Kingdom. The EMS Soundbeam emits a low grade laser beam. When the beam is interrupted by movement, a pre-set sound or sound effect is generated by the MIDI application. A switchbox with the EMS Soundbeam allows the operator to quickly adjust the length and width of the beam. A very short, narrow beam could be interrupted by only minimum movement, e.g., the movement of an eyelid, or finger. Students with only minimum voluntary movement could hence generate a sound or sound effect independently. A longer, wider beam could be set for students with a greater range of voluntary movement. Such students could dance from a wheelchair as they generated a sound or sound effect. Figure 4.2 shows use of the soundbeam.
The computer, hardware, and peripherals were housed on a custom built trolley (fashioned from an old wooden door) for ease of movement of the equipment from class to class as necessary. I used both peripherals in the unit of work.

4.3 Summary

Special education teachers recognize the capacity of all learners, particularly those with disabilities and impairments to participate and achieve...
valued educational outcomes. They have a deep understanding of child
development and apply that knowledge to the development requirements of
students with disabilities and impairments. Programs which are developed are
age appropriate making use of a broad range of learning environments taking into
account individual student needs and required outcomes. They make use of
extensive task/activity analysis and database decision making in teaching
techniques. Systematic instruction that may incorporate assistive information and
communication technologies is used to achieve generalization of learning.

The development, implementation and evaluation of the extended
curriculum policy framework provided the opportunity to encourage special
knowledge and modes of knowing in the participants; provide recognition of such
contributions; enhance the possibilities of attracting a greater number of daring,
experimental, and intellectually active people into curriculum discussion; imply
challenging decision-making processes and collaborative planning; provide a
basis for recognition of participants as possessed of special knowledge and
competence through a sense of intellectual community; and entail an
understanding of implied changes in culture, structure and processes that facilitate
effective proposed and actual changes, and pressure for change in public
curriculum policy framework and programs initiatives in special education sectors
(e.g., Fawns 1984; Johnson 1989a, 1989b).
CHAPTER 5
FIVE CASE STUDIES: EXPLORING, DESCRIBING, EXPLAINING AND PREDICTING PATTERNS OF MUSICAL THINKING

5.0 Case Study Method: Exploring, Describing, Explaining and Predicting Patterns of Musical Thinking Within Cases

This chapter continues to describe the beginning stage of a spiral of self-reflective cycles. This section assesses and reports patterns of musical thinking in relation to the extended profiles of musical achievement within the five individual student participants observed over the ten week research period using pattern matching logic, i.e., acting and observing the process and consequences of the change. Multiple types and sources of data described in Chapter 3 contributed to enhancing quality and credibility of exploring, describing, explaining and predicting patterns of musical thinking. Great care was taken when analyzing data, e.g., intent and meaning of particular physical movements, patterns of responses.
5.0.1 Case Study 1: Aaron

Aaron was aged 12 years and 9 months at the beginning of the 10-week research period. He had the physically disabling disorder Muscular Dystrophy, a progressive weakness of all muscles in the body attributed to a degeneration of muscle cells and their replacement by fat and fibrous tissue. He had the most common Duchenne-type Muscular Dystrophy. He was prescribed anti-convulsant medication that appeared to have very successfully controlled his history of petit-mal type epileptic seizures. Aaron lived with his mother. She had sole custody of Aaron and his siblings. His parents were of Italian origin. English was spoken in the home.

The onset of Muscular Dystrophy is usually observed in the preschool years. Early signs of the disorder include awkward and clumsy movements, poor posture, and tiptoeing. Muscle weakness develops from the feet upward to the legs, hips, abdomen, shoulders, and arms. Hands, neck, and face are affected later. In the Duchene-type Muscular Dystrophy, the course of the disorder becomes progressively worse. Most children are wheelchair bound by the age of ten. Death often occurs in the late teens usually from secondary complications such as heart failure and/or overwhelming lung infection. The condition is genetically coded, i.e., inheritance patterns can be demonstrated in family histories.

Aaron attended a local regular preschool program, then local primary school full-time for years Prep to 2. However, access to regular paramedical therapy support became a critical issue in the management of his good health. At the end of year 2, it was considered that the best option for Aaron was to attend his local primary school three days per week and this specialist school setting two days per week in order to access the on-site paramedical therapy support services during years 3 to 6. With the need for regular paramedical therapy support an even more critical issue in the management of good health as he approached his teen years, Aaron attended this specialist school setting full-time for his secondary education.
Concurrent with educational programs, Aaron attended an exercise program to maintain muscle strength and range of movement for functional activities, e.g., eating and wheelchair driving three times per week. The regular exercise program incorporated a bubble pep to assist in maintaining his chest clear of infection. Extra bubble peps were essential, perhaps four or five times during the school day if he unfortunately contracted a respiratory infection. The team continually monitored, assessed and carried out modifications to his wheelchair to accommodate periodic growth spurts. The team continually monitored, assessed and carried out modifications to his home, e.g., hoist, slatted wooden shower base, and commode chair for safe showering and toileting routines as required.

Aaron was described in end-of-year reports as a “…motivated member of the group … he asks lots of questions … he is interested in finding out answers … he has an inquiring mind … is always enthusiastic about themes and topics … very popular with peers to whom they look for answers and approval …”. Sadly, Aaron passed away at the Royal Children’s Hospital, a major paediatric teaching hospital setting in Melbourne, May 2000.

Creating, Making and Presenting Music: Exploring and Developing Musical Ideas. Aaron joined with others to explore and recreate concepts about sound effects to accompany song repertoire in response to the theme “The Human Body” developed by the multi disciplinary team in the Secondary mini-school section as the starting point for an integrated curriculum unit for the second ten-week (autumn) term of the academic year in which data for this study was collected.

Table 5.0.1a shows the levels of achievement in the Creating, Making and Presenting Music: Exploring and Developing Musical Ideas Substrand Organizer at which I believed Aaron was working across the ten-week research period.
Table 5.0.1a
Aaron: Levels of achievement in the *Creating, Making and Presenting Music: Exploring and Developing Musical Ideas* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploring and Developing Musical Ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.1 Demonstrate personal responses when creating and making music</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.1 Communicate personal responses when creating and making and presenting music in an <em>intentional</em> way</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>1.1 Draw upon play and imagination in creating and making music</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>2.1 Use experience and imagination in creating and making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>oo</td>
<td>oo</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
</tbody>
</table>

*Key to levels of achievement:* 0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established; oo = absent
Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes. On several visual images collected throughout the unit of work, Aaron was observed to be very keen to explore the techniques, equipment and processes of the information technology that can be used to perform and improvise with the sound effects to accompany song repertoire individually and with other class group members.

The objective for Aaron was to maintain current muscle strength, range of movement, movement coordination and muscle positioning. He very much used the fullest possible range of the techniques and processes available on the learning technology to achieve a desired effect. For example, “Can you make the beam go on my hands again like last week”, he said mid way through the research period. In the latter stages of the research period, Aaron chose to experiment with his feet. “… Aaron likes to explore and experiment ... and take charge (if allowed) ... he loves a new challenge ... was continually exploring options ... always keen to participate and create his sound …” commented Donna in her anecdotal notes.

There were many opportunities to practice singing. Aaron demonstrated the ability to very accurately pitch match with his natural voice when singing.

Aaron learned to recognize differences in the constituent elements of the sound effects, e.g., rhythmic and melodic patterns, repeated phrases, same and different phrases, steps and leaps, ascending and descending melodic phrases, higher and lower melodic phrases, contrasts in tempo and dynamics, legato and staccato sounds, presence/absence of accompanying sounds, identification of instruments.

Visual images capture Aaron entirely engrossed in the task of investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects. He identified common, readily available materials, i.e., cardboard and an assortment of texta colours. “I can draw a heart”, he interjected, in a lesson at the beginning of the research period. He drew shapes and lines. He demonstrated very good fine motor skill. We all watched and showed interest as Aaron began to draw the outline of a heart shape in the middle of the card with a thick black texta colour. He was most concerned that the colour
fill was done very carefully. “Careful, don't go outside of the lines”, said Aaron (to Carol). For Aaron, the scribble of Beverley and Dennis on this visual symbol began to suggest intent and meaning. He related the scribble to his own experience and knowledge of the use of a heart monitor. “I could draw some of those patterns on a heart monitor”, he said. He took a black texta colour from the table. Aaron drew a regular \_\_\_\_/\_\_/\_\_/\_\_/\_\_/\ pattern from the centre left hand side of the card into the left of the filled in heart shape. “This person is alive and well”, he announced. He continued by drawing a straight line \___________\ pattern from the right of the filled in heart shape to the centre right hand side of the card. “This person had died”, he said.

Aaron was also very keen to begin drawing in a lesson mid way through the research period. “Can I start?”, he said. He began to draw an outline of a plastic milk bottle with a thick black texta colour in the middle of the card. Not a word. Barely a muscle movement. Everyone watched and showed a great deal of interest. He continued. He drew a horizontal water line within the bottle shape. He drew the outline of a few bubbles above the water line. He drew a straw from the neck of the bottle. “Carol, you colour it in. But, keep in the lines”, he said insistently. “… Aaron used his general knowledge to be very creative ... contributed greatly to the composing of the visual symbol from drawing upon his experience …” commented Donna in her anecdotal notes. Visual images capture Aaron’s very proud facial expression in response in his contribution, as the group completed the task of creating and making these visual symbols. He was apparently very pleased with the results. He demonstrated efforts to fully capture a one-to-one-correspondence between the sound effect and a symbolic representation of the sound effect.

Table 5.0.1b shows the levels of achievement in the Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes Substrand Organizer at which I believed Aaron was working across the ten-week research period.
<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Using Music Skills, Techniques and Processes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A.2</strong> Demonstrate personal responses to the basic</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>elements of sound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B.2</strong> Communicate personal responses to the basic</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>elements of sound in an <em>intentional way</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1.2</strong> Use the basic elements of sound and explore</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>them in making music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.2</strong> Make choices about sounds and organize</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>oo</td>
<td>oo</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>them in expressive ways</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established  oo = absent
Creating, Making and Presenting Music: Presenting Music. Visual images show that Aaron seemed to have very much enjoyed performing improvisations individually with the sounds effects for the class. Aaron created, made and presented improvisations with other class group members. He was always concerned that the person with whom he played also had equal opportunity for success. For example, in the beginning stages in the research period I wanted the students to perform improvisations with the sound effects with another class member whilst we sang the song. I asked Aaron and Carol to have a turn together. Whilst Carol improvised patterns of the sound effect parallel to a partner, cooperation and interaction appeared to be rare. For Aaron, these were probably very challenging conditions under which to cooperate and interact. Visual images of this vignette in the lesson show Aaron interjecting with sound effects with a very determined, yet patient facial expression. He was observed to have very much enjoyed performing an improvisation with the sound effects to a very attentive audience of visitors to the classroom in a lesson in the latter stages of the research period. “… Aaron related previous lessons to the visitors …” commented Donna in her anecdotal notes. Aaron identified different ways in which people express friendship, love and respect. He recognized and learned to value similarities and differences between himself and others and to respect the rights, feelings and efforts of others.

Aaron appeared to have thoroughly enjoyed being engaged in the process of composition, e.g., opportunity to make choices about the use of music elements for the song repertoire including generating a melody (going up, going down, steps, leaps), same/different phrases, getting faster, style and mood. He suggested lyrics for the song repertoire. Aaron learned the call-and-response form of the song repertoire by rote and performed them from memory. I included many opportunities to practice the song repertoire in every lesson. He was engaged in recreating these songs, i.e., learning how to use the voice, accurate recall and performance of the rhythmic and melodic patterns. With the many opportunities to practice, he quickly learned to accurately recall and perform the rhythmic and melodic patterns. Visual images early in the research period show that, at least initially, he did not entirely and accurately recall and perform the rhythmic and melodic patterns. However, it was not very long at all before he very confidently
and very accurately recalled and performed rhythmic and melodic patterns. “... imitated the song perfectly ...” commented Donna in her anecdotal notes.

For a little interest and challenge for Aaron in the early stages of the research period, I asked him to lead the song rather than follow my lead. “… Aaron was always trying to lead …” commented Martin in his anecdotal diary notes. Visual images of the lesson show a very broad smile in response to the opportunity to lead the song. He was apparently very pleased to be given the opportunity to lead the song. Although very slow and cautious at first, he was able to accurately recall and perform the rhythmic and melodic patterns in the song repertoire. “... accurately reproduced the rhythm and melody of the song as song leader ...” commented Donna in her anecdotal notes. Visual images of lessons in mid-way through the research period show that Aaron quickly learned to accurately recall and perform the similar rhythmic and melodic patterns in the new song. In the latter stages of the research period, he was able to recall and perform the differences in the rhythmic and melodic patterns between the two songs.

Aaron took part in, contributed to, and indeed assumed much responsibility for many activities throughout the research period. He had contributed important ideas when planning and presenting a performance for an annual combined regions Specialist Schools Music Festival.

I presented Aaron with an audio cassette of improvisations he had created, made and presented during the unit of work recorded directly from the MIDI files during this unit of work at the beginning of the next term. He seemed very pleased.

Table 5.0.1c indicates the levels of achievement in the Creating, Making and Presenting Music: Presenting Music Substrand Organizer at which I believed Aaron was working across the ten-week research period.
## Table 5.0.1c
Aaron: Levels of achievement in the *Creating, Making and Presenting Music: Presenting Music* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting Music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.3 Demonstrate personal responses to music making with others</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.3 Communicate personal responses to music making with others in an <em>intentional</em> way</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>1.3 Share music making with others</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>2.3 Present musical works for a familiar audience</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>oo</td>
<td>oo</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established; oo = absent.
Music Criticism and Aesthetics. Aaron made and listened to different pitches, duration, dynamics and other expressive qualities of the sound effects. He listened to and talked about obvious changes in the sound effects. He developed an awareness of the patterns and structures in the constituent elements of the sound effects.

Printout of the score from the MIDI file that was created for him from the lesson of that week seemed to demonstrate an intentional rhythmic pattern in the improvisation with the sound effect that very much featured fast, i.e., lots of semiquavers.

The last lesson of the research period gave students an opportunity to reflect on what they had learned in the unit of work for the term in a more informal, relaxed climate as we concurrently worked together as a group to create a collage of the unit of work. “What sound did you like the best?”, I asked of them. “I liked the bubbles ... they sounded good”, replied Aaron. “What song did you like the best?”, I asked. “I liked the song about the bubbles ... it was easier to sing”, replied Aaron. “What part of the body did you like making the sounds on the soundbeam best?”, I asked. “My hands ... it was easier”, replied Aaron. “Did you like being song leader?”, I asked. “It was OK ... I was a bit embarrassed”, replied Aaron. “Did you like drawing the compics (visual symbols)?”, I asked. “Yes, the artwork was fun”, replied Aaron. “Do you think Eric enjoyed making the sounds and listening to the songs?”, I asked. “Yes, he laughed and smiled a lot”, replied Aaron. “… (Aaron) is clear about what he likes, and dislikes ... made his intentions and meanings clearly known both verbally and with gestures …” commented Donna in her anecdotal notes.

Table 5.0.1d indicates the levels of achievement in the Music Criticism and Aesthetics Substrand Organizer at which I believed Aaron was working across the ten-week research period.
### Table 5.0.1d
Aaron: Levels of achievement in the *Music Criticism and Aesthetics* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Music Criticism and Aesthetics</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.4 Demonstrate personal responses to music</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.4 Communicate personal responses to music in an <em>intentional</em> way</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>1.4 Respond to music in a personal way</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>2.4 Respond to music, giving reasons for preferences</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>oo</td>
<td>oo</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established
- oo = absent
Past and Present Contexts of Music. Aaron appeared to identify sources of sound in own daily life. He immediately related the sound effects that were a feature of the unit of work to his very own world of events, e.g., “Isn't that like what the doctor hears”, he said in a lesson at the beginning of the research period. He was particularly engaged when I introduced the use of the stethoscope to hear a heartbeat. “What the doctor uses”, he said. He drew attention to the group the fact that he knew that a heartbeat (pulse) could also be felt in the wrist and in the neck in a lesson mid way through the research period. He went on to suggest a breathing sound to work on in the unit of work. Visual images of the very end of this particular lesson capture a very proud facial expression on Aaron's face when I suggested that his idea was to be included later in the unit of work as he exited the class for lunch.

Initially, Aaron seemed to be very confused and not at all sure about the second sound effect. Visual images mid way through the research period show that he frowned a great deal at this stage of the lesson. His initial response was that he thought it was the sound of the gastric juices of the stomach. After some verbal prompting, he was far more convinced that the second 'mystery sound' was indeed bubbles. “Oh yeah ... um ... yeah ... it is bubbles ... um ... like I do when I go to physio”, he said. “… (Aaron) felt positive that one of his ideas was being followed through ... displayed a great deal of interest in the topics ... communicated to the class the bubble pep procedure in physiotherapy ... demonstrated a good understanding of why he had to do in that program ... keen to answer questions as best as he could ... recalled a lot of information from the previous lesson …” commented Donna in her anecdotal notes.

Table 5.0.1e indicates the levels of achievement in the Past and Present Contexts of Music Substrand Organizer at which I believed Aaron was working across the ten-week music program.
Table 5.0.1e
Aaron: Levels of achievement in the Past and Present Contexts of Music Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Past and Present Contexts of Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.5 Demonstrate personal responses to music in everyday life</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.5 Communicate personal responses to music in everyday life in an <em>intentional</em> way</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>1.5 Show an awareness of music in everyday life</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>oo</td>
<td>oo</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>2.5 Discuss the ways music is made and used for a range of purposes</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>oo</td>
<td>oo</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
</tbody>
</table>

Key to levels of achievement: 0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established oo = absent
**Summary.** Table 5.0.1f compares the levels of achievement in the substrand organizers at which I believed Aaron was working at the *beginning* (b) and *end* (e) of the research period.

**Table 5.0.1f**

Aaron: Levels of achievement in each of the relevant learning outcomes at the *beginning* (b) and *end* (e) of the research period

<table>
<thead>
<tr>
<th>DISCIPLINE: Music</th>
<th>STUDENT: AARON</th>
<th>LEVELS OF ACHIEVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0  1  2  3</td>
</tr>
</tbody>
</table>

**Substrand Organizer: Creating, Making and Presenting Music**

**Exploring and Developing Musical Ideas**

- **A.1** Demonstrate personal responses when creating and making music
  - b e

- **B.1** Communicate personal responses when creating and making and presenting music in an *intentional* way
  - b e

- **1.1** Draw upon play and imagination in creating and making music
  - b e

- **2.1** Use experience and imagination in creating and making music
  - b e

**Key to levels of achievement:**

- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established

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Table 5.0.1f (cont)
Substrand Organizer: Creating, Making and Presenting Music

Using Music Skills, Techniques and Processes

A.2 Demonstrate personal responses to the basic elements of sound

B.2 Communicate personal responses to the basic elements of sound in an intentional way

1.2 Use the basic elements of sound and explore them in making music

2.2 Make choices about sounds and organize them in expressive ways

Substrand Organizer: Creating, Making and Presenting Music

Presenting Music

A.3 Demonstrate personal responses to music making with others

B.3 Communicate personal responses to music making with others in an intentional way

1.3 Share music making with others

2.3 Present musical works for a familiar audience

Substrand Organizer: Music Criticism and Aesthetics

A.4 Demonstrate personal responses to music

B.4 Communicate personal responses to music in an intentional way

1.4 Respond to music in a personal way

2.4 Respond to music, giving reasons for preferences

Key to levels of achievement:

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

Table 5.0.1f (cont)
Substrand Organizer: Past and Present
Contexts of Music

A.5 Demonstrate personal responses to music in everyday life

B.5 Communicate personal responses to music in everyday life in an intentional way

1.5 Show an awareness of music in everyday life

2.5 Discuss the ways music is made and used for a range of purposes

Key to levels of achievement:
0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

The learning outcomes corresponding to the first two levels, i.e., A.1, A.2, A.3, A.4, A.5, B.1, B.2, B.3, B.4 and B.5 became entirely redundant for Aaron. He very quickly seemed to demonstrate a well established level of achievement at these first two levels. Aaron appeared to demonstrate a consolidated level of achievement in learning outcomes corresponding to the third level, i.e., 1.1, 1.2, 1.3, 1.4 and 1.5 at the beginning stages of the research period.

He demonstrated a very keen interest in experimenting with the sound effects to accompany song repertoire. Aaron was observed to be very keen to explore and recreate techniques, equipment and processes of the learning technology. It was good to observe that the peripherals on the learning technology appeared to greatly assist Aaron overcome the severe psychomotor difficulties that he experienced. Aaron learned to recognize differences in the constituent elements of the sound effects. Aaron appeared to thoroughly enjoy being engaged in the composition of the song repertoire. Visual images capture Aaron entirely engrossed in the task of investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects with common, readily available materials. Because of the group nature of music teaching, activities promoted opportunities to learn about friendship and the skills of listening, sharing, helping, negotiating and caring. However, at least in the beginning stages of the research period, efforts seemed to be hesitant, cautious and unsure.
Aaron made and listened to different pitches, duration, dynamics and other expressive qualities of the sound effects. He listened to and talked about obvious changes in the sound effects. He developed an awareness of the patterns and structures in the constituent elements of the sound effects. He developed communication and language associated with psychomotor activity. Aaron talked about the song repertoire and the musical activities enjoyed. Aaron identified sources of sound in own daily life. However, efforts also seemed to be hesitant, cautious and unsure in the beginning stages of the research period.

With many opportunities to practice skills, Aaron appeared to demonstrate established levels of achievement in learning outcomes corresponding to the third level, i.e., 1.1, 1.2, 1.3, 1.4 and 1.5 by mid way through the research period. Efforts seemed to be entirely more sure, certain, positive, convincing, confident and persuasive.

Aaron was absent due to illness for the lessons of week 6 and week 7. Would he demonstrate that he had maintained levels of achievement when he returned from his two weeks’ absence? Would he lose some of the skills? Remarkably, he seemed to continue to demonstrate established levels of achievement in the learning outcome corresponding to the third level, i.e., 1.1, 1.2, 1.3, 1.4 and 1.5, his health very much improved.

A practice evacuation drill was conducted throughout the entire school setting during the period of the lesson in week 9 of the research period. The evacuation took approximately forty minutes of that lesson period. In practical terms, genuine opportunity for music teaching and learning was not available. Indeed, collection of data about achievement in relation to learning outcomes for the lesson may not have been truly trustworthy, credible, confirmable or dependable.

In the beginning stages of the research period, it was not apparent that he had achieved at the fourth level, i.e., 2.1, 2.2, 2.3, 2.4 and 2.5. However, he did seem to begin to demonstrate emerging levels of achievement in these learning outcomes in the latter stages of the research period. Aaron seemed to demonstrate an emerging ability to use experience and imagination in creating and making
music; in make choices about sounds and organizing them in expressive ways; to present musical works for a familiar audience; to respond to music, giving reasons for preferences; and to discuss the ways music is made and used for a range of purposes.
5.0.2 Case Study 2: Beverley

Beverley, aged 14 years and 8 months at the beginning of the 10-week research period, was born eight weeks premature. Urgent caesarean section surgery had to be performed as a result of infection in the mother. Failure to thrive was observed in infancy. Cerebral Palsy (spastic quadriplegia type – the muscles of all four limbs are tight and contract strongly when one attempts to stretch or move suddenly) was confirmed at seven months. She was also reported to have a visual impairment (Strabismus Brachiocephaly), as a result of which she had difficulty maintaining fixation on an object or person and scanning and tracking an object or person. Yet, Beverley demonstrated that she recognized objects or people even from her brief fixations. She was observed to rely on sound. Her father was of Italian origin. English was spoken in the home.

Cerebral Palsy is a non-progressive disorder of movement and posture that is caused by damage to motor areas of the brain. Approximately 85%-90% of such brain damage occurs during pregnancy or the birth process. In the spastic-type Cerebral Palsy, several important muscle reflexes are disturbed, leading to abnormal movement patterns and posture. At rest, Beverley often rested her head at 90 degrees to her spine. As she attempts to talk, she often holds her head stiffly upright against the head rest on her wheelchair, turned 90 degrees to the left; her arms often extended, apparently involuntarily. As the child grows older, the contracted muscles become shorter, and deformities of the limbs, pelvis, and spine can occur.

Beverley sometimes complained of cramp in her legs. This could often be relieved by releasing her feet from constraint in a velcro strap attached to a taddy bolted to the footplate of her wheelchair for a period allowing her to stretch the legs. She also often complained of pain in her hip. In consultation with the family and therapy team, she was offered the option of major surgery to correct the deformity of the hip. At the time of writing, this option had not been exercised.
Almost all cerebral palsied children have multiple disabilities. Approximately 50% to 60% have an intellectual disability. About the same percentage have a visual impairment. Between 5% and 8% have a hearing impairment. Approximately one-third have epileptic seizures. Most of these children need some form of speech therapy. Learning disabilities are also very common, often accentuated by hyperactivity, distractibility, lack of concentration and poor attention span.

Beverley attended a preschool program at the Child Development Centre (more commonly known as “Uncle Bob’s”) within the Royal Children’s Hospital in Melbourne for two full days and two half days per week, a Specialist Early Intervention Group for two half days per week for a Conductive Education program and a local kindergarten session for one half day per week.

Beverley was enrolled at and attended this specialist school setting full-time for the first four years of her primary schooling. For the next three years of her primary schooling, she was enrolled as an integration student at and attended a local primary school setting for one day, then two days per week, with the view to broadening social opportunities. She remained enrolled at and attended this specialist school setting four days, then three days per week respectively.

After completing year 6 in a composite year 5/6 grade at her local state primary school setting, Beverley apparently made it abundantly clear that she wanted to return full-time to this specialist school setting rather than enrol and attend her local regular secondary school setting. She returned full-time to this specialist school setting. Beverley apparently very much considered this specialist school setting as “… her school …”.

Beverley was described in end-of-year reports as “… a very helpful member of the class … especially with new students … a very reliable class monitor … a great dancer in her wheelchair … a keen participant in class discussions …”. My understanding is that Beverley is currently well settled into a local post school program for young adults with disabilities and impairments.
Creating, Making and Presenting Music: Exploring and Developing Musical Ideas. Beverley joined in with others to experiment with concepts about sound effects to accompany song repertoire in response to the theme “The Human Body” developed by the multi disciplinary team in the Secondary mini-school section as the starting point for an integrated curriculum unit for the second ten-week (autumn) term of the academic year in which data for this study was collected.

Table 5.0.2a shows the levels of achievement in the Creating, Making and Presenting Music: Exploring and Developing Musical Ideas Substrand Organizer at which I believed Beverley was working across the ten-week research period.
<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploring and Developing Musical Ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.1 Demonstrate personal responses when creating and making music</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.1 Communicate personal responses when creating and making and presenting music in an intentional way</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>1.1 Draw upon play and imagination in creating and making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>2.1 Use experience and imagination in creating and making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**
- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established
- oo = absent
Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes. Visual images collected throughout the unit of work show Beverley very keen to explore the techniques, equipment and processes of the information technology that can be used to perform and improvise with the sound effects to accompany song repertoire individually and with other class group members.

She used her left arm very successfully to perform and improvise patterns with the sound effect with the soundbeam peripheral early in the research period. Mid-way through the research period, Beverley decided that she would like to produce patterns with the sound effect with her leg. In the next lesson, she again decided to perform and improvise patterns with the sound effect with her arm. Her leg “… was too hard …”. However, I also noted in the research text that she appeared to have difficulties whilst attempting to perform and improvise with the jelly bean switch mid-way through the research period. She demonstrated an emerging ability to make informed decisions about the use of appropriate techniques and processes available on the learning technology as she improvised, created, and composed with, and listened to, patterns of those sound effects. In the latter stages of the research period, Donna noted that Beverley “… chose to use her arm [to activate the sound effects with the soundbeam] … far more successfully than previously …”.

There were many opportunities to practice singing in every lesson. Beverley demonstrated an emerging ability to pitch match with her natural voice when singing. Some variation in pitch, volume, stress, and quality was observed. Students were engaged in pitch matching exercises on vowel tones mid-way through the research period. The research text noted that, even on her first attempt, Beverley very accurately matched the vowel tone, but not the pitch. Her pitch was held constant, rather than with a vibrato quality. The volume was strong. I repeated the exercise on the same vowel. This time, however, I matched the pitch of Beverley's previous attempt. This time, Beverley matched the vowel tone and the pitch very accurately. I repeated the exercise, but this time, change the pitch. Beverley did not accurately match my pitch, but her pitch was held constant. The volume was strong.
I repeated the exercise, but this time changed the vowel tone. Beverley successfully imitated the change of vowel tone, but did not accurately match my pitch. Yet, her pitch was held constant, the volume was strong. I repeated the exercise. Beverley again successfully imitated the change of vowel tone, but did not accurately match my pitch. Again, her pitch was held constant, the volume was strong. I repeated the exercise. This time, however, I matched the pitch of Beverley's previous attempt. This time, Beverley matched the vowel tone and the pitch very accurately.

The research text of the lesson in the following week noted that Beverley immediately matched the given vowel tone and pitch very accurately. I repeated the exercise. Beverley again matched the given vowel tone and pitch very accurately. I repeated the exercise, but this time changed the pitch. Beverley successfully matched the given vowel tone and the change in pitch. Her pitch was held constant, the volume was strong.

I repeated the exercise, but this time changed the vowel tone. Beverley successfully matched the change of vowel tone and the given in pitch. I repeated the exercise, but this time changed the pitch. She successfully matched my change of pitch. I repeated the exercise, but this time changed the pitch again. She again successfully matched my change of pitch. Her pitch was held constant, the volume was strong.

Beverley communicated responses to differences in the constituent elements of the sound effects, e.g., rhythmic and melodic patterns, repeated phrases, same and different phrases, steps and leaps, ascending and descending melodic phrases, higher and lower melodic phrases, contrasts in tempo and dynamics, legato and staccato sounds, presence/absence of accompanying sounds, identification of instruments.

Visual images capture Beverley entirely engrossed in the task of investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects. She identified common, readily available materials, i.e., cardboard and an assortment of texta colours. “What do you think we could draw that will help us to remember our mystery sound”, I asked at the early stages
of the research period. “A heart”, quickly replied Beverley. She did not demonstrate the fine motor skills to actually draw the outline, but seemed very happy to leave Aaron to do that part of the task. We all watched and showed interest as he began to draw the outline of a heart shape in the middle of the card with a thick black texta colour. Then Carol chose a thick red texta colour and proceeded to fill the outline of the heart shape with great care. Dennis then had a turn. “What about a turn for you, Beverley”, I said. I placed the tin of assorted texta colours within her reach. She giggled. She chose a bright green texta colour. I took the lid from the texta colour. She took the texta colour from me, and held it very firmly with a palmer grasp (object held with fingers and adducted thumb) in her left hand and drew scribbles over the filled in heart shape.

Mid-way through the research period, Aaron was very keen to begin drawing. “Can I start?” he said. Aaron began to draw an outline of a plastic milk bottle with a thick black texta colour in the middle of the card. Not a word. Barely a muscle movement. Everyone watched and showed a great deal of interest. He continued. He drew a horizontal water line within the bottle shape. He drew the outline of a few bubbles above the water line. He drew a straw from the neck of the bottle. Carol then chose a thick brown texta colour, and proceeded to fill the outline of the bottle shape very carefully. “My turn”, interjected Beverley in a loud voice. Her left arm was fully extended, waving high in the air. I placed the assortment of texta colours within her reach. She slowly began to relax the extension in her arm. She chose a bright orange texta colour. I took the lid from the texta colour. She took the texta colour from me, and held it very firmly with a palmer grasp (object held with fingers and adducted thumb) in her left hand. Wendy assisted by holding the card steady on the table surface. She turned her head away, apparently not able to maintain a fixation on the drawing. She drew scribbles over the filled in bottle shape.

Table 5.0.2b shows the levels of achievement in the Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes Substrand Organizer at which I believed Beverley was working across the ten-week research period.
Table 5.0.2b
Beverley: Levels of achievement in the *Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Using Music Skills, Techniques and Processes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.2 Demonstrate personal responses to the basic elements of sound</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.2 Communicate personal responses to the basic elements of sound in an <em>intentional</em> way</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>1.2 Use the basic elements of sound and explore them in making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>2.2 Make choices about sounds and organize them in expressive ways</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established  oo = absent
Creating, Making and Presenting Music: Presenting Music. Beverley seemed to have very much enjoyed presenting improvisations individually with the sounds effects for the class. She presented improvisations with other class members especially to a very attentive audience of visitors to the classroom in the latter stages of the research period.

Beverley appeared to have thoroughly enjoyed being engaged in the process of composition, e.g., opportunity to make choices about the use of music elements for the song repertoire including generating a melody (going up, going down, steps, leaps), same/different phrases, getting faster, style and mood. She suggested lyrics for the song repertoire.

Visual images taken in the beginning stages of the research period showed that she quickly learned the simple call-and-response form in the song repertoire. She imitated and repeated the majority of the rhythmic and melodic patterns. For a little interest and challenge mid-way through the research period, I gave Beverley the opportunity to lead the song, rather than follow my lead. Visual images showed that she performed the majority of the rhythmic and melodic patterns. However, she skipped from the first to the third line of the song. In the latter stages of the research period, I gave Beverley another opportunity to lead the song rather than follow my lead. Visual images showed that she performed the rhythmic and melodic patterns in the song very accurately.

She had apparently thoroughly enjoyed joining in the process of planning and presenting performances for a particular audience or purpose, e.g., planning and presenting a performance for an annual combined regions Specialist Schools Music Festival.

I presented Beverley with an audio cassette of improvisations she had created, made and presented during the unit of work recorded directly from the MIDI files during this unit of work at the beginning of the next term. She seemed very pleased.
Table 5.0.2c indicates the levels of achievement in the Creating, Making and Presenting Music Substrand Organizer at which I believed Beverley was working across the ten-week research period.
<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting Music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.3 Demonstrate personal responses to music making with others</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.3 Communicate personal responses to music making with others in an <em>intentional</em> way</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<td>3</td>
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<tr>
<td>1.3 Share music making with others</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>2.3 Present musical works for a familiar audience</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established  oo = absent
Music Criticism and Aesthetics. Beverley made excellent efforts to imitate and repeat different pitches, duration, dynamics and other expressive qualities of the sound effects. She experimented with obvious changes in the sound effects. She made excellent efforts to match patterns and structures in the constituent elements of the sound effects.

Printout of the score from the MIDI file that was created from the lesson of that week seemed to demonstrate an intentional rhythmic pattern in the improvisation with the sound effect that very much featured fast, i.e., lots of semiquavers.

The last lesson of the research period gave students an opportunity to reflect on what they had learned in the unit of work for the term in a more informal, relaxed climate as we concurrently worked together as a group to create a collage of the unit of work. “What sound did you like the best?”, I asked of them. “I liked the bubbles ... they sounded good”, replied Aaron. “I agree”, replied Beverley. “What song did you like the best?”, I asked. “I liked the song about the bubbles ... it was easier to sing”, replied Aaron. “I agree”, replied Beverley. “What part of the body did you like making the sounds on the soundbeam best?”, I asked. “I preferred my arm”, replied Beverley. “Did you like being song leader?”, I asked. “It was alright”, replied Beverley. “Did you like drawing the compics (visual symbols)?”, I asked. “Yes, the artwork was fun”, replied Aaron. “I agree”, replied Beverley. “Do you think Eric enjoyed making the sounds and listening to the songs?”, I asked. “Yes, he laughed and smiled a lot”, replied Aaron. “I agree”, replied Beverley. I had a sense that Beverley simply echoed Aaron’s responses.

Table 5.0.2d indicates the levels of achievement in the learning outcomes in the Music Criticism and Aesthetics Substrand Organizer at which I believed Beverley was working across the ten-week research period.
Table 5.0.2d
Beverley: Levels of achievement in the *Music Criticism and Aesthetics* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Music Criticism and Aesthetics</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.4 Demonstrate personal responses to music</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.4 Communicate personal responses to music in an <em>intentional</em> way</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>1.4 Respond to music in a personal way</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>2.4 Respond to music, giving reasons for preferences</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

Key to levels of achievement:  
0 = not apparent;  
1 = emerging;  
2 = consolidating;  
3 = established  
oo = absent
Past and Present Contexts of Music. For Beverley, the relationship between the sound effects and her very own world of events appeared to be just emerging. Visual images throughout the research period capture her with a very alert facial expression. She demonstrated a very keen interest in the sound effects, but could not immediately identify the source of the sound. “I think it sounds like a drum”. Visual images mid way through the research period also capture her with a very alert facial expression. I noted in the anecdotal observations that she demonstrated a very keen interest in the use of the stethoscope and a very keen interest in finding her pulse in the wrist and in the neck. At times, Beverley seemed to simply echo Aaron’s response, e.g., “It's the stomach”.

Mid way through the research period, she was able to respond with a great deal more confidence, i.e., the weeks in which Aaron was absent due to illness. For example, I had replacement teacher Yvonne with me as helper in place of teacher assistant Donna. “First, we have to tell Yvonne a little bit about what we have been doing in music this term. Tell her what we have been talking about in our classrooms”, I began the lesson. “The Human Body”, Beverley quickly replied. I continued. “Good. Now, we have been making secret sounds about the human body. Tell Yvonne what secret sound we have been making for the past few weeks”. “Bubbles”, interjected Carol. “Good”, I said. “Can you tell Yvonne what part of the body helps us to make bubbles?”, I continued. “Lungs”, Beverley quickly replied. I noted in the anecdotal observations that she also began to lead a discussion on the subject of sleep apnea at one stage of the lesson, but when I pursued the discussion a little further, she did not appear to truly understand the concept.

Table 5.0.2e indicates the levels of achievement in the Past and Present Contexts of Music Substrand Organizer at which I believed Beverley was working across the ten-week music program.
Table 5.0.2e
Beverley: Levels of achievement in the *Past and Present Contexts* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand organizer: Past and Present Contexts</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.5 Demonstrate personal responses to music in everyday life</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.5 Communicate personal responses to music in everyday life in an <em>intentional</em> way</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>1.5 Show an awareness of music in everyday life</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>2.5 Discuss the ways music is made and used for a range of purposes</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**
0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established oo = absent
Summary. Table 5.0.2f compares the levels of achievement in the substrand organizers at which I believed Beverley was working at the beginning (b) and end (e) of the research period.

Table 5.0.2f

Beverley: Levels of achievement in each of the relevant learning outcomes at the beginning (b) and end (e) of the research period

<table>
<thead>
<tr>
<th>DISCIPLINE: Music</th>
<th>LEVELS OF ACHIEVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENT: BEVERLEY</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Substrand Organizer: Creating, Making and Presenting Music</td>
<td></td>
</tr>
<tr>
<td>Exploring and Developing Musical Ideas</td>
<td></td>
</tr>
<tr>
<td>A.1</td>
<td>Demonstrate personal responses when creating and making music</td>
</tr>
<tr>
<td>B.1</td>
<td>Communicate personal responses when creating and making and presenting music in an intentional way</td>
</tr>
<tr>
<td>1.1</td>
<td>Draw upon play and imagination in creating and making music</td>
</tr>
<tr>
<td>2.1</td>
<td>Use experience and imagination in creating and making music</td>
</tr>
</tbody>
</table>

Key to levels of achievement:

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

Table 5.0.2f (cont)
Substrand Organizer: Creating, Making and Presenting Music

Using Music Skills, Techniques and Processes

A.2  Demonstrate personal responses to the basic elements of sound  b e

B.2  Communicate personal responses to the basic elements of sound in an intentional way  b e

1.2  Use the basic elements of sound and explore them in making music  b e

2.2  Make choices about sounds and organize them in expressive ways  b e

Substrand Organizer: Creating, Making and Presenting Music

Presenting Music

A.3  Demonstrate personal responses to music making with others  b e

B.3  Communicate personal responses to music making with others in an intentional way  b e

1.3  Share music making with others  b e

2.3  Present musical works for a familiar audience  b e

Substrand Organizer: Music Criticism and Aesthetics

A.4  Demonstrate personal responses to music  b e

B.4  Communicate personal responses to music in an intentional way  b e

1.4  Respond to music in a personal way  b e

2.4  Respond to music, giving reasons for preferences  b e

Key to levels of achievement:

0 = not apparent;  1 = emerging;  2 = consolidating;  3 = established

Table 5.0.2f (cont)
Substrand Organizer: Past and Present

Contexts of Music

A.5 Demonstrate personal responses to music in everyday life

B.5 Communicate personal responses to music in everyday life in an intentional way

1.5 Show an awareness of music in everyday life

2.5 Discuss the ways music is made and used for a range of purposes

Key to levels of achievement:

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

The learning outcomes corresponding to the first level, i.e., A.1, A.2, A.3, A.4 and A.5 became entirely redundant for Beverley. She very quickly seemed to demonstrate a well established level of achievement at this level. Beverley appeared to demonstrate a consolidated level of achievement in learning outcomes corresponding to the second level, i.e., B.1, B.2, B.3, B.4 and B.5 at the beginning stages of the research period.

She demonstrated a very keen interest in the sound effects to accompany song repertoire. Beverley was observed to be very keen to explore and recreate techniques, equipment and processes of the learning technology. It was good to observe that the peripherals on the learning technology, in particular the soundbeam, appeared to greatly assist Beverley overcome the severe psychomotor difficulties that she experienced. She made excellent efforts to pitch match when singing. She made excellent efforts to recognize differences in the constituent elements of the sound effects. She made excellent efforts to be engaged in the composition of the song repertoire. Visual images capture Beverley entirely engrossed in the task of investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects with common, readily available materials. However, given her severe psychomotor difficulties, great care had to be taken when attempting to extract coherent conclusions about musical perception from observation of Beverley’s attempts to reproduce elements of music using graphic visual symbols. Because of the group nature of music teaching, activities promoted opportunities to learn about sharing and exchanging, and taking turns. She was a friendly, willing, cooperative and
positive class group member. However, at least in the beginning stages of the research period, efforts seemed to be hesitant, cautious and unsure.

Beverley made excellent efforts to match different pitches, duration, dynamics and other expressive qualities of the sound effects. She recognized obvious changes in the sound effects. She imitated and repeated the patterns and structures in the constituent elements of the sound effects. She developed communication and language associated with psychomotor activity. She joined in discussion about the song repertoire and the musical activities enjoyed. Beverley explored sources of sound in own daily life. However, efforts also seemed to be hesitant, cautious and unsure in the beginning stages of the research period.

A practice evacuation drill was conducted throughout the entire school setting during the period of the lesson in week 9 of the research period. The evacuation took approximately forty minutes of that lesson period. In practical terms, genuine opportunity for music teaching and learning was not available. Indeed, collection of data about achievement in relation to learning outcomes for the lesson may not have been truly trustworthy, credible, confirmable or dependable.

In the beginning stages of the research period, it was not apparent that she had achieved at the third level, i.e., 1.1, 1.2, 1.3, 1.4 and 1.5. However, she did seem to begin to demonstrate an emerging level of achievement in learning outcomes at this level in the latter stages of the research period. Beverley seemed to demonstrate ever increasing ability to draw upon play and imagination in creating and making music; to draw the basic elements of sound and explore them in making music; share music making with others; to respond to music in a personal way; and to show an awareness of music in everyday life. The learning outcomes corresponding to the fourth level, i.e., 2.1, 2.2, 2.3, 2.4 and 2.5 became entirely redundant. It was not apparent that she demonstrated achievement at this level during the ten-week research period.
Carol, aged 12 years and 7 months at the beginning of the 10-week research period, had Cockayne's Syndrome, a rare chromosomal disorder (autosomal recessive). Carol, the youngest of three children, lives with her mother. Her parents, of Lebanese origin, were separated. Arabic was spoken in the home. She had an older brother (middle sibling in the family) also with the same rare chromosomal disorder. The eldest (male) sibling of this family was unaffected. The English physician E. A. Cockayne (1880-1956) apparently reported this disorder in siblings in 1946. Subsequently, more than 16 other cases have been documented. Males are equally prone to the syndrome as females.

Growth and development appear to proceed at a normal rate in early infancy. It is not until two to four years of age that features of this disorder become clearly evident. Dwarfism (short trunk; disproportionately long limbs, deformed joints; large hands and feet); a premature senile appearance; cerebral atrophy with progressive intellectual deterioration; progressive upper motor neuron dysfunction with associated unsteady gait and tremor, wheelchair bound, bed bound; photosensitivity of the skin with associated variegated skin pigmentation and scarring; progressive hearing loss; optic atrophy (blindness is a real possibility); and decalcification of the teeth are all typical features of this disorder. Many pass away in early childhood, but late teens and early twenties can be reached. The disorder becomes profound, and full-time care is needed.

Carol was initially diagnosed with Cerebral Palsy. It appeared that diagnosis of the chromosomal disorder was not confirmed until she was nearly eight years of age when a skin biopsy was taken from her, cultured, and sent to Erasmus University in Rotterdam for a range of specialized genetic tests. Medical records in the school records included detail of the range of genetic testing done on the skin biopsy and various referrals made by the Victorian Clinical Genetics Services at the Royal Children’s Hospital in Melbourne to a consultant dermatologist, a neurologist, and a clear recommendation to consult a dentist very regularly. One medical report comments that “… both of the children … have been assigned the more common group B form of the disorder … and demonstrate … only slow progress of their disorder … which is pleasing …”.

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An extensive Occupational Therapy assessment conducted in term 3 of 1994 provided a very useful guide to vision, hearing, gross motor (muscle tone, mobility, positioning, transfers, range of movement, balance, contractures, strength, coordination, physical tolerance), fine motor (hand preference, grasp, release, reach, fine manipulation), classroom functioning (reading, spelling, mathematics, writing), cognitive-perceptual (attention, concentration, initiative, memory), communication (expressive language, receptive language), and activities of daily living (dressing, eating, toileting, bathing, domestic) status. The assessment emphasized that the “… condition varies from day to day …”. A report of an intensive six-week speech therapy program was also included.

School records also included reports from Education Officers for Students with Vision Impairment, the Royal Victorian Institute for the Blind and Audiology Clinics.

As a preschooler, Carol attended both an early intervention-kindergarten setting for young visually impaired and a local regular kindergarten setting. At the age of approximately five years of age, Carol enrolled at and attended a prep grade class at a local state primary school setting full-time. At approximately eight years of age, she attended the local state primary school setting as part of a year 3 class for three days per week, and also enrolled at and attended this specialist school setting for two days per week.

A major goal for her integration was to participate in the classroom program as fully as possible, in particular to socialize with children in a mainstream setting “… to be fully accepted as a class member … other children to treat Carol the same as everyone else …”. A second major goal was for her to be exposed to good speech models and use expressive language skills. Rather than enrol at and attend a local post primary school setting after completing her final year at her local primary school setting, she enrolled at and attended this specialist school setting full-time.
Perusal of the minutes of Program Support Group meetings in the school records highlighted the impact of a variety of personal issues that became very critical at several junctures of her primary school career. There were several changes to her classroom integration aide and visiting teacher for the visually impaired. Behaviour was reported to be very unsettled and erratic following these changes in personnel.

Issues relating to bodily changes as she entered puberty became very critical. Behaviour was reported to have been very unsettled and erratic following onset of these changes. She received a series of Depo Provera injections to stop her menstrual cycles. At another juncture, behaviour was reported to be very unsettled and erratic following major surgery and the complication of a urinary tract infection.

End-of-year-class reports described her as “… friendly, happy, and outgoing … a real delight … enjoys socializing with other children … a sparkling personality … enthusiastic about what she does and always tries very hard … likes to try new things … persists with physically difficult tasks …”. My understanding is that Carol is currently well settled into an appropriate transitional program for young adults with disabilities and impairments.

Creating, Making and Presenting Music: Exploring and Developing Musical Ideas. Carol joined in with others to experiment with concepts about sound effects to accompany song repertoire in response to the theme “The Human Body” developed by the multi-disciplinary team in the Secondary mini-school section as the starting point for an integrated curriculum unit for the second ten-week (autumn) term of the academic year in which data for this study was collected.

Table 5.0.3a shows the levels of achievement in the Creating, Making and Presenting Music: Exploring and Developing Musical Ideas Substrand Organizer at which I believed Carol was working across the ten-week research period.
### Table 5.0.3a

**Carol: Levels of achievement in the *Creating, Making and Presenting Music: Exploring and Developing Musical Ideas* Substrand Organizer**

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exploring and Developing Musical Ideas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.1 Demonstrate personal responses when creating and making music</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td>B.1 Communicate personal responses when creating and making and presenting music in an <em>intentional</em> way</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td>1.1 Draw upon play and imagination in creating and making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td>2.1 Use experience and imagination in creating and making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>oo</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established
- oo = absent
Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes. Visual images collected throughout the unit of work show Carol very keen to experiment with the techniques, equipment and processes of the information technology that can be used to perform and improvise with the sound effects to accompany song repertoire individually and with other class group members.

Carol often squealed. She often drew attention and pointed as she was engaged in skills, techniques, and processes. She clearly delighted in attention. However, I was not fully convinced that she demonstrated a clear understanding of a cause-effect relationship, i.e., if she stretched and shook her feet, she generated the sound effect.

There were many opportunities to practice singing in every lesson. Great variation in pitch, volume, stress, and quality was observed in Carol's voice. She did not demonstrate ability to pitch match when singing. She could not pitch match when I engaged students in pitch matching exercises on vowel tones mid way through the research period, yet seemed to enjoy simply experimenting with her voice.

Carol communicated responses to differences in the constituent elements of the sound effects, e.g., rhythmic and melodic patterns, repeated phrases, same and different phrases, steps and leaps, ascending and descending melodic phrases, higher and lower melodic phrases, contrasts in tempo and dynamics, legato and staccato sounds, presence/absence of accompanying sounds, identification of instruments. She was encouraged to make choices about the expressive qualities of the sound effects. However, it did not seem apparent that Carol demonstrated understanding or could apply knowledge of the expressive qualities of those sound effects. She did not seem to watch, or display interest when I used an opportunity during the beginning stages of the research period to introduce some vocabulary to help describe something of the expressive qualities of the sounds that they were hearing. She yawned.
Visual images capture Carol entirely engrossed in the task of investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects. She seemed to enjoy exploring and manipulating the common, readily available materials, i.e., cardboard and texta colours. Carol demonstrated a good range of gross motor movement and well-formed fine motor skills. She proceeded to fill outline of the visual symbols with great care. However, there did not appear to be one-to-one-correspondence between the sound effect and symbolic representation of the sound effect. Great care had to be taken when attempting to extract coherent conclusions about musical perception from observation of Carol’s ability to reproduce elements of music using graphic notation.

Table 5.0.3b shows the levels of achievement in the Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes Substrand Organizer at which I believed Carol was working across the ten-week research period.
Table 5.0.3b
Carol: Levels of achievement in the *Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Music Skills, Techniques and Processes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.2 Demonstrate personal responses to the basic elements of sound</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td>B.2 Communicate personal responses to the basic elements of sound in an <em>intentional</em> way</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td>1.2 Use the basic elements of sound and explore them in making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td>2.2 Make choices about sounds and organize them in expressive ways</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>oo</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established  oo = absent
Visual images show that Carol seemed to have very much enjoyed experimenting with ways of performing improvisations with the sound effects that were a feature of the unit of work using the techniques and processes available on the learning technology individually and with other class group members. She clearly delighted, often drawing attention, and pointing. She often squealed. However, when performing improvisations with or parallel to a partner cooperation and interaction appeared to be rare.

Carol did not seem to watch, or display interest when engaged in the process of composition, e.g., opportunity to make choices about the use of music elements for the song repertoire including generating a melody (going up, going down, steps, leaps), same/different phrases, getting faster, style and mood, suggesting lyrics for the song repertoire. She yawned.

Carol demonstrated an emerging ability to use short term memory. She seemed to enjoy imitating and repeating melodic and rhythmic patterns in the song repertoire with me. However, it did not seem to me apparent that Carol had demonstrated an understanding of order and pattern, i.e., the call-and-response form in the song repertoire.

I presented Carol with an audio cassette of improvisations she had created, made and presented during the unit of work recorded directly from the MIDI files during this unit of work at the beginning of the next term.

Table 5.0.3c indicates the levels of achievement in the Creating, Making and Presenting Music: Presenting Music Substrand Organizer at which I believed Carol was working across the ten-week research period.
Table 5.0.3c
Carol: Levels of achievement in the *Creating, Making and Presenting Music: Presenting Music* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.3 Demonstrate personal responses to music making with others</td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td>B.3 Communicate personal responses to music making with others in an <em>intentional</em> way</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td>1.3 Share music making with others</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td>2.3 Present musical works for a familiar audience</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>oo</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**
0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established  oo = absent
**Music Criticism and Aesthetics.** Carol did not always seem to watch or display a great deal of interest when engaged in making and listening to different pitches, duration, dynamics and other expressive qualities of the sound effects; obvious changes in the sound effects; or patterns and structures in the constituent elements of the sound effects. She often yawned.

Printout of the score from the MIDI file that was created for her from the lesson of that week seemed to demonstrate a clearly *random* rhythmic pattern in the improvisation with the sound effect. She did not seem to demonstrate the ability to perform an *intentional* rhythmic pattern.

The last lesson of the research period gave students an opportunity to reflect on what they had learned in the unit of work for the term in a more informal, relaxed climate as we concurrently worked together as a group to create a collage of the unit of work. Carol was absent from this lesson.

Table 5.0.3d indicates the levels of achievement in the *Music Criticism and Aesthetics* Substrand Organizer at which I believed Carol was working *across* the ten-week research period.
Table 5.0.3d
Carol: Levels of achievement in the *Music Criticism and Aesthetics* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Music Criticism and Aesthetics</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.4</strong> Demonstrate personal responses to music</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td><strong>B.4</strong> Communicate personal responses to music in an <em>intentional</em> way</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td><strong>1.4</strong> Respond to music in a personal way</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>oo</td>
</tr>
<tr>
<td><strong>2.4</strong> Respond to music, giving reasons for preferences</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>oo</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established
- oo = absent
Past and Present Contexts of Music. Carol demonstrated a very keen interest in the sound effects but did not seem able to relate the sources of sound to her very own world of events. Visual images throughout the research period capture her with a very alert facial expression. She clearly delighted in attention, often drawing attention and pointing. She often squealed.

Table 5.0.3e indicates the levels of achievement in the Past and Present Contexts of Music Substrand Organizer at which I believed Carol was working across the ten-week music program.
Table 5.0.3e
Carol: Levels of achievement in the *Past and Present Contexts of Music* Substrand Organizer

<table>
<thead>
<tr>
<th>STUDENT NAME: CAROL</th>
<th>DISCIPLINE: Music</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substrand Organizer: Past and Present Contexts of Music</strong></td>
<td><strong>W1</strong></td>
</tr>
<tr>
<td>A.5 Demonstrate personal responses to music in everyday life</td>
<td>3</td>
</tr>
<tr>
<td>B.5 Communicate personal responses to music in everyday life in an <em>intentional</em> way</td>
<td>1</td>
</tr>
<tr>
<td>1.5 Show an awareness of music in everyday life</td>
<td>0</td>
</tr>
<tr>
<td>2.5 Discuss the ways music is made and used for a range of purposes</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**
0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established  oo = absent
Summary. Table 5.0.3f compares the levels of achievement in the substrand organizers at which I believed Carol was working at the beginning (b) and end (e) of the research period.

Table 5.0.3f

Carol: Levels of achievement in each of the relevant learning outcomes at the beginning (b) and end (e) of the research period

<table>
<thead>
<tr>
<th>DISCIPLINE: Music</th>
<th>LEVELS OF ACHIEVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENT: CAROL</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>

Substrand Organizer: Creating, Making and Presenting Music

Exploring and Developing Musical Ideas

A.1 Demonstrate personal responses when creating and making music

B.1 Communicate personal responses when creating and making and presenting music in an intentional way

1.1 Draw upon play and imagination in creating and making music

2.1 Use experience and imagination in creating and making music

Key to levels of achievement:

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

Table 5.0.3f (cont)
Substrand Organizer: Creating, Making and Presenting Music

Using Music Skills, Techniques and Processes

A.2 Demonstrate personal responses to the basic elements of sound

B.2 Communicate personal responses to the basic elements of sound in an *intentional* way

1.2 Use the basic elements of sound and explore them in making music

2.2 Make choices about sounds and organize them in expressive ways

Substrand Organizer: Creating, Making and Presenting Music

Presenting Music

A.3 Demonstrate personal responses to music making with others

B.3 Communicate personal responses to music making with others in an *intentional* way

1.3 Share music making with others

2.3 Present musical works for a familiar audience

Substrand Organizer: Music Criticism and Aesthetics

A.4 Demonstrate personal responses to music

B.4 Communicate personal responses to music in an *intentional* way

1.4 Respond to music in a personal way

2.4 Respond to music, giving reasons for preferences

Key to levels of achievement:

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

Table 5.0.3f (cont)
The learning outcomes corresponding to the first level, i.e., A.1, A.2, A.3, A.4 and A.5 became entirely redundant for Carol. She seemed to demonstrate a well established level of achievement at this level. Carol appeared to demonstrate an emerging level of achievement in learning outcomes corresponding to the second level, i.e., B.1, B.2, B.3, B.4 and B.5 at the beginning stages of the research period.

Carol demonstrated a very keen interest in the sound effects. She often drew attention to the techniques, equipment and processes of the learning technology. She pointed. She often squealed. However, she did not always seem to be able to predict a cause-effect relationship. Great variation in pitch, volume, stress, and quality was observed in Carol's voice, yet seemed to enjoy simply experimenting with her voice. She seemed to enjoy experimenting with the constituent elements of the sound effects. Carol did not seem to watch, or display interest when engaged in the composition of the song repertoire. She often yawned. She seemed to enjoy experimenting with investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects. Given her severe intellectual difficulties, great care had to be taken when attempting to extract coherent conclusions about musical perception from observation of Carol’s attempts to reproduce elements of music using graphic visual symbols. Because of the group nature of music teaching, activities promoted opportunities to learn about sharing and exchanging, and taking turns. However, when engaged with or parallel to a partner, cooperation and interaction appeared to be rare.
Carol’s ability to match different pitches, duration, dynamics and other expressive qualities of the sound effects, recognize obvious changes in the sound effects and imitate and repeat the patterns and structures in the constituent elements of the sound effects seemed to be emerging. Carol did not seem to watch, or display interest when engaged in communication and language associated with psychomotor activity or discussion about the songs and the musical activities enjoyed. She often yawned. She experimented with sources of sound in own daily life. Given her severe intellectual difficulties, great care had to be taken when attempting to extract coherent conclusions.

A practice evacuation drill was conducted throughout the entire school setting during the period of the lesson in week 9 of the research period. The evacuation took approximately forty minutes of that lesson period. In practical terms, genuine opportunity for music teaching and learning was not available. Indeed, collection of data about achievement in relation to learning outcomes for the lesson may not have been truly trustworthy, credible, confirmable or dependable.

With the many opportunities to practice skills in every lesson, she did seem to progress to a consolidating level of achievement in learning outcomes corresponding to the second level, i.e., B.1, B.2, B.3, B.4 and B.5 in the latter stages of the research period. The learning outcomes corresponding to the third and fourth level, i.e., 1.1, 1.2, 1.3, 1.4, 1.5; 2.1, 2.2, 2.3, 2.4 and 2.5 became entirely redundant. It was not apparent that she demonstrated achievement at these levels during the ten-week research period.
5.0.4 Case Study 4: Dennis

Dennis was aged 15 years and 5 months at the beginning of the 10 week research period. His parents were of Fijian origin. English and Hindi were spoken in the home. He was admitted to the Royal Children’s Hospital in Melbourne at the age of one year and one month following a motor vehicle accident. A CT scan revealed extensive fractures of the skull, particularly the front right region, and haemorrhaging into the brain. A ventriculo-peritoneal shunt was inserted approximately eight weeks post-accident. The brain injury has resulted in severe hemiplegia (affected left upper and lower limbs), particularly the left hand which has had inhibitory casting and a variety of splints.

As a presholer, Dennis attended an early intervention centre-kindergarten setting for young visually impaired for three sessions per week. Reports cited that he was able to sit and bottom shuffle, but not walk or crawl. He was being trained to use a walking frame. He was reported to have very restricted visual fields, hence limited tracking ability. It was recommended that visual material be presented directly in front of him at eye level. A history of epilepsy was reported to be mainly very well controlled with anti-convulsant medication. He also attended a local kindergarten setting for four sessions per week with the assistance of a full-time aide.

Dennis was reported to be cooperative, but totally dependent on assistance for toileting, showering and dressing. The therapy team continually monitored, assessed and carried out modifications to his home for safe showering and toileting routines as necessary. He was able to finger feed himself and drink from a cup independently. He understood very simple instructions for immediate needs, and used functional single and two word phrases. He had a reliable and appropriate yes/no response. Much of his speech was reported to be echolalic. Various attempts appeared to have been made to design walking aids over many years for Dennis. He did not appear to have been able to use any of these walking aids satisfactorily.
His most outstanding achievement cited in end-of-year reports had been “… his success in learning to drive a motorized wheelchair … speech continues to improve … with the constant support and encouragement of his aide … a delightful student to teach … always cooperative and happy … always tries very hard … a great sense of humour …”. An intensive individual stretching program with the therapy staff and the swimming program featured as important foci of his curriculum. My understanding is that Dennis is currently well settled into an appropriate transitional program for young adults with disabilities and impairments.

Creating, Making and Presenting Music: Exploring and Developing Musical Ideas. Dennis began to explore concepts about sound effects to accompany song repertoire in response to the theme “The Human Body” developed by the multi disciplinary team in the Secondary mini-school section as the starting point for an integrated curriculum unit for the second ten-week (autumn) term of the academic year in which data for this study was collected.

Table 5.0.4a shows the levels of achievement in the Creating, Making and Presenting Music: Exploring and Developing Musical Ideas Substrand Organizer at which I believed Dennis was working across the ten-week research period.
Table 5.0.4a
Dennis: Levels of achievement in the *Creating, Making and Presenting Music: Exploring and Developing Musical Ideas* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploring and Developing Musical Ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.1 Demonstrate personal responses when creating and making music</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.1 Communicate personal responses when creating and making and presenting music in an <em>intentional</em> way</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Draw upon play and imagination in creating and making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>2.1 Use experience and imagination in creating and making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**
- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established
- oo = absent
Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes. On several visual images collected throughout the research period, Dennis was observed to demonstrate emerging response to the techniques, equipment and processes of the information technology that can be used to perform and improvise with the sound effects to accompany song repertoire individually and with other class group members.

The peripherals on the learning technology, in particular the soundbeam, appeared to greatly assist Dennis overcome the severe psychomotor difficulties that he experienced. Dennis demonstrated a good range of voluntary gross motor movement. The objective was to encourage fullest range of voluntary movement in all limbs. He was able to experiment with techniques and processes available on the learning technology. For example, mid way through the research period, Dennis was able to perform and improvise with the sound effects with a medium long and wide beam emitted from the soundbeam aimed at head height approximately 30cm to his right hand side. The objective was to encourage Dennis to shake and stretch his right arm, i.e., fullest range of voluntary movement in his right arm. In the latter stages of the research period, Dennis was able to perform and improvise with the sound effects with a medium long and wide beam emitted from the soundbeam aimed at his legs. The objective was to encourage Dennis to shake and stretch his legs, i.e., fullest range of voluntary movement in his legs.

He often giggled, laughed and interjected with vocal play as he was engaged in activity. However, I was not fully convinced that he demonstrated a clear understanding of a cause-effect relationship, i.e., if he stretched and shook his torso, he generated the sound effect. Given his severe intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

There were many opportunities to practice singing. Great variation in pitch, volume, stress, and quality was observed in Dennis’ voice. He often giggled, laughed and interjected with vocal play. He did not demonstrate the ability to pitch match when singing. He could not pitch match when I engaged
students in pitch matching exercises on vowel tones mid way through the research period.

Dennis seemed to respond to *obvious differences* in the constituent elements of the sound effects, e.g., rhythmic and melodic patterns, repeated phrases, same and different phrases, steps and leaps, ascending and descending melodic phrases, higher and lower melodic phrases, contrasts in tempo and dynamics, legato and staccato sounds, presence/absence of accompanying sounds, identification of instruments. He often giggled, laughed and interjected with vocal play. However, it did not seem apparent that Dennis had an understanding, or could apply knowledge of the expressive qualities of those sound effects. Given his severe intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

Visual images capture Dennis entirely engrossed in the task of investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects. He seemed to enjoy exploring and manipulating the common, readily available materials, i.e., cardboard and an assortment of texta colours. His contribution was essentially pre-representational ‘scribble’. There did not appear to be one-to-one-correspondence between the sound effect and the symbolic representation. Given his severe intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions about musical perception from observation of Dennis’ ability to reproduce elements of music using graphic notation.

Table 5.0.4b shows the levels of achievement in the *Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes* Substrand Organizer at which I believed Dennis was working *across* the ten-week research period.
Table 5.0.4b
Dennis: Levels of achievement in the *Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Music Skills, Techniques and Processes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.2 Demonstrate personal responses to the basic elements of sound</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.2 Communicate personal responses to the basic elements of sound in an <em>intentional</em> way</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Use the basic elements of sound and explore them in making music</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>2.2 Make choices about sounds and organize them in expressive ways</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**
0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established  oo = absent
Creating, Making and Presenting Music: Presenting Music. Visual images show that Dennis seemed to have very much enjoyed performing improvisations individually with the sounds effects for the class. He clearly delighted in attention, often drawing attention, and pointing. Dennis created, made and presented improvisations with other class group members. However, when performing improvisations with, or parallel to a partner, cooperation and interaction appeared to be rare. Dennis often watched and seemed to show a great deal of interest as he listened and attended to classroom peers as they improvised with the sound effects featured in the unit.

Dennis did not seem to watch or display interest when engaged in the process of composition, e.g., opportunity to make choices about the use of music elements for the song repertoire including generating a melody (going up, going down, steps, leaps), same/different phrases, getting faster, style and mood, suggesting lyrics. He often giggled, laughed and interjected. He generally had a consistent yes/no response. However, I was not fully convinced that he demonstrated the ability to make choices in this context. Given his severe intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

Dennis seemed to demonstrate an emerging use of short term memory. He was able to imitate and repeat some of the melodic and rhythmic patterns with repeated verbal prompts. He often giggled, laughed and interjected with vocal play, e.g., “... boom, boom ...” in pauses in song repertoire.

I presented Dennis with an audio cassette of improvisations he had created, made and presented during the unit of work recorded directly from the MIDI files during this unit of work at the beginning of the next term.

Table 5.0.4c indicates the levels of achievement in the Creating, Making and Presenting Music: Presenting Music Substrand Organizer at which I believed Dennis was working across the ten-week research period.
<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting Music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.3 Demonstrate personal responses to music making with others</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
</tr>
<tr>
<td>B.3 Communicate personal responses to music making with others in an <em>intentional</em> way</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>1.3 Share music making with others</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>2.3 Present musical works for a familiar audience</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established  oo = absent
Music Criticism and Aesthetics. Dennis seemed to watch and display a great deal of interest when engaged in making and listening to different pitches, duration, dynamics and other expressive qualities of the sound effects; obvious changes in the sound effects; or patterns and structures in the constituent elements of the sound effects.

Printout of the score from the MIDI file that I created for him from the lesson of that week demonstrated a clearly random rhythmic pattern in the improvisation with the sound effect.

The last lesson of the research period gave students an opportunity to reflect on what they had learned in the unit of work for the term in a more informal, relaxed climate as we concurrently worked together as a group to create a collage of the unit of work. He often giggled, laughed and interjected as he was engaged in the activity.

Table 5.0.4d indicates the levels of achievement in the Music Criticism and Aesthetics Substrand Organizer at which I believed Dennis was working across the ten-week research period.
### Table 5.0.4d

**Dennis: Levels of achievement in the *Music Criticism and Aesthetics* Substrand Organizer**

<table>
<thead>
<tr>
<th>Substrand Organizer: Music Criticism and Aesthetics</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.4 Demonstrate personal responses to music</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.4 Communicate personal responses to music in an <em>intentional</em> way</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>1.4 Respond to music in a personal way</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>2.4 Respond to music, giving reasons for preferences</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established;
- oo = absent
Past and Present Contexts of Music. Dennis seemed to watch and display a great deal of interest when engaged in activity related to the sources of sound. Visual images throughout the research period capture him with a very alert facial expression. Dennis often shook his torso. He often giggled, laughed and interjected. However, it did not seem apparent to me that he was able to relate the sound effects to his very own world of events. Given his severe intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

Table 5.0.4e indicates the levels of achievement in the Past and Present Contexts of Music Substrand Organizer at which I believed Dennis was working across the ten-week music program.
Table 5.0.4e
Dennis: Levels of achievement in the Past and Present Contexts of Music Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Past and Present Contexts of Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.5 Demonstrate personal responses to music in everyday life</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>B.5 Communicate personal responses to music in everyday life in an intentional way</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>1.5 Show an awareness of music in everyday life</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>2.5 Discuss the ways music is made and used for a range of purposes</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

Key to levels of achievement: 0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established; oo = absent
**Summary.** Table 5.0.4f compares the levels of achievement in the substrand organizers at which I believed Dennis was working at the beginning (b) and end (e) of the research period.

Table 5.0.4f

Dennis: Levels of achievement in each of the relevant learning outcomes at the beginning (b) and end (e) of the research period

<table>
<thead>
<tr>
<th>DISCIPLINE: Music</th>
<th>LEVELS OF ACHIEVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENT: DENNIS</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>

**Substrand Organizer: Creating, Making and Presenting Music**

Exploring and Developing Musical Ideas

- **A.1** Demonstrate personal responses when creating and making music
  - **b e**

- **B.1** Communicate personal responses when creating and making and presenting music in an intentional way
  - **b e**

- **1.1** Draw upon play and imagination in creating and making music
  - **b e**

- **2.1** Use experience and imagination in creating and making music
  - **b e**

**Key to levels of achievement:**

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established
Substrand Organizer: Creating, Making and Presenting Music

Using Music Skills, Techniques and Processes

A.2 Demonstrate personal responses to the basic elements of sound

B.2 Communicate personal responses to the basic elements of sound in an intentional way

1.2 Use the basic elements of sound and explore them in making music

2.2 Make choices about sounds and organize them in expressive ways

Substrand Organizer: Creating, Making and Presenting Music

Presenting Music

A.3 Demonstrate personal responses to music making with others

B.3 Communicate personal responses to music making with others in an intentional way

1.3 Share music making with others

2.3 Present musical works for a familiar audience

Substrand Organizer: Music Criticism and Aesthetics

A.4 Demonstrate personal responses to music

B.4 Communicate personal responses to music in an intentional way

1.4 Respond to music in a personal way

2.4 Respond to music, giving reasons for preferences

Key to levels of achievement:

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

Table 5.0.4f (cont)
Substrand Organizer: Past and Present
Contexts of Music

A.5 Demonstrate personal responses to music in everyday life  

B.5 Communicate personal responses to music in everyday life in an intentional way  

1.5 Show an awareness of music in everyday life  

2.5 Discuss the ways music is made and used for a range of purposes  

Key to levels of achievement:

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

Dennis seemed to demonstrate a consolidating level of achievement in the learning outcomes corresponding to the first level, i.e., A.1, A.2, A.3, A4 and A5 at the beginning stages of the research period.

He seemed to enjoy experimenting with the sound effects. He seemed to enjoy improvising with the techniques, equipment and processes of the learning technology. It was good to observe that the peripherals on the learning technology appeared to greatly assist Dennis overcome the severe psychomotor difficulties that he experienced. However, he did not always seem to be able to predict a cause-effect relationship. Great variation in pitch, volume, stress, and quality was observed in Dennis' voice, yet seemed to enjoy simply experimenting with his voice. He often giggled, laughed, and interjected with vocal play, e.g., “... boom, boom ...” in pauses in song repertoire. He seemed to enjoy experimenting with the constituent elements of the sound effects. He was able to imitate and repeat some of the melodic and rhythmic patterns with repeated verbal prompts. He seemed to watch and display a great deal of interest when engaged in the composition of the song repertoire. Dennis often shook his torso. He seemed to enjoy experimenting with investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects. However, given his severe psychomotor and intellectual difficulties, great care had to be taken when attempting to extract coherent conclusions about musical perception from observation of Dennis’ attempts to reproduce elements of music using graphic visual symbols. Because of the group nature of music teaching, activities promoted opportunities to learn about sharing and exchanging, and taking turns.
Dennis’ ability to match different pitches, duration, dynamics and other expressive qualities of the sound effects, recognize obvious changes in the sound effects and imitate and repeat the patterns and structures in the constituent elements of the sound effects seemed to be emerging. He seemed to watch and display a great deal of interest when engaged in communication and language associated with psychomotor activity or discussion about the songs and the musical activities enjoyed. Dennis often shook his torso. He experimented with sources of sound in his own daily life. However, given his severe psychomotor and intellectual difficulties, great care had to be taken when attempting to extract coherent conclusions.

A practice evacuation drill was conducted throughout the entire school setting during the period of the lesson in week 9 of the research period. The evacuation took approximately forty minutes of that lesson period. In practical terms, genuine opportunity for music teaching and learning was not available. Indeed, collection of data about achievement in relation to learning outcomes for the lesson may not have been truly trustworthy, credible, confirmable or dependable.

With the many opportunities to practice skills in every lesson, he did seem to progress to an emerging level of achievement in learning outcomes corresponding to the second level, i.e., B.1, B.2, B.3, B.4 and B.5 in the latter stages of the research period. The learning outcomes corresponding to the third and fourth level, i.e., 1.1, 1.2, 1.3, 1.4, 1.5; 2.1, 2.2, 2.3, 2.4 and 2.5 became entirely redundant. It was not apparent that he demonstrated achievement at these levels during the ten-week research period.
5.0.5 Case Study 5: Eric

Eric was aged 14 years and 5 months at the beginning of the research period. Eric lived with his mother. His parents, of Maltese origin, were separated. English was spoken in the home. Eric’s major disability was described as a result of a severe Cerebral Vascular Accident, more commonly referred to as a stroke. Blood flow to the brain is restricted or a blood vessel in the brain ruptures (an aneurism) resulting in permanent brain damage. The specific effects of a stroke are determined by extent and location of damage. Little medical detail was available in his school records. Suffice to say, it would appear that the extent and location of damage was widespread. Affected areas appeared to include speech, memory, vision, and motor skills. He was prescribed anti-convulsant medication that appeared to very successfully control his history of epilepsy.

As a preschooler, Eric attended an early intervention-kindergarten program provided by a not-for-profit organization in Victoria that provides a range of services and programs for people with disabilities and impairments. He was enrolled at and attended this specialist school setting at the age of five.

Eric visual status was assessed by the Educational Vision Assessment Clinic (EVAC) in 1993. As with many children with severe and multiple disabilities, Eric was assessed with Cortical Visual Impairment. The assessment indicated that he was eligible for support from the Department of Education’s Visiting Teacher Service for Vision Impairment. A review of his visual status by the EVAC in 1997 indicated that Eric’s visual status had deteriorated markedly. The examining ophthalmologist reported no attempt to fixate and/or follow a visual target. In what were reported to be ‘minor absences’ during the assessment, the pupils dilated and sometimes his eyes deviated to the left or to the right. Eric was regarded as legally blind.
It seemed more important for the Education Officer (Visual Impairment) to meet with the class teacher and to plan future education programs and teaching strategies the overall aim of which would be to assist him make sense of his environment. His curriculum would include a range of sensory focused activities, e.g., foot spa, switch operated activities. Suggestions for teaching strategies included not expecting him to respond to a sensory stimulus unless he is comfortable and pairing a tactile cue (e.g., tickling his ribs) with a verbal cue (e.g., “… I’m going to pick you up, now …”) when something is about to happen to him (James, Weaver, Clemens & Plaster 1985).

Eric had a wheelchair with a custom molded seat that accommodated his very deformed limbs, pelvis and spine. He cried when he was physically uncomfortable. A change of position, e.g., from wheelchair to a side lying or supine position on a hospital trolley would often offer physical Eric comfort.

End-of-year reports commented that he had “… continued to enjoy the comfort of his new wheelchair … affording him extended periods … to access a knee switch …”. Reports also commented on how much he had appeared to have enjoyed the experience of being the focus of attention in the introduction to a combined regions Specialist Schools Music Festival. My understanding is that Eric was well settled into an appropriate transitional program for young adults with disabilities and impairments. Sadly, Eric passed away April 2005.

Creating, Making and Presenting Music: Exploring and Developing Musical Ideas. Eric seemed to demonstrate an emerging awareness of sound effects to accompany song repertoire in response to the theme “The Human Body” developed by the multi disciplinary team in the Secondary mini-school section as the starting point for an integrated curriculum unit for the second ten-week (autumn) term of the academic year in which data for this study was collected.

Table 5.0.5a shows the levels of achievement in the Creating, Making and Presenting Music: Exploring and Developing Musical Ideas Substrand Organizer at which I believed Eric was working across the ten-week research period.
<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploring and Developing Musical Ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.1 Demonstrate personal responses when</td>
<td>n/a</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>n/a</td>
<td>2</td>
</tr>
<tr>
<td>creating and making music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.1 Communicate personal responses when</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>creating and making and presenting music in an</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>intentional way</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Draw upon play and imagination in creating</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>and making music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Use experience and imagination in creating</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>and making music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established
- oo = absent
Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes. On several visual images collected throughout the unit of work, Eric was observed to demonstrate emerging response to the techniques, equipment and processes of the information technology that can be used to perform and improvise with the sound effects to accompany song repertoire individually and with other class group members. Eric responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle.

Eric had extremely limited gross motor movement and fine motor control. The peripherals on the learning technology, in particular the soundbeam appeared to greatly assist Eric overcome profound psychomotor difficulties that he experienced. Use of the peripherals had to be fully assisted. He appeared to be actively receiving and orientating to the sound effects, attempting to fixate, track and locate the source of the sound effects with rapid movements of his eyes. However, I was not at all convinced that he demonstrated a clear understanding of a cause-effect relationship, i.e., he generated the sound effect with movement in his chest.

There were many opportunities to practice singing. Eric responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. He appeared to be actively receiving and orientating to the song repertoire, attempting to fixate, track and locate the source of the singing with rapid movements of his eyes.

Eric appeared to respond to obvious differences in the constituent elements of the sound effects, e.g., rhythmic and melodic patterns, repeated phrases, same and different phrases, steps and leaps, ascending and descending melodic phrases, higher and lower melodic phrases, contrasts in tempo and dynamics, legato and staccato sounds, presence/absence of accompanying sounds, identification of instruments. He responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. He appeared to be actively receiving and orientating to the music elements, attempting to fixate, track and locate the source of the sound effects with rapid movements of his eyes. However, it did not seem apparent that Eric had an understanding or could apply knowledge of the expressive qualities of those sound effects. Given his profound intellectual and
physical difficulties, great care had to be taken when attempting to extract coherent conclusions about his understanding or application of knowledge of the expressive qualities of those sound effects.

Visual images capture Eric entirely engrossed in the task of investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects. His contribution was fully assisted. He responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. He appeared to be actively receiving and orientating to conversation, attempting to fixate, track and locate the source of conversation with rapid movements of his eyes. There did not appear to be one-to-one-correspondence between the sound effect and the symbolic representation. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions about musical perception from observation of Eric’s ability to reproduce elements of music using graphic notation.

Table 5.0.5b shows the levels of achievement in the Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes Substrand Organizer at which I believed Eric was working across the ten-week research period.
Table 5.0.5b
Eric: Levels of achievement in the *Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Music Skills, Techniques and Processes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.2 Demonstrate personal responses to the basic elements of sound</td>
<td>n/a</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>n/a</td>
<td>2</td>
</tr>
<tr>
<td>B.2 Communicate personal responses to the basic elements of sound in an <em>intentional</em> way</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>1.2 Use the basic elements of sound and explore them in making music</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>2.2 Make choices about sounds and organize them in expressive ways</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established; oo = absent
Creating, Making and Presenting Music: Presenting Music. Visual images show that Eric seemed to have very much enjoyed performing improvisations individually with the sounds effects for the class. He created, made and presented improvisations with other class group members. He responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. He appeared to be actively receiving and orientating to the sound effects, attempting to fixate, track and locate the source of the sound effects with rapid movements of his eyes. His contribution was fully assisted. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

Eric responded with a change of facial expression when engaged in the process of composition, e.g., opportunity to make choices about the use of music elements for the song repertoire including generating a melody (going up, going down, steps, leaps), same/different phrases, getting faster, style and mood, suggesting lyrics for the song repertoire. He smiled. Often, his smile gradually broke into a giggle. He appeared to be actively receiving and orientating to the music elements. He appeared to attempt to fixate, track and locate the source of the sound with rapid movements of his eyes. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

I presented Eric with an audio cassette of improvisations he had created, made and presented during the unit of work recorded directly from the MIDI files during this unit of work at the beginning of the next term.

Table 5.0.5c indicates the levels of achievement in the Creating, Making and Presenting Music: Presenting Music Substrand Organizer at which I believed Eric was working across the ten-week research period.
Table 5.0.5c
Eric: Levels of achievement in the *Creating, Making and Presenting Music: Presenting Music* Substrand Organizer

<table>
<thead>
<tr>
<th>Substrand Organizer: Creating, Making and Presenting Music</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting Music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.3 Demonstrate personal responses to music making with others</td>
<td>n/a</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>n/a</td>
<td>2</td>
</tr>
<tr>
<td>B.3 Communicate personal responses to music making with others in an <em>intentional</em> way</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>1.3 Share music making with others</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>2.3 Present musical works for a familiar audience</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>0</td>
</tr>
</tbody>
</table>

Key to levels of achievement: 0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established; oo = absent
Music Criticism and Aesthetics. Eric responded with a change of facial expression when engaged in making and listening to different pitches, duration, dynamics and other expressive qualities of the sound effects; obvious changes in the sound effects; or patterns and structures in the constituent elements of the sound effects. He smiled. Often, his smile gradually broke into a giggle. He appeared to be actively receiving and orientating to different pitches, duration, dynamics and other expressive qualities of the sound effects; obvious changes in the sound effects; or patterns and structures in the constituent elements of the sound effects. He appeared to attempt to fixate, track and locate the source of the sound with rapid movements of his eyes. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

Printout of the score from the MIDI file that I created for him from the lesson of that week demonstrated a clearly random rhythmic pattern in the improvisation with the sound effect.

The last lesson of the research period gave students an opportunity to reflect on what they had learned in the unit of work for the term in a more informal, relaxed climate as we concurrently worked together as a group to create a collage of the unit of work. He smiled. His smile gradually broke into a giggle as he was engaged in the activity.

Table 5.0.5d indicates the levels of achievement in the Music Criticism and Aesthetics Substrand Organizer at which I believed Eric was working across the ten-week research period.
Table 5.0.5d  
Eric: Levels of achievement in the *Music Criticism and Aesthetics* Substrand Organizer

<table>
<thead>
<tr>
<th>STUDENT NAME: ERIC</th>
<th>DISCIPLINE: Music</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substrand Organizer: Music Criticism and Aesthetics</strong></td>
<td><strong>W1</strong></td>
</tr>
<tr>
<td>A.4 Demonstrate personal responses to music</td>
<td>n/a</td>
</tr>
<tr>
<td>B.4 Communicate personal responses to music in an <em>intentional</em> way</td>
<td>n/a</td>
</tr>
<tr>
<td>1.4 Respond to music in a personal way</td>
<td>n/a</td>
</tr>
<tr>
<td>2.4 Respond to music, giving reasons for preferences</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**
- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established
- oo = absent
Past and Present Contexts of Music. Eric responded with a change of facial expression to the source of sounds. He smiled. Often, his smile gradually broke into a giggle. He appeared to be actively receiving and orientating to the source of the sounds. He appeared to attempt to fixate, track and locate the source of the sounds with rapid movements of his eyes. However, it did not seem apparent to me that he was able to relate the sound effects to his very own world of events. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

Table 5.0.5e indicates the levels of achievement in the Past and Present Contexts of Music Substrand Organizer at which I believed Eric was working across the ten-week music program.
### Table 5.0.5e
Eric: Levels of achievement in the *Past and Present Contexts of Music* Substrand Organizer

<table>
<thead>
<tr>
<th>STUDENT NAME: ERIC</th>
<th>DISCIPLINE: Music</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substrand Organizer: Past and Present Contexts of Music</strong></td>
<td><strong>W1</strong></td>
</tr>
<tr>
<td>A.5 Demonstrate personal responses to music in everyday life</td>
<td>n/a</td>
</tr>
<tr>
<td>B.5 Communicate personal responses to music in everyday life in an <em>intentional</em> way</td>
<td>n/a</td>
</tr>
<tr>
<td>1.5 Show an awareness of music in everyday life</td>
<td>n/a</td>
</tr>
<tr>
<td>2.5 Discuss the ways music is made and used for a range of purposes</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Key to levels of achievement:**
- 0 = not apparent;
- 1 = emerging;
- 2 = consolidating;
- 3 = established
- oo = absent
Summary. Table 5.0.5f compares the levels of achievement in the substrand organizers at which I believed Eric was working at the beginning (b) and end (e) of the research period.

Table 5.0.5f

Eric: Levels of achievement in each of the relevant learning outcomes at the beginning (b) and end (e) of the research period

<table>
<thead>
<tr>
<th>DISCIPLINE: Music</th>
<th>LEVELS OF ACHIEVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENT: ERIC</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>

Substrand Organizer: Creating, Making and Presenting Music

Exploring and Developing Musical Ideas

A.1 Demonstrate personal responses when creating and making music

B.1 Communicate personal responses when creating and making and presenting music in an intentional way

1.1 Draw upon play and imagination in creating and making music

2.1 Use experience and imagination in creating and making music

Key to levels of achievement:

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

Table 5.0.5f (cont)
Substrand Organizer: Creating, Making and Presenting Music

Using Music Skills, Techniques and Processes

A.2 Demonstrate personal responses to the basic elements of sound

B.2 Communicate personal responses to the basic elements of sound in an intentional way

1.2 Use the basic elements of sound and explore them in making music

2.2 Make choices about sounds and organize them in expressive ways

Substrand Organizer: Creating, Making and Presenting Music

Presenting Music

A.3 Demonstrate personal responses to music making with others

B.3 Communicate personal responses to music making with others in an intentional way

1.3 Share music making with others

2.3 Present musical works for a familiar audience

Substrand Organizer: Music Criticism and Aesthetics

A.4 Demonstrate personal responses to music

B.4 Communicate personal responses to music in an intentional way

1.4 Respond to music in a personal way

2.4 Respond to music, giving reasons for preferences

Key to levels of achievement:

0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

Table 5.0.5f (cont)
Substrand Organizer: Past and Present
Contexts of Music

A.5  Demonstrate personal responses to music in everyday life

B.5  Communicate personal responses to music in everyday life in an intentional way

1.5  Show an awareness of music in everyday life

2.5  Discuss the ways music is made and used for a range of purposes

Key to levels of achievement:
0 = not apparent; 1 = emerging; 2 = consolidating; 3 = established

Eric seemed to demonstrate a consolidating level of achievement the learning outcomes corresponding to the first level, i.e., A.1, A.2, A.3, A.4 and A.5 at the beginning stages of the research period.

He appeared to be actively receiving and orientating to the sound effects, attempting to fixate, track and locate the source of the sound effects with rapid movements of his eyes. With full assistance, Eric explored and manipulated techniques, equipment and processes of the learning technology. It was good to observe that the peripherals on the learning technology appeared to greatly assist Eric overcome the profound psychomotor difficulties that he experienced. However, he did not seem to be able to predict a cause-effect relationship. He seemed to receive and orientate to differences in the constituent elements of the sound effects. He seemed to receive and orientate when engaged in the composition of the song repertoire. With full assistance, Eric explored and manipulated as he was engaged in the task of investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects with common, readily available materials. Because of the group nature of music teaching, activities promoted opportunities to learn about anticipating, initiating and terminating a turn. Eric responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. However, given his profound intellectual and psychomotor difficulties, great care had to be taken when attempting to extract coherent conclusions.

He appeared to be actively receiving and orientating to the sound effects, attempting to fixate, track and locate the source of the different pitches, duration,
dynamics and other expressive qualities of the sound effects, obvious changes in
the sound effects, patterns and structures in the constituent elements of the sound
effects, communication and language associated with psychomotor activity,
discussion about the songs and the musical activities enjoyed with rapid
movements of his eyes. Eric responded with a change of facial expression. He
smiled. Often, his smile gradually broke into a giggle. However, given his
profound intellectual and psychomotor difficulties, great care had to be taken
when attempting to extract coherent conclusions.

A practice evacuation drill was conducted throughout the entire school
setting during the period of the lesson in week 9 of the research period. The
evacuation took approximately forty minutes of that lesson period. In practical
terms, genuine opportunity for music teaching and learning was not available.
Indeed, collection of data about achievement in relation to learning outcomes for
the lesson may not have been truly trustworthy, credible, confirmable or
dependable.

Eric seemed to maintain a consolidating level of achievement in the
learning outcomes corresponding to the first level, i.e., A.1, A.2, A.3, A.4 and A.5
throughout the research period. Even with the many opportunities to practice
skills in every lesson, he did not seem to progress to an established level of
achievement in learning outcomes at this level during the ten-week research
period. However, maintenance of skills for a student with such profound
intellectual, physical and multiple disability and impairment is in itself indeed a
significant achievement. Description of achievement may hence seem repetitive.
Learning outcomes corresponding to levels two, three and four, i.e., B.1, B.2, B.3,
B.4, B.5; 1.1, 1.2, 1.3, 1.4, 1.5; 2.1, 2.2, 2.3, 2.4 and 2.5 became entirely
redundant during the ten-week research period.
5.1 Case Study Method: Exploring, Describing, Explaining and Predicting Patterns of Musical Thinking Across Cases

Up to now discussion has focused on exploring, describing, explaining and predicting patterns of musical thinking in each of (within) the five individual student participants observed over the ten week research period using pattern matching logic. Effort was concentrated on developing a well-grounded sense of local reality. It was crucial to have developed an understanding of the dynamics of each particular case before proceeding to exploring, describing, explaining and predicting patterns of musical thinking across the five individual student participants observed over the ten week research period.

This section assesses and reports patterns of musical thinking in relation to the extended profiles of musical achievement across the five individual student participants observed over the ten week research period using pattern matching logic, i.e., acting and observing the process and consequences of the change. Multiple types and sources of data described in Chapter 3 contributed to enhancing quality and credibility of exploring, describing, explaining and predicting patterns of musical thinking. Great care was taken when analyzing data, e.g., intent and meaning of particular physical movements, patterns of responses.
5.1.1 Creating, Making and Presenting Music: Exploring and Developing Musical Ideas

Students explored and developed musical ideas. They learned to generate and develop musical ideas using many starting points to extend understanding of the potential of music to express, challenge, stimulate and shape meaning. They worked with a range of musical processes as they developed, selected, decided upon and refined ideas. The five students in this defined classroom grouping demonstrated very significant variation in achievement in relation to the learning outcomes in this Substrand Organizer. Table 5.1.1 shows a summary of this variation in relation to the learning outcomes in this Substrand Organizer across the five students in the defined classroom grouping during the ten week research period.
Table 5.1.1
Levels of achievement in the Creating, Making and Presenting Music: Exploring and Developing Musical Ideas Substrand Organizer across the five students during the ten-week research period

<table>
<thead>
<tr>
<th></th>
<th>AARON</th>
<th>BEVERLEY</th>
<th>CAROL</th>
<th>DENNIS</th>
<th>ERIC</th>
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<td></td>
<td>Aaron developed concepts about sound. He was able to describe and sequence these musical activities and experiences quite coherently for extended periods in speech. He contributed relevant ideas and information. He explored and recreated rhythmic patterns to create accompaniment for song repertoire. He asked and answered questions for information and clarification. He gave and followed instructions and directions to complete tasks. He entered conversation appropriately and took turns in discussion with others. He used language to establish social relationships with peers and adults.</td>
<td>Beverley seemed to demonstrate an emerging ability to develop concepts about sound. She was able to use simple sentences within known vocabulary to describe and sequence musical activities and experiences for short periods in speech. She used a great deal of natural gesture, e.g., nodding, waving and frowning. She consistently requested choices when contributing relevant ideas and information. She demonstrated a great deal of interest in the results of her actions. She demonstrated emerging ability to explore and recreate rhythmic patterns to create accompaniment for song repertoire.</td>
<td>Carol responded to musical activities and experiences to develop concepts about sound. She was able to imitate and repeat single words and short phrases to describe and sequence musical activities and experiences for short periods in speech. She sought attention, e.g., eye contact, gesture or action. She often squealed. She demonstrated consistent preferences and responses. She cooperated with coactive exploration and participation when exploring and recreating rhythmic patterns to create accompaniment for song repertoire.</td>
<td>Dennis seemed to demonstrate an emerging awareness of musical activities and experiences to develop concepts about sound. He was able to imitate and repeat single words to describe and sequence musical activities and experiences for short periods in speech. He demonstrated some extended periods when he was alert and seemed ready to focus attention. Sometimes, he became very animated, e.g., he shook his torso. He accepted and engaged in coactive exploration and participation when exploring and recreating rhythmic patterns to create accompaniment for song repertoire.</td>
<td>Eric encountered musical activities and experiences to develop concepts about sound. Exploration and participation was fully prompted when exploring and recreating rhythmic patterns to create accompaniment for song repertoire.</td>
</tr>
</tbody>
</table>
5.1.2 Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes

Students used music skills, techniques and processes. Their skills were acquired by experimenting with and observing techniques followed by practice and further experimentation with tools, materials and processes that enable students to extend, learn and refine their music skills. The five students in this defined classroom grouping demonstrated very significant variation in achievement in relation to the learning outcomes in this Substrand Organizer. Table 5.1.2 shows a summary of this variation in relation to the learning outcomes in this Substrand Organizer across the five students in the defined classroom grouping during the ten week research period.
Table 5.1.2
Levels of achievement in the *Creating, Making and Presenting Music: Using Music Skills, Techniques and Processes* Substrand Organizer across the five students during the ten-week research period

<table>
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<tr>
<th></th>
<th>AARON</th>
<th>BEVERLEY</th>
<th>CAROL</th>
<th>DENNIS</th>
<th>ERIC</th>
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<tr>
<td></td>
<td>Aaron appeared to enjoy exploring the production of sound effects on the information and communication technology. He was well aware of cause and effect. He contributed and generated ideas regarding the uses of the information and communication technology. He developed communication and language associated with psychomotor activity, e.g., described how different psychomotor activities made him feel, compared their own and others students’ likes and dislikes about the activity and clarified reasons for preferences.</td>
<td>Beverley demonstrated an emerging ability to produce sound effects on the information and communication technology. She was aware of cause and effect. She demonstrated a great deal of interest in the results of her actions. She developed emerging communication and language associated with psychomotor activity, e.g., described how different psychomotor activities made her feel, compared their own and others students’ likes and dislikes about the activity and clarified reasons for preferences.</td>
<td>Carol seemed to seek attention, e.g., eye contact, gesture or action as she produced sound effects on the information and communication technology. She did not appear to be aware of cause and effect. She often squealed. She sustained concentration for short periods. Carol engaged in the technology process. Communication and language associated with psychomotor activity did not seem to have intent and meaning for Carol. Great variation in pitch, volume, stress, and quality was observed in her natural voice when singing.</td>
<td>Dennis seemed to demonstrate an emerging awareness of the sound effects that could be made on the information and communication technology. He did not appear to be aware of cause and effect. Dennis demonstrated an emerging awareness of the technology process. Communication and language associated with psychomotor activity did not seem to have intent and meaning for Dennis. Great variation in pitch, volume, stress, and quality was observed in his natural voice when singing.</td>
<td>Eric encountered the sound effects that could be made on the information and communication technology. He appeared to actively receive and orientate to the sound effects, attempting to fixate, track and locate the source of the sound effects with rapid movements of his eyes. Communication and language associated with psychomotor activity did not seem to have intent and meaning for Eric. Eric encountered pitch and melodic contour. He encountered pitch-interval relationships, i.e., the formal characteristics of the tonal:</td>
</tr>
<tr>
<td></td>
<td>AARON</td>
<td>BEVERLEY</td>
<td>CAROL</td>
<td>DENNIS</td>
<td>ERIC</td>
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</table>
Aaron demonstrated the ability to very accurately pitch match with his natural voice when singing.

Aaron seemed to have largely accomplished the mastery of pitch and melodic contour. His concern seemed to be the accurate representation of pitch-interval relationships, i.e., the formal characteristics of the tonal system. He used everyday language to describe, order and compare. Language included bipolar comparatives, e.g., short/long (rhythm), fast/slow (tempo), loud/soft (dynamics) and smooth/short/detached (articulation).

Aaron appeared to enjoy investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects with commonly, readily available materials. He contributed and generated obvious differences in pitch and melodic contour, e.g., he shook his torso.

Beverley demonstrated an emerging ability to pitch match with her natural voice when singing. Some variation in pitch, volume, stress, and quality was observed.

Beverley seemed to demonstrate an emerging mastery of pitch and melodic contour. She seemed to demonstrate an emerging representation of pitch-interval relationships, i.e., the formal characteristics of the tonal system. Everyday language to describe, order and compare did not seem to have intent and meaning for Carol.

Beverley seemed to demonstrate an emerging ability to pitch match with her natural voice when singing. Some variation in pitch, volume, stress, and quality was observed.

Beverley appeared to enjoy investigation, designing, producing and evaluating graphic visual symbols to represent the sound effects with commonly, readily available materials. Her contribution was essentially pre-representational ‘scribble’ (Goodnow 1977). She responded very well to verbal and visual prompting.

Carol seemed to seek attention, e.g., eye contact, gesture or action as she explored pitch and melodic contour. She did not demonstrate the accurate representation of pitch-interval relationships, i.e., the formal characteristics of the tonal system. Everyday language to describe, order and compare did not seem to have intent and meaning for Carol.

Carol sought attention, e.g., eye contact, gesture or action as she investigated, designed, produced and evaluated graphic visual symbols to represent the sound effects with commonly, readily available materials. Carol demonstrated a good range of gross motor movement, and very good fine control. She proceeded to fill outline of the visual symbols with great care.

Dennis seemed to demonstrate an emerging awareness of visual symbols to represent the sound effects with commonly, readily available materials. His system. He appeared to actively receive and orientate to obvious differences in pitch and melodic contour, attempting to fixate, track and locate the source of obvious differences in pitch and melodic contour with rapid movements of his eyes.

Eric encountered visual symbols to represent the sound effects with commonly, readily available materials. Eric tolerated, even appeared to enjoy exploration and participation with full verbal and physical prompting. However, I was not at all convinced that he demonstrated a clear understanding of a cause-effect relationship. He responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. He did not appear to demonstrate resistance to an unwanted activity or experience. Given his profound intellectual and
ideas regarding the uses of materials. He engaged in the technology process. He used size, position and gaps in these visual symbols (Goodnow 1977).

ability to investigate, design, produce and evaluate graphic visual symbols to represent the sound effects with commonly, readily available materials. She demonstrated a great deal of interest in the uses of materials. She demonstrated a great deal of interest in the technology process. However, her contribution seemed to be essentially pre-representational ‘scribble’ (Goodnow 1977).

physical difficulties, great care had to be taken when attempting to extract coherent conclusions, e.g., consistent like or dislike response.
5.1.3 Creating, Making and Presenting Music: Presenting Music

Students presented and performed music. They shared the musical work by presenting and performing. Involvement in presentation and performance enabled students to reflect on their own works as well as those presented by others. The five students in this defined classroom grouping demonstrated very significant variation in achievement in relation to the learning outcomes in this Substrand Organizer. Table 5.1.3 shows a summary of this variation in relation to the learning outcomes in this Substrand Organizer across the five students in the defined classroom grouping during the ten week research period.
Table 5.1.3
Levels of achievement in the *Creating, Making and Presenting Music: Presenting Music* Substrand Organizer across the five students during the ten-week research period

<table>
<thead>
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<th>AARON</th>
<th>BEVERLEY</th>
<th>CAROL</th>
<th>DENNIS</th>
<th>ERIC</th>
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<tr>
<td>Aaron demonstrated principles that underlie the development and maintenance of positive relationships when joining others in music activities and experiences. He demonstrated appropriate communication skills when interacting. He demonstrated willingness to engage in a cooperative musical activity and experience; displayed very friendly, willing, and cooperative behaviour; and worked positively in a group situation. He demonstrated ways of enhancing and maintaining relationships between individuals and within the classroom grouping.</td>
<td>Beverley demonstrated an emerging ability to develop and maintain positive relationships and appropriate communication skills when interacting in music activities and experiences. Beverley demonstrated an emerging ability to recall and perform rhythmic patterns with sound effects and a repertoire of songs.</td>
<td>Carol seemed to seek attention, e.g., eye contact, gesture or action relationships when joining others in music activities and experiences. Carol often squealed when recalling and performing rhythmic patterns with sound effects and a repertoire of songs.</td>
<td>Dennis sometimes became very animated, e.g., he shook his torso relationships when joining others in music activities and experiences. Dennis seemed to demonstrate learned responses when recalling and performing rhythmic patterns with sound effects and a repertoire of songs. He often giggled, laughed and interjected with vocal play, e.g., “...boom, boom...”.</td>
<td>Eric tolerated, even appeared to enjoy exploration and participation with full verbal and physical prompting when joining others in music activities and experiences. He appeared to actively receive and orientate the activities and experiences with rapid movements of his eyes. He responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. He did not appear to demonstrate resistance to an unwanted activity or experience. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions, e.g., consistent like or dislike response.</td>
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</tbody>
</table>

Aaron recalled and performed
rhythmic patterns with sound effects and a repertoire of songs.
5.1.4 Music Aesthetics and Criticism

Students listened to and talked about musical works. They learned how social and cultural values and meanings are constructed, challenged and reconstructed. They engaged in music criticism as they described, analyzed, interpreted, evaluated, developed preferences and the ability to discriminate between musical works and to challenge ideas. They reflected on and responded to their own musical works and those of others. The five students in this defined classroom grouping demonstrated very significant variation in achievement in relation to the learning outcomes in this Substrand Organizer. Table 5.1.4 shows a summary of this variation in relation to the learning outcomes in this Substrand Organizer across the five students in the defined classroom grouping during the ten week research period.
AARON

Aaron talked about obvious changes in the sound effects, repeated patterns, the song repertoire and the musical activities enjoyed. Many of the visual images taken throughout the unit of work capture Aaron interacting with teachers, peers, and other known adults in both structured and informal classroom activities appropriately whilst dealing with familiar topics. He demonstrated an awareness of the purposes of communication and language and the ability to monitor communication of self and others, e.g., clarify meaning, active listening, and responding appropriately; and drew upon knowledge of linguistic structures and features of language as he communicated understanding of and response to the

BEVERLEY

Beverley demonstrated an emerging ability to talk about sound effects, repeated patterns, the song repertoire and the musical activities enjoyed. She interacted with teachers, peers, and other known adults in both structured and informal classroom activities appropriately whilst dealing with familiar topics. She demonstrated an emerging awareness of the purposes of communication and language and the ability to monitor communication of self and others, e.g., clarify meaning, active listening, and responding appropriately; and drew upon knowledge of linguistic structures and features of language as she communicated understanding of and response to the

CAROL

Carol made much use of natural gesture when communicating about sound effects, repeated patterns, the song repertoire and the musical activities enjoyed. She nodded. She shook her head. She frowned. She squealed. She cried. She used protowords and some two and three word phrases. She waved when interacting with teachers, peers, and other known adults in both structured and informal classroom activities. Given her severe intellectual difficulties, great care had to be taken when attempting to extract coherent conclusions.

DENNIS

Dennis made much use of natural gesture when responding to obvious changes in the sound effects, repeated patterns, the song repertoire and the musical activities enjoyed. Sometimes, he became very animated when engaged with obvious changes and repeated patterns in the sound effects, e.g., he shook his torso. He often giggled, laughed and interjected with vocal play. He sometimes responded with protowords with verbal prompting. He waved when interacting with teachers, peers, and other known adults in both structured and informal classroom activities with verbal and visual prompting. Given his severe intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions, e.g., consistent like or dislike response.

ERIC

Eric tolerated, even appeared to enjoy exploration and participation with full verbal and physical prompting when communicating about obvious changes in the sound effects, repeated patterns, the song repertoire and the musical activities enjoyed. He appeared to actively receive and orientate with rapid movements of his eyes. He responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. He did not appear to demonstrate resistance to an unwanted activity or experience. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions, e.g., consistent like or dislike response.

Table 5.1.4

Levels of achievement in the Music Criticism and Aesthetics Substrand Organizer across the five students during the ten-week research period
of the constituent elements of music. He interacted in confident and extended ways; adjusted speaking and listening to different situations; and experimented with different linguistic features and structures when expressing and interpreting ideas and information as he began to explain responses to own musical works and those of others in a variety of ways, and describe the constituent elements of music in his own and others’ works. He demonstrated the ability to monitor communication of self and others and an awareness of the purposes of spoken language, e.g., clarify meaning, active listening, and responding appropriately; and drew upon knowledge of linguistic structures and features of language.
5.1.5 Past and Present Contexts of Music

Students studied the social, cultural and historical contexts in which music is produced. They reflected on the value and meaning that different cultures and societies assign to music and musical works. They learned about the construction of music histories and the relationship between social and cultural issues and music practices. They developed skills in analyzing, researching, interpreting and questioning to expand their understanding of music in past and present contexts. The five students in this defined classroom grouping demonstrated very significant variation in achievement in relation to the learning outcomes in this Substrand Organizer. Table 5.1.5 shows a summary of this variation in relation to the learning outcomes in this Substrand Organizer across the five students in the defined classroom grouping during the ten week research period.
Aaron identified and described routines and events associated with the sound effects in his life.

Beverley demonstrated an emerging ability to identify and describe routines and events associated with the sound effects in her life.

Carol made much use of natural gesture when communicating about routines and events associated with the sound effects in her life. She nodded. She shook her head. She frowned. She squealed. She cried. She used protowords and two and three word phrases. Given her severe intellectual difficulties, great care had to be taken when attempting to extract coherent conclusions.

Dennis made much use of natural gesture when responding to routines and events associated with the sound effects in his life. Sometimes, he became very animated, e.g., he shook his torso. He often giggled, laughed and interjected with vocal play. He sometimes responded with protowords with verbal prompting. Given his severe intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

Eric tolerated, even appeared to enjoy exploration and participation with full verbal and physical prompting when responding to routines and events associated with the sound effects in his life. He appeared to actively receive and orientate with rapid movements of his eyes. He responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. He did not appear to demonstrate resistance to an unwanted activity or experience. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions, e.g., consistent like or dislike response.

Table 5.1.5
Levels of achievement in the Past and Present Contexts of Music Substrand Organizer across the five students during the ten-week research period

<table>
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<th>AARON</th>
<th>BEVERLEY</th>
<th>CAROL</th>
<th>DENNIS</th>
<th>ERIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aaron identified and described routines and events associated with the sound effects in his life.</td>
<td>Beverley demonstrated an emerging ability to identify and describe routines and events associated with the sound effects in her life.</td>
<td>Carol made much use of natural gesture when communicating about routines and events associated with the sound effects in her life. She nodded. She shook her head. She frowned. She squealed. She cried. She used protowords and two and three word phrases. Given her severe intellectual difficulties, great care had to be taken when attempting to extract coherent conclusions.</td>
<td>Dennis made much use of natural gesture when responding to routines and events associated with the sound effects in his life. Sometimes, he became very animated, e.g., he shook his torso. He often giggled, laughed and interjected with vocal play. He sometimes responded with protowords with verbal prompting. Given his severe intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.</td>
<td>Eric tolerated, even appeared to enjoy exploration and participation with full verbal and physical prompting when responding to routines and events associated with the sound effects in his life. He appeared to actively receive and orientate with rapid movements of his eyes. He responded with a change of facial expression. He smiled. Often, his smile gradually broke into a giggle. He did not appear to demonstrate resistance to an unwanted activity or experience. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions, e.g., consistent like or dislike response.</td>
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</table>
5.2 Summary

Development of musical thinking in this defined grouping of students with disabilities and impairments appeared to have important and integral links to the development of thinking processes in the psychomotor, social, cognitive and linguistic domains. Uneven outcomes depending on the requirements associated with each musical task were observed. Development of musical thinking in this defined group of students appeared to vary greatly depending on the particular category of disability and the musical task. Student’s intellectual age seemed to be a better predictor of development than chronological age. Development of musical thinking seemed to not only vary greatly from one category of disability to another, but also within each category of disability, depending on the severity of the condition as well as the particular musical task. However, this defined grouping of students appeared to demonstrate development of musical skills in a similar sequence as non-disabled peers throughout their years of schooling, albeit at an uneven and/or lower rate.

Students joined others in musical activities and experiences. They built upon their play and imagination to develop concepts about sound. They experimented with sound effects to create accompaniment to song repertoire. Personal experiences, ideas, feelings and understandings were explored through creative performance and improvisation.

The notion that creative performance and improvisation is outward expression of imagination seemed especially compatible. Indeed, there may be various types of imagination and stages or levels of imaginative development. For example, creative musical thought is captured by intense observation of and interaction with the process of improvisation. Improvisation is the combination of the generation of musical ideas and the simultaneity of doing so with a performance, i.e., the performer generated musical ideas during the act of performing. Each improvised performance, even of the same piece, is expected and created to be different form every other performance. Students attempted a distinctive exploration, e.g., Pressing (1984, 1987, 1988) and Sloboda (1988). This small classroom grouping seemed to demonstrate that students made substantive decisions about what the musical sounds might be and become in the very act of performing improvisations with the sound effects.
Students seemed to demonstrate spontaneity, creativity and freedom of expression, playfulness and a sense of identity as they developed concepts about sound effects to accompany song repertoire through performance and improvisation of rhythmic patterns, e.g., Bruscia (1987), Nordoff and Robbins (1977), Nordoff (1990) and Plach (1996). Opportunities were provided to express feelings which may have been difficult to express verbally and a safe means of experimenting with new behaviours, roles or interactional patterns whilst also developing the ability to make choices and decisions within established limits.

Students recognized patterns in their observations of everyday musical activities and experiences. They developed musical literacy to describe musical activities and experiences. They explored and developed musical ideas with body percussion, acoustic and electronic instruments, objects and their voices. They discussed, made informed comments, drew comparisons, recounted events, predicted outcomes, interpreted data, compared, ordered and classified. They demonstrated responsibility, e.g., gave and followed instructions and directions to complete tasks.

Students explored skills, techniques and processes for producing sounds. Information and communication technology, including a range of digital imaging, desktop publishing and multimedia software applications was used as a tool to enhance outcomes in arts education. Students explored the techniques, equipment and processes for performing and improvising sound affects on information and communication technology. I selected standard music authoring software supported with adaptive peripherals that enabled the five students in this defined classroom to perform and improvise. I created musical accompaniments with which to perform and improvise with the sound effects on the information and communication technology, e.g., rhythmic patterns as soloist or perform in a duet (Baker & Wigram (editors) 2005, Bruscia 1987, Nordoff & Robbins 1977, Nordoff 1990, Plach 1996 and Wigram 2004).

A series of complex patterned motor movements seemed to be aroused. However, those living with disabilities and impairments will frequently
experience difficulties with control of movement patterns and sequences. Physical fitness, fine and gross motor control, posture and stamina is

… frequently at a lower level than those of their normal peers on physical tasks requiring strength, endurance, coordination, running speed, flexibility, and reaction time … (Davis, Gfeller & Thaut 1992, p. 78)

Psychomotor activity associated with the musical activities and experiences seemed to provide opportunities for relaxation, enjoyment, recreation, fitness, social interaction and competition. The five students in this defined classroom grouping undertook a range of psychomotor activity in a musical context. They certainly encountered severe and profound difficulties with control of movement patterns and sequences, physical fitness, fine and gross motor control, posture and stamina. They executed simple movement patterns and sequences as they performed and improvised on the information and communication technology. They practised movements and explored various ways to move, e.g., stopping, starting, changing direction, changing speed, using space. They combined movement with the use of body percussion, acoustic and electronic instruments, objects and voices. They practised ways of exploring and controlling movement, e.g., encourage fullest range of voluntary movement in all limbs; maintain current muscle strength, range of movement, movement coordination and muscle positioning; successfully use of a specific body part to perform and improvise patterns with the sound effect with the soundbeam peripheral; demonstrate a clear understanding of a cause-effect relationship. With extremely limited gross motor movement and fine motor control, Eric was fully assisted.

They developed language associated with psychomotor activity and respond to verbal and non-verbal directions. They described how psychomotor activity in the musical context made them feel. They compared their own and others’ likes and dislikes in relation to psychomotor activity in the musical context, e.g., “… can you make the beam go on [nominated limb] …”, choose to experiment with another limb.
Students pitch matched when singing with their natural voice. There were many opportunities to practice singing. Aaron demonstrated the ability to very accurately pitch match with his natural voice when singing. Beverley demonstrated an emerging ability to pitch match when singing. Some variation in pitch, volume, stress, and quality was observed in her voice. Great variation in pitch, volume, stress, and quality was observed in Carol’s and Dennis’ voices. They did not demonstrate ability to pitch match when singing. Dennis often incorporated imaginative vocal play (Moog 1976a, 1976b).

Students learned to recognize and make differences in the basic constituent elements of sound. Aaron communicated musical ideas in everyday language including bipolar comparatives, e.g., short/long, high/low, soft/loud, slow/fast. Aaron seemed to recognize differences in the constituent elements of the sound effects, e.g., rhythmic and melodic patterns, repeated phrases, same and different phrases, steps and leaps, ascending and descending melodic phrases, higher and lower melodic phrases, contrasts in tempo and dynamics, legato and staccato sounds, presence/absence of accompanying sounds, identification of instruments. The mastery of pitch and melodic contour appeared to be largely accomplished.

Beverley seemed to demonstrate an emerging ability to communicate musical ideas in everyday language including bipolar comparatives, e.g., short/long, high/low, soft/loud, slow/fast. Beverley seemed to demonstrate an emerging ability to recognize differences in the constituent elements of the sound effects, e.g., rhythmic and melodic patterns, repeated phrases, same and different phrases, steps and leaps, ascending and descending melodic phrases, higher and lower melodic phrases, contrasts in tempo and dynamics, legato and staccato sounds, presence/absence of accompanying sounds, identification of instruments. The mastery of pitch and melodic contour appeared to be largely accomplished.

Carol and Dennis seemed to respond to the basic constituent elements of sound with movement, e.g., rocking, nodding, seesawing, swaying and bouncing. There was an increase in the amount of physical response to music. Carol demonstrated clear attempts to carry out dance movements with other people. There were some signs of co-ordination between music and movement. They
matched their movement to the rhythm of the music for short periods of time. They were increasingly likely to sit and listen attentively to music. It appears that these students were increasingly able internalize their response to music. They were encouraged to make choices about the expressive qualities of the sound effects. Neither student seemed to demonstrate understanding or application of knowledge of the expressive qualities of the sound effects.

Eric seemed to respond to obvious differences in patterns in the musical elements, e.g., rapid eye movement (Chang & Trehub 1977a, 1977b). The intent and meaning of such responses were assigned.

For this defined grouping of student participants, it did not seem that learning activities such as rounds that assume conservation of rhythmic and melodic elements would be at all successful. However, more research and theory would appear necessary before one can draw definite conclusions regarding whether development of music perception is a function of age or whether development can be fostered through training.

Students used a limited range of visual symbols to represent the basic constituent elements of sound, e.g., draw shapes or lines. Much knowledge about musical perception has been built from observation of children’s ability to reproduce sequences of simple rhythms, short melodies, harmony and other elements of music using discipline (music) specific visual symbols. Notions that young children use idiosyncratic symbols (graphic notation) to encode their experiences in music seemed to be especially compatible. These symbols may be viewed as vehicles for conveying meaning and are precursors to the development of the culturally agreed symbol systems (conventional notation). Data suggests that as children become more experienced in encoding their meaning, recordings become less context-bound and more concerned with ideas and concepts.

The task to investigate, design, produce and evaluate graphic visual symbols to represent the sound effects with commonly, readily available materials was presented as a problem during the 10 week research period. Students worked with the techniques, equipment and processes of the basic characteristics of common, readily available materials. Aaron was entirely engrossed in the task of
investigating, designing, producing and evaluating graphic visual symbols to represent the sound effects. Aaron began to produce what Goodnow (1977) called action equivalents of the sequences, e.g., he used size, position and gaps of shapes and lines to draw representations of the sound effects. Beverley’s contribution was essentially pre-representational rhythmic scribble (Bamberger 1982). Carol demonstrated a good range of gross motor movement and very good fine control. She proceeded to fill outline of the visual symbols with great care. However, there did not appear to be one-to-one-correspondence between the sound effect and symbolic representation of the sound effect (Bamberger 1982). Dennis’ contribution was essentially pre-representational rhythmic scribble (Bamberger 1982). However, there did not appear to be one-to-one-correspondence between the sound effect and symbolic representation of the sound effect (Bamberger 1982). Eric’s contribution was fully assisted. There did not appear to be one-to-one-correspondence between the sound effect and the symbolic representation. Given the students’ severe intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions about musical perception from observations.

Students joined others in performing rhythmic patterns with the sound effects to accompany the song repertoire. Because of the group nature of music, activities and experiences promoted opportunities to learn about friendship and the skills of listening, sharing, helping, negotiating and caring. Students’ broadening of the world is reflected in the development of a broader set of social skills where musical activities and experiences stress cooperation and teamwork to achieve a musical goal. They identify appropriate communication skills and cooperative behaviours when interacting. They become more responsible and dependable, demonstrate increasing capacity to care for others and to develop and follow rules and codes of behaviour. Aaron and Beverley identified different ways in which people express friendship, love and respect. They recognized and learned to value similarities and differences between themselves and others and to respect the rights, feelings and efforts of others. Carol clearly delighted, often drawing attention, and pointing. She often squealed. However, when performing improvisations with or parallel to a partner cooperation and interaction appeared to be rare. Dennis often watched, and seemed to show a great deal of interest as he listened and attended to classroom peers as they improvised with the sound
effects featured in the unit. Eric responded with change of facial expression. The intent and meaning of such responses were assigned. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

Composition is also a creative musical act. Composition is recognized as an important musical activity through which children can learn music. I simplified the process of composition of the song repertoire by engaging students in the opportunity to make choices about the use of music elements including generating a melody (going up, going down, steps, leaps), same/different phrases, getting faster, style and mood, suggesting lyrics for the songs. I took responsibility for more technical aspects such as harmonization and notation (Bruscia 1987, Nordoff & Robbins 1977, Nordoff 1990, Plach 1996).

Aaron and Beverley appeared to have thoroughly enjoyed being engaged in the process of composition, e.g., opportunity to make choices about the use of music elements for the song repertoire including generating a melody (going up, going down, steps, leaps), same/different phrases, getting faster, style and mood. They suggested lyrics for the song repertoire. Carol and Dennis did not seem to watch, or display interest when engaged in the process of composition. They generally had consistent yes/no responses. However, I was not fully convinced that they demonstrated the ability to make choices in this context. Carol yawned. Dennis often giggled, laughed and interjected. Eric responded with change of facial expression when engaged in the process of composition. The intent and meaning of such responses were assigned. Given his profound intellectual and physical difficulties, great care had to be taken when attempting to extract coherent conclusions.

Students recalled and performed the rhythmic and melodic patterns in song repertoire. Aaron and Beverley learned to accurately recall and perform the call-and-response form of the song repertoire. Carol and Dennis seemed to demonstrate an emerging ability to use short term memory. They were able to imitate and repeat melodic and rhythmic patterns in the song repertoire. Dennis often giggled, laughed and interjected with vocal play, e.g., “...boom, boom...”
pauses in song repertoire. Eric seemed to respond to the rhythmic and melodic patterns with a change of facial expression.

Students made and listened to sounds of different pitch, duration, dynamics and tone colour. Aaron and Beverley seemed to create and make intentional rhythmic patterns in the improvisations with the sound effects, e.g., fast that featured lots of semiquavers. Carol and Dennis seemed to watch and display a great deal of interest when making and listening to different pitches, duration, dynamics and other expressive qualities of the sound effects. They demonstrated clearly random rhythmic pattern in the improvisations with the sound effect. They did not seem to demonstrate the ability to perform intentional rhythmic patterns. Eric responded with a change of facial expression when making and listening to different pitches, duration, dynamics and other expressive qualities of the sound effects.

Students talked about musical activities and experiences and the song repertoire enjoyed. Aaron seemed to be very clear about what he liked and disliked. I had a sense that Beverley often simply echoed Aaron’s responses. Dennis often giggled, laughed and interjected as he was engaged in this activity. Eric smiled. His smile gradually broke into a giggle as he was engaged in this activity.

Students talked about the sources of music in their lives and become aware of some of the different uses of music. Aaron appeared to identify sound effects in own daily life. He immediately related the sound effects to his very own world of events. For Beverley, the relationship between the sound effects and her very own world of events appeared to be just emerging. Carol demonstrated a very keen interest in the sound effects, but did not seem able to relate the sound effects to her very own world of events. She clearly delighted in attention, often drawing attention, and pointing. She often squealed. Dennis seemed to watch and display a great deal of interest when engaged in activities and experiences related to the sound effects. He often shook his torso. He often giggled, laughed and interjected. However, it did not seem apparent to me that he was able to relate the sound effects to his very own world of events. Eric responded with a change of facial expression to the sound effects. He smiled. Often, his smile gradually broke into a giggle. He appeared to be actively receiving and orientating to the
source of the sound effects. He appeared to attempt to fixate, track and locate the source of the sound effects with rapid movements of his eyes. However, it did not seem apparent that he was able to relate the sound effects to his very own world of events.

Conclusions about patterns of musical thinking within and across the students in this small classroom grouping can only be drawn tentatively from the very small sample size of participants in this study. Patterns seemed to corroborate with much of the music research and theory construct in this study. Students seemed to demonstrate development of musical thinking in a similar sequence as their non-disabled peers throughout their years of schooling, albeit at an uneven and/or lower rate. Analysis of patterns seemed to demonstrate significant variation in qualities and characteristics thinking both within and across categories of disability and impairment. Student’s intellectual age seemed to be a better predictor of development than chronological age. Students seemed to demonstrate that the human brain is indeed an extremely complex organ. Sometimes, students seemed to demonstrate highly uneven patterns of thinking, e.g., more highly developed level of performance in one domain against a background of mediocre or poor performance in another.

For Aaron and Beverley, patterns of musical thinking seemed to be exemplary of a late pre-operational stage of musical thinking typically expected of a majority of students at the end of their first year of schooling (Level 1: end of Preparatory Year), perhaps up to five or six years of age. For Carol and Dennis, patterns of musical thinking seemed to be exemplary of an early pre-operational stage of musical thinking typically expected of a majority of preschoolers, perhaps up to four to five years of age. For Eric, patterns of musical thinking seemed to be exemplary of a sensory-motor stage of musical thinking typically expected of a majority of young infants and toddlers, perhaps up to two to three years of age.
CHAPTER 6
EMERGING INSIGHTS AND CONCLUSIONS: THE CONTINUING
CHALLENGE INTO THE NEW MILLENIUM

This study described the beginning stages of a spiral of self-reflective cycles, i.e., planning a change and acting and observing the process and consequences of the change (e.g., Kemmis & McTaggart 2005). This chapter completes the beginning stages of the spiral of self-reflection with reflection on the processes and consequences and suggests a push into the next stages of the spiral of self-reflection, i.e., replanning, acting and observing again and reflecting again.

Consistent with the legacy of approximately 230 years and Jean Marc Gaspard Itard (1775-1838) to whom most trace the beginning of special education as we know it today, the study explored policy and program making processes, e.g., ways in which key stake holder organizations and governments jointly produce policy and programs in special education sectors. The study investigated changes in the role of government since the early 1970s in the context of extraordinary complexities, e.g., notions of inclusive education in relation to the development and implementation of national and state level standards-based music curriculum frameworks. Discussion focused on the nature of governance and the role of different types of key stake holder organizations in securing change or resistance. The study debated the economic efficiency, political feasibility and social and cultural effectiveness of recent reforms in Australian and Victorian policy and programs in special education sectors in relation to the development and implementation of national and state level standards-based music curriculum frameworks.

Notions of inclusive education, integration, normalization and least restrictive environment for people with disabilities and impairments still do not appear to have become sufficiently integrated into practices so as to become little discussed facts of life (e.g., Gavin 1983, Gilbert 1977). Such notions still appear to continue to be of concern to all educators. Copious sections of public laws, reports and reviews highlight key issues. Key recommendations in policies and
programs in response to these notions continue to include the development of appropriate curriculum policy frameworks. Can the impact and local implementation of standards-based music curriculum policy frameworks be improved for students with disabilities and impairments in Victoria? What are the strengths and weaknesses of standards-based music curriculum policy frameworks for such students? Emerging insights and conclusions about the impact and local implementation of standards-based music curriculum frameworks can only be tentatively drawn from this study. Whither to? The following broad areas may be considered for further investigation.

**The Theoretical Construct.** It bears repeating that one of the most urgent tasks for music teachers, therapists and directors may be to develop, implement and evaluate extended profiles of musical achievement in standards-based music curriculum policy frameworks for students with disabilities and impairments. From humble beginnings to a rich history of over 140 years, contributions to music research and theory seemed to very much enhance the broad understanding of the extraordinary complexities that encompass such a task. In my view, research experience needs to continue to be supported to provide fresh research and theory regarding musical thinking in students with disabilities and impairments to further enhance understandings of the extraordinary complexities that encompass the development, implementation and evaluation of standards-based music curriculum policy frameworks.

**The Research Context, Methodology and Ethical and Political Considerations.** A small-scale qualitative inquiry and evaluation for this study seemed to be practical. The demand was that the results be true for the specific context at the particular time. Emerging insights and conclusions did not need to be true for all contexts all over the country for all time. This study attempted to speak to the great need for a compassionate, critical and interpretive social science. The qualitative researcher must navigate among the oppositional forces which threaten to deny the advances in qualitative approaches to inquiry and evaluation over the past three decades. Qualitative inquiry and evaluation that has taken place has continued to gain momentum in spite of assault from multiple forms of resistance in the new millennium, e.g., methodological conservatives who support evidence-based methodologies or mixed methods that has consigned qualitative inquiry and evaluation to the methodological margins. Traditionalist
methodologists look to with nostalgia at The Golden Age of qualitative inquiry and evaluation. The past is all that is needed for qualitative inquiry and evaluation in the present. Mainstream biomedical scientists and traditional social scientists often appear to refuse to engage with arguments of those researchers who entertain collaborative, consciousness-raising and empowering qualitative inquiry and evaluation.

The qualitative researcher does more than observe history. Eisner (1986), Polkinghorne (1995) and Zeller (1995) suggested that he or she plays a part in history with narrative from the field that reflect the researcher’s direct and personal engagement with the historical moment. The transformation took shape in the 1990s in the discipline of qualitative inquiry and evaluation (e.g., Ellis & Bochner 1996). Few look back on narrative with skepticism. Experimental ways of writing first-person ethnographic texts are now commonplace. New ways of composing ethnography are being explored, e.g., fiction, drama, performance texts, ethnographic poetry. Many have told their tales from the field (e.g., Chase 2005). Space for dialogue and scholarly engagement must be created.

The development and implementation of assessment and reporting practices for all students should provide relevant and accessible information about what a student knows and can do and how future learning will be supported and extended, including those with disabilities and impairments. The study argued the careful development and implementation of reliable, valid and fair assessment and reporting practices for students with disabilities and impairments. Research experience needs to continue to be supported to provide further development and implementation of reliable, valid and fair practices for such students.

It appears that it is important that the teacher of students with disabilities and impairments acquire understanding of ethical and political challenges that must be confronted. Concerns included legal and legislative considerations. Given severe and profound psychomotor, personal, linguistic and cognitive difficulties, great care had to be taken when attempting to extract definitive conclusions about patterns of musical thinking within and across the small classroom grouping of students in this study.

An Extended Standards-Based Music Curriculum Policy Framework and Music Program. Organization of standards-based curriculum policy frameworks
and programs must recognize and respond to diverse student needs, i.e., cater for different learning styles and challenge all students including those with disabilities and impairments. The study developed a standards-based music curriculum framework that included profiles of musical achievement in two extended levels for students who may not demonstrate achievement at or beyond Level 1. These levels outlined the types and a range of musical behaviours that such students might characteristically demonstrate. The extended standards-based music curriculum framework was intentionally aligned with a high degree of congruence to the 1995 standards-based music curriculum framework in Victoria.

A ten-week music program was developed and implemented for a defined classroom grouping of five students with disabilities and impairments from the extended standards-based music curriculum framework. The program outlined a specific Unit of Work. I believe that the program featured a comprehensive range of individual activities and tasks, and how to’s at the classroom level for such students. Students appeared to particularly enjoy the assistive information and communication technology. The program included activities and tasks associated with each of the substrand organizers in the extended standards-based music curriculum framework. As the substrand organizers are related, students often engaged in the substrand organizers in the same learning activity or task. The program appeared to have a positive impact on both the individual students and the group.

The development, implementation and evaluation of the extended curriculum policy framework and music program provided the opportunity to encourage special knowledge and modes of knowing; provide recognition of such contributions; enhance the possibilities of attracting a greater number of daring, experimental, and intellectually active people into curriculum discussion; imply challenging decision-making processes and collaborative planning; provide a basis for participants’ recognition of themselves as possessed of special knowledge and competence through a sense of intellectual community; and entail an understanding of implied changes in culture, structure and processes that facilitate effective proposed and actual changes, and pressure for change in public curriculum policy framework and programs initiatives in special education sectors.
This study was limited to a specific context, but could possibly be replicated in other contexts. For example, the extended standards-based music curriculum framework would seem to have the potential to be generalizable to other Key Learning Areas (e.g., Schofield 1990). A validation process of the framework involving the many sectors of an education community, e.g., teachers, educators, subject specialists, researchers, professional teaching associations and community groups would enhance quality and credibility of such a process. Longitudinal studies of larger samples across a greater variation of contexts would further enhance quality and credibility.

Music educators are concerned not only about what they must know or be able to do in order to teach music for students with disabilities and impairments effectively, but also where they can acquire the requisite skills and knowledge (e.g., Farrell 1994; Forsythe & Jellison 1977; Hoffer 1987; Kearns 1986; Keller 1977; Lam & Wang 1982; Lehr 1977, 1982; Thompson, Harvey, Kaplan & Lehr (editors) 1980). It would be useful to develop and deliver curriculum policy framework and program support materials and targeted high quality professional development programs supporting principles of learning and teaching for teachers of such students in areas such as diversity of thinking styles, student-teacher relationships, curriculum development, pedagogy, individual activities, tasks and how to’s at the classroom level and assessment and reporting practice consistent with the notion of continuous improvement to performance and development culture outlined in the Blueprint. This may include examples of exemplary practice with students with disabilities and impairments entered into the knowledge bank on the World Wide Web to ensure that best practice is shared across the system.
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APPENDIX

The Extended Curriculum and Standards Framework
Music

Creating, making and presenting

Exploring and developing ideas

Curriculum focus

Students participate in music activities and experiences. They respond to voices, instruments and objects. They orientate to and discriminate rhythmic and melodic patterns in words and movement in response to stimuli such as poems, stories and art works.

Learning Outcomes

At the completion of level A, a student will be able to:

A.1 Demonstrate personal responses when creating and making music

This will be evident when the student:

- searches and reaches for instruments to represent a movement (such as walking, skipping, crawling or stretching) or a feeling (such as happy or sad)
- reacts to activities and experiences, e.g., fixates, tracks and locates voice to imitate sound
- predicts a cause-effect relationship with a sound effect to complement a short story, rhyme, picture or song
- accepts and engages in coactive exploration, manipulation and experimentation with different instruments and objects to create an accompaniment for a song, story or dance
Creating, making and presenting

Using skills, techniques and processes

Curriculum focus

Students hit and shake instruments. They anticipate or initiate a turn. They watch and show interest in others. They may vocalize, laugh, cry or scream. They orientate to and discriminate obvious differences in the basic elements of sound such as pitch (high/low), duration (long/short) and dynamics (loud/soft).

Learning Outcomes

At the completion of level A, a student will be able to:

A.2 Demonstrate personal responses to the basic elements of sound

This will be evident when the student:

- anticipates or initiates a turn in call-and-response format
- anticipates or initiates a turn to questions and greetings
- orientates to and discriminates to clapping and/or foot stamping to create the effect of a crescendo
- orientates to and discriminates different pitches and durations of sound to create short sound sequences
- makes pre-representational scribbles representing the basic elements of sound
Creating, making and presenting

**Presenting**

**Curriculum focus**

Students participate with others in music and movement activities and experiences that include voice, percussion instruments, objects or clapping and stamping. They predict melodic and rhythmic patterns and a repertoire of songs.

**Learning Outcomes**

At the completion of level A, a student will be able to:

- A.3 Demonstrate personal responses to music making with others

This will be evident when the student:

- shows interest in people, events, and objects, e.g., participates with others in singing and chanting rhymes
- anticipates and initiates simple clapping and/or foot-stamping patterns to accompany a song
- anticipates and initiates sound sequence
- listens and attends to short melodic/rhythmic patterns and echo games played by the teacher
- participates with others in creative movement activities
Music criticism and aesthetics

Curriculum focus
Students make and listen to sounds of different pitch, duration, dynamics and tone colour of instruments. They react to obvious changes in sound such as high/low, loud/soft, long/short, fast/slow. They develop an awareness of rhythmic patterns in words and listen for simple structures in music such as repeated patterns.

Learning Outcomes
At the completion of level A, a student will be able to:

A.4 Demonstrate personal responses to music

This will be evident when the student:

• reacts to obvious changes in sound in a piece of music with change of facial expression
• reacts to repeated pattern in a short musical work with change of expression
• accepts and engages in coactive exploration to create a movement sequence to represent their feelings about a short piece of music
• reacts to a lullaby or a nonsense song with change of facial expression
• reacts to songs and musical activities enjoyed with change of facial expression
Past and present contexts of music

Curriculum focus
Students participate in folk-dancing, listening to music and singing children’s songs from cultural groups in the community. They orientate and discriminate sources of music in their lives and some of the different uses of music such as celebration and entertainment.

Learning Outcomes
At the completion of level A, a student will be able to:

A.5 Demonstrate personal responses to music in everyday life

This will be evident when the student:

- reacts to sources of music in his or her daily life (radio, supermarket) with change of facial expression
- participates in children’s singing games
- reacts to songs associated with occasions such as birthdays with change of facial expression
Music

Creating, making and presenting

Exploring and developing ideas

Curriculum focus

Students join in music activities and experiences to explore concepts about sound. They explore and manipulate voices, instruments and objects. They explore and recreate rhythmic and melodic patterns in response to stimuli such as poems, stories and art works.

Learning Outcomes

At the completion of level B, a student will be able to:

| B.1 Communicate personal responses when creating and making and presenting music in an intentional way |

This will be evident when the student:

- responds to options and choices of an instrument to represent a movement (such as walking, skipping, crawling or stretching) or a feeling (such as happy or sad)
- uses voice to imitate sound, e.g., of animals, the wind, a police siren
- applies potential solutions systematically to problems to create sound effects to complement a short story, rhyme, picture or song
- draws attention to different instruments and objects to create an accompaniment for a song, story or dance
Creating, making and presenting

Using skills, techniques and processes

Curriculum focus

Students manipulate and explore techniques for producing sound on selected instruments. They pitch match when singing with their natural voice. They learn to recognize and make differences in the basic elements of sound, such as pitch (high/low), duration (long/short) and dynamics (loud/soft). They use a limited range of visual symbols to represent these.

Learning Outcomes

At the completion of level B, a student will be able to:

B.2 Communicate personal responses to the basic elements of sound in an intentional way

This will be evident when the student:

- repeats and copies sounds in call-and-response format
- sings songs using their natural voice, e.g., by singing responses to questions and greetings
- uses clapping and/or foot stamping to create the effect of a crescendo
- applies potential solutions systematically, e.g., uses different pitch and duration of sound to create short sound sequences
- copies and imitates shapes or lines to represent the basic elements of sound
Creating, making and presenting

Presenting

Curriculum focus
Students join others in music activities, using their voices, percussion instruments, objects or clapping and stamping with willing, cooperative and positive behaviour. They recall and perform melodic and rhythmic patterns, and a repertoire of songs. They participate in music and movement activities.

Learning Outcomes
At the completion of level B, a student will be able to:

B.3 Communicate personal responses to music making with others in an intentional way

This will be evident when the student:

- joins other class members in singing and chanting rhymes
- remembers learned responses, e.g., simple clapping and/or foot-stamping patterns to accompany a song
- initiates interactions and activities, e.g., plays his or her sound sequence for the class
- remembers learned responses, e.g., echo games, imitating short melodic/rhythmic patterns played by the teacher and other students
- joins in creative movement activities such as folk dancing
Music criticism and aesthetics

Curriculum focus
Students make and listen to sounds of different pitch, duration, dynamics and tone colour of instruments. They use conventional communication to talk about obvious changes in sound such as high/low, loud/soft, long/short, fast/slow. They develop an awareness of rhythmic patterns in words and listen for simple structures in music such as repeated patterns.

Learning Outcomes
At the completion of level B, a student will be able to:

B.4 Communicate personal responses to music in an intentional way

This will be evident when the student:

- uses conventional communication to talk about obvious changes in sound in a piece of music
- remembers learned response to a repeated pattern in a short musical work
- initiates interactions and activities to create a movement sequence or pictures to represent their feelings about a short piece of music
- sings songs that express feelings, e.g., a lullaby or a nonsense song
- uses conventional communication to talk about the songs and musical activities enjoyed
Past and present contexts of music

Curriculum focus

Students participate in folk-dancing, listening to music and singing children’s songs from cultural groups in the community. They use conventional communication to talk about the sources of music in their lives and become aware of some of the different uses of music such as celebration and entertainment.

Learning Outcomes

At the completion of level B, a student will be able to:

B.5 Communicate personal responses to music in everyday life in an intentional way

This will be evident when the student:

- identifies sources of music in his or her daily life (radio, supermarket)
- performs folk dances and children’s singing games
- remembers learned response to songs associated with occasions such as birthdays
Music

Creating, making and presenting

Exploring and developing ideas

Curriculum focus

Students join in music activities, building upon their play and imagination to develop concepts about sound. They use their voices, instruments and objects. They explore sound patterns in words and movement and create their own rhythmic and melodic patterns. Students use sound patterns in response to stimuli such as poems, stories and art works.

Learning Outcomes

At the completion of level 1, a student will be able to:

1.1 Draw upon play and imagination in creating and making music

This will be evident when the student:

- uses the sound of an instrument to represent a movement (such as walking, skipping, crawling or stretching) or a feeling (such as happy or sad)
- uses voice to imitate sound, e.g., of animals, the wind, a police siren
- creates sound effects to complement a short story, rhyme, picture or song
- experiments with different instruments and objects to create an accompaniment for a song, story or dance
Creating, making and presenting

Using skills, techniques and processes

Curriculum focus

Students explore techniques for producing sound on selected instruments. They pitch match when singing with their natural voice. They learn to recognize and make differences in the basic elements of sound, such as pitch (high/low), duration (long/short) and dynamics (loud/soft). They use a limited range of visual symbols to represent these.

Learning Outcomes

At the completion of level 1, a student will be able to:

1.2 Use the basic elements of sound and explore them in music making

This will be evident when the student:

- imitates sounds in call-and-response format
- sings songs using their natural voice, e.g., by singing responses to questions and greetings
- uses clapping and/or foot stamping to create the effect of a crescendo
- uses different pitch and duration of sound to create short sound sequences, e.g., musical opposites
- draws shapes or lines to represent the basic elements of sound
Creating, making and presenting

**Presenting**

Curriculum focus

Students join others in music activities, using their voices, percussion instruments, objects or clapping and stamping. They recall and perform melodic and rhythmic patterns, and a repertoire of songs. They participate in music and movement activities.

Learning Outcomes

At the completion of level 1, a student will be able to:

1.3 Share music making with others

This will be evident when the student:

- joins others class members in singing and chanting rhymes
- performs simple clapping and/or foot-stamping patterns to accompany a song
- plays his or her sound sequence for the class
- participates in echo games, imitating short melodic/rhythmic patterns played by the teacher and other students
- joins in creative movement activities such as folk dancing
Music criticism and aesthetics

Curriculum focus

Students make and listen to sounds of different pitch, duration, dynamics and tone colour of instruments. They listen for and talk about obvious changes in sound such as high/low, loud/soft, long/short, fast/slow. They develop an awareness of rhythmic patterns in words and listen for simple structures in music such as repeated patterns.

Learning Outcomes

At the completion of level 1, a student will be able to:

1.4 Respond to music in a personal way

This will be evident when the student:

- talks about obvious changes in sound in a piece of music
- recognizes a repeated pattern in a short musical work, e.g., using colours, shapes or movements to indicate the repeated pattern
- creates a movement sequence or pictures to represent their feelings about a short piece of music
- sings songs that express feelings, e.g., a lullaby or a nonsense song
- talks about the songs and musical activities enjoyed
Curriculum focus

Past and present contexts of music

Students participate in folk-dancing, listening to music and singing children’s songs from cultural groups in the community. They talk about the sources of music in their lives and become aware of some of the different uses of music such as celebration and entertainment.

Learning Outcomes

At the completion of level 1, a student will be able to:

| 1.5 Show an awareness of music in everyday life |

This will be evident when the student:

- identifies sources of music in his or her daily life (radio, supermarket)
- performs folk dances and children’s singing games
- recognizes songs associated with occasions such as birthdays
Music

Creating, making and presenting

Exploring and developing ideas

Curriculum focus

Students create and make music using their voices, instruments and objects to learn about sound and its expressive qualities such as dynamics (loud/soft), pitch (high/low), duration (long/short) and tone colour (unique sound of an instrument, voice, object). They explore sound patterns and create their own rhythmic and melodic patterns in response to stimuli such as songs, movement, poems, stories and art works.

Learning Outcomes

At the completion of level 2, a student will be able to:

2.1 Use experience and imagination in creating and making music

This will be evident when the student:

- experiments with vocal sounds to create different moods, e.g., sunrise on a spooky swamp or recites rhymes and chants changing the mood and meaning
- uses the sound of an instrument to represent an imaginary character or place, e.g., a bunyip or the beach
- creates a piece of music in response to different stimuli such a dance, story, poem, picture or feeling
- creates a short repeated pattern for voice or instrument to accompany a movement, song, poem or game
- sings a song with the voice of an imagined character
Creating, making and presenting

Using skills, techniques and processes

Curriculum focus

Students explore and learn to use techniques for producing sound with their voices and selected instruments. They learn to use and interpret a limited range of visual symbols to represent sound. They organize sounds to create a desired expression and develop skills to listen to, recognize and reproduce sounds presented aurally.

Learning Outcomes

At the completion of level 2, a student will be able to:

2.2 Make choices about sound and organize them in expressive ways

This will be evident when the student:

- creates a piece of music with a given rhythmic pattern on a sound mobile made from pieces of metal or tubing hung on a coat hanger
- selects and organizes sounds to create a piece of music based on an idea (such as ‘night’) or a feeling (such as flying)
- uses the effects of gradual change in dynamics and tempo, e.g., making sounds that gradually become louder then softer to represent an aeroplane taking off
- sings songs using a natural voice to capture the intended spirit of the song
- makes up symbols to represent basic elements of sounds and uses them to write down the work created
Creating, making and presenting

Presenting

Curriculum focus

Students perform with others using their voices, instruments, objects or body percussion sounds such as clapping, foot-stamping, slapping of thighs and clicking of the tongue or fingers. They recall and expressively perform short vocal and instrumental works. They experience and share their music making through performing.

Learning Outcomes

At the completion of level 2, a student will be able to:

- 2.3 Present musical works for a familiar audience

This will be evident when the student:

- sings a variety of songs, including rounds as part of a group using a natural voice
- participates in echo games, imitating short rhythmic and melodic phrases played by the teacher and other students
- performs simple rhythmic patterns using body percussion sounds to accompany a song or recorded music
- works as member of an instrumental group and presents a performance of their work or the works of others for another class
Music criticism and aesthetics

Curriculum focus

Students sing, play on instruments, listen to and move to music to develop concepts about the expressive qualities of sound and musical structures. They make and describe sounds of different pitch, duration, dynamics and tone colour. They talk about their movements and relate them to the sounds that inspired their actions. They identify various characteristics of sound such as heavy/light, smooth/rough, flowing/jagged, higher/lower, louder/softer and faster/slower. Students identify simple structure in music such as repeated patterns and sections. They express their preferences for particular songs and instrumental works they have heard or performed.

Learning Outcomes

At the completion of level 2, a student will be able to:

2.4 Respond to music giving preference

This will be evident when the student:

- talks about obvious sound characteristics and identifies an instrument or piece of music by sound alone
- listens to a short musical work and responds with movement to its prominent musical features such as dynamics, pitch, rhythm, tempo and tone colour
- listens to a short musical work and draws shapes, patterns or pictures to represent its musical characteristics
- describes, in his or her own words, how sounds were used to create the images, mood or feelings in a piece of program (descriptive) music
Level A

- talks about personal reactions or feelings about musical works and classroom musical experiences and gives reasons for preferences

**Past and present contexts of music**

**Curriculum focus**

Students participate in activities involving listening to music, dancing and singing songs from cultural groups in the community. They talk about the sources of music in their everyday lives and about some of the different uses of music in their community.

**Learning Outcomes**

At the completion of level 2, a student will be able to:

2.5 Discuss the ways in which music is made and used for a range of purposes

This will be evident when the student:

- describes the sounds heard in familiar situations such as at home, at a shopping centre and in the playground
- describes rhythmic features such as tempo, beat grouping and rhythmic pattern of the music used for a folk dance he or she has performed
- talks about the purpose of a work listened to or performed (such as a march or lullaby) and how the purpose affects the performer’s choices in areas such as tempo and dynamics
- talks about the story told through the words of a song and then performs the work to illustrate the story
- talks about the ways music is used in activities such as football matches, the Anzac Day ceremony, school assemblies and circuses
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