

**THE CREATIVE USE OF MUSIC TO SUPPORT LEARNING DISABLED
LEARNERS IN AN INCLUSIVE CLASSROOM: A CONTINUOUS
PROFESSIONAL LEARNING PROGRAMME IN DISTANCE EDUCATION**

By

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Submitted in accordance with the requirements for the degree of

DOCTOR OF EDUCATION

in the subject

INCLUSIVE EDUCATION

at the

UNIVERSITY OF SOUTH AFRICA

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JANUARY 2009

I hereby declare that: '**The creative use of music to support learning disabled learners in an inclusive classroom: a continuous professional learning programme in distance education**' is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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ACKNOWLEDGEMENTS

I wish to express my thanks to the following people who helped to make the completion of this research possible:

My supervisor, Prof. Ansie Lessing, and co-supervisor, Dr Susanne Jacobs, for their willingness to always help me immediately, regardless of how busy their schedules were, and for the generous way in which they shared their knowledge and expertise with me.

The experts who assisted with the evaluation of the first draft of the programme.
UNISA for the study leave granted.

Rika Opper for editing.

Esta de Jager, for her assistance with the formatting and technical layout.

My friend and colleague, Dr Jean Mitchell, who encouraged and helped me to get this research off the ground.

André Weber for critical reading.

My husband, Piet, for his encouragement and support throughout this endeavour, especially when I had to start extremely slowly again after a liver transplant.

My children; Gerhard, for various discussions of a musical and an academic nature, Delia for loyal support, critical reading and Johan for sleeping arrangements.

My parents, for their loyal support and encouragement in all my endeavours.

Soli Deo Gloria

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SUMMARY

In the past decade, education has undergone fundamental changes, such as the simultaneous implementation of Outcomes-based Education and Inclusive Education. A study of different sources has led me to realise that many teachers lack the skills needed to cope with a diversity of learners in their classrooms, which results directly and indirectly in a drop in teacher morale, which in turn causes emotional problems like stress and a lack of motivation. This has a spill-over effect on the learners in their classes, who have no role model for their emotional development and often have weak results. I argued that proof exists that music can alleviate stress, while creative skills can help teachers to better cope with their emotions and develop more effective problem-solving skills, which will help them to attain emotional stability and better academic results in the inclusive classroom.

The purpose of the study was to determine how to design an effective continuous learning programme for distance education. The purpose of the programme is to train teachers to use music creatively to support learners experiencing learning difficulties. The information obtained by means of a literature study was used to develop the first draft of the programme, *Music for All*.

After the first draft of the programme had been developed, the skills of experts in the fields of creativity, music and materials development in open and distance learning were utilised to evaluate the programme. This was done by applying the principles of the Delphi Method to ensure a sound theoretical and practical base for the course. A summary of the aspects that should be considered when developing such a programme (as identified during the literature study and through the evaluation by experts) was put forward and it was concluded that the knowledge and experience of the experts greatly enhanced the practical value of the programme.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION AND ORIENTATION TO THE STUDY

1.1	INTRODUCTION	1
1.2	BACKGROUND TO THE STUDY.....	4
1.3	PROBLEM STATEMENT	6
1.4	DELIMITATION OF THE STUDY	7
1.5	PURPOSE OF THE STUDY.....	8
1.6	RESEARCH DESIGN.....	9
1.6.1	Philosophical foundation	9
1.6.2	Research approach	10
1.6.3	Literature study and conceptual analysis	10
1.6.4	The Delphi method	11
1.7	DEFINITION OF TERMS.....	11
1.7.1	Constructivist coaching.....	11
1.7.2	Music in a supporting function	12
1.7.3	Creativity.....	13
1.7.4	Creativity training.....	13
1.7.5	Learning disabilities	14
1.7.6	Continuous Professional Learning.....	15
1.7.7	Open and Distance Learning.....	16
1.7.8	Primary school learners.....	16
1.7.9	Music for All.....	17
1.8	THE STRUCTURE OF THE THESIS	18
1.9	CONCLUSION.....	19

CHAPTER 2

THE NATURE OF CREATIVITY AND MUSIC

2.1	INTRODUCTION	20
2.2	CREATIVITY	21
2.2.1	The nature of creativity	21
2.2.2	Categories of creativity	24
2.2.3	Operational definition of creativity	25
2.2.4	The creativity complex	26
2.2.4.1	<i>The creative person</i>	26
2.2.4.2	<i>The creative product</i>	28
2.2.4.3	<i>The creative process</i>	29
2.2.4.4	<i>The creative press/place</i>	30
2.2.5	The value of creativity	30
2.2.5.1	<i>The value of creativity for the teacher</i>	30
2.2.5.2	<i>The benefit of creativity for the teacher in their professional lives</i>	32
2.2.6	The value of creativity for the learner with learning disabilities	33
2.2.7	The importance of creativity in music	34
2.3	MUSIC	35
2.3.1	The nature of music	35
2.3.2	The effect of music on humans	39
2.3.2.1	<i>Physiological</i>	40
2.3.2.2	<i>Emotional</i>	40
2.3.2.3	<i>Cognitive</i>	41
2.3.2.4	<i>Social</i>	43
2.3.3	The value of music in schools	44
2.3.3.1	<i>Multiple Intelligences</i>	44
2.3.3.2	<i>Musical intelligence</i>	45
2.3.4	Consequences for teaching	48
2.3.4.1	<i>The therapeutic value of music</i>	48
2.3.4.2	<i>Emotional and cognitive enrichment through music</i>	50
2.3.4.3	<i>Metacognitive advantages of music</i>	51

2.3.5	Ways in which a non-specialist teacher can use music.....	52
2.3.5.1	<i>Listening</i>	53
2.3.5.2	<i>Singing</i>	55
2.3.5.3	<i>Rhythmical activities and movement</i>	55
2.3.6	Characteristics of class teachers using music in the inclusive classroom	58
2.4	CONCLUSION.....	61

CHAPTER 3

THE CREATIVE USE OF MUSIC IN THE INCLUSIVE CLASSROOM TO SUPPORT LEARNING-DISABLED LEARNERS

3.1	INTRODUCTION.....	63
3.2	THE INCLUSIVE CLASSROOM: SCENARIOS	64
3.2.1	Creativity in an inclusive classroom.....	73
3.2.2	Levels at which music can be used creatively in an inclusive classroom	76
3.2.2.1	<i>First level, the class teacher</i>	76
3.2.2.2	<i>Second level, the music teacher</i>	77
3.2.2.3	<i>Third level, the music therapist</i>	77
3.3	LEARNING DISABILITIES	78
3.3.1	Manifestations of learning disabilities in developmental skills	78
3.3.1.1	<i>Motor and sensory motor development</i>	79
3.3.1.2	<i>Perceptual development</i>	81
3.3.1.3	<i>Memory</i>	83
3.3.1.4	<i>Attention</i>	83
3.3.1.5	<i>Language</i>	84
3.3.1.6	<i>Cognitive development</i>	84
3.3.1.7	<i>Social competence</i>	86
3.3.2	Manifestations of learning disabilities in academic skills	86
3.3.1.8	<i>Language</i>	86
3.3.1.9	<i>Mathematical skills</i>	87

3.4	MUSICAL ACTIVITIES TO SUPPORT LEARNING DISABLED LEARNERS	87
3.4.1	Developmental skills.....	88
3.4.1.1	<i>The development of motor and sensory motor skills</i>	88
3.4.1.2	<i>The development of perceptual skills</i>	92
3.4.1.3	<i>The development of memory</i>	95
3.4.1.4	<i>The development of attention</i>	96
3.4.1.5	<i>The development of language</i>	97
3.4.1.6	<i>The development of cognitive skills</i>	99
3.4.1.7	<i>The development of social competence</i>	101
3.4.2	Academic skills.....	102
3.4.2.1	<i>Language: reading, spelling and writing</i>	102
3.4.2.2	<i>Mathematical calculations and skills</i>	104
3.5	CONCLUSION.....	105

CHAPTER 4

ASPECTS OF CONTINUOUS PROFESSIONAL LEARNING AND OPEN AND DISTANCE EDUCATION TO CONSIDER IN THE DEVELOPMENT OF A LEARNING PROGRAMME: MUSIC FOR ALL

4.1	INTRODUCTION.....	106
4.2	THE IMPROVEMENT OF SCHOOL PERFORMANCE THROUGH CONTINUOUS PROFESSIONAL LEARNING	107
4.2.1	School improvement by means of reflexive teaching	108
4.2.2	Practical ways to foster reflection	111
4.2.2.1	<i>Autobiography</i>	111
4.2.2.2	<i>Journal</i>	111
4.2.2.3	<i>Observation</i>	112
4.2.2.4	<i>Reading</i>	113
4.2.3	Music in school improvement programmes	114

4.3	CONTINUOUS PROFESSIONAL LEARNING	114
4.3.1	Continuous professional learning: definition.....	115
4.3.2	The necessity of continuous professional learning.....	117
4.3.3	Methods of professional learning.....	118
4.3.4	Principles for successful professional learning courses	119
4.4	OPEN AND DISTANCE LEARNING	124
4.4.1	Definition of open and distance learning	125
4.4.2	Characteristics of open and distance learning.....	126
4.4.2.1	<i>Openness</i>	126
4.4.2.2	<i>Flexibility</i>	127
4.4.2.3	<i>The distance education student</i>	128
4.4.2.4	<i>Instructional design</i>	129
4.4.2.4.1	Content coverage	131
4.4.2.4.2	Content presentation	132
4.4.2.4.3	Student support.....	133
4.4.2.4.4	The social aspect	133
4.4.2.4.5	Programme review	133
4.4.3	Constructivism in ODL.....	134
4.4.3.1	<i>Case studies/scenarios</i>	134
4.4.3.2	<i>Authentic assignments</i>	135
4.4.3.3	<i>Knowledge integration</i>	137
4.4.4	Pedagogical principles underlying successful ODL courses	138
4.5	CONCLUSION.....	140

CHAPTER 5

RESEARCH DESIGN

5.1	INTRODUCTION.....	141
5.2	RESEARCH PROBLEM.....	142
5.2.1	Orientation.....	142

5.2.2	Formulating the research problems	142
5.2.2.1	<i>Primary research question</i>	142
5.2.2.2	<i>Secondary research questions</i>	143
5.3	AIMS OF THE RESEARCH.....	143
5.3.1	Primary research aim	143
5.3.2	Secondary aims.....	143
5.4	RESEARCH DESIGN.....	144
5.4.1	Philosophical foundation	145
5.4.2	Qualitative paradigm.....	146
5.4.3	Exploratory character	147
5.4.4	Descriptive disposition.....	148
5.4.5	Contextual nature	148
5.5	DATA COLLECTION METHOD	149
5.5.1	Literature study.....	149
5.5.2	Delphi method	150
5.5.2.1	<i>Historical roots</i>	151
5.5.2.2	<i>Definition</i>	152
5.5.2.3	<i>Comparison of the original Delphi with the variant used in this study</i>	153
5.5.2.4	<i>Panel selection</i>	155
5.5.2.5	<i>Composition of the chosen panel of experts</i>	156
5.5.2.6	<i>Data collection procedures</i>	158
5.5.2.7	<i>Data analysis</i>	159
5.5.2.8	<i>Cover letter</i>	160
5.5.2.9	<i>Review instrument</i>	161
5.5.3	Reliability and validity	161
5.5.4	Ethical responsibilities	162
5.6	CONCLUSION.....	163

CHAPTER 6: DISCUSSION OF THE FINDINGS

6.1	INTRODUCTION	164
6.2	DISCUSSION AND APPLICATION OF THE LITERATURE FINDINGS	165
6.2.1	The value of creativity for teachers.....	165
6.2.2	The value of music in education.....	171
6.2.3	The value of music in schools	172
6.2.4	The manifestations of learning disabilities in learners	176
6.2.5	Examples of music to support learning disabled learners	178
6.2.6	Continuous Professional Learning.....	179
6.2.7	Open and Distance Learning.....	180
6.2.7.1	<i>The distance education student.....</i>	180
6.2.7.2	<i>The development of materials</i>	180
6.2.8	The compilation of the programme: Music for All	182
6.3	FINDINGS OF THE EMPIRICAL INVESTIGATION	188
6.3.1	Results of the Delphi evaluation.....	188
6.3.1.1	<i>Programme.....</i>	189
6.3.1.1.1	General.....	189
6.3.1.1.2	Content of the programme	194
6.3.1.1.3	The use of creativity in the programme	194
6.3.1.1.4	The use of music in the programme.....	196
6.3.1.2	<i>Practical application.....</i>	199
6.3.1.3	<i>The review instrument</i>	201
6.3.1.4	<i>Audio-visual material</i>	202
6.3.2	Experts' suggestions that were not backed in the relevant literature.....	203
6.3.3	Adapted (revised) programme: Music for All	204
6.3.4	Summary of findings of the empirical investigation	208
6.4	CONCLUSION.....	211

CHAPTER 7

CONCLUSION OF THE RESEARCH

7.1	INTRODUCTION.....	212
7.2	CONCLUSION ON THE FINDINGS OF THE LITERATURE STUDY	213
7.2.1	Creativity.....	213
7.2.2	Music	214
7.2.2.1	Musical activities that general teachers can use for support in the classroom	216
7.2.2.2	Musical examples for the support of learning disabled learners.....	217
7.2.3	Principles of continuous professional learning and open and distance learning.....	217
7.3	CONCLUSION ON THE FINDINGS OF THE EMPIRICAL INVESTIGATION.....	218
7.4	RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH.....	219
7.5	LIMITATIONS.....	220
7.6	CONTRIBUTION OF THE STUDY	221
7.7	MATTERS REQUIRING FURTHER RESEARCH	223
7.8	A FINAL WORD	224
	BIBLIOGRAPHY	226
	APPENDIX 1	256
	APPENDIX 2.....	258

LIST OF TABLES

Table 2.1:	Aims of chapter 2	20
Table 2.2:	Categories of creativity.....	24
Table 3.1:	Aims of chapter 3	63
Table 4.1:	Aims of chapter 4	107
Table 4.2:	Principles of CPL	123
Table 5.1:	Aims of chapter 5	141
Table 5.2:	Comparison between the classical Delphi and the variant used	154
Table 5.3:	List of experts.....	157
Table 6.1:	“Creative” answers to challenges experienced in schools.....	166
Table 6.2	Advantages of creative skills in the classroom.....	168
Table 6.3	The value of creativity for teachers	170
Table 6.4	The effect of music on human beings	171
Table 6.5	Advantages of the creative use of music	173
Table 6.6	The manifestations of learning disabilities	176
Table 6.7	Suggestions of the experts not found in the literature.....	203
Table 6.8	Suggestions for the revised programme, <i>Music for All</i>	207

LIST OF FIGURES

Figure 1.1	Aims of the study	19
Figure 6.1	Intelligences influenced by the musical intelligence	173
Figure 7.1	Review of the study.....	212

CHAPTER 1

INTRODUCTION AND ORIENTATION TO THE STUDY

1.1 INTRODUCTION

In South Africa in particular, classes are generally very big and teachers often find the **diversity** that is present among the learners in these large classes very daunting. Although a diversity of learning styles, talents and personalities has always been a key factor in the classroom, teachers in the past also taught within a framework of many commonalities because of the uniformity of culture, age and background of especially white learners in South Africa prior to 1994. Learners with barriers to learning were previously referred to special classes or specialised schools. In the case of many black learners in Africa, those with severe barriers to learning were often not sent to school, and those with less obvious barriers were included by default in general classes (Ainscow 1994:186). Consequently teachers were seldom required to teach specifically learners with physical impairments, such as visually or hearing-impaired learners, or learners with other severe barriers to learning in their classes. Today, however, diversity in the classroom implicates not only learners with specific barriers to learning (academic, emotional and socio-economic), but also learners from diverse cultural, gender, age, skills and language backgrounds (De Villiers 2000:1).

Inclusion, as a response to diversity, refers to attempts by educational authorities, schools and individual teachers to integrate all learners in the teaching-learning process. Since the practical implementation of inclusion is a continuous process, the government and teachers have to consider ongoing and concrete steps designed to ensure sustainable change in the most effective way possible.

Both nationally and internationally there is currently a tendency to educate learners in an inclusive environment. An important document in this regard is the *Salamanca Statement*, issued in 1994 at Salamanca, Spain, by the United Nations Educational, Scientific and Cultural Organisation (Unesco) and intended to serve as a directing principle for international education fraternities. In 1996, the *National Commission on Special Needs in*

Education and Training (NCSNET) was allocated the task of advising the Minister of Education in South Africa on the education of learners with special educational needs. According to this report, an inclusive learning environment is one that:

promotes the full personal, academic and professional development of all learners irrespective of race, class, disability, religion, learning styles and language. It is one which is free from discrimination, segregation, and harassment and which intentionally tries to facilitate an atmosphere of mutual acceptance and respect. ... It respects the rights of all learners and enables them to participate fully in a democratic society (NCSNET 1997:vi).

The definition and implications of the above were highlighted in the policy documents that followed, such as the White Paper 6 (2001), which state, inter alia, that:

All learners can learn, but they need support. This principle coincides with that of Outcomes-based Education.

- The fact that all learners are different in some way and consequently have different learning needs, must be accepted and respected.
- Conditions at school (educational structures, systems, teaching methods, teachers' skills) should be such that they can meet the needs of all learners, also those who previously qualified to attend specialised schools.
- The participation of all learners should be maximised in order to empower them to develop their individual strengths.
- Teachers who lack the necessary expertise and skills will have to develop them by attending one or more appropriate programmes.

Researchers that participated in the *National Educational Policy Investigation* (NEPI 1992:30) determined that at that time between forty and fifty per cent of learners in South Africa needed special support in the classroom. Learners requiring extra support could include those who are learning disabled, dyslexic, gifted, who manifest with Attention Deficit Hyperactivity Syndrome, have hearing- or visual impairments, are AIDS orphans

with no adult care, or experience emotional or other barriers, for example socio-economic barriers to learning, or who are second- and third-language speakers. Researchers like Ainscow (1994:5) and Dednam (2005:364) maintain that there is no sharp divide between 'handicapped' and 'normal', but rather a range of individual needs across a continuum.

Teachers are required to accommodate a variety of learners, such as mentioned above, and should, at the same time, be able to effectively serve the interests of the high achievers and learners with mild and invisible difficulties in one class and in one lesson, regardless of their strengths or barriers (Pugach 2003:215; Stanovich & Jordan 2002:173). Recent studies have found that many teachers report high levels of discomfort when interacting with learners with barriers to learning as a result of the fact that they are possibly not fully informed about the limitations and strengths of such learners (Cheek, Bradley, Parr & Lan 2003:205; De l'Etoile 2005:37; MacPherson-Court, McDonald & Sobsey 2003:57; McLeskey & Waldron 2002:159; Patterson 2003:35; Spencer & Logan 2003:51; Stanovich & Jordan 2002:173; Talmor, Reiter & Feigin 2005:215). Some regular class teachers even refuse to accept responsibility for the teaching of learners with special needs (Ainscow 1994:8; Zaiman 2003:8). In the Education White Paper 6 it is clearly stated that teachers are the primary resource for achieving the goal of inclusive education (Swart & Pettipher 2005:18). One source of possible support is to use the expertise of teachers from the so-called 'resource centres', or previous special schools, such as the Prospectus Novus School for learning-disabled learners(see 3.2). Success in inclusive education could also be achieved if teachers are well prepared by means of effective professional development programmes to accept their new roles and responsibilities (Boudah, Blair, & Mitchell 2003:11; Hanko 1995:3; McLeskey & Waldron 2002:159; Pugach 2003:215; Stanovich & Jordan 2002:173).

Discrepancies between stated policy and actual practice are evident in many countries (Ainscow 1994:7), also in South Africa. Even though policies in South Africa can be considered as progressive and modern in comparison to those in the rest of the world, teachers do not seem to attain the goals as stated in those policies. Since 1994 a great deal of time, energy and money has been invested in the development of a new curriculum for South African schools. However, despite this, the curriculum is still being revised and is still being met with a great deal of criticism (Feather 2003:86; Green 2004:10). In fact, the revised curriculum for Grade 11 was implemented as recently as 2007. There could be

many reasons for the gap between theory and practice. Two possibilities are that the curriculum is not appropriate in our current context, or that teachers are not capable of using the curriculum to attain good practical results (Brodie, Lelliott & Davis 2002:542; Green 2004:10).

1.2 BACKGROUND TO THE STUDY

A colleague and I were asked to do a workshop for teachers at a school in the deep rural area of Pongola in Kwazulu Natal. We had to train them in a one-day session to identify and support learners with barriers to learning in the classroom. We did not know what to expect, what their existing knowledge base was, what resources they had at their disposal and on which barriers to focus. The organizer of the training sessions, though very enthusiastic, could not help us pinpoint their basic needs either. We compiled interactive sessions, made photocopies and took with us a variety of study materials as examples of the courses available at Unisa.

We were totally unprepared for what we found there. Not even basics such as running water and electricity were available. We were able to show them a video using electricity tapped by means of a long lead from an unknown source. The teachers were not focused on specific problems and were not actively trying to make sense of inclusive education. It seemed as if they were not even sufficiently familiar with Outcomes-based Education (OBE) at that stage and struggled so much with paperwork that they could not manage to become involved with learners who experienced a variety of barriers to learning.

At the end of the day we left some of the study material with them and although they thanked us profusely for our willingness to go there, we saw in their eyes that we probably only added to their confusion. It was clear to us that they needed practical guidance over an extended period to understand and try to help learners with barriers to learning, but we did not know where to start.

Articles in newspapers on the situation in South African schools now had new meaning for us. Throughout the country there were schools whose needs were not being met. Apart from teachers' inability to assist learners with barriers to learning, the newspapers reported

other disconcerting tendencies at some schools. For a variety of reasons, an unacceptably high percentage of schools in South Africa do not function properly (Rademeyer 2008:9). In 2005 one hundred and fifty-seven (157) schools in Mpumalanga had pass rates of lower than 50% in Grade 12, and in Limpopo province there were three hundred (300) such schools. Schools in many provinces even had pass rates of 0% (Fourie 2006a:12). Pelsler (2006:4) reported that most of the schools are incapable of transmitting attitudes and intellectual skills that are necessary to build a modern state. Violence in schools is becoming a serious problem (Fourie 2006b:12; Tempelhoff 2006:1; Rademeyer 2008:5). In fact, "the South African Education system is on its knees" (Malan 2008:9).

We realised that teachers not only needed specific subject-related and professional training (Rademeyer 2008:9; Ravhudzulo 2003:76), but also motivation and emotional support. This notion was substantiated by research done by Cheek *et al.* (2003:205). We considered the possibility that it was mainly teachers who had not received any further training who could not cope in their situations, or make a difference in their schools. To answer that question we commenced on a research project to determine the emotional status of teachers enrolled at Unisa and the effect of change on their feeling of well-being and control over their own situation. About 1 000 students were involved in the project. The results showed that teachers who were in the process of upgrading their qualifications and were theoretically in a position to know their strengths and weaknesses, were also overwhelmed by the change and were unable to handle their situations well (Jacobs, Kemp & Mitchell 2008:132).

I then became convinced that, together with training on specific barriers to learning, the creative use of music in ordinary classes would create a nurturing atmosphere which would be to the benefit of both teachers and learners. Research (Camilleri 2002:261; Cheek *et al.* 2003:206; Ferreira & Moller 2004:31; Lingerman 1990:12, 22, 35) confirmed that stress, depression, fear and exhaustion have been lessened through the use of music. Hyperactivity can be controlled through music, and self-control improved (Dean & Gross 1992:613; De l'Etoile 2005:38,9; Lingerman 1990: 35, 38). Neuroscience also emphasizes the important emotional foundation of knowledge (Hannaford 2005:57; Kosslyn & Koenig 1995:473). By stabilizing a person emotionally through music, creating a peaceful atmosphere and giving the person new strength and courage (Lingerman 1990:10,37), optimal cognitive operation is encouraged (Diamantes, Young & McBee 2002:117;

Hannaford 2005:58). The emotional benefits of music, combined with its cognitive benefits, would make it the ideal mechanism to use, especially in an inclusive classroom. The use of music as vehicle for telling and remembering facts is a known practice in certain indigenous cultures. It would also present a good opportunity for multi-cultural education.

The combination of music with creativity may further enhance the value of music in the classroom. Thirty years of research by Csikszentmihalyi into what makes human beings happy, is summarized in one sentence: 'when we are involved in creative activities we feel that we are living more fully than during the rest of life' (Barnes 2003:41). He further states that the fact that we are creative *beings* may be the very definition of our humanity. Involvement in creative activity is highly motivating, enhances cognitive skills and creates a condition within which we may achieve our highest selves, our greatest happiness (Maslow 1954:56). Han and Marvin (2002:98) suggest that intensive teacher training in creativity should be done in order to connect research done on creativity with the practice.

Teachers should have the attitude, knowledge and skills required to support learners with a diversity of needs in the inclusive classroom. However, it is apparent from the different sources discussed that many teachers are not adequately equipped and consequently cannot cope in their current situations (Ravhudzulo 2003:76). This has a negative effect on learning in the classroom. According to literature, music can be used creatively to address a variety of problems. Unfortunately teachers are not trained to use music in the presentation of their lessons. Thus a need exists for a continuous professional learning (CPL) programme for teachers in this regard. The question is: What should a CPL programme focusing on the creative use of music in the inclusive classroom consist of, and how should such a programme be compiled to foster the maximum learning?

1.3 PROBLEM STATEMENT

In the past decade, education has undergone fundamental changes, such as the simultaneous implementation of Outcomes-based Education and Inclusive Education. This resulted in a marked drop in teacher morale brought about by the stress that has resulted directly and indirectly from these changes (Cheek *et al.* 2003:205). A study of research reports, personal experience in training workshops and correspondence with teachers

have led the researcher to realise that many teachers lack the skills to cope with a diversity of learners in their classrooms, which results in emotional problems like stress and a lack of motivation. This has a spill-over effect on the learners in class, who in turn have weak results and no role model for their emotional development (Jacobs *et al.* 2008:141). The creative use of music has proven results for alleviating the above (Cheek *et al.* 2003:206) and can help teachers attain the important critical outcome of creative learning for reasons already mentioned in 1.2, with the added value that it is also prescribed in the critical outcomes in Outcomes-based Education. Therefore the focus of this study is to determine the criteria for a CPL programme in distance education that uses music creatively to support teachers of learning-disabled learners in an inclusive classroom.

The problem is to determine how a CPL programme in open and distance learning focusing on the creative use of music to support learners experiencing learning difficulties in the inclusive classroom look like. Therefore, to effectively solve the problem, the following question should be answered: What should be the criteria for a CPL programme focusing on the creative use of music in the inclusive classroom to support learners experiencing learning impairments?

1.4 DELIMITATION OF THE STUDY

Although an inclusive classroom includes learners with many different kinds of barriers to learning, the researcher will, in this study, concentrate on learning disabilities (international terminology). The reason is that the manifestations of learning difficulties (South African terminology) encompass the different developmental skills that primary school learners should attain to learn and to do academic tasks effectively. Learners experiencing learning difficulties often also manifest emotional and social barriers, which are prevalent in many learners who could be supported with the help of music.

The focus is on the evaluation of the programme by experts and not on the re-writing of the final programme, or on the application of the programme in the inclusive environment. Furthermore group work, though important, will not be discussed, though most of the activities are collaborative and done in group and team contexts.

1.5 PURPOSE OF THE STUDY

The purpose of the study is, firstly, to determine how music can be used creatively in the classroom and to design and develop a professional learning programme for distance education that would equip primary school teachers with the practical, foundational and reflexive competence to support learners who experience barriers to learning in an inclusive classroom creatively through the use of music. Secondly, the purpose is the evaluation of the content of the developed programme by experts.

The research plan included the following steps:

- Research undertaken to determine the nature and advantages of music and creativity and to decide how music could be used creatively in the inclusive classroom, focusing on the learning disabled learner.
- To determine the best practices of a CPL programme in distance education for application in a generic programme that uses music creatively to support learning-disabled learners in an inclusive classroom in the primary school.
- The writing of the first draft of the programme (*Music for All*) based on the research done in the previous chapters.
- The evaluation of the content and structure of the programme (*Music for All*) by a number of experts and a summary of the elements that should be included in such a programme.

The purpose is therefore to address the following questions:

Primary question:

Which core elements should be included in a continuous professional learning programme in an open and distance learning environment focusing on the creative use of music in the inclusive classroom in order to support learners with learning impairments?

Secondary questions:

What is the value of creativity for teachers and eventually also for learners?

What is the value of music in education?

What are the manifestations of learning disabilities?

How can music be used to support learning-disabled learners?

What are the basic principles of a good continuous professional learning programme?

How should a successful open and distance learning programme be compiled?

1.6 RESEARCH DESIGN

This research is of a qualitative nature and combines two research methods, namely a literature study and an empirical investigation using the Delphi method (see details in Chapter 5).

1.6.1 Philosophical foundation

De Vos (2005:40) maintains that all scientific research is conducted within a specific paradigm, or way of viewing one's research material. Henning, Van Rensburg and Smit (2004:17-25) describe three main paradigms used by researchers in their investigations, namely the positivist, the interpretivist and the critical frameworks.

Positivism is the approach of the natural sciences (De Vos, Schulze & Patel 2005:5): an approach that works with the accumulation of verified facts (De Vos *et al.* 2005:6). Positivism requires that the researcher be objective and detached (Neuman 2006:86), while the researcher is subjectively involved in this study through the interpretation of the situation of the teachers, the information gained by way of the literature study, and decisions taken regarding the compilation of the programme. Therefore the interpretive and critical approaches have been chosen as philosophical base.

The **interpretivist theory** of knowledge emphasizes experience and interpretation and is concerned with meaning and the understanding of situations (Henning, Van Rensburg & Smit 2004:21; Neuman 2006:87), therefore it is well suited to this study. The interpretive paradigm points to the use of qualitative research methods, both in collecting and analyzing data (Henning *et al.* 2004:22). Qualitative methods, like the literature study and Delphi method, enable the researcher to gain deep understanding of the creative use of music and the development of study material.

The **critical theory** claims that knowledge and our understanding of truth should not be separated from everyday life and that theory cannot stand apart from the practice (Higgs & Smith 2006:71). Consequently, by critically reflecting on situations in society, for example the situation in schools, we can slowly alter the social reality and help people realize themselves in their situations. Freire (Higgs & Smith 2006:75) argues that schools are oppressive, authoritarian and alienating. The situation in many schools in South Africa today may support Freires' point of view. The interpretive and critical approaches give this study a qualitative and evaluative nature.

1.6.2 Research approach

The research approach will be qualitative in nature, taking into account the aim of the research (see 1.5). A literature study will provide the researcher with knowledge and understanding of the creative use of music, as well as Continuous Professional Learning (CPL) and material development in Open and Distance Learning (ODL). By using the Delphi method, the researcher aims to obtain rich feedback on the first draft of the programme from experts who are coming from different backgrounds and mind frames.

1.6.3 Literature study and conceptual analysis

The first aspect of the research presented in this study is a literature review that focuses on music, creativity, continuous professional learning and good distance learning practices. This focus is the result of the perception that a professional learning programme on the creative use of music in the inclusive classroom may help teachers to handle their own situations in a more creative way. Chapter 2 therefore focuses on music and its creative

utilization in the classroom. The manifestations of learning disabilities which must be supported through the use of music and the examples of music that can be used by class teachers will be pointed out in Chapter 3. To answer the question of the requirements for an effective Continuous Professional Learning programme in a distance learning milieu, the best practices for a continuous professional learning programme are determined in Chapter 4.

1.6.4 The Delphi method

The Delphi method is used in the empirical investigation. It is an effective technique whereby the opinions of experts in the field are utilized to evaluate the first draft of the programme. Once the experts had presented their views, their suggestions were scrutinized and the improvements on their suggestions were incorporated in accordance with the literature study. This is an in-depth exploration of the qualities of a programme, therefore the research is of a qualitative nature (Creswell 2003:15).

One of the strengths of this method is that it allows for a conscious inclusion of different constituencies on a panel (Dimmit, Carey, McGannon & Henningson 2005:217), so care was taken to include academic experts from different fields (music education, creativity, materials development), professionals, teachers and managers from as many diverse contexts as possible.

1.7 DEFINITION OF TERMS

For the purposes of this study the following concepts need to be clarified.

1.7.1 Constructivist coaching

The purpose of constructivist coaching is to enhance the teacher's capacity to plan, monitor, reflect upon and thus build meaning about their own instructional decision making

(Costa 1999:x). Constructivist coaching will therefore lead to the modification of teachers' capacities to modify themselves. Constructivist teachers can make curriculum interventions to include all learners in a lesson in the inclusive classroom.

When designing learning material for distance education, there are two commonly cited instructional design models, namely the objectivist paradigm and the constructivist, or interpretive paradigm (Bellefeuille 2006:86). In this study the constructivist paradigm is used. Constructivism is based on the assumption that learners construct their own knowledge by actively participating in the learning process, which is affected by their prior learning experiences (Van Niekerk 2002:56). A constructivist instructional design promotes a more open-ended learning experience. It shapes learning as an individual construction within the learner's environment (Bellefeuille 2006:86).

The results of constructivist learning can be measured by the practical value for the learners (teachers). However, it is not intended or assumed to be the same for each learner. Learners are expected to engage each other in their learning process and to discuss their points of view with one another, which in turn fosters shared understanding. Teachers as learners are required to reflect on the material and their experiences and justify their responses. The benefits of implementing a constructivist approach are the joy of self-discovery and the enhancement of the self-esteem for teachers as learners. For the instructor, the reward is the personal satisfaction experienced when the achievement of those teachers is enhanced (Costa 1999:xii).

1.7.2 Music in a supporting function

Although music is usually taught formally at schools, it can also be used in an informal way when teachers and learners 'make music', as is proposed in this study. Learning in this situation involves more than just the training of music; it has the character, as described by Söderman and Folkestad (2005:281), of integrated learning at a holistic level as it would include schooling, training, education, socialization and enculturation. This kind of musical learning is also more in line with what learners experience at an informal level outside the school, which is apparently a preferred way of learning music for many learners (Söderman & Folkestad 2005:282).

Although learners do not necessarily realise it, music has therapeutic value when used in schools. For instance, it can be used to promote social interaction, to stabilise learners emotionally, to motivate them, or to assist them in working through possible perceptual, motor or learning problems (Ensor-Smith 1989:128; Hinds 1995:15; Van Deventer 1998:4.18-4.22). Although these forms of assistance have added value in the case of learners with barriers to learning, the same music contributes towards more effective learning in all learners. In other words, music can also be used as preventative treatment and enjoyment for learners who do not experience barriers to learning.

1.7.3 Creativity

Creativity is a multi-faceted concept which means different things to different people. For this research however, creativity is a process that starts at the identification of a problem in a persons' life world and the working towards an original solution for that problem so that such a person would effectively adapt to his/her specific circumstances (Csikszentmihalyi 1996:23; Ochse 1990:111; Proctor & Burnett 2004:421,422; Sternberg 1999:11). The creative teacher will seek for original solutions towards effective support for learners who experience learning problems or impairments in the inclusive classroom.

However, the creative application of music in the classroom has much wider effects. It can, for instance, elicit self-actualising behaviour and many positive responses, which will be dealt with in Chapter 2.

1.7.4 Creativity training

Striving towards self-actualisation and creativity is an essential part of man's development (Maslow 1954). This striving is the common thread linking the various theoretical psychological approaches that have attempted to study creativity, namely that creativity has been linked to well-being and successful adaptation of daily life (Scott, Leritz & Mumford 2004a:361). By being creative, man is able to actualize his potential (Csikszentmihalyi 1996:1).

This study is based on the premise that creative thinking skills can be taught (Csikszentmihalyi 1996:51; Gruhn 2005:222; Scott Leritz & Mumford 2004b:149). Creativity training does, however, not attempt to develop all the capacities associated with creative behaviour (Scott *et al.* 2004b:150). For the purpose of this study, creativity training refers to efforts made by the researcher to uncover teachers' creative potentials and develop them into creative acts by engaging them in creative thinking.

According to Gruhn (2005:223), it is clear that to achieve the goal of creative teaching in schools, the implementation of a shift of the teacher's role and supporting conditions within the school system will be needed. If the teachers focus their efforts on creative education, it in effect becomes therapeutic education (Krason 2003:193), which becomes even more effective if music is combined with creative education. Both nationally and internationally teachers are becoming therapists of 'the first contact', recognizing the initial symptoms of learners' failures, their problems and deficiencies (Krason 2003:193; see 1.1). It is often the (class) teacher who attempts to support the learner's healthy development in the first place.

The point of departure is the assumption that our society values individualism and that the aim of teaching is not to socialize learners towards conformity.

1.7.5 Learning disabilities

Historically the definition of learning disabilities has been troublesome. No physical markers are known to identify learners with learning disabilities (Prater 2007:5). Learning-disabled learners' achievement is normally below what is expected of them, taking their Intelligence Quotient (IQ) into account. However, this discrepancy factor does not discriminate between low achievers and those with a learning disability. A definition widely used by the Individuals with Disabilities Education Act (IDEA) is the following (Prater 2007:6):

Specific learning disabilities are defined as follows:

- (i) General. The term means a disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, that may

manifest itself in an imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia.

- (ii) Disorders not included. The term does not include learning problems that are primarily the result of visual, hearing or motor disabilities, or of mental retardation, emotional disturbance, or environmental, cultural or economic disadvantage.

Although the term learning difficulties is at this moment the terminology preferred by the Department of Education, South Africa (DoE 2006:23), the researcher will generally use the international term, namely learning disabilities.

1.7.6 Continuous Professional Learning (CPL)

In-service training, continuous professional development, staff development and practical training are sometimes used interchangeably. For the purpose of this study, professional development will be used as an umbrella term which includes all of the above-mentioned terms.

In contrast to CPL, in-service training is intended to provide intensive learning over a limited period and usually has a designated leader, or leaders, whose role it is not only to facilitate, but also to actively stimulate learning (Day 1999:131). It is timed to fit the needs of teachers in relation to their phase of experience, career development, demands of the system and lifelong learning cycle of system needs. The purpose of inset is the improvement of schools and the stimulation of professional development (Day 1999:132).

Just as the various domains of learning constitute the work of learners, professional 'learning' is an intrinsic part of the work of teachers (Blandford, 2000:xi). The term professional development describes the life-long activity where teachers are committed to continuously upgrade their professional knowledge and skills, as described by the term Continual Professional Development (CPD), or Continuous Professional Learning (CPL).

1.7.7 Open and Distance Learning (ODL)

Distance education describes education that happens where teacher and learner are separated throughout the length of the learning process (Carr, Fung & Chan 2002:166; Holmberg 1995:51). However, there is a dialogue between the learner and tutor by means of learning material and technical media (Carr *et al.* 2002:168). The concept of openness was encountered when the United Kingdom Open University (UKOU) came into being. The purpose of the UKOU was described as being open to people, places, methods and ideas (Lentell 2007:2).

Being aware of learners' personal circumstances and study needs, ODL institutions are enabled to offer appropriate courses and learning programmes and to provide suitable and adequate learner support. In this way the institution provides opportunities for learners to improve their chances of success.

ODL can be offered in formal, non-formal and informal contexts. Various case studies of programmes offered in a number of developing countries showed that when an institution takes the real needs of its learners into account, appropriate programmes are usually the result (Simonson, Schlosser & Hanson 1999:3). ODL can have a very important impact on education on the continent if it is offered in ways that are appropriate to the needs of the learners.

1.7.8 Primary school learners

For the purposes of this study, the researcher will include both the foundation and the intermediary learning phases in the programme. There will not be a strict delimitation for each phase as levels of functioning differ vastly among primary school learners in South Africa. The intended programme is generic and fundamental with the possibilities for adaptation to higher levels.

Neurologists have determined the critical ages for brain plasticity to be between six and twelve years (Diamond & Hopson 1998:7,57), therefore the prime time for musical and creative enrichment of learners is during that time.

1.7.9 Music for All

Music for All is the practical application of the research done in this study. It is a short course to be presented by the Centre of Community Training and Development, UNISA. The first draft of this course, or programme, consisted of 6 units which are used as stimuli, instead of a questionnaire, for the panel of experts who evaluated the course. The panelists could express their opinions by means of a review instrument, compiled as an open-ended questionnaire, and/or a two-page summary of their recommendations.

The content consists of authentic scenarios and information about the creative use of music to solve the problems in those scenarios. The aim is to teach teachers skills that can be used in the classroom to support learning-disabled learners and to optimally stimulate learning and the emotional welfare of all learners.

1.8 STRUCTURE OF THE THESIS

This study comprises the following chapters:

Chapter 1: Introduction and orientation to the study

This chapter provides the background to the research study, problem statement, delimitation of the problem, research aim, research design (which includes the philosophical foundation, research approach, literature study, Delphi method) and the definition of terms.

Chapter 2: Contextualisation of the study and literature review

This chapter will review the literature consulted concerning the creative use of music in the inclusive environment. The use of creativity and music in the educational context will be researched and applied in an inclusive environment, with learners who experience barriers to learning in mind. The topic is discussed from a broad constructivist perspective of learning within a critical theoretical paradigm.

The importance of the creative use of music as a tool for the teacher to reach specific aims and to be successful as teacher is discussed. A profile of the possible manifestations of

learners who experience learning impairments is used to illustrate how the teacher can use music creatively in an inclusive classroom.

Chapter 3: The creative use of music in the inclusive classroom to support learning-disabled learners

Teachers will provide authentic examples by describing scenarios illustrating the behaviour of learning disabled learners, after which they will suggest plans for support. The levels at which music could fit into the inclusive paradigm will be discussed, followed by the manifestations of learning disabilities. This will finally determine the practical examples of how music could be used creatively to support the learning-disabled learner in the inclusive classroom.

Chapter 4: Continuous professional learning and principles for an open and distance learning course

This chapter reviews literature concerned with best practices for continuous professional development, as well as principles for the generating of an Open and Distance Learning course. Principles for the development of programme are determined and decisions are made regarding the course content. A framework of the intended programme will be presented.

Chapter 5: Research design

A description of the research rationale, purpose, research design and method is given. The justification for using the Delphi method is discussed and the panel of experts is chosen to evaluate the programme.

Chapter 6: Research findings

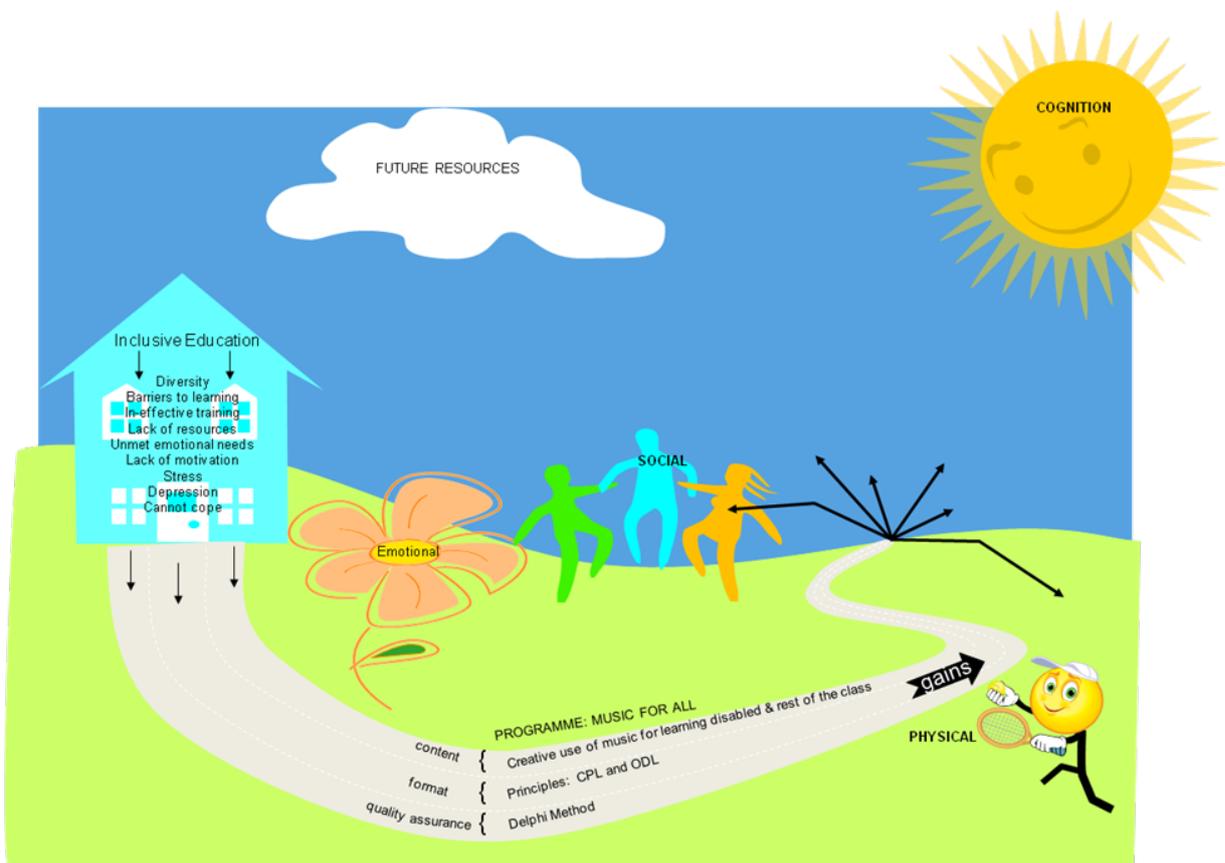
The findings based on the literature review and the opinions of the experts are presented. The rationale behind the implementation of certain suggestions against the background of the literature study is also indicated.

Chapter 7: Review of findings, conclusions and recommendations.

The findings and conclusions based on the literature review and the opinions of the experts are discussed in the light of the research question posed in Chapter 1. Findings from the different aspects of the research are compared in order to make meaningful conclusions. Finally, recommendations for the development of future programmes and research in the field are made.

1.9 CONCLUSION

Chapter 1 provided a background to the research reported in this thesis. The problem was presented and the limits of the study explained. The research questions that formed the basis of this study were explained. The method of investigation that was followed and the outline of the chapters in this thesis were also presented. Chapter 2 will now focus on a review of literature that seeks to explain creativity, music and the creative use of music in the classroom.



CHAPTER 2

THE NATURE OF CREATIVITY AND MUSIC

2.1 INTRODUCTION

In order to determine the content, style and content of the CPL programme *Music for all*, one needs to take an in-depth look at creativity and music. In this chapter the focus will therefore be on the nature of creativity, different categories of creativity and the creativity complex. Firstly, the value of creativity for the teacher and for learners with disabilities will be discussed, and the reason for combining creativity with music explained.

Secondly, the nature of music, its effect on human beings and the value of music in schools will be focused on. The ways in which music can be used by non-specialist teachers, in other words class teachers with no formal training in music, and the results that could be achieved are scrutinized to help determine the content of the programme. The concepts creativity and music are examined separately for the sake of clarity. (The following is a graphic representation of what Chapter 2 must achieve. It will serve to orientate the reader towards the important aims of the study as a whole)

Table 2.1 Aims of chapter 2

PROGRAMME: MUSIC FOR ALL		
Chapter 2	Content	Creative use of music
Chapter 3		Examples of music for Learning disabled learners
Chapter 4	Format	Principles of CPL and ODL
Chapter 5	Quality Assurance	Delphi Method

2.2 CREATIVITY

In order to answer the research question on the content and style in which the programme will be compiled, one needs to first analyse the concepts creativity and music. The research on creativity must determine HOW (the style) the content should be presented if music is to be used creatively to enhance learning, and which creative qualities the programme aims to develop in teachers. Attention is therefore given to the nature of creativity, categories of creativity, the creative person, the creative product, the creative process, the creative place and the value of creativity for teachers in their personal and professional lives. The personal and professional lives of teachers are interrelated. The categories of creativity, (Table 2.2) illustrate how the second level of creativity (professional creativity) is built on the first level (personal creativity).

2.2.1 The nature of creativity

Creativity is among the most complex of **human behaviours**. It seems to be influenced by a wide array of developmental, social and educational experiences and manifests itself in different ways and in a variety of domains (Charles & Runco 2001:417; Guilford 1950:444; Runco & Sakamoto 1999:62; Saracho 2002:431). **Truly creative work** requires such a complex combination of skills, traits and capacities that it could be called a *syndrome* (Charles & Runco 2001:417). Creativity it is a intricate process and creative people cannot be stereotyped. Wallace and Gruber (1989:5) stress the point that it is impossible to 'reduce the **creative process** to formula and to pigeonhole **creative people** into slots and types'.

It is apparent that definitions of creativity revolve around creative people, creative processes, creative products and human behaviour, which are all aspects of creativity that researchers take into account in their study of creativity. The following aspects of creativity are those about which there is relative consensus, even though differences do exist in the way they are viewed by different groups of researchers:

- **Everyone has inestimable gifts for being creative** (Barnes 2001:97; Beghetto 2005:255; Guilford 1950:444; Jamieson-Proctor & Burnett 2002:33; Leggo 2003:14; Lilly & Bramwell-Rejskind 2004:103). Morrison and Johnston (2003:148) define personal creativity as the process of becoming sensitive to, or aware of problems, deficiencies and gaps in knowledge for which there is no learned solution. Problem solving seems to be central to most definitions of creativity. However, researchers believe that creativity should be further qualified.
- Gardner (1993:xiii, 35) maintains that creativity is culturally specific when he defines a creative individual as ‘a person who regularly solves problems, fashions products, or defines new questions in a domain in a way that it is initially considered novel, but that ultimately becomes accepted in a **particular cultural setting**’. In other words, Gardner’s ideas correspond with those of Csikszentmihalyi (1996:23, 343), who acknowledges personal creativity in the lives of ordinary people. However, in order for it to be recognised by specialists, he adds that a further qualification of creativity should be that the creative act/product should be acknowledged in a **specific domain**. This immediately puts his definition in a **systemic category**, which means that it is no longer only personal. Csikszentmihalyi and researchers like Feldman (1999:170) and Lilly and Bramwell-Rejskind (2004:103) further maintain that a creative product should be judged by its power to transform the traditional constraints of reality and to yield a radically new perspective in a specific domain. Moreover, the specialists in the domain or field within which the novel idea or product should be included must recognise the value of that product.
- Some researchers (Csikszentmihalyi 1996:29; Fasko 2001:317,318) are of the opinion that creativity as a more tangible concept can be more effectively evaluated and defined if this is done in terms of the creative **product** (see 2.2.4.4).

The characteristics of the creative product that most researchers are comfortable with is that firstly, creativity involves bringing something into being that is **original** (Beghetto 2005:255; Lubart 1999:339; Ochse 1990:2). Originality could therefore be the most encompassing characteristic of the creative product. Bruner (in Lytton 1971:2) describes the novelty in creativity as having an ‘effective surprise’ element. What is interesting about the surprise effect of that novelty is that it is often not rare

or strange. Rather, it seems to have the quality of obviousness when it occurs, producing a shock of recognition, after which there is no longer astonishment.

Secondly, the product of creativity is **valuable and useful** (Beghetto 2005:255; Lubart 1999:339). The idea of appropriateness is described by Lytton (1971:2) as follows: 'it is not only right, it is *just* right' (for a specific purpose). The problem lies in the fact that there is often a continuum of appropriateness and subjectivity regarding usefulness. Runco and Chand (1995:256) express a different view regarding the usefulness of creativity, not only because of the problem that appropriateness is judged subjectively, but because they actually found an inverse relationship between appropriateness and originality. It may also be difficult to apply this criterion to the music of Mozart or any other form of art. Nevertheless the idea of appropriateness and usefulness could be effectively applied to problem solving by teachers in their particular personal and professional circumstances.

- Creators do have a high level of specific ability that relates to their particular level of achievement (Ochse 1990:111). The one definition of creativity that appears to be generally accepted is that **creativity is some sort of mental activity that involves certain kinds of thinking and problem-solving techniques, knowledge, personality traits and motivation** (Csikszentmihalyi 1996:23; Feldman 1999:169; Martindale 1999:137; Proctor & Burnett 2004:421,422). The dominant view here is that creative problem solving could include such behaviours as problem finding, convergent and divergent thinking, intuition and remote associations (Ochse 1990:111; Sternberg 1999:11).

Ochse (1990:1) remarks that an enormous body of findings has accumulated in this area, but little has been done to integrate it into a meaningful whole. Charles and Runco (2001:417) are of the opinion that the multidimensionality of creativity is the reason why there cannot be one single acceptable definition for creativity. It is a fact is creativity is a pluralistic concept (Gardner 1993:xiii) and means different things to different people. Considering the different levels of creativity that became apparent from the definitions, it might be meaningful to discuss certain categories of creativity before we attempt to formulate a working definition.

2.2.2 Categories of creativity

When one considers the categories of creativity, it becomes clear that the definitions discussed thus far are in fact definitions of different categories or stages of creativity. The following grid was compiled using information taken from research conducted by Barnes (2001:97); Beghetto (2005:255); Csikszentmihalyi (1996:28,29); Fasko (2001:317,318); Gardner (1999:117); Guilford (1950:444); Jamieson-Proctor and Burnett (2002:33); Leggo (2003:14); Lilly and Bramwell-Rejskind (2004:103); Maslow (1954:45,6); Morrison and Johnston 2003 (2003:148); Parker (2005:187) and Sawyer, John-Steiner, Moran, Sternberg, Feldman, Nakamura and Csikszentmihalyi (2003:21,338):

Table 2.2 CATEGORIES OF CREATIVITY

	Determining factor/Dynamo	Time span	Characteristics
Primary/ personal level	The person has a tendency towards self-actualisation.	Short	1) Acts, thinks and communicates in a creative way. 2) Remarkable for ability to adapt to almost any situation and make do with whatever is at hand to reach goals
Secondary/ professional level	When the young mind becomes focused and organised towards a known purpose	1) Ten years' hard work; the person must be an expert in the field 2) Such a person must recognise a problem and become motivated to solve it	Perceptions are fresh, shows a willingness to take risks, reveals a preference for multiple ideas, etc.

Unique	Exceptionally talented people born into an era where their work will be valued and recognised as a significant contribution to their domain	Personalities like Einstein, Edison worked exceptionally hard. So did Mozart, but he had no formal training and started composing as a child because he simply <i>knew</i> how to write music	They expose a driving absorption in their work, perseverance, task focus, etc.
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The categories of creativity that the programme *Music for All* aims to instil/develop in teachers are categories one and two. These categories aim to prompt teachers towards self-actualisation by introducing them to problems and assisting them to problem solve situations at home and at school, to make plans and make do with what is available to them in their own situations. Development towards creativity in the second category, namely professional creativity, will take longer than the achievement of personal creativity.

2.2.3 Operational definition of creativity

In the absence of any one general operational definition of creativity (Williams 2002:7), the working definition of this research considers creativity at the first level, which is **personal** creativity, as well as creativity on the second, namely the professional level. The most prevalent characteristic of creativity is originality. Most definitions highlight the ability of a creative person to identify and solve problems in his/her specific setting. Csikszentmihalyi's (1996:51) description, which states that 'what distinguishes creative people is their ability to adapt to changing circumstances', is appropriate in the context of this research. The working definition of creativity for the purpose of this study will therefore be as follows:

Creativity starts with the decision to be creative. In the case of teachers, this implies the will to identify problems in their personal and professional life worlds, which includes the intrinsic motivation to generate original solutions for those problems. In so doing, a

developing creative teacher will be able to adapt to changing situations. In the inclusive classroom the creative teacher will seek for original solutions towards effective support for learners who experience problems or impairments.

The implication of looking at creativity in this way is that creative quality can come to the fore in any small act and at many levels (Beghetto 2005:255). The focus of this study is to compile a programme (*Music for All*) based on the creative use of music in the inclusive classroom. It is hoped that this programme will help teachers and ultimately learners to be creative and, as a result, to improve and add value to their lives. This will become possible if they develop the ability to identify problems in their personal situations and are intrinsically motivated to work on those problems, find solutions and feel as if they have a certain measure of control over their lives. They must feel that they can make choices that could bring about positive change in some aspects of their lives.

2.2.4 The creativity complex

Instead of trying to come up with a precise definition of creativity, it would make sense to develop a broader understanding of the creativity complex (Sawyer *et al.* 2003:143). Traditionally researchers examined the four 'classic Ps' of creativity, namely the person, product, process and press (or place) for that purpose (see Feather 2003:9). A discussion of the creative person, the creative product, the creative process and the creative press (place) follows with the purpose of examining the possible application of certain factors in the inclusive classroom.

2.2.4.1 The creative person

Proctor and Burnett (2004:421) name Guilford as was one of the earliest researchers to emphasise the importance of the creative personality. Maslow's description of a self-actualising person strongly relates to the creative personality in the following ways: apart from other characteristics of self-actualising people, such as the tendency to be creative (Maslow 1954:223), they are generally not much concerned about themselves, but tend to be problem centred (Maslow 1954:211,212). Typically they have a mission in life, some

problem outside themselves that enlists much of their energies (Maslow 1954:211) and an unhostile sense of humour (Maslow 1954:222). Numerous other researchers have since defined the characteristics of creative people, generally displaying a high level of consistency.

Creative personalities cope well with life: they are imaginative, **flexible**, non-stereotype and non-authoritarian rather than rigid and conforming (Isenberg & Jalongo 2006:30; Ochse 1990:125; Proctor & Burnett 2004:423; Runco & Chand 1995:103). One of the components of flexibility or psychological resilience is the ability to overcome adversity (Brink 2003:3). Resilient people have a proactive approach to problem solving and will therefore be able to take charge of their own life situations. The result is that they know they have some control over what happens in their lives. Resilience implicates problem solving as an outflow of creativity, where creativity can help a person to redefine and cope with a problem.

The behaviour of creative personalities is described as **original** because it does not adhere to social prescriptions or emulate the behaviours of others (Feather 2003:15; Proctor & Burnett 2004:424; Runco & Chand 1995:103). This type of functioning is considered good or valuable in the sense that it involves healthy, adaptive, authentic, spontaneous responses, rather than rigid, ritual or defensive reactions to the various demands of daily life. The impact on children is clear: creativity prepares them for life and improves self-esteem, motivation and achievement (Parker 2005:186).

The **fluency** factor also plays a role in creative talent (Guilford 1950:452). Fluency is the ability to envisage and communicate a breadth of ideas on a single topic (Guilford 1950:452; Lilly & Bramwell-Rejskind 2004:103; Williams 2002:8). The person who is capable of producing a large number of ideas per unit of time, is perhaps more likely to have significant ideas. Other fluency factors, for instance verbal and nonverbal talents, may also be present.

Other research on creativity confirmed aspects such as perseverance (Ocshe 1990:131), being task-focused, disciplined and showing commitment to work (Feather 2003:17); imaginativeness and the ability to internally visualise a project (Sawyer *et al.* 2003:76), the ability to tolerate ambiguity (Ochse 1990:125; Proctor & Burnett 2004 423; Runco & Chand

1995:103 and Sternberg 1988:143), an aesthetic ability (Feather 2003:15; Gallagher 2004:17; Proctor & Burnett 2004:424) and the possession of a childlike wonder at the 'beauty' of solved problems (Morrison & Johnston 2003:152). Although characteristics that are applicable to people in general will also apply to teachers, we will now look at research focusing specifically on creative teachers.

2.2.4.2 The creative product

Plucker and Renzulli (1999:44) argued that the starting point, the bedrock of all studies of creativity, is an analysis of creative products, aimed specifically at determining what it is that makes creative products different from more mundane products. The creative product/idea is one that is both original and appropriate for the situation in which it occurs. It would seem that creative products very often consist of novel combinations of pre-existing mental elements (Csikszentmihalyi 1996:28; Guilford 1950:452; Martindale 1999:137; Ochse 1990:2; Sawyer *et al.* 2003:20). However, creativity does not deal with the repeatable or predictable, like normal science, but with the unique and unrepeatable.

Humour affords the creative person the ability to take fresh and playful approaches to problems, and many creations come about as the result of 'fooling around' with ideas and playing with possibilities. Creative people also see relations more easily than others. They are able to make 'mental leaps' from one idea to the other (Proctor & Burnett 2004:423, 4). Humour is also an example of a creative product that consists of novel combinations of pre-existing ideas and could therefore be a valuable tool in the classroom because of the relaxed atmosphere it creates.

Creative products can occur in any **domain**, including the virtual arts, literature, music, business, science, education and everyday life (Lubart 1999:339), and may include behaviours, performances, ideas, things and all other kinds of outputs (Feather 2003:10). The most frequently discussed 'products' of creative thought in the psychological literature are solutions to problems, responses on creativity tests and explanations for phenomena (Feather 2003:11).

2.2.4.3 *The creative process*

The most widely quoted analyses of the creative process were put forward by Helmholtz and by Graham Wallas in 1896 and 1926 respectively (Martindale 1999:138; Sawyer *et al.* 2003:23). According to these analyses the following stages can be distinguished: preparation; incubation; illumination and elaboration/verification (Martindale 1999:138; Sawyer *et al.* 2003:23). Csikszentmihalyi (1996:80) included **evaluation** as a fourth step.

The **preparation** is the stage during which the problem is investigated from a variety of perspectives. These perspectives involve thinking about or learning the mental elements that are considered to be relevant to the problem at hand. A solution is not reached at this stage, except if the problem is trivial (Martindale 1999:138). The problem is usually set aside to '**incubate**'. During this stage the individual is not consciously thinking about the problem; rather, it is simmering below the level of consciousness (Sawyer *et al.* 2003:23). This stage is the least understood, but also the most essential. Following this process of incubation, the solution often suddenly becomes apparent – this is the stage of **illumination**, inspiration or creative insight (Sawyer *et al.* 2003:26). According to Sawyer *et al.* (2003:26) a creative insight results in the mind of the creator when a set of more basic elements, none of them novel, is brought together to form a more complex cognitive structure. This stage is not confined to the 'flash of insight', but includes the psychological events that immediately precede and accompany its appearance. Csikszentmihalyi (1996:80) includes **evaluation** here, a step when the person must decide whether the insight is valuable and worth pursuing. This perspective is often the most emotionally trying part of the process, when one feels most uncertain and insecure. This step is a period of self-criticism and soul-searching. Finally, during the stage of **elaboration**, the new idea is subjected to logical scrutiny and put into its final form (Martindale 1999:138).

Although this division has since been contended (the accounts of creative process differ in terms of number of stages thought to be involved and the order in which these stages occur), the process itself is essentially the same. In fact, if one looks deeply enough, the process identified by Wallas can be seen to be the basis of almost all accounts of the creative process in existence today (Egan & Nadaner 1988:45). The main idea of looking at creativity in this way is that it alerts us to the fact that creativity is a process, not an event (Parker 2005:191).

2.2.4.4 *The creative press (place)*

Sawyer *et al.* (2003:97) maintain that human beings respond to their environments either actively or passively, and that an active response is more likely in those who have had the opportunity to develop a sense of self-worth through a supportive environment, particularly in the formative years. The same applies to a creative environment: a nurturing, creative environment is one that is supportive of the individual, not by dishing out false praise, but honest support that dignifies the individual. It allows for mistakes, encourages experimentation, openness and risk taking, and provides a climate that enables learners to explore their own potential (Saracho 2002:431). Teachers would, for instance, need support when they study (see 3.3.4). In turn, however, they must provide a supportive classroom climate for their learners. A climate that supports creativity takes into consideration three major factors, namely the physical, mental and emotional climates.

2.2.5 The value of creativity

In order to be creative in their professional lives, teachers need to understand creative activities and realise that teaching for creativity requires that teachers enrich and enlarge both their own and their learners' capacity for creative thought and artistic expression (Isenberg & Jalongo 2006:28). The outcomes for the creative use of music do not mean that the teacher must have a good voice, or be able to play a music instrument. The teacher should set the creativity of the learner free and support conditions for learners to create. It is imperative that the teacher also be a good role model of creativity.

2.2.5.1 *The value of creativity for the teacher*

Dimensions of creativity, such as the characteristics of creative people which can be developed in teachers (see 2.2.4.1), can be valuable for teachers in the classroom situation for the following reasons:

Fluent teachers are the ones who are more capable of producing many ideas and solutions to educational problems in general. During teaching, fluent teachers can present problems that are expansive, allow for a variety of responses, have no fixed answers or stereotypes and encourage learners' free thinking. The fluent teacher fosters an openness and respect for unusual questions and ideas, an understanding that all ideas have value and an opportunity to learn and perform without constant threat of evaluation (Gunseli 2006:71). Fluent teachers can evoke more ideas in their learners' minds and lead them to use their divergent thinking skills.

Originality refers to putting together new and usable ideas that others have not thought about. **Original teachers** can initiate new actions in finding solutions to effectively implement inclusive education, or helping a variety of learners in the same class. They can create new alternatives to everyday problems, generate new questions to problems ignored and produce new and better ways of thinking. Original teachers support the development of curiosity and sense of wonder; the growth of imaginative powers and original thinking experiences – the cultivation of creativity that produces effective surprise. Imaginative or resourceful teachers use positive motivation to encourage learners' responses and to increase their ability to suggest unusual uses for common objects (Gunseli 2006:72).

Qualities like flexibility help teachers to produce more and better ideas in different domains. **Flexible teachers** can play important roles in raising the quality of education in developing countries and under-resourced rural areas by generating new ideas and concepts to assist education and by readily adapting to innovations in the education system. In the classroom, flexible teachers are those teachers who can connect independent and even apparently irrelevant ideas and variables when handling a problem (Gunseli 2006:71). Teachers can model thinking to learners in generating ideas in eclectic and interdisciplinary ways. Flexible teachers may act as role models for learners to enhance adaptability to innovations and nourish curiosity in their classrooms. Overall, they may show their learners not to fear novelty and to reach a useful solution by associating existing mental schemes to the unknown. Learner-centred teachers appear to adapt to individual differences, to vary materials and activities and to attain improved flexibility in learner thinking. Teacher flexibility and acceptance of learners are the crucial determinants of a classroom atmosphere that promotes creativity (Gunseli 2006:71). The flexible teacher

attempts to set up problem situations for the learners for which there is no single correct response, so that learners can independently try out different solutions.

Creative teachers are generally devoted to improving their own practice; they model self-confidence through taking risks, have faith in themselves and their students, and accept difference and diversity (Lilly & Bramwell-Rejskind 2004:117, 8).

2.2.5.2 The benefit of creativity for teachers in their professional lives

The benefits of creativity, as researched by Csikszentmihalyi (1990:49); Fleith (2000: 375); Floden, Goertz and O'Day (1995:20); Florida (2002:xxvii); Gunseli (2006:65,71); Hoy and Spero (2005:344); Hunsaker (2005:292); Parker (2005:190); Rosseau , Drapeau, Lacroix, Bagilishya and Heusch (2005:180); Williams 2002:7, and Young (2001:109) can be summarised as follows:

Creativity

- is a everyday source of happiness and fulfilment;
- is one of the highest priorities of contemporary education;
- appears to have replaced intelligence as the major contributor to professional success;
- cultivates tolerance for ambiguity, which controls stress;
- liberates a person from the conditioned responses and usual choices;
- fosters problem-solving skills, which help people to handle matters more efficiently;
- provides for the healthy expression of emotions and conflict resolution;
- prevents emotional and behavioural problems by enhancing the self-esteem of participants;
- helps learners to attain the critical outcomes in of creative and critical thinking;
- helps teachers to develop creative skills in learners to better equip them for the future;
- is the ultimate economic resource, as it raises productivity and living standards;
- contributes positively towards teachers' feelings of efficacy and self-esteem;

- confirms its value in the inclusive environment because of the distinct connection between intellectual skills and healthy emotions;
- activates both hemispheres of the brain;
- helps people to operate simultaneously on several cognitive levels, which is necessary for transferable learning; and
- engages each person's individual learning styles and intelligences in any specific situation.

Apart from the value of creativity for teachers in the classroom, creativity could also be used effectively in the teaching of learners who experience barriers to learning.

2.2.6 The value of creativity for the learner with learning disabilities

Many teachers feel overwhelmed by having to teach learners with mixed abilities (see 1.1). If teachers could learn creative skills, they would be able to handle situations in the classroom more effectively and would also be able to impart those skills to their learners. Current thinking (Kemple & Nissenberg 2000:67) emphasises that all children, including those with barriers to learning, have the potential for creativity, but it seems as if education is not geared towards fostering the necessary skills.

Existing evidence that creative expression can prevent emotional and behavioural problems at school by enhancing the self-esteem of participants to the programme should serve as important motivation for the use of creativity in schools (Fleith 2002: 375; Rosseau *et al*, 2005:180). Apart from improved self-esteem, the healthy expression of emotions, problem solving and conflict resolution are the most frequently mentioned benefits of therapy methods based on creative expression (Rosseau *et al*. 2005:180). There is, therefore, a distinct connection between creativity, intellectual skills and healthy emotions, which confirms the value of creativity education in an inclusive environment for both teachers and learners.

New paradigms and mechanisms should be available to teachers to nurture creativity in the classroom (Tan 2004:23). In rural areas where resources are limited, teachers should

tap into their own resources to invent instructional tools that will enhance talents, strengths and motivation among all learners in the classroom (Blumen-Pardo 2002:48). At this point it is necessary to consider the value of the combination of creativity with music.

2.2.7 The importance of creativity in music

Creativity requires that a person operate on several cognitive levels simultaneously, for example using skills and knowledge, the imagination and reflection – the very characteristics that, according to many researchers, are necessary for transferable learning (Barnes 2001:96). The use of creativity in any subject is likely to engage different aspects, such as individual learning styles, different intelligences and imagination at the same time (Barnes 2001:97). Barnes quotes studies that show that when the brain operates at several levels at once, an optimum level for understanding is achieved. Creative music activities involve the bringing together of those parts of the brain that handle image, intellect, imagination, sound, metaphor, movement, emotion and reflection in a challenging process. By encouraging creative music making in schools, we are providing the challenge without the crushing and educationally limiting effects of stress, which can result from embarrassment, competition or feelings of inadequacy.

Certain skills are developed by both music and creativity. If the principle of holism is taken into account, the creative use of music would probably more than double the effect that is achieved when only creativity or only music is used. The creative use of music

- gives pleasure;
- enhances the healthy expression of emotions;
- controls stress;
- elicits self-actualising behaviours;
- activates both hemispheres of the brain;
- helps people operate on several cognitive levels simultaneously, and
- engages each person's individual learning style and intelligence in any specific situation.

However, music has strong attributes of its own. On the basis of the discussion of the importance of creativity in music, the researcher is of the opinion that music is the sphere within which creativity can develop optimally.

2.3 MUSIC

Music can create an atmosphere of relaxation and emotional stability which is essential for the effective fostering of creative problem-solving acts (see 2.3.2.2; 2.3.2.3). Music not only provides the optimal atmosphere for the development of creativity, but is also a natural part of human existence (2.3.1). It is a powerful way of communication (2.3.1). When making music in the many different possible ways, the whole person is involved. Furthermore, music actively influences cognitive development (2.3.2.2). In order to understand the benefits of music, the nature of music needs to be examined.

2.3.1 The nature of music

Though many people who love music would declare that they know nothing about music, music is an **inherent part of human existence**. It is as much a part of human beings as any other natural behaviour such as speaking (Barnes 2001:97; Cox 2001:17; Hair 1997:27; Hallam 2001:61; Uptis 2003:24;), playing, running and jumping (Hodges 2000:42). Musical skills develop naturally (Gardner 1999:9; Hair 1997:35) and therefore do not necessarily have to be taught formally (Gardner 1989:73). Researchers (Barnes 2001:97; Bjorkfold 1989:xiii) maintain that if music is neglected in the lives of human beings, an important part of human existence is ignored.

Music is also a **universal phenomenon** (Macdonald, Hargreaves & Miell 2002:1; Hodges 2000:42; Whittle 2000:17). It has existed in the lives of human beings since the earliest of times, and people of all ages enjoy it – it has a calming effect on people of all ages, from babies to senior citizens. Musical experiences are furthermore a part of all nations and cultures (Aiello & Sloboda 1994:41). In this regard, Bjorkvold (1992:89) refers to research that found that the people of St Petersburg experience the same need to express

themselves through spontaneous song and movement as people in Norway and America. Spaeth (1972:72) indicates that music from different parts of the world shows universal characteristics. This can be illustrated by comparing the national anthems of countries from all over the world, such as the *Stars and Stripes* (America), *La Marseillaise* (France), *Nkosi sikeleli i'Africa* (South Africa), *God save the Queen* (Britain) and *Der Wacht am Rhein* (Germany). From the first few notes, strong similarities are evident. Among other things, the anthems are rhythmically very strong and are spread over at least an octave (eight notes). There is, in other words, evidence of universal rhythms and melodic motives. This small set of recurring pitch-time relations that, through cultural evolution, have come to be shared by all of our common folk and pop tunes, and by and large by all of the art music from at least Bach to Brahms, is termed *simples* by Bamberger (1991:11).

Mothers' speech to infants, 'motherese', or 'infant-directed speech', is also similar across all languages (McDonald, Fischer & Helzer 2002:23). The same characteristics can be seen in the spontaneous music of children. Music for children use musical formulas that are similar to those that children communicate with, for example, the 'call tune', with which somebody is called through two tones (do me), and the 'tease melody', as in 'you - can - not - catch - me' (so me la so me). Modest Mussourgsky (1839-1881), who became known for his ability to communicate with children through music, used the above-mentioned patterns (*simples*) as keys in his melodic patterns in his 'song cycle' *The Nursery* (1860). Lullabies are also recognisable as lullabies all over the world, despite the diversity of musical styles used across cultures (Hodges 2000:41). Not only is there a distinct genre for infants; there is also a distinct way of singing to them. Hodges (2000:42) believes that the structure of music across cultures owes much to the nature of the human auditory system. In other words, the music of any culture is not merely a matter of convention; nature makes important contributions.

Another culturally universal for music is the use of rhyme and rhythm, which are exploited and enjoyed by young children in both literate Western and traditional cultures. Children often (ab)use it in rhyming nicknames, riddles and games (Egan 1997:56).

Music is a **powerful way of communicating** (Campbell, Campbell & Dickenson 1999:151; Hallam 2001:61; Macdonald *et al.* 2002:1; Schaberg 1990:62). In this regard, Luban-Plozza, Ponti and Dickhaut (1988:98) quote the composer Richard Wagner: 'There where

the power of the word ends, the power of music begins.’ The truth of these words is proven by the fact that people who suffer from serious physical or mental illness and with whom it has become impossible to communicate verbally, do indeed react to music (Benenson 1997:30–37; Macdonald *et al.* 2002:1).

Seen in this context, it is evident that music is one of the **highest forms of aesthetical expression**. The element of emotional and/or intellectual contact between artist and fellow human beings is clear, especially if one considers Fétis’ (1985:4) definition of music as ‘the art of producing emotions by the combination of sounds’.

Furthermore, music has a **clear effect on almost all aspects of human life**, such as the physiological, emotional, cognitive and social aspects (Hallam 2001:61). Although this influence is not easily measured or defined, it can easily be proven. Why else would there be so many radio stations devoted to playing music 24 hours a day? Since this is such an important issue, it will be discussed more thoroughly later in this chapter under a separate heading (see 2.3.2 for discussion).

Music can be **practiced and experienced in a number of ways**, such as through singing, listening, moving or performing instrumental improvisations along with it. The nature of this participation can vary from spontaneous and uncomplicated to highly sophisticated. However, a specific characteristic of music is that whatever the form of participation, a person participates not through his/her voice, ears or body, but **the person as a whole is involved** (Hallam 2001:61; Zaaiman 2003:16).

For various reasons, music, like creativity, is a difficult term to define. The following varying definitions illustrate this fact:

The Verklarende Handwoordeboek van die Afrikaanse Taal (Odendal 1994:681) defines music as a form of art, beauty, and an expression of emotions: the art of combining vocal or instrumental sounds (or both) to produce beauty of form, harmony, and expression of emotion. Tolstoi (Exley 1991) also emphasised the emotional component of music when he referred to it as the ‘shorthand of emotion’.

The philosopher Arthur Schopenhauer (1788 - 1860) had similar ideas regarding the characteristics of music (Exley 1991). He specifically emphasised the aesthetic aspect: ‘... music stands quite alone. It is cut off from all the other arts ...’ and continued to say that music not only expresses emotions, but in abstract terms it becomes the quintessence of what the music expresses. Therefore music is art, but at the same time it is also a great deal more than art.

The above definition from *the Concise Oxford Dictionary* (Allen 1990) also refers to music as an expression in sound. Sounds are expressed through melodic and harmonic combinations by either voices or instruments, or both. Edgard Varese’s (Ter Burg 1985:19) brief definition, ‘muziek is georganiseerd geluid’, also falls into this category. However, he does not believe that the combination of sounds necessarily have to sound harmonic or melodic to the average person. For example, his *Poeme electronique*, composed for the Expo 1958 in Brussels, is a composition for 100 metronomes which start together, but are set at different paces and end after each other in a very exciting way. Ter Burg (1985:20) emphasises the time aspect of music, which he describes as a structured acoustic performance in time and with time.

Revers, Harrer and Simon (1974:10, 34) attach particular importance to the emotional ‘relationship’ between humans and music, and to the fact that a specific atmosphere can be created through music. According to them, the power of music lies in its communicative character, which is so effective that it can provide contact where all other forms of communication have become ineffective. Heinrich Heine (Exley 1991) stated that ‘Where words leave off, music begins’. Nordoff and Robbins (1979:59) agree with this statement and maintain that the areas of the brain that react to music are virtually indestructible.

An important characteristic of music is the joy that it brings. Hector Berlioz (1803 - 1869) said: ‘When I hear a piece of music, I feel a delicious pleasure in which reason has no part’ (Exley 1991).

Finally, music is a form of art which is experienced mainly auditively and is uniquely connected to our ability to move and control our bodies. This characteristic of music immediately brings us closer to the therapeutic and practical value that music has for human beings.

The following quotation from Lucien Price (Exley 1991) combines a variety of the qualities of music and brings us to an important question, namely the question regarding the essence music:

No one knows what music is. It is performed, listened to, composed and talked about; but its essential reality is as little understood as that of its first cousin, electricity. We know that it detaches the understanding, enabling thoughts to run inward upon themselves and clarify; we know that it releases the human spirit into some solitude of meditation where the creative process can freely act; we know that it can soothe pain, relieve anxiety, comfort distress, exhilarate health, confirm courage, inspire clear and bold thinking, ennoble the will, refine taste, uplift the heart, stimulate intellect, and do many other interesting and beautiful things. And yet, when all is said and done, no one knows what music is. Perhaps the explanation is that music is the very stuff of creation itself.

The wide variety of definitions discussed above, leads us to the conclusion that any particular definition is usually determined by the function of music in a specific situation. For the purpose of this study, music can be defined as a spontaneous form of art and a creative expression for humankind, in which people can take part in different ways. Music can influence the lives of people in different ways, or can influence every aspect of a person's life.

2.3.2 The effect of music on humans

The effect music has on human beings can be distinguished on the physiological, emotional, cognitive and social dimensions.

2.3.2.1 *Physiological*

Various researchers (Alvin 1991: 101; Cheek, Bradley, Parr & Lan 2003:204; Lingerman 1990:10, 20) claim that music could be used as a **way of healing people**, specifically burnt-out teachers (Cheek *et al.* 2003:204). Van Niekerk (2002:55) reports that music, even if it cannot heal a person, can at least lessen that person's acute perception of pain, because music can **stimulate the release of pain-controlling hormones such as endorphins** and can enhance normal physiological rhythmicity (Hodges 2000:42). Lingerman (1990:7) states that music can either **restore or increase physical energy**.

Savill (1923:155) argued as early as in 1923 that the opposite can also be achieved through music, in other words, that it can **combat restlessness and sleeplessness**. This was confirmed by more recent studies (Van Niekerk 2002:14,15). In addition Lingerman (1990:31-41) found that music can be used effectively to treat hyperactivity and improve self-control. Alvin (1991:99) refers to experiments that showed that different tones can either increase or decrease tension, depending on the atmosphere of the music itself.

2.3.2.2 *Emotional*

Music has a crucial role to play in human existence and has a very **powerful impact on our emotions** in ways of we may not be consciously aware (Hallam 2001:61; Whittle 2000:17).

Music can be experienced in many different ways. What might be perceived as a single activity, like listening, may involve a range of different processes. Listening can, for instance, be experienced holistically with the person deriving pleasure from the emotion engendered. It may also be undertaken at an intellectual level when identifying structure, harmony, timbre or dynamics. Kosslyn and Koenig (1995:472,3) point to the important emotional foundation of knowledge: 'There has been long evidence that **emotion affects various aspects of cognition**, such as the memory of a happy event, which is often easier recalled when happy than when sad.' It is therefore evident that by stabilising a person emotionally through music, creating a peaceful atmosphere and giving the person

new strength and courage (Lingerman 1990:10, 37; Macdonald *et al.* 2002:22), optimal cognitive operation is encouraged (Diamantes, Young & McBee 2002:117).

All people, even infants of between four and six months, can show pleasure when a well-known song is played (Hair 1997:30). Emotions should not be suppressed. If suppressed, emotions such as anger or fear may lead to ulcers, shingles, arthritis and other ailments (Lingerman 1990:29). Music enables us to either **replace negative emotions with positive ones, or to express a wide spectrum of feelings** (Hallam 2001:61). Ferreira and Möller (2004:31) refer to various examples where stress, depression, fear and exhaustion, which are all part of the situation mentioned in 1.2, have been diminished through the use of music. In schools musical activities can be adapted to allow everyone to feel competent and successful, thus providing a positive way **to cultivate a healthy self-image in learners** (Isenberg & Jalongo 2001:151).

2.3.2.3 Cognitive

Cognition includes aspects such as perception, memory, language and concentration, which play an important role in the development of cognitive abilities (Bamberger 1991:8; Colwell & Murlless 2002:14; Grandin, Peterson & Shaw 1998:11). Diamond and Hopson (1998:20-25) explain how music can be used to exercise the human brain. Bamberger (1991:13,14) draws a parallel between the musical development of children (their ability to process and categorise musical information) and the cognitive developmental stages of Piaget. Musical and cognitive development influence each other mutually (Rauscher & Zupan 2000:217).

Various authors (Giguere 2005:37; Plummeridge 2001:21) promote the idea of using art to promote thinking and learning. In *Art as Experience* (1958) John Dewey characterises art as a mode of symbolic thinking. Howard Gardner, noted author of the theory of multiple intelligences, maintains that abstraction is the ultimate act of intelligence (1983:5). Music is filled with symbolic abstractions, from notation to the symbolic representation of emotions through music. Referring to its abstract qualities, Leibnitz (Vygotsky & Luria 1993:122) called music 'unconscious mathematics.'

Our knowledge of the world around us is the result of the interaction between what we experience through our senses (**perception**) and the effective cognitive processing of the perceived data. Based on research, Rauscher (1999:35) and Grandin *et al.* (1998:11) predicted that music training could enhance spatial-temporal task performance, which is necessary for proportional reasoning used in mathematics and many scientific endeavours (Rauscher 1999:37).

Memory can be enhanced through music (Mora 2000:150). The principle of using both hemispheres of the brain is applicable (Hodges 2000:41). This principle is used effectively in business by making use of jingles to advertise certain goods. By listening to classical music analytically, with the purpose of recognizing and remembering certain themes, memory and auditory discrimination can be improved in a way that is both effective and pleasant.

Various researchers have already proved the positive influence of classical music on people's ability to **concentrate, pay attention and learn** (Hallam, Price & Katsarou 2002:119; Lingerman 1990:14,41; Smith & Davidson 1991:4). This happens when classical music is used as background music for students. Brain scans illustrate that when baroque and classical music is played, more areas in the brain are activated (Storr 1992:24; also see 2.2.5.2), which improves both productivity and creativity (Lingerman 1990: 11, 14).

Since the four most important characteristics of music, namely pitch, timbre, intensity and rhythm, are also found in the spoken language, music is ideal for preparing and developing children's hearing, voice and body, stimulating listening skills and integrating and using **language** (Storr 1992:35). Research results show that a second language is taught more effectively through the use of right hemisphere strategies, such as rhythmic rhymes, music, song and dancing techniques that involve visual-spatial skills (Alexander-Smith 2004:58,9). Ferreira and Moller (2004:32) view music as a non-verbal way of expression which stimulates a child's urge to listen and learn, as well as the ability and urge to express him/herself. Alexander-Smith (2004:59) expresses a similar view when she says that 'music and poetry share a mutual lyricism that evokes adolescents' emotions and enlightens their minds'. In other words, music can be an aid in the learning and understanding of languages.

Evidence of the enhancing effect of music on **mathematics** is abundant. (Brinkworth & Scott 1999:2-3; Fernandez 1999:90-95; Florence 1999:12; Grandin et al 1998:11; Houser 2002:16; Ivanov & Geake 2003:405; Johnson & Edelson 2003:474; Rauscher & Zupan 2000:215; Ruttkay 1997:36, 7; Shilling 2002:179; Stevens, Sharp & Nelson 2001:376). In South Africa, music can be used fruitfully to aid the learning of mathematics and also to stimulate positive social relations, as will be discussed next.

2.3.2.4 Social

Music is said to have the ability to influence the social aspects of people's lives (Camilleri 2002:263; Plummeridge 2001:23). In certain circumstances musical experiences can strengthen friendships and create a harmonic atmosphere of co-operation (Isenberg & Jalongo 2006:152; Lingerman 1990:14, 30; McDonald, Miell & Morgan 2000:406; Whittle 2000:17). It plays an important role in creating group identity (Söderman & Folkestad 2002:151). At athletic meetings, for example, singing can create a group atmosphere and a feeling of solidarity and goodwill (Storr 1992:7).

Musical activities in a group context can create opportunities to experience joy together, to taking the initiative, accept responsibility, to get to know and understand each other better and to acquire social skills, as well as creating healthy human relationships (Colwell & Murless 2002:18; Diamantes, Young & McBee 2002:116; James 2000:36; McDonald *et al.* 2000:407; Savill 1923:159). According to Morgan (Hugo 1987:82), music can, generally speaking, contribute towards '...a remarkable example of true democracy wherein both the individual and society have due regard for each other'. Folk music lends itself excellently to being practiced in an informal setting in a group, whereas classical music is more appropriate for performing in a more formal setting, or as background music. Listening to and discussion about pop music can be the ideal way of letting young people experience a feeling of group identity and encouraging discussion in a natural way (Alexander-Smith 2004:58-63).

The physiological, emotional, cognitive and social effects of music on man have been discussed. A discussion of the value of music in schools with regard to multiple intelligences and musical intelligence will now follow.

2.3.3 The value of music in schools

There are different views regarding the role of music in modern classes. One is that a part of every school day should be devoted to elective musical experiences. The value of music in education is emphasised in the White Paper on Education and Training (Republic of South Africa 1995:22):

Education in the arts, and the opportunity to learn, participate and excel in dance, music, theatre, art and craft must become increasingly available to all communities on an equitable basis, drawing on and sharing the rich traditions of our varied cultural heritage and contemporary practice.

Arts and culture form an integral part of life, embracing the spiritual, material, intellectual and emotional aspects of human society. Music, as integral part of the arts and culture learning area, is not limited to training in music, but includes the principle of the integration of knowledge and skills and an interdisciplinary approach between learning areas. However, music is also acknowledged as one of the independent multiple intelligences, and learning through the different intelligences is encouraged by the NCS. If musical intelligence is a valid concept, it stands apart from other art forms and should not be grouped with the arts and culture strain. With the focus on multiple intelligences, the education profession will hopefully design a framework for an expanded educational programme in which music plays an enhanced role in the education of all students (Colwell & Davidson 1996:58). It seems as if not much has done in terms of the practical application of the theory.

2.3.3.1 *Multiple intelligences*

Researchers started realising that the definition of intelligence was seriously inadequate, and that intelligence (IQ) tests were consequently not reliable. Gardner discarded the idea that intelligence was a single quantifiable concept (Campbell, Campbell & Dickenson 1999:xv) and proposed the theory of multiple intelligences in 1983 (Sawyer *et al.* 2003:141). Traditionally intelligence tests measured learners' abilities in the language and numerical areas in standardised testing and schools concentrated on knowledge learning and number training.

Gardner established the existence of different intelligences or talents, which led to the realisation that concepts should be taught in a variety of ways that call on the many types of intelligences. His definition of intelligence (Campbell *et al.* 1999:xv) includes many abilities:

- The ability to solve problems encountered in real life
- The ability to generate new problems to solve
- The ability to create something or offer a service that is valued within one culture.

It is essential to remember that the definition of intelligence highlights *problem solving* and *product making* as the most important elements. This suggests that intelligence is more than what we can observe in a person's action and speech. Great importance appears to be attached to the decision-making processes that occur before the actions take place (Chapman 1993:2).

In his initial text, Howard Gardner proposed seven specific intelligences, which included musical intelligence (Gardner 1999:41). Another form of intelligence, namely the Naturalist intelligence, has since been added. Intelligence is a pluralistic concept. Humans have evolved over millions of years into different kinds of problem solvers and problem finders. Gardner (1987:270) claims that one has to understand this process if one wants to understand how people learn, develop and solve problems.

2.3.3.2 Musical intelligence

Musical intelligence has a special quality that distinguishes it from all the other forms of intelligence and relates to the other six intelligences in the following ways (Stollery & McPhee 2002:97-99):

- 1 *Language*. The connection between language and music is evident: the history of song supports this fact. There are many similarities between music and language (Mora 2000:147; Philpott 2001a:33), and research in psychological and linguistic studies has revealed how the interaction between music and language is activated at a very early stage (Mora 2000:148; Sacks 2007:x). For instance, both use vocal

and auditory sound processes as their natural medium; both involve the use of notational systems; both share some universality of form across cultures and both can be examined in terms of phonetic, syntactic and semantic structure. Research also shows the correlations between rhythm performance and reading and spelling. Willats and Douglas (Stollery & McBee 2002:97) found that a six-month programme of music to develop auditory, visual and motor skills in children showed significantly improved reading competency, compared with children in a control group who participated in discussion skills programme. This finding is corroborated by Fisher (2001:46,7).

Another important perspective for teachers is the one where musical speech means being able to produce and give voice to musical ideas (Philpott 2001a:44). Teachers should realise that the musical language is a metaphorical process where one aspect is seen in terms of another (Sacks 2007:x). Music is then used for understanding, which requires a cognitive act of interpretation, as well as a way of feeling and knowing (Philpott 2001a:43). Kwami (2001:144) confirms the idea that for the majority of the world musical literacy does not mean written notation, but the ability to communicate with others through music.

- 2 *Numbers and Mathematics.* The obvious connection between music and mathematics is supported by numerous research findings (Brinkworth & Scott 1999:2-3; Fernandez 1999:90-95; Florence 1999:12; Grandin *et al.* 1998:11; Greeley & Offerman 1998:192; Houser 2002:16; Johnson & Edelson 2003:474; Rauscher & Zupan 2000; Ruttkay 1997:36, 7; Shilling 2002:179; Stevens, Sharp & Nelson 2001:376). An investigation of spatial-temporal reasoning showed that learners with keyboard training performed better in numbers and mathematics after the training than a control group with computer training. Spatial awareness - a cornerstone in mathematics - is best understood very early in life by moving the body through space (Sillick 1996:80). The process of making a movement plan, thinking about props, deciding what movements will be used, acting out the plan and talking about it afterwards, develops a cognitive-motor link. This combines thought, action and language in a movement experience (Sillick 1996:80).

- 3 The relationship between musical intelligence and *bodily/kinesthetic intelligence* is once again self-evident if one considers the intimate relationship between dance and music (Sillick 1996:81,2). This connection is supported by the findings of different research studies conducted on the circuits in the brain that developed through music activities (Diamond & Hopson 1996:33; Sacks 2007:xi; Stollery & McBee 2002:98). Participation in music and movement activities contributes to the psychomotor development of learners (Isenberg & Jalongo 2006:146) and to optimal learning (Hannaford 2005:113-117).

Hannaford (2005:109-111) maintains that learning involves the building of not only physical skills, but also intellectual skills, through the movement of muscles. Movement actually anchors thought. In fact, Dr Montessori promoted education of the learner as a whole (body and mind) as far back as 1949 (Sillick 1996:82,3).

- 4 *Intrapersonal intelligence*. The effect of music on humans, even babies, has been proven in different contexts. Music can, for instance, elicit self-actualising attitudes and behaviours via its similarities with imagery (Sacks 2007:xii;). Classical music was found to be the most conducive of all types of music for the purpose of self-exploration, self-understanding, growth, healing and transformation. Musical selections with well-integrated and clearly focused moods are recommended as they have greater effect upon individuals than music with frequent or abrupt mood changes (Whittle 2000:17).
- 5 *Interpersonal intelligence*. The social effects of music, especially in the context of an ensemble, or any other cooperative engagement with music, enhances working together for the production of a musical idea, which contributes to a better and less competitive climate (see 3.3.1.7).

Teachers should incorporate a variety of musical activities in the classroom, involving everyone in not only singing, but also in playing different instruments (home made, traditional, Orff, popular) and listening to a wide variety of musical styles, including popular, folk and classical music from all over the world (Green 2001:47). This goes hand in hand with the roles of music in the wider society. The relationships of people from differing social groups to music have changed: women are less restricted in their musical roles than they once were (Karen Zoid, rock singer); certain styles of music, such as folk and classical, are no longer exclusively

associated with certain social classes (for example the Soweto strings, Black Ties and many others); and particular music styles no longer 'belong' solely to specific ethnic groups (the rap artist Francois, alias Snotkop, alias Lekgwoi). However, not enough research has been conducted to determine the measure of success achieved by a multicultural music curriculum in promoting inter-ethnic tolerance and understanding (Green 2001:57).

It is evident from the above that musical intelligence has a dimension that overarches into the other intelligences and thus also into the specific ways of learning of those intelligences. This fact has clear implications for the use of music in the classroom. The specific consequences that music and musical intelligence have for teaching will now be discussed.

2.3.4 Consequences for teaching

Gardner (1987:28), the founder of the idea of multiple intelligences, claims that probably the most important consequence of this theory is that learners who experience barriers to learning, for example dyslexics, who generally experience severe language problems, very often have outstanding spatial abilities. This means that if a teacher can concentrate on these strengths in the classroom, many more learners will reach their potential. Capitalising on learners' strengths is also one of the principles of inclusive teaching.

According to the researcher, music should not only be acknowledged as a separate intelligence, but should also be integrated in the daily curriculum and activities by the class teacher for the following reasons:

2.3.4.1 *The therapeutic value of music*

The idea that the healing effects of music may influence physical and psychological health can be traced back to classical Greece (Camilleri 2000:184). Psychological well-being is also very relevant today. As family and community dynamics change over time, teachers' responsibilities also change (Graham & Phelps 2003:11). In the South African context, where Aids orphans are often present in classes and violent crime is a daily reality,

teachers have become increasingly responsible for providing psychological support, which may be lacking at home (De Witt 2007:80). Teachers are also exposed to burn-out and stress (Giallo & Little 2003:21), which could be alleviated with the help of music (Cheek *et al.* 2003:205). Camilleri (2000:184) argues that negative situational elements such as poverty, crime, abuse and alcohol can often lead to developmental deficiencies in a learner's self-esteem, communication, respect and responsibility. Such social and emotional deficits can hinder a learner's potential for learning and create a downward spiral of social, emotional and academic failure. Camilleri (2002:261) explains how the effect of violence on communities can be reversed so that communities can be built up psychologically through drumming exercises. Similar community/family exercises using marimbas have been very successful in Australia (Rankin, 2001).

Learners with impairments and/or barriers to learning often have low self-esteem and high frustration levels, and feel that they are estranged from their peers (Colwell & Murless 2002:18; Dednam 2005:16; De l'Etoile 2005:38). The therapeutic use of music therapeutically in the classroom can address social and emotional skills such as communication, sharing, listening, respect, self-esteem and interaction (Cheek *et al.* 2003:204; Hotvedt 2001:73). Music puts the learner in touch with his/her own inner feelings, which can then be explored and expressed in different ways. Learners are less likely to behave disruptively when they are aware of their aggression and anger, and it is worked through (Hotvedt 2001:71; Merrit 1990:47). The inner process that takes place helps the learner to learn more effectively, because music can sometimes reach emotions better than words are able to. As learners listen to music in a relaxed, receptive state of mind, positive emotions are evolved and negative emotions blocked out (Van Niekerk 2002:124; Yick-Ming 2005:110). The use of music encourages expression of feelings that can often not be put into words. A way for a learner to be heard is provided (Camilleri 2002:185; Yick-Ming 2005:109).

Music may also provide an environment where all learners are successful in participating in the chosen activities (Hotvedt 2001:73). There is no right or wrong when music is used therapeutically. Learners with different barriers to learning can be integrated with their peers and seen as equals in a creative atmosphere. In addition, the repetitious nature of these music activities could enhance the success of the various activities. The focus is on the process, and not on the end product. As the learners accumulate positive experiences

with the help of music, they gain confidence in themselves, which can help them in all areas of life (Colwell & Murless 2002:18).

2.3.4.2 *Emotional and cognitive enrichment through music*

Emotional enrichment is conditional to cognitive enrichment since, according to research, emotions are fundamental to thought (Hotvedt 2001:72). Research in the neurosciences explains how and why rich emotional development is essential for understanding relationships, rational thought, imagination, creativity and even the health of the body (Hannaford 2005:56).

In America, the arts and music were commonly used in many enrichment programmes for gifted students. Because of the success achieved with these programmes they have, in the past few decades, been extended to reach not only the talented, but also economically disadvantaged learners and those with short attention spans, low problem solving skills and problems with self-discipline (Dean & Gross 1992:613; Hotvedt 2001:73). The effect is the stimulation of their brains to be more responsive and effective in the study of, for them, seemingly unrelated subjects (Van Niekerk 2002:10).

At birth, most of the brain's 100 billion neurons are not yet connected in networks (Hannaford 2005:34). Connections between neurons are formed extremely rapidly in the early years of life as the growing child experiences and forms attachments to the surrounding world (Rauscher 1999:35; Sillick 1996:85). If these synapses are used repeatedly in the child's day-to-day life, they are reinforced and become part of the brain's permanent circuitry. More than any other organ, the brain can be shaped, either positively by stimulation and use, or negatively by dull routine and disuse. In the first instance the brain will develop into a centre of thought, sensation and regulation most appropriate for a given individual's life (Diamond & Hopson 1998:56). Depending on whether or not the corresponding mental facilities in the brain are used or neglected, the density of synapses in the brain declines or develops further (Upitis 2003:25).

Childhood is a special time when the brain is metaphorically spongelike and when the learning of new skills can be both fun and effortless (Diamond & Hopson 1998:4; Sillick

1996:85). Although the prime time for enrichment is between the ages of six to twelve, older people can still create new pathways in the brain and enjoy the benefits that an enriched mental capacity could bring (Diamond & Hopson 1998:7).

Unfortunately too many South African children do not experience an enriched environment (see 1.2; De Witt 2007:80). Often children do not have hobbies, are not able to read well, eat less than an optional diet, do not like school and are exposed to failed teaching methods. Worse even is that many are in reality experiencing the effects of drugs, are part of a criminal society and fear for their safety (see Chapter 1). They are, in fact, subjected to experiences that should not be part of any child's life. Those learners often make life miserable for teachers, often posing threats to their sanity and safety.

Although we do not fully understand the extra-musical benefits of music instruction in inclusive school settings, there is enough evidence that the benefits are significant. For many learners, especially the disadvantaged and learners who experience barriers to learning, school education can mean the difference between success or failure in life. For the welfare of these learners, music programmes that could contribute towards their emotional welfare and cognitive development should be phased in at least in primary schools.

2.3.4.3 *Metacognitive advantages of music*

The term metacognition refers to a person's ability to manage, plan and evaluate his/her own learning (Hallam 2001:65). This includes being aware of personal strengths and weaknesses, selecting appropriate strategies for particular tasks, planning and monitoring progress towards a goal, developing problem-solving skills and evaluating the final outcome reflectively. When using music in the classroom, teachers need to have a range of available strategies for improvising for different situations that may occur in the classroom. However, this is not sufficient to ensure successful task completion. These strategies also need to be embedded within a substantial knowledge base, which has implications for the programme that will be developed for this study.

Metacognition also includes strategies that are 'person' rather than 'task' oriented (Hallam 2001:65). Teachers need to be aware of the conditions necessary for working effectively and should know how to bring these about. Such strategies might include optimising concentration, coping with distractions and ensuring that work is completed on time.

Stollery & McPhee (2002:89) indicate that music is an activity that involves much more of our brains than we ever thought to be the case. There is an increasing body of evidence that suggests that there may be a metacognitive dimension to music which actually facilitates learning in other subject areas (Hallam 2001:61; Stollery & McPhee 2002:96; Van Niekerk 2002:9). In fact, music has a general transfer effect on the integration of learning. The optimal phase for these general transferring qualities is during the primary school years and it disappears at about thirteen years of age (Van Niekerk 2002:90). Music is therefore the perfect tool to help integrate subject disciplines, to use in intercultural approaches and to promote a holistic education (Asmal 2000:14; Burrack & McKenzie 2005:45; Hauptfleisch 1991:175,178; Yick-Ming 2005:108). By making use of this valuable tool, we will produce well rounded and balanced young adults in our schools.

2.3.5 Ways in which a non-specialist teacher can use music

Teachers should encourage learning through several modalities, because learners retain 24 per cent of what they hear, 40 per cent of what they see and 70 per cent of what they learn through multisensory experiences (Miller 2002:4). An increasing number of teachers are therefore integrating the different modalities into their teaching, especially since such an approach also proves to be successful for learners who experience different barriers to learning (Miller 2002:4). However, the use of a multisensory approach might provide only a partial answer to the problem of many teachers who do not know how to best provide learning opportunities for all the learners in classes where there are many learners with different needs and strengths.

The following musical activities can be exploited for the purpose of perceptual and academic development by class teachers in an inclusive classroom. These activities, including listening to music, singing, rhythmical activities, movement, the playing of homemade instruments and inventing primitive notation, are developed in such a way all the learners in a class, including those with barriers to learning, can benefit.

2.3.5.1 *Listening*

Listening is the most important skill for language development in all facets (see 2.3.2.3). Listening is also the basic skill required for achievement in all other academic learning areas. What might be perceived as a single activity, for example listening, may involve a range of different processes. It may be undertaken at an intellectual level, for instance by identifying structure, harmony, timbre or dynamics. Listening to music can also be undertaken holistically when the person understands the structure of the music and derives pleasure from the emotion engendered.

Listening to music could, among other things, be used by the teacher to create a particular effect in the classroom. Rhythm can foster physical and spiritual relaxation, and body movement and music could be used to the advantage of learners at the start of a lesson. This will enhance relaxation and will change the brainwaves to alpha waves, which is ideal for learning (Martindale 1999:149; Van Niekerk 2002:95). Research conducted by neurologists confirms that under pleasant, relaxed circumstances, the brain produces chemicals that enhance long-term memory. From early infancy and throughout our lives, physical movement and emotional safety play an important role in the creation of nerve-cell networks, which are the fundamental grounds of learning (Hannaford 2005:16).

The following are examples of how class teachers can use music in the classroom:

When learners seem to be lethargic, they could be asked to put their heads down on their desks, close their eyes and let their imagination follow the music (Fisher 2001:47). Play four minutes of Vivaldi's *Spring* (from *The Four Seasons*) (Van Niekerk 2002:124). Invite the learners to briefly share the images that the music evoked. Other compositions for waking up are Telemann's string compositions, the Haydn string quartets, Grieg's *Peer Gynt Suite – Morning*, Giuliani's guitar concertos, Mozart's piano concertos and Telemann's compositions for the flute.

To **integrate listening and writing skills**, it is a good idea to play Mozart's *Eine Kleine Nachtmusik* to open up the inner creative self. Merrit (1990:54) advises the following procedure: Learners stand up and take deep breaths. They shake the kinks out of their bodies. To focus their minds, make them bring to mind an image that relates to the topic at

hand, while closing the eyes and listening to the music. When the music is over, play it again and make the learners write about the experience. Invite volunteers to share their adventures with the class.

Baroque music is suitable for structured stimulation, which would be the ideal atmosphere for the **mathematics environment** where a state of relaxed concentration is needed. At the end of the day listlessness can be combated by playing the fast movement from Vivaldi's *Four Seasons*.

After breaks or outdoor activities, learners may be overexcited and hyperactive. Teachers could ask them to lie down or put their heads on the desk or table and listen to three minutes of **calming music**, such as Pachelbel's Canon in D, a slow movement from a Vivaldi Flute Concerto or Massenet's *Dimanche Soir* from *Scenes Alsaciennes*. The music soothes and the structured beat makes learners feel secure (Meritt 1990:49-50). Campbell *et al.* (1999:179) claims that music allows sensory integration, which is necessary for long-term memory, to take place during resting periods.

Background music could be used effectively during activities in the classroom when silent desk work is being done, for example reading, storytelling, art activities or written assignments (Hallam & Price 1998:88). Any of the *Brandenburg Concertos* could, for instance, be played. When a story is read with music in the background an open focused state is created where the music allows large amounts of information to be absorbed because the listener's attention is not narrowly fixed on the task at hand. It has the relaxing, soothing qualities that provide structure, grounding and balance to improve concentration. This technique may also be used when learners have to move around outside the classroom, for instance in the school corridors, or while entering the school hall.

Campbell uses the example of calming music being played on a school bus, which lessened inappropriate behaviour of school children (Van Niekerk 2002:125). Researches have also reported that light pop music, especially songs by the Beatles, reduced the rate of inappropriate behaviour. It is beneficial for both teachers and learners to study and memorise Baroque music such as Pachelbel's Canon in D (Van Niekerk 2002:125).

Examples of the music in the form of a cassette or video will be provided with the programme *Music for All*.

2.3.5.2 Singing

Learners can be taught discipline by **singing** songs that represent different activities. For instance, junior primary learners may learn different songs, each of which represents an activity that is regularly executed in class. When it is time to switch to a next activity, for instance reading, the teacher can start singing the appropriate song. The learners will join in the singing while they automatically finish off the previous activity and prepare for the next.

Choral singing can be used at school to teach discipline and to create a positive atmosphere. According to Hugo (personal interview, 27 September 2006), choral singing is the second most popular activity in South Africa. Soccer is the most popular! Learners derive tremendous enjoyment from this social activity. While they cannot all talk together, they can all sing together, and they can learn to simultaneously represent the contour (melody) of the song by means of innovative graphic signs.

Research shows that singing is an easy way of enhancing the memorisation of information (Mora 2000:150). The melody seems to act as a path or cue to evoke the precise information we are trying to retrieve. Music seems to leave a particularly deep trace in our memories; this could be due to the fact that specific music is unconsciously related to affective factors.

2.3.5.3 Rhythmical activities and movement

Rhythm is the strongest element in music and the combining factor in speech, movement and music (see 2.3.2.3; 2.3.3.2). Therefore, rhythm is the logical starting point for the use of music, or any other form of learning with the help of music. Rhyme and rhythm are commonly used, exploited and enjoyed by young children in both literate Western and traditional cultures. Even without any previous training, children often use chanting in rhyming nicknames, riddles and games (see 2.3.1).

Neuro-scientific research (Hodges 2000:43) proves that the element of rhythm forms the central part of the relationship between human beings and music, because music is such an inherent part of human life. The total biological make-up of human beings functions according to rhythm, as is shown by our rhythmic heart-beat and breathing (Luban-Plozza *et al.* 1988:82). As a matter of fact, our lives revolve around the rhythm of life, such as the change between day and night, the change of seasons and daily routine. There exists a great deal of educational and neuro-scientific theory and practice that suggests that bodily movement is the foundation for the development of all cognition and learning (Philpott 2001b:81). Piaget, Vygotsky and Bruner believe that the actions of the body, when interacting with the world, can eventually be internalised as thought (Philpott 2001b:81).

According to Dalcroze, **rhythm depends entirely on movement**, and all the nuances of time (*allegro*, *andante*, *accelerando*, *ritenuto*), and energy (*forte*, *piano*, *crescendo*, *diminuendo*) can be realised by our bodies (Philpott 2001b:84). **Rhythm**, as an integral part of human nature, **allows for an array of many-sided activities**. These activities, graded from easy to complicated, can provide for many creative moments. Rhythm provides for experiences in time, coordination, planning, concentration, discipline, different perceptual modalities; all skills which can be a problem to learners with barriers to learning. The possibilities for having fun with, for instance, speech rhythms (echoes, canons), body percussion and rhythmic accompaniment for songs with leaders in typical African style, are many. Rhythmic rondos can be developed (ABACADA format) once the learners have gained enough experience and have enough self-confidence to perform different rhythms. These rhythmic patterns can become more and more complex when used as canons.

Rhythm can foster physical and spiritual relaxation. Teachers could use rhythmic ideas to the advantage of the learners when classes start with body movement and music. This will enhance relaxation and change the brainwaves to alpha waves, which are ideal for learning. Research by neurologists confirms that under pleasant, relaxed circumstances, the brain produces chemicals that enhance long term memory. From early infancy and throughout our lives, physical movement and emotional safety play an important role in the creation of nerve-cell networks, which are the fundamental grounds of learning (Hannaford 2005:16).

Improvisation activities reinforce learning (Riveire 2006:40). The manipulation of musical material executed in improvisation causes the brain to process the information differently, using more of the cortex and strengthening a learner's ability to learn. Classroom teachers can use improvisation activities, which can be treated as games and will allow learners to have fun as they explore and learn. For instance, pairs of learners can face each other and play, or improvise rhythmic movements starting only with two kinds of notes.

Games are usually perceived as nonthreatening activities. Teachers can reduce anxiety most effectively by creating an encouraging, trusting environment. Learners must feel safe to experiment without being berated or belittled for what they perceive as wrong notes or bad sounds. Teachers and learners must all agree on ground rules of behaviour (e.g. no laughing or grimacing and critiquing). There are no wrong notes, only ones that you would rather change if you played them again (Riveire 2006:44).

The more closely we consider the elaborate interplay of brain and body, the more clearly one compelling theme emerges: **movement is essential to learning and to the manifestation of life itself** (Hannaford 2005:107). Movement awakens and activates many of our mental capacities. Movements integrate and anchor new information and experiences in our neural networks. Every movement is a sensory-motor event, linked to the intimate understanding of our physical world, the world from which all learning derives (Hannaford 2005:108). A movement of the head aligns the sensory organs (eyes, ears, nose and tongue) to environmental input. Subtle movements of the eyes allow us to see at a distance, experience three dimensions, sense our periphery and focus of small letters on a page, sense where we are in space and tell us how to move effectively.

Howard Gardner does not consider motor activity as subservient to 'pure' thought, but rates it as one of the eight intelligences (2.3.3.1). Almost daily new research illuminates the strong neural links between areas in the brain involved in movement and those involved in cognitive activity (Hannaford 2005:108). Research indicates that muscular activities, particularly coordinated and balanced movements stimulate the production of neurotrophins, such as dopamine, natural substances that stimulate the growth of existing nerve cells and increase the number of nerve cells and neural connections in the brain. As we learn and master movement and skills, our brains require less energy and function more efficiently (Hannaford 2005:113).

As discussed, the musical activities that class teachers can perform with all learners are in reality simple, considering the benefit that can be derived for the learners. There is, however, the question regarding the need for teachers to possess specific characteristics when they use music in the inclusive classroom.

2.3.6 Characteristics of class teachers using music in the inclusive classroom

Although Van Deventer (1998:5.4) maintains that class teachers need no special training in music, she does mention that the following qualities in the teacher will contribute greatly to the success of any musical activity:

Skills, the ability to

- listen attentively and react to music and sound quality;
- use music to communicate clearly with learners, and
- plan musical activities and integrate them with the syllabuses for different subjects.

Personality traits, such as

- imagination,
- enthusiasm,
- playfulness,
- warmth,
- a childlike appreciation of life, and
- a willingness to learn more about music and musical concepts.

When musical activities are planned, the teacher should also keep the following in mind (Isenberg & Jalongo 2001:156; Van Deventer 1998:5.4;5.5):

- Learners should be encouraged to take part independently and wholeheartedly. They should realise that it is not possible to make mistakes in music and that their efforts would therefore never be wrong. This will enable them to forget about their inhibitions and experience success.

- The achievement of individual success or technical skills should not be the aim of the activity. Apart from improving learners' developmental and academic skills and social and emotional aspects, the focus should be on the development of creativity, imagination, understanding and sensitivity.
- The level of creativity achieved in the classroom depends on the atmosphere created by the teacher, which will determine whether learners only respond in the traditional way, or whether they dare to be creative, to experiment and to take chances.
- Teachers should realise that it is difficult to evaluate creative work and that success is not necessarily immediately evident.
- Teachers should not try to make their original planning work at all costs. They should rather, where necessary, make changes during the course of the lesson and even adopt a new approach, if required. It is more important for the learners to enjoy the activities and to learn from them (construct their own knowledge) than it is for the teacher's plans to work out. Remember, there is no right or wrong.
- Musical activities should be made as pleasant and meaningful as possible so that the learners will remember them the rest of their lives.
- Musical activities and the instruments that are used should be kept as simple as possible, as complexity would serve no purpose. The aim of these activities is, after all, to stimulate enthusiastic participation and creativity.
- Seeing that the periods are short, the activities should also be short. If necessary, they could be broken down into sensible units so that one aspect can be dealt with at a time.
- Activities can be planned in such a way that learners are allowed to help each other, as suggested by the cooperative learning principle. Learners with special needs, in particular, could benefit from being assisted by their peers.

- The teacher should emphasise learners' strengths and ignore their weaknesses.
- Teachers should plan deliberately for the integration of knowledge from different subjects.
- At this level it is not necessary to pay attention to a formal notation system. If learners do want to develop a system (e.g. as part of a problem-solving exercise) in order to note rhythm according to that system, this would offer an opportunity to include cognitive skills. Otherwise the solfa system could be used, if necessary.
- Rhythm forms the basis of all learning activities. In these activities it is important to keep a constant pulse, also when learners make or improvise variations on the rhythmic patterns. When a learner reacts slowly or hesitantly, as will probably happen, the teacher should continue with the normal pulse of the activity. The learner concerned will get an opportunity to fall in with the rhythm later. The teacher should give clear, simple instructions so that the rhythm of the movements is not interrupted unnecessarily.
- Use the simplest forms of accompaniment. Simple instruments, such as tambourines or maracas, could be very effectively played by learners themselves.
- In the case of music and the spoken word, the natural accents of the words and the pulse of the music should be coordinated.
- Seek opportunities for professional development. When teachers are not specialists in music and movement, they need to rely on high-quality resources such as tapes, which can be borrowed from a library.

Van Deventer (1998:5.6-5.21) explains extensively how class teachers can develop all learners' developmental and academic skills (with or without the help of a music teacher) at the primary and intermediary levels. The practical application will be demonstrated in the programme *Music for All*.

2.4 CONCLUSION

Some of the advantages of **creativity** at a personal level that are important for this research include that it can develop in a relatively short time span, fosters people's ability to identify and solve problems in their specific settings and stimulates the development of an ability to adapt to changing circumstances. Problem-solving skills and the ability to make do with available resources can help teachers to cope with the immediate challenges that many of them experience in their specific circumstances

According to the researchers consulted, all people possess a measure of creativity and musicality which can be developed. The value of using both creativity and music in the classroom context lies in the emotional, cognitive and social benefits that it offers. Both creativity and music provide opportunities for the healthy expression of emotions, give pleasure, elicit self-actualising behaviour and activate both lobes of the brain, which offers tremendous cognitive gains.

Substantial research has been conducted to prove that the creative use of music can be a powerful tool for learning and support in schools. Not only can music be used to heal and stabilise learners emotionally, it also supports cognitive growth. Music is the ideal mechanism to stimulate growth and enhance all the intelligences. A strong musical foundation is therapeutic, fosters concentration and attention, develops perceptual skills, academic competencies and cognitive functioning, has the ability to transfer experience gained in musical activities to performance in other domains and promotes self-efficacy, self-discipline and social skills. Together with movement, the use of music turns the whole body into an instrument of learning and can be effective in managing stress and health in teachers and learners alike.

The challenge lies in the actual teaching of teachers to enable them to use music creatively in a way that will arouse their interest and motivate them to persevere long enough to experience success.

The next chapter deals with the inclusive classroom, which is the context of implementation of the programme. The inclusive classroom will not be discussed in detail, as it was explained earlier (see 1.1). However, practical examples of problems that could

possible present themselves in the inclusive classroom will be discussed by way of reference to authentic scenarios. Learning disabilities will be defined and the way in which they manifest in the classroom will be discussed, as well as possible support for developmental, academic, emotional and social barriers. Examples of different musical activities that could be used creatively to support learning-impaired learners will be suggested. Although learning-impaired learners are mentioned, 'normal' learners are implicitly included.

CHAPTER 3

THE CREATIVE USE OF MUSIC IN THE INCLUSIVE CLASSROOM TO SUPPORT LEARNING-DISABLED LEARNERS

3.1 INTRODUCTION

The rationale for using music creatively was determined in Chapter 2. In this chapter the focus will be on the inclusive classroom, the manifestations of learning disabilities and examples of how music can be used creatively in the inclusive classroom. This will include descriptions of authentic examples of the behaviour of learning-disabled learners in the classrooms of the Prospectus Novus School by way of scenarios provided by their (specialist) teachers and a discussion of the support suggested by the teachers. The levels at which music can fit into the inclusive paradigm and the manifestations of learning disabilities will also be discussed. Finally, practical examples will be given of how music can be used creatively to support the learning-disabled learner in the inclusive classroom.

Table 3.1 Aims of chapter 3

PROGRAMME: MUSIC FOR ALL		
Chapter 2	Content	Creative use of music
Chapter 3		Examples of music for Learning disabled learners
Chapter 4	Format	Principles of CPL and ODL
Chapter 5	Quality Assurance	Delphi Method

3.2 THE INCLUSIVE CLASSROOM: SCENARIOS

The inclusive classroom is one where a diversity of learners, who are all entitled to effective support, can be found in one classroom (see 1.1). Apart from the diversity of learners, teachers at different levels of efficiency also work in different circumstances, which may include a lack of resources (Jacobs, Kemp & Mitchell 2008:132), inadequate professional capacity and a lack of professional support.

To effectively illustrate the type of behaviour encountered by teachers, teachers at Prospectus Novus, a school for learning-disabled learners in Pretoria, were requested to describe typical scenarios in their classrooms. Specialist teachers were invited to provide examples of adequate support strategies. The scenarios illustrate examples of the type of learners who need to be accommodated and supported in inclusive classrooms, often by teachers who were not trained to support learners experiencing severe learning difficulties. The same scenarios are also used in the programme *Music for All* as training material to teach the teacher-students problem-solving skills. The unedited versions of the teachers' descriptions of incidents in their classrooms are presented and discussed further on. The first and second scenarios describe learners who suffer mainly from motor and perceptual problems. The second scenario illustrates the difference between the treatments suggested by a teacher and an occupational therapist. In the third scenario, the teacher described the learner as an 'emotional time-bomb'. It is interesting to see the difference between the support suggested by the occupational therapist and the support offered by the teacher. The occupational therapist is much more to the point and uses specific exercises for specific problems, whereas the teacher's solutions are more arbitrary.

In the fourth scenario, a learner's second-language problems are described, and in the fifth a learner experiencing problems with mathematics is discussed. In each case the focus is on the main problems, for example the type of barrier to learning that is experienced, as well as the secondary problems, such as emotional, social and other academic difficulties. The solutions suggested by the teachers in each case will also be included in the programme *Music for All*. This will provide examples of how specialist teachers deal with specific problems so that other teachers can use those solutions as a starting point, after which they can add their own solutions with the help of music.

SCENARIO 1:

Learner: Bobby is a nine-year-old boy in Grade 4. He is very small for his age and his T-shirt and trousers are far too big for his tiny frame. He has well- educated parents and has grown up with strong opinions on certain matters. He often acts very impudently (cheeky). His parents are very supportive, but not always helpful to the teacher. Bobby never takes responsibility for his wrongdoings.

Positives: Bobby loves singing and dancing.

Problems: Bobby's level of reading is that of a seven-year-old child. There are shortcomings in his **fine motor coordination** and his colouring and copying work is very untidy. He has problems with written work, drawing and cutting and pasting, presumably because of weak visual motor skills.

Bobby's **spatial skills** and body orientation are poor. He often becomes confused and easily gets lost. When the Grade 4 learners change classrooms at the end of a period, he often runs around asking others where he should be.

Socially Bobby is very impulsive, loud and disobedient, frequently becomes involved in fights and is very difficult to discipline. He is also very talkative in class and abusive towards teachers and fellow learners. He can be defiant and has no self-discipline. Bobby only listens to himself and his opinions are the only ones that count. With such behaviour in class nobody can learn. He rushes through his work and then starts talking or fidgeting. He is overly active and wants to sit at the front of the class, which leads the teacher to suspect that he has a need for attention.

Teacher's solutions:

- 1 To move him to the back of the class where he will not disrupt the other learners.
- 2 To get his parents involved to make them realise how his behaviour affects his schoolwork and how he could be helped by the teachers. His defiant attitude will

lead to him being ignored in the classroom, or to frequent punishment. The teacher suggested that Bobby would be a candidate for medication.

- 3 Directive therapy could be a possible way of treatment: Act like a traffic officer. First get his attention before giving guidance. Make physical contact by touching him. Address him by his name and give short and clear directions and instructions. Check on his progress regularly and guide him in another direction if necessary. The teacher needs to stay calm and be careful not to over-stimulate the learner.
- 4 The teacher further suggested counselling by a psychologist who could get to the root of the problem by talking and listening to him. She felt that once his behaviour had changed, she would be able to address his other problems, such as reading and writing, more effectively. It would probably also be helpful if he could read to his parents for ten minutes each day.

Teachers complain that over the past few years, more and more learners like Bobby have made their appearance in the classroom situation. In fact, research (Smith 2007:158) suggests that up to 50% of learners experience learning disabilities or barriers to learning. Teachers need to develop the skills that are required to adequately provide for the many needs that manifest in large classrooms.

The next scenario was described by an occupational therapist. She tested and supported Keketso and Khosi (not their real names) in the following way:

SCENARIO 2:

Keketso and Khosi's relationship development intervention:

As an occupational therapist, I feel a child should be treated holistically. Therefore I try to address perceptual, motor, school-related and social problems together. Increasing numbers of learners are being admitted to the Prospectus Novus School for Learning Disabilities, with not only learning disabilities, but also characteristics of the autistic spectrum. Khosi and Keketso, for instance, experience difficulties in all aspects of occupational therapeutic functioning. The most important difficulties are discussed:

- Their **fine motor skills** are poor. They have difficulty in cutting and colouring.
- Their **perceptual skills** are below their age norm, which negatively affects school-related work such as reading, writing and coping in the classroom setting.
- They experience problems with **motor skills**, for example bilateral integration (jumping with two legs), ball skills and balance skills.
- Regarding their **social skills**, both learners show a poor ability to interact appropriately in a social setting. They also show poor eye contact, an inability to read emotions and inappropriate verbal interaction.

To address these difficulties, an occupational therapist and a speech therapist worked out a programme which included the following session ideas:

For the improvement of alphabet sequence, reading of facial expressions and gross motor aspects an obstacle course was used:

Obstacle course: The learner must sort cards alphabetically, look at the picture on each card and at the therapist, who is demonstrating with facial expressions what the learners should do, for instance **crawl** through the hoop, **jump** in the spaces between the ladder rungs, **lie down** on the big bean bag ...

To improve focus of attention and referencing, fine motor skills and motor planning, the following activities were decided upon:

Hot potato: Each learner holds an object. As soon as another object is thrown to him/her, (s)he throws the first object to someone else.

Whistle game: The learner runs around holding a whistle. When the learner hears the whistle being blown, (s)he must freeze, look at the teacher and copy the movement (s)he is doing.

To improve eye contact, focus of attention and referencing, and encourage the use of the body and eyes in communication, the following activities were suggested:

Discuss the facial expression worksheet with the learner. The learner must practise making these faces in a mirror. Play 'charades' using gestures, facial expressions and descriptions. Set up a reward system with the class teacher and reward the learner daily for appropriate eye contact.

To improve awareness and interpretation of surroundings:

The learner must 'catch' the teacher with his/her eyes to stop him/her from creeping up from behind him/her and touching him/her while involved in an activity.

The therapist reported that improved abilities were shown as outcomes of the sessions, especially in the areas of social referencing (eye contact and appropriate social interaction). This intervention will continue to be implemented in therapy together with parent guidance.

Another learner, Mpho, experienced extensive unmet emotional needs:

SCENARIO 3:

Learner: Mpho has had cancer and four years ago a growth was removed from his brain. His parents had to teach him all the basic skills again and his mother did everything for him. However, last December she died in a car accident. Mpho showed no emotion after her death. Mrs Dlamini, his class teacher, tries to give extra attention to him, but her class is filled to capacity with other learners who also have needs. Although Mpho had previously been able to complete his timesheets, he did not succeed in doing so by the end of February. Mrs Dlamini suspected that Mpho was an emotional time bomb.

His breakdown came one day when his classmates were standing in the queue after break to go back into their classroom. Mpho started throwing stones at the classroom. It sounded like gunshots against the asbestos walls. Mrs Dlamini managed to get the learners into the classroom without anyone being hurt. She shut the door and went to the principal's office for help. Mpho's father was phoned and he immediately fetched his son and promised to make an appointment with a doctor.

The next day Mpho was back without having seen a doctor. He was really impossible. He crawled under the teacher's table and mocked everyone who spoke in the class. When the teacher spoke to him about his work, he became furious and grabbed the nearest books, tore the pages and threw them on the floor. A male teacher had to remove him from class and he was immediately taken to a doctor who sedated him before his father took him home. The next day, before the start of school, he threatened the learners with a knife, but denied having done anything of the kind when confronted by the teacher. Mrs Dlamini firmly told him to give her the knife and, without showing any emotion, Mpho turned around, took the knife from his bag and gave it to Mrs Dlamini. She took it and told him that she would put his name on it and keep it in a safe place. Still without showing any emotion, he turned around and as quick as lightning grabbed the ice-cream container used for storing stationery and threw it at the head of the boy who had told Mrs Dlamini that he had the knife in his schoolbag. All chaos broke loose. Mrs Dlamini tried to grab his hands when he stooped to grab something else from his schoolbag and they both lost their balance and fell to the ground. Help was summoned once again. Mpho was taken back to the doctor who referred him to a psychiatrist.

Mrs Dlamini decided that, if it were in her power, she would never again let the situation get out of control, but would rather call for help before things got out of hand.

The problem of overworked teachers who have to make do with very limited resources and little support. Mrs Dlamini realised that plans could have been made and that there was no excuse. She knew that there were other learners in her class who constantly experienced trauma and that she, as the adult, had to intervene to prevent their lives from being ruined. Mpho was back within a week, showing little gestures of reconciliation. However, Mrs Dlamini was sad because she had been unable to help him find a healthy outlet for his anger at an earlier stage.

Positives: The class teacher was eager to implement a programme for healthy emotional development in her classroom. She decided to ask the learners to help and support each other to foster a caring classroom atmosphere. The learners seemed to be motivated to cooperate.

Something else that was mentioned was the possibility of student teachers helping teachers as part of their practical work. She did feel, however, that the DoE should consider subsidising students who have to travel long distances, pay for accommodation and manage without basic resources when they do practical work in the rural areas.

In the following scenario Keneilwe experiences mainly language difficulties:

SCENARIO 4:

Learner: Keneilwe Sebitiele

Keneilwe is 10 years and in Grade 3. He is struggling to cope academically.

This learner has never been exposed to English. He was struggling with his mother tongue before being brought to the Vista School for Learning Impairments. He cannot speak, read or write a simple three-word sentence in English. He is not familiar with phonics and cannot discriminate between sounds at all. Consequently he cannot spell, read or write.

Because he cannot cope in English, he pays no attention and tends to fidget in class and regularly becomes disruptive. On the playground he shows off by bullying and fighting with other children.

Keneilwe cannot concentrate and his self-esteem is very low because he cannot cope scholastically. He tends to become emotional when confronted with his schoolwork.

Positives:

Teacher's solution:

- 1 The teacher should do code switching, moving from the known to the unknown.
- 2 Phonics should be started from the beginning.
- 3 A point system for behaviour should be implemented in class. When learners behave well they score points. If a certain score is reached, the specific learner qualifies for a prize. This will encourage Keneilwe to behave well in and outside the classroom.

When learners struggle with numbers, this is often an indication that they suffer from learning disabilities. Johnny experiences mainly emotional and number problems:

SCENARIO 5:

Learner: Johnny is ten years old and in Grade 3. This is his fourth year in this phase and his performance is average.

His parents are divorced and he stays with his biological mother and an uncle. There are no other siblings. His father re-married and has a baby girl with whom Johnny loves to play. It is very difficult for him to adapt to the idea of two families and on Fridays and Mondays he needs special attention to get him to join the rest of the class and start his schoolwork.

Socialising: Johnny often complains about other children and is often involved in fights, but is always innocent. During breaks he associates with the 'difficult' group on which the teacher on duty must constantly keep an eye. He will also just get up from his desk after break and go outside to eat, even though he had already had enough to eat.

Scholastic problems

Perceptual skills: Johnny often struggles to differentiate between right and left and spatial orientation is a problem. The teacher must still show him where to start writing, even though she regularly marks the starting point with red dots.

Reading: Johnny's reading skills are at Grade 2 level. He reads slowly and his comprehension is not good. His expressive language is poor and his illustrations of vocabulary are often not appropriate.

Numbering: He struggles to add and subtract numbers up to ten. He eventually managed concrete work, but oral + and – is a nightmare. He gets confused when he uses his fingers to count numbers bigger than five.

Johnny became confused when the teacher counted out 20 sticks to start with the next concrete level, but the rest of the class are able to use number charts and spread charts to do + and – from ten to twenty.

Positives: Johnny is excited when he is rewarded for something he did well. He is a good athlete, but withdraws if he does not win.

Teacher's solution:

The teacher uses the ten on the left-hand side of the number charts and then combines it with the spread charts so that Johnny can see $10+1=11$ and $10+2=12$.

The teacher laminated the number charts so that the learners can actually scratch out numbers on the chart with koki pens to help them see what happens, but Johnny skipped one number and then counted the blocks that they had to subtract.

This class teacher expressed the opinion that teachers need help in the classrooms to ensure that all learners can receive the necessary attention. She feels that inclusive education cannot be successful in the circumstances in which she has to cope.

The learners described in the scenarios are in a special school where they are supported by specialist teachers. The situation in those schools is more ideal for teachers and learners than in the general schools where inclusive education has to take place. In special schools there are relatively few learners in classrooms and usually the services of specialists, for example occupational therapists, are available. In inclusive classrooms, learners with barriers to learning similar to those described in the scenarios are supposed to be supported by non-specialist teachers who do not always have proper initial training. Furthermore, general teachers often have huge classes (50+ learners) with no additional human or other resources. Some of the consequences of situations like these are discussed in 1.2.

One possible solution to the problems experienced by teachers in inclusive classrooms is that teachers should be trained to support learning-disabled learners, and it is for this purpose that the programme *Music for All* was developed. It is clear that no 'tried-and-tested recipe' will work in all circumstances, or in all of the above-mentioned scenarios. Creative problem solving could help teachers solve some of their problems. However, teachers should first be given creative tools which could be utilised in different situations in the inclusive classrooms, and which would help them experience success at different levels. Once the teachers experience success, they will have the courage to invent their own plans with the help of the suggested tools – the creative use of music. Examples of such tools will be discussed in 3.4. The inclusive classroom indeed has many possibilities for creativity.

3.2.1 Creativity in an inclusive classroom

When one thinks of an inclusive classroom, the first thing that comes to mind is the many and varied needs of learners for which teachers are expected to cater. The following very basic needs list was compiled from the literature consulted:

Teachers should provide, amongst others,

- opportunities for all learners to achieve;
- a creative, rather than a rigid atmosphere;
- for the gaining of basic outcomes in a variety of subject areas;
- activities that will stimulate the usage of the full power of the brain (whole-brain learning);
- enjoyment;
- activities that will ensure interest, involvement and concentration;
- emotional support while learning;
- experiences that will make the whole body an instrument of learning and at the same time, and
- for their own stress and health management.

Teachers who are expected to fulfil all the needs of all the learners in an inclusive class are indeed facing a daunting task. However, as discussed in Chapter 2, many of the needs can be catered for through the creative use of music. One aspect that emanates from the use of music is movement. Movement, which emanates from the use of music, is particularly useful in the inclusive classroom as it supplements the creative use of music (see 2.3.5.3).

When planning lessons for the inclusive classroom, it is essential to include **opportunities to achieve** for all learners, including boys and girls, learners with barriers to learning, learners from all social and cultural backgrounds and learners from diverse linguistic backgrounds. They should also be supported to help them attain their individualized outcomes (Frederickson & Cline 2003:261). It is clear that **in such circumstances, rigidity cannot work**. Teachers should devise their teaching strategies by planning for differentiation where music is creatively used to complement the individual needs and strengths of their learners (Witchell 2001:198, 204). Music can be used as mechanism in an inclusive setting to help all learners **attain the basic outcomes in a variety of subject areas** (Whittle 2000:17). In fact, a more versatile teaching aid than the creative use of music can hardly be found (De l'Etoile 2005:37).

The creative use of music facilitates **whole-brain learning**, where the two hemispheres of the brain work together to **use the full power of the brain** (Van Niekerk 2002:78). Using mostly one hemisphere of the brain in the learning process is inefficient and wasteful of human talent and ability. Van Niekerk (2002:83) discusses Einstein and other great scientists who seemed to be largely left hemisphere dominant, but turned out to be whole-brain dominated. Einstein's activities included playing the violin, art, sailing and imagination games. It was while daydreaming that he realized that the universe must be curved, which led to his theory on relativity.

The use of **movement** in an inclusive classroom has **many advantages** (Hannaford 2005:17). If movement is combined with music and used in a creative way, **all learners will enjoy the activities**, everybody will learn, may discover a new talent, **become interested and involved** in a new environment, and will be emotionally supported while they are learning (Hotvedt 2001:71). To overcome the barriers to learning that poor socio-economic circumstances may create, learners need to possess a talent or skill that will lead them to undertake challenging activities while being emotionally supported by a mentor (Hotvedt 2001:71). Hotvedt reports that experience taught her that the more **movement she included in her lessons, the more attentive the learners became** (2001:72). Moreover, **more learning occurs when emotions are integrated with instruction, because all body systems are then united**. She concludes that a strong arts (music) foundation builds creativity, concentration, problem solving, self-efficacy, coordination, attention and self-discipline (Hotvedt 2001:73).

Carla Hannaford (2005:17) experienced miracles with learning-disabled learners and the progress the learners made when movement and play were applied in the classroom. She found that they would learn more easily when they started lessons with simple, whole body integrative movements in a safe, playful and exploratory atmosphere. Research revealed that **movement activates the neural wiring throughout the body, making the whole body the instrument of learning (2005:18)**. She further learnt that **movement and play profoundly improve not only learning, but also creativity, stress management and health** (Hannaford 2005:18) for teachers and learners alike.

While music is such a multifaceted tool, there are many levels at which music can be used in the inclusive classroom.

3.2.2 Levels at which music can be used creatively in the inclusive classroom

In the South African context of inclusion, support is supposed to be practised in schools on a multilevel basis. The **first level** of support should be provided by the class teacher. The **second level** of support should come, directly or indirectly, from specialist teachers and, if necessary, a **third level** of support should be provided by experts from outside the school environment. With regard to music, the same type of support seems to be possible. The **first level** can be provided by the class teacher (with the help of the music teacher) and involves simple exercises with the learners to develop the whole range of developmental and academic skills. At the **second level**, the music teacher can use more advanced musical knowledge and skills (like improvisation, if possible) to support and further develop learners. If specific learners need therapeutic intervention by an expert, they should be referred to a music or an art therapist who will render support at the **third level**.

For the purposes of clarity, the different ways in which the class teacher, music teacher and music therapist can use music as a mechanism in the school will be briefly described.

3.2.2.1 *First level, the class teacher*

The class teacher plays a key role as manager of the learning process designed to support learners imaginatively by using the available resources in and outside the classroom. Class teachers are best equipped to use music as a mechanism in helping learners to acquire specific skills. Firstly, they know the learners best and are aware of their individual weaknesses and strengths, as well as their specific needs. Secondly, class teachers spend the most time with the learners and are therefore able to incorporate planned or spontaneous music activities as specific needs become apparent. Thirdly, since music is for everyone (Paynter 1972:9) and many learners love music but are only involved in music activities outside the classroom, class teachers may use the basic materials of music in a

creative way. It can offer learners plenty of scope for self-realisation, increase their sensitivity to the world around them and educate the part of their intelligence that is concerned with feeling (Paynter 1972:10).

Class teachers are able to enhance all the developmental and academic skills of learners by means of the creative use of music (with the help of a music teacher, if necessary) at the primary and intermediary levels.

3.2.2.2 *Second level, the music teacher*

Van Deventer (1998:5.23-5.26) argues that support for learning-disabled learners can be given at the second level by either the music teacher or another member of the teaching staff who has been adequately trained in the use of music as a teaching aid. Such support will be more specialised and more intensive. Music teachers have a more specialised knowledge of music, a good ear for music and more experience. As a result they are more confident and their activities are more purposeful.

3.2.2.3 *Third level, the music therapist*

Music therapy entails a process where music and sound is used by a qualified person for the improvement of mental and physical health. Since such professionals are not readily available in South Africa, the practice of using music therapists in schools is not found locally. However, in Australia registered music therapists are employed in 41% of the special schools (Booth 2004:68). A music therapist is trained to implement strategies that will strengthen a functional area of an individual's life through participation in musical experiences. The therapist usually addresses non-musical skills (such as motor, social, cognitive and communication skills) only when it is proven to be beneficial in attaining educational goals (Patterson 2003:36).

3.3 LEARNING DISABILITIES

More than 50 per cent of all learners who experience barriers to learning in the classroom are learning disabled (Dednam 2005:364). It is the opinion of the researcher that if teachers are able to recognize the specific barriers to learning experienced by learning-disabled learners, and possess the skills required to support those learners, the degree of success achieved by those learners and the feeling of well-being in the classroom could be greatly enhanced. Furthermore, it will have a positive effect on the teacher's own feeling of efficacy (Blumen-Pardo 2002:47; Hoy & Spero, 2005:344).

Learning disabilities is a puzzling phenomenon to researchers who, for many years, did not agree on the definition of learning disabilities (Prater 2007:5). However, the following definition (Lerner 1993:10; Hallahan & Kauffman 2006:171) still serves as the recognised definition and is the one that will be used for this study:

A learning impairment can be described as a general term which refers to a heterogeneous group of neurological disorders in the basic psychological processes of the brain and which manifest in difficulties with language (speaking, reading and writing) and/or mathematical calculations. Such disorders include conditions as perceptual problems, dyslexia, developmental aphasia and slight brain injury. This excludes learners who experience learning problems as a result of hearing, visual, motor and intellectual impairments, emotional disturbances or environmental, cultural or economic disadvantages.

While it is very difficult to identify learning-disabled learners, teachers should be aware of the possible manifestations of learning disabilities.

3.3.1 Manifestations of learning disabilities in developmental skills

Not all learners with learning disabilities manifest all the following barriers. They experience these barriers in different grades of intensity and in different combinations (Prater 2007:3).

3.3.1.1 Motor and sensory motor development

Learning-disabled learners often experience difficulties with gross motor movements (Hallahan & Kauffman 2006:186; MacConville, Dedridge, Gyulai, Palmer & Rhys-Davies 2007:68). They appear to be clumsy, walk in an uncoordinated manner, bump into things and are awkward in ball games because their reflexes are slow. Especially in the intermediary phase, where physical activities are important, learners who experience such barriers could develop a weak self-concept.

Gross motor activities refer to the use of bigger body movements, i.e. movements that involve the arms, the legs or the body as a whole. Gross motor activities develop from general reflex movements to the differentiated movements that are required for running, jumping, throwing, catching and balancing, and then to more differentiated and stronger, more accurate and functional activities (Cook, Klein & Tessier 2008:223; Hallahan & Kauffman 2006:186).

Other barriers which are often associated with neurological dysfunctions and therefore with learners who experience learning disabilities are:

- Hyperactivity, or the performing of redundant and dysfunctional movements
- Hypoactivity, or slow, inactive learners with striking dysfunctional movements
- Perseveration, or the senseless repetition of one activity and inability to carry on to the next (Prater 2007:13).

Fine motor activities involve the use of the smaller muscles in the body, for example those in hands and the fingers, which are necessary to manipulate small objects in a skilful way (Cook *et al.* 2008:223). Actions like cutting out, colouring in and writing are actually not only fine motor activities since they also involve other skills, such as eye-hand coordination (Hallahan & Kauffman 2006:186). The development of fine motor skills is dependent on continuous exercise (Cook *et al.* 2008:223).

Learning-disabled learners may experience the following difficulties which are related to fine motor skills:

- Their handwriting is careless and untidy.
- Learning-disabled learners experience an inability to execute flowing movements in the correct order.
- They are unable to manage their own movements the way they want to, therefore they often cannot execute a conscious writing movement on command.
- Learning-disabled learners often do not realize that they have wrong responses on commands; consequently they do not try to rectify them.

Sensory motor integration includes the concepts body awareness, laterality, balance, rhythm and time awareness:

- **Body awareness** refers to the subjective picture, as well as objective knowledge of one's bodies (**body concept**). Learning-disabled learners often do not have the same measure of body awareness as other learners. Their inner reference system is affected, resulting in confusion regarding directionality and position in space, which influences the ability to do abstract reasoning, especially in mathematics.
- **Laterality** indicates awareness and differences of both sides of the body (Dednam 2005:16; Prater 2007:16). When learning-disabled learners do not understand these differences, they cannot move both hands in symmetrical movements. More often they cannot execute a-symmetrical actions, for instance when one hand writes and the other has to rest on the desk. Written language and reading problems occur, since these learners mostly fail to discriminate between a 'b' and 'd', an 'n' or 'u', as well as a '6' and '9'. They also read numbers and letters from the wrong side, e.g. 'glas' for 'salg' or 13 for 31. They also find it difficult to interpret maps in Geography classes.

- **Balance** has to do with auditory perception and nerve receptors, which must keep the body in a balanced position. Learners who experience learning disabilities often have problems with balance (Lerner 1993:313), which means that they have to overly concentrate on their body positions to the detriment of other activities, which has a negative effect on their academic achievement.
- Learning-disabled learners often find it difficult to keep a constant, flowing **rhythm**. This leads to a jerky way of writing that lacks rhythm. Because of the interrupted visual rhythm of their eye movements, their reading also tends to be jerky and uneven.
- To learn successfully, learners must develop a sense of **time**. Learning-disabled learners often experience problems with time (MacConville *et al.* 2007:76; Myers & Hammill 1990:60). They may confuse concepts like now, before and after, or confuse events from the past with those of the present. They do not plan effectively for the future, which has a negative effect on their learning (Hallahan & Kauffman 2006:186).

3.3.1.2 Perceptual development

Perception is the ability to observe information actively through the senses, to interpret it and give meaning to it (Lerner 1993:318). At the same time, this information is stored in the brain for later use. The more information is added, the more differentiated and complete the system for further references in the brain becomes and the more accurately the brain can interpret the incoming sensory information. Learners experiencing learning disabilities have faulty information processing skills (Smith 2007:158).

According to Hallahan and Kaufmann (2006:186), the visual and auditory perceptions are those that are mainly problematic to learning-disabled learners. Perceptual barriers that are often experienced by learning-disabled learners are the following:

Learners who experience learning disabilities struggle to **analyse and synthesise** incoming visual and auditory information and consequently cannot always understand or interpret spoken or written language.

Learning-disabled learners find it difficult to give meaning to information that is not complete. **Perceptual closure** takes place when partly written letters or words are recognized and understood for what is represented.

Learning-disabled learners experience difficulties with **visual and auditory discrimination** (MacConville *et al.* 2007:68), which means that they can often not see or hear the differences or similarities between speech sounds, characters, or words (3.3.1.5). This leads to spoken language problems like omission, adding or confusion with consonants, which in turn leads to language problem in reading and written work.

It is difficult for learning-disabled learners to **discriminate between fore- and background** sounds or letters or words in visual material (Hallahan & Kauffman 2006:186). They find it difficult to pay attention because they are unable to listen effectively to what the teacher says in the class and at the same time ignore sounds that are not relevant (see 3.3.1.4). This may cause language problems such as inaccurate articulation (see 3.3.1.5).

Learning-disabled learners may experience problems with **visual and auditory association** (Smith 2007:165) entailing limited ability to associate auditory or visual occurrences with other relevant information. Learners experiencing visual and auditory association problems may find it difficult to associate a name with a written word (see 3.3.1.5). Auditory level associations are an important component of language and are learnt by listening to other people. Learning-disabled learners therefore do often attach the correct meanings to what they hear or see (see 3.3.1.7).

Problems may also be experienced with **cross-modal association**. This means that learners who experience learning disabilities can often not integrate visual and auditory information to give meaning to that information (Lerner 1993:328). What they learn by listening to the teacher will not help them to better understand what they read in their books, which must lead to problems with spelling, reading and numeracy (see 3.3.2.1; 3.3.2.2).

Learning-disabled learners often have to cope with an **overload of the different modalities** (Lerner 1993:321). Because many learning-disabled learners cannot integrate

information coming from their different senses, they experience such an overload of information negatively, which leads to their either dodging some of the work or trying to complete tasks as quickly as possible (and consequently ineffectively).

3.3.1.3 Memory

Learning-disabled learners often experience problems with their **short-term memory** (Dednam 2005:15; Hallahan & Kauffman 2006:187; MacConville *et al.* 2007:68; Myers & Hammill 1990:58; Prater 2007:15), which means that they cannot execute orders properly. They experience problems with spelling and reading and cannot master numerical work that involves several consecutive steps (see 3.3.2.1; 3.3.2.2).

Because learning-disabled learners experience problems with their **long-term memory**, they often cannot memorise long questions or poetry effectively (Kirk, Gallagher & Anastasiow 1993:229; Prater 2007:15; Smith 2007:162). Inadequacies in respect of **visual and auditory memory** imply that learners cannot remember information that they have read or work taught by the teacher in the class (MacConville *et al.* 2007:68; Kirk *et al.* 1993:227). Weak sequential memory will lead to problems with numeracy and the spelling (see 3.3.2.2), because learning-impaired learners cannot remember the sequence of steps or sounds. Switching like 'plya' for 'play' or 'deos' for 'does' can occur. Learning-disabled learners do not have the ability to work out mnemo techniques to exercise their ability to remember (Prater 2007:15).

3.3.1.4 Attention

Learning-disabled learners are easily distracted, therefore they experience problems when they try to focus their attention on one aspect for a period of time (Dednam 2005:15; Hallahan & Kaufman 1991:135; Prater 2007:14; Smith 2007:165). They also lack the ability to differentiate between important and less important tasks.

3.3.1.5 *Language*

Learning-disabled learners often experience problems **with receptive language** (Smith 2007:157) since they cannot attach meaning to sounds (Hallahan & Kauffman 2006:184). Sometimes learners interpret idiomatic expressions literally, or they quickly forget what they have heard, so that they are unable to retell stories (Kirk *et al.* 1993:242; Smith 2007:157; Zaaiman 2003:16). Learning-disabled learners can easily misunderstand people, since they often misinterpret melodic intonations (Hallahan & Kauffman 2006:184; MacConville *et al.* 2007:75) which, for example, indicate whether a sentence was meant as a question, a proposition or an accusation, e.g: 'Oh, you are going to town?', as opposed to 'Oh, you are going to town!'

Regarding their **expressive language**, learning-disabled learners are often at a loss for words, use sentences in a story in the wrong order, or start in the middle of a story and consequently are unable to carry on a conversation fluently (Lerner 1993:359; Prater 2007:15; Smith 2007:157; Zaaiman 2003:16). With regard to their **speech**, learning-disabled learners experience problems with articulation, voice production and fluency as a result of poor rhythm and meaningful pauses (Hallahan & Kauffman 2006:184; Zaaiman 2003:16).

3.3.1.6 *Cognitive development*

The concept 'cognition' is used to describe mental activities that occur when people think or learn, including aspects such as perception, memory, language, attention, learning and thinking (Lerner 1993:578). Problems with any of the above-mentioned aspects, which are common among learning-disabled learners, can lead to problems with cognition and may include the following:

- Learning-disabled learners are more **field dependent** on concrete clues regarding their work than other learners (Bender 1992:120; Bernstorff & Welsbacher 1996:23; MacConville *et al.* 2007:76). At the social level, field-dependent learners conform more readily and will be more uncertain about things and subjective in their judgments (MacConville *et al.* 2007:76).

- They are not familiar with **problem-solving strategies**, and cannot apply such strategies easily (Hallahan & Kauffman 2006:187; therefore they are often passive learners (Hallahan & Kauffman 2006:191).
- Learning-disabled learners are more **impulsive** than regular learners (Bender 1992:121; MacConville *et al.* 2007:76). They tend to make quick, reflexive decisions which lead to unnecessary mistakes.
- Learning-disabled learners tend to **think unsystematically and illogically** (Smith 2007:157), which negatively affects their numeric skills. Their uncertainty regarding the correct methods for problem solving and the steps of specific methods makes it very difficult to perform well in numeracy.
- Learning-disabled learners also **lack the ability to plan** and will often hand in their tasks late (Hallahan & Kauffman 2006:187; MacConville *et al.* 2007:76).
- Learning-disabled learners find it difficult to **classify and categorise** (Bernstorff & Welsbacher 1996:23.24; Lerner 1993:202; MacConville *et al.* 2007:76; Smith 2007:157, 165). New information is often not associated with previous knowledge.
- When effective learning takes place, certain actions are executed automatically. Learning-disabled learners have a **problem with automatisms**, therefore they use much more energy and time to complete their tasks.

Learning-disabled learners experience problems regarding their developmental skills, which results in academic failures (Prater 2007:15). Repeated failures in the classroom may lead to these learners becoming frustrated and aggressive (Bernstorff & Welsbacher 1996:26; MacConville *et al.* 2007:70). Their self-concept naturally also suffers (MacConville *et al.* 2007:73; Robinson 2004:43; Zaiman 2003:16). The researcher is of the opinion that it is imperative that learning-disabled learners be supported to achieve the necessary developmental skills, preferably in a relaxed atmosphere where they will not develop emotional and social problems.

3.3.1.7 Social competence

Social competence, in particular the ability to demonstrate good interpersonal skills, is important for the social wellbeing of any learner, and many learning-disabled learners do not display age-appropriate social skills (Hallahan & Kauffman 2006:187; MacConville *et al.* 2007:75; Prater 2007:15; Smith 2007:157). These learners are not skilled in picking up social clues, such as facial expressions and body language, and find it hard to wait their turn (Prater 2007:17), which may lead to their being regarded by their peers as insensitive and rude towards. Very often teachers do not teach these skills to learning-disabled learners, due to the pressure placed on them to take care of 'greater' academic problems.

3.3.2 Manifestations of learning disabilities in academic skills

3.3.2.1 Language

Reading poses the most problems for learners who experience learning disabilities (Hallahan & Kauffman 2006:183; Smith 2007:162) as they do not always read **fluently** and consequently experience difficulties with reading **comprehension** (Hallahan & Kauffman 2006:183).

Written language is another aspect of language development with which learners experiencing learning disabilities often struggle (Hallahan & Kauffman 2006:184; Smith 2007:162). Learning-disabled learners tend to experience problems with handwriting, spelling and composition. Their problems in terms of handwriting are more severe than the ordinary less-than-perfect **handwriting**. They write very slowly (which can pose time problems during examinations) and their written products are often illegible. **Spelling** is a problem owing to their inadequate understanding of the correspondence between sounds and letters. Shortcomings regarding creative aspects (which imply fewer ideas, not being able to set interesting scenes and poor vocabulary) explain why their **compositions may** compare unfavourably with those of 'ordinary' learners (Hallahan & Kauffman 2006:183).

3.3.2.2 Mathematical skills

The second most serious academic problem for learning-disabled learners, after their inability to read, is their problem with mathematics (Hallahan & Kauffman 2006:185). Among other things, they experience difficulties with **computation** and **word problems**, which is often due to the inefficient application of problem-solving strategies, and with retrieving information from long-term memory (see 3.3.1.3), therefore they also have trouble remembering basic number facts (Smith 2007:162).

Whittle (2000:17) emphasized that music can 'communicate' with different aspects of the human consciousness simultaneously. The importance of the ability of music to transfer skills to other areas of learning cannot be underestimated (see Hotvedt 2001:72). Learners experiencing learning disabilities may acquire both planned and unplanned skills through musical activities, which in turn may influence various other learning areas in which they may be experiencing problems. In the section that follows, the researcher will examine the possibility that music may be used creatively to support learning-disabled learners in an inclusive classroom.

3.4 MUSICAL ACTIVITIES TO SUPPORT LEARNING DISABLED LEARNERS

Many class teachers have no special training in dealing with learners who experience barriers to learning, therefore they might not be able to diagnose learners' problems correctly. Despite this, they are generally expected to be the first to notice the presence of learning difficulties and to be able to help them, or at least to know where to ask for help. According to the policies on inclusive education (White Paper 6), they could ask for help from a remedial teacher, if available, medical experts, the support services of the district, community members, or a specialized school nearby. However, until help from outside becomes available, they have to support the learner as well as they can.

Policies relating to inclusive education demand that such learners be approached positively, with the emphasis on their individual strengths. The teacher is therefore required to

- teach preventatively by, for instance, using musical activities to develop certain skills (e.g. perceptual, memory, attention and reading skills);
- use many different modalities and teaching methods for one lesson. The teacher could, for instance, use music and movement throughout the lesson for different purposes, such as integrated learning, refreshment, to capture the learners' attention and for self-concept building.

Teachers who keep to this strategy will involve most of the learners in class in the lesson and provide them with opportunities to be successful (Robinson 2004:43). The same music and movements can be used to develop skills in all learners, from learning-disabled learners to high achievers.

The following section **practical examples of activities** aimed at the promotion of gross and fine motor skills, sensory motor skills, perceptual skills, memory, attention, language, cognitive and social skills will be discussed.

3.4.1 Developmental skills

Developmental skills are foundational skills for the effective execution of academic skills. Normally developmental skills, such as motor and perceptual skills, are ignored during the intermediary phase. However, many of these skills are in fact lacking in inclusive classrooms, and music provides an opportunity for development without learners considering such exercises to be 'childish'.

3.4.1.1 *The development of motor and sensory motor skills*

Learners with learning disabilities are often clumsy; their responses are slow and their fine motor movements are underdeveloped. Learning-disabled learners, in particular, experience problems in respect of flexibility, flowing movements and the carrying out of deliberate movements. Sometimes the learners are unable to follow instructions and

consequently carry out the wrong movements. With regard to sensory motor development, learning-disabled learners experience problems with aspects such as bodily concept, laterality, sense of direction and cross-modal integration.

Music that has a strong, clear rhythm is particularly suitable for exercising gross and fine motor movements (Booth 2004:65). Nietzsche said that 'we listen to music with our muscles' (Sacks 2007:xi). In African cultures it is common to perform various actions to the rhythm of music, such as clapping of hands, stamping of feet and dancing. Movement may well be more important to learning than was realized by researchers in the past (Palmer 2001:13). According to Hannaford (2005:107), movement awakens and activates many of our mental capacities. It is important to consider the types of motor and sensory motor problems learning-disabled learners experience in order to find out whether those problems could be adequately supported through the creative use of music (Palmer 2001:17; Patterson 2003:36).

Activities involving music can also be used to practise the sensory motor skills of learners and to internalise their concept of time. Although the different activities are discussed here under different headings, it should be noted that a particular activity can often be used to promote the development of various motor and sensory motor skills.

Examples of music for the development of gross, fine and sensory motor skills are given below:

Music for the development of gross motor movements

- At this level learners will enjoy simple rhythmic exercises executed to the beat of popular music. Such exercises will improve gross motor movements and sensory motor aspects such as central line crossing.
- Walking to the beat of music is a simple exercise that can be used to improve learners' response times and will help them to synchronise the 'response' (walking) and the stimulus (music and time). The constant rhythm could also improve learners' awareness of the constant passing of time. This exercise may be used in various forms, for example:

- Walking to the beat of rhythm sticks or music
 - Walking to the tune of a well-known walking song such as *John Brown's Body*
 - Exercises that combine walking and the clapping of hands or other activities help learners to synchronise various movements and contribute to the development of concentration and memory.
- Once learners have learnt to coordinate walking, clapping and singing, knee slapping may be added, followed by movements requiring them to stamp their feet or snap their fingers. For instance: The learners and the teacher sing the song *Shoshalozza* together. On the first beat the teacher slaps her knees, and on the second beat she claps her hands. The third and fourth beats are indicated by snapping her fingers in the air. This illustrates the idea that the accent beat is heavier than the other beats.
 - Two intertwined circles moving to the rhythm of the same music, as in traditional dancing, also strengthen the rhythmic idea and will sustain the focus.

Music for the improvement of fine motor movements

Attention may be given to activities involving learners in the playing of (home-made) musical instruments or body percussion (Patterson 2003: Orff 1980:91). Once again the emphasis must be on rhythm.

- Singing *Frere Jacques* while simultaneously playing musical instruments. Divide the instruments into four distinct sound groups (wood, metal, glass [e.g. bottles half-filled with water] and cardboard) and play the song as a rhythmic canon.
- Give each group of six learners a bag containing six small noise-making objects, e.g. clothes pegs, pencils, spoons, two pieces of sandpaper, plastic lids and some dried beans in a small container. They have to decide how they could use each of the objects as a musical instrument. Play a song of their choice and let them play along after they have listened to it once. Repeat the process with different types of music and give them the opportunity to vary their 'accompaniment' to the song.
- Give each learner a piece of play-dough and ask them to roll a round ball using only the middle finger and thumb (of either hand). They start when you start playing a song and stop when you stop playing.

Music for the development of sensory motor skills

Orff (1980:92) maintains that action songs provide an ideal method for the integration of sensory motor skills:

- Make the learners aware of the space around them by allowing them to move to the sound of music, using different parts of their bodies and varying the size and direction of movements.
- Construct a simple obstacle course in the classroom. A circle of chairs or a row of desks may be used. Play rhythmic music and call out instructions to the learners to move to the right or the left, up or down, over or under, behind, in front of or next to objects – all to the beat of the music.
- The well-known song *If you're happy and you know it* is ideal for strengthening body awareness in Grade 4 learners. The teacher calls out various instructions indicating actions to be carried out.
 - If you're happy and you know it
 - nod your head ...
 - pat your knees ...
 - touch your toes, ankles, shoulders ...
 - look to your right, left ...

or

 - If you want to be a dancer turn around ...
 - If you're sad and you know it, wipe your eyes ...
 - if you're angry and you know it, stamp your feet ...
- Laterality can be promoted by using the left hand to tap a rhythmic pattern on the left knee, followed by the same action carried out by the right hand on the right knee. Vary the movements by tapping the left leg with the left hand while snapping the fingers of the right hand.

- To practise cross-dominance, the following rhythmic exercises taken from the African culture may be used: Clap the hands rapidly, say 8 or 10 times for each beat. Pulse (accent) beats with the other hand may coincide with different beats and need not be regular, for example:

1 2 3 4 5 6 7 8

- Learners may count out loud and clap only on the beat (the underlined numbers). They could simultaneously keep the rhythm with their left hands while their right hands clap the beat on the left-hand side of their chairs.
- The teacher writes the following on the board:

L.H.	R.H.
1	x
2	x
3	
4	
5	x
6	

First the learners count the left-hand column and clap the right-hand column. Then they clap their left hands on their right legs, and their right hands on their left legs.

- Kinaesthetic experiences with time and space are the perfect way of acquainting learners with the concept of time. Learners can become aware of time, rhythm and accents by rolling tennis balls between their hands, or bouncing them in order to demonstrate the length of musical beats. They could also bounce the balls on each beat, or just on the accent beat.

3.4.1.2 *The development of perceptual skills*

The problems that learning-disabled learners experience in the development of perceptual skills imply that they may have a backlog in acquiring academic skills, which are based on perceptual skills.

Music has a significant effect on the development of learners' perceptual skills, since it makes them more receptive to all kinds of auditory, visual and other stimuli (Sacks 2007:xi). Activities that combine music and movement help to create satisfactory contact between the ear, the mind and the body. Any motor activity performed to music (see 3.4.1) should therefore also exercise perceptual skills.

Examples of music for the promotion of auditory analysis and synthesis, auditory discrimination and visual and auditory association will now be presented.

Music for the promotion of auditory analysis and synthesis

- Learners are divided into groups and each group chooses a poem that has been taught in class. They illustrate its sounds and rhythm with the aid of any home-made instruments that can produce interesting sounds. The rest of the class have to guess which poem they are illustrating.
- Learners could develop their own 'Morse code' and put up a list of the codes in the classroom. They could use the signals in groups or in pairs by tapping on the desk with fingers or pencils. Instruments could also be used. Words could be dictated, with pauses between the letters. At first the teacher dictates a word that has to be deciphered by the entire class. Group-work competitions could also be held, with groups competing to see who can decipher the word first.

A * ___
 B ___
 C ___* etc.

Music for the promotion of auditory discrimination

- Start by asking the learners to close their eyes. Play two sounds on completely different instruments, such as a note on a recorder and a beat on a drum or tambourine. The learners must guess which instruments were used.

- Gradually learners learn to identify more subtle differences. Eventually a competition could be held in which different groups must decide which of two notes played on the piano is the higher (or the lower). Exercises in sound discrimination are also useful for the language development of learning-impaired learners.

Music for the promotion of foreground and background discrimination

- Play telephone games. The message can be transmitted in rhythm, e.g.:
 **__ is clicked with the tongue, or a sound sequence like *p-p-f* is whispered. The learners stand in different parts of the room – some could even stand outside. Rhythmic messages are transmitted from one learner to another, with brief pauses, and the last learner writes the message on the board.

Examples of messages that correspond to rhythmical patterns:

__** (= crotchet, quaver, quaver, or one long and two short notes)

**** (= quavers, or only short notes)

**__ (= quaver, quaver, crotchet, or two short and one long note)

All musical activities performed in groups involve foreground and background discrimination as learners have to distinguish the music made by different group members.

Music for the promotion of visual and auditory association

- Play a quiz game. Prepare tapes containing animal sounds, everyday sounds and music and ask the learners to associate the sounds with pictures on the board.
- Record music used in television advertisements and compile a simple crossword puzzle which the learners must complete by filling in the names of products associated with each piece of music.

Since most musical activities use more than one modality, they will at the same time promote cross-modal integration. Examples of music for the promotion of memory will be illustrated next.

3.4.1.3 *The development of memory*

Memory is one of the key skills required for effective learning. Learning-impaired learners experience difficulties with remembering information in the short and the long term. Researchers (Patterson 2003: Rainey 2002:181) claim that long-term memory for information learnt to a well-known tune is much better than it is for information learnt without music. However, music perceived as arousing, unpleasant and aggressive has a negative effect on performance on a memory task (Hallam, Price & Katsarou 2002:119).

The following are examples of how memory can be enhanced with the help of music:

- Learners are first shown that particular sounds suggest specific geometrical shapes. They are then blindfolded and asked to listen to different sounds and to draw the shape that each sound suggests on the board, for instance:

Staccato sounds	=	triangle
Legato	=	a line pointing upwards
Falling passage	=	square
Rising passage	=	circle

The class could use instruments to improvise the sounds vocally. One learner uses a torch to beam the shape that has to be drawn on the board. The class has to follow the beam of light to see which sound they have to improvise, so that the learners at the board can know which shape they have to draw by following the acoustic clues. After a while two or three sound clues could be given together.

- The teacher could clap out a particular rhythm, or use a percussion instrument and ask the learners to repeat it, for example:

```
**  _  **  _
*  _  _  **  _
```

- Learners must be able to recognise themes from musical items, such as the theme depicting the movements of the trout in Schubert's *Die Forelle*, or the themes depicting the different animals in *Peter and the Wolf* (Prokofiev).

In the following section, examples of music for the development of attention will be put forward.

3.4.1.4 *The development of attention*

Learning-impaired learners often struggle to keep their attention focused on a specific topic. This is a major problem for hyperactive learners in particular.

In two studies that involved four and ten hyperactive learners respectively, it was found that the introduction of **background music** had a calming effect (Hallam & Price 1998:88). When music is used in conjunction with pleasant activities, it compels learners to pay attention and to become involved in the activities (Patterson 2003:35; Lozanov 1977:85). Smith (1979:50) even claims that music can be used more effectively than television to obtain and hold learners' attention.

The following are suggestions for the use of background music:

- Use Baroque compositions as background music to help learners to pay attention during learning activities (Lozanov 1977:85). Teachers should not talk too much, but should from time to time direct learners' attention to specific points.
- Plan activities in which learners have to distinguish between short and long sounds. The sound of a cymbal, for instance, resonates long after it has been played. Learners must listen to the fading sounds until only relative silence remains. The colour and duration of the sounds made by various instruments could be compared.
- The typical rhythms of Indian and African music could be used in an exciting presentation. Classical Indian music has a unique rhythmical structure which suggests ways of arousing learners' attention by teaching them various rhythms from a four-beat to a sixteen-beat cycle.
- The typical rhythms of Africa are relatively simple, but considerable concentration is needed for quick and rhythmical performance. A learner who can play a drum

accompaniment to a familiar tune such as *Shoshaloza* may be asked to do so. This will arouse the interest the other learners, who could eventually be taught to play along.

Examples of the developmental language skills, namely listening and spoken language skills will be discussed next.

3.4.1.5 *The development of language*

Learning-impaired learners experience a variety of problems with listening to and using spoken language. Music can be used in different ways for the improvement of learners' language skills (Booth 2004:65; Fisher 2001:46). The stimulation of the language skills also has a positive impact on self-image and social skills.

Music for the promotion of listening skills

The development of listening skills is a fundamental aspect of language development, and every kind of music (singing, playing instruments, keeping time and listening to music) contributes to the development of learners' listening skills, and hence to their ability to listen to language (Booth 2004:65). The possibilities are endless. Here are some examples.

- Learners in the intermediate phase enjoy changing a musical composition or a song, which allows them to be creative, to carry out written or spoken commands, to remember sequences and to learn musical concepts.
- The learners prepare written instructions for a sound improvisation depicting a journey from one town to another by car, aircraft and/or boat. The following could be used:
 - An eggbeater, to imitate the sound of a car engine warming up
 - A marimba, shaken loudly at first and then gradually more gently to imitate the sound of a car moving further and further until it disappears in the distance

- A tune, whistled to suggest that the car radio has been turned on
- A drum roll that starts rapidly and gradually slows down to a single beat to indicate the end of the journey.

An activity that develops selected listening skills can be illustrated as follows (also refer to the exercises for distinguishing foreground and background sounds):

- A learner is asked to read into a tape recorder for about one minute. The tape already contains a certain amount of sound. Play it back. The learners have to distinguish the reading from the background sounds and repeat what they have heard.
- Take the learners for a walk inside and outside the school building with the specific purpose of listening. Ask them to write down the different sounds that they heard.

Music for the promotion of spoken language

Because music and speech share common characteristics such as pitch, duration, various levels of volume and colour, music a highly effective medium for developing spoken language. Music also helps learners to speak in a more spontaneous and confident way, not only to the teacher, but also among themselves (Booth 2004:65; Patterson 2003:36). Learners are keener to take part in musical activities than in the usual kind of oral language activities. The use of music also helps the teacher to play an active part without being too dominant.

The combination of music with brief word patterns which the learners repeat and follow with claps can provide practise with rhythm, stress and the division of words into syllables. Words, phrases and nonsense rhymes could be combined with the music (instead of instruments). The human voice is a particularly expressive medium for rhythm work, especially when proper inflections are used.

- Take the learners' names and join them together to form a rhythmic pattern, for example:
Annabel, Barbara, Angela, Jennifer
Christopher, Daniel, Samuel, Timothy

- Each learner has a turn to say his or her name and surname rhythmically and to clap along with the rhythm. The rhythmic patterns of all the names and surnames will be different. They can be expanded to short phrases which can be spoken aloud with a strong rhythm, for instance:
Ruth Khumalo hurt her knee.
Jeremy Jele goes to the shop.
Danny Mahlangu wants to talk to his Dad.
- The possibilities are endless. Later, try to end each phrase with a rhyming word. This enables the learners to create their own raps. Once the learners understand the concept, they can sit in a circle and take turns to say words that relate to a predetermined theme, while the others keep the beat by way of physical activities like clapping on their thighs, stamping their feet, or a combination of slapping knees and shoulders.
- Debates or panel discussions could be held on various aspects of music, such as different pop singers. (Here music is the topic and not an aid.) Music plays such an important role in the lives of young people that it will stimulate them to speak.
- Singing together is an excellent way to learn a second language. The learners practise pronunciation, sentence construction and idiom, they enjoy what they are doing and they are not shy or anxious about the pronunciation.

The basic skills necessary to perform/execute cognitive tasks are also part of the developmental skills and will be discussed next.

3.4.1.6 *The development of cognitive skills*

Some of the most important problems faced by learners who experience barriers to learning in the cognitive domain are field dependence, the inability to form groups effectively, the inability to categorise and an ineffective style of problem solving. All the cognitive processes are involved when learners play music or take part in musical activities. Various cognitive functions are involved during even the most basic involvement in music (Patterson 2003:35).

Researchers (see 2.3.2.2) point out that the successful application of academic skills depends to a considerable extent on the learners' emotional and social development. Their cognitive processes are dependent on their emotional state, and so are their motivation and volition. Music can stabilise learners emotionally, teach them better social skills and enable them to function more effectively in the cognitive domain (Robinson 2004:40).

As far as these learners' field dependence is concerned, they can learn through music activities to be less dependent on clues from other people and to trust their own intuition. Music activities provide opportunities to develop a sense of time, volume and other matters (which cannot be precisely set down), and the ability to take their own decisions. Learners get an opportunity to improvise, and their contributions are always correct. Note that this kind of group activity requires thorough planning.

Bjorkvold (1992) suggests that the African equivalent of Descartes's remark: 'I think, therefore I am' is: 'I dance (play, improvise, make music), therefore I am'. In this way he emphasises how important creativity is in African music. Creativity is vitally important for cognition, because it can lead to the innovative solving of problems. When learners are given the opportunity to take part in music in a spontaneous, creative and improvisational way, they practise problem-solving strategies, which they can then transfer to other parts of their lives. For example:

- At the very simplest level, learners can perform their own improvised physical movements in time to the music. In order to do this, they must first develop and then internalise a feel for rhythm before they are able to reflect this in their muscle movements. Learners may perform slow movements to the accompaniment of classical-romantic music, such as the slow movement from Beethoven's Sixth Symphony (the Pastoral). They then use their imagination to portray what the music 'represents to them'. This music is also ideal to aid relaxation.
- Learners in the intermediate school phase may improvise in a group when they are made responsible for choosing the background music for a play, a story or drama. They will experiment with different sounds, rhythms and tunes in order to create the appropriate background for the particular situation. Learners must be able to discuss the atmosphere of the scene and mimic the necessary sounds in an original way, and eventually coordinate everything.

- Categorising can be practised by asking learners to identify similar sounds, rhythms and tunes. In the relaxed atmosphere created by the music they can be asked to elaborate on an answer and to explain the reason for a choosing a particular category.
- Counting rhymes, songs about the months of the year, or any other information contained in the song, as well as any other song, help learners to concentrate, exercise their memory, categorize and group, and to convey this information in other situations, all in a spontaneous and pleasant manner.

3.4.1.7 The development of social competence

All learners learn best in collaborative, creative classrooms (Sawyer, John-Steiner, Moran, Sternberg, Feldman, Nakamura & Csikszentmihalyi 2003:163). To help learners who experience learning difficulties to understand collaboration, musical collaboration in group work can be very effective (Pigneguy 2004:77). An effective group activity allows all learners to participate in a meaningful way, regardless of their level, and it is structured so that each level of participation naturally propels the learner to increasing levels of mastery and participation.

In classrooms where music is used informally, learners learn much more than the mechanics of music. They learn interactional skills; they learn how to listen and to respond appropriately; they learn to collaborate, and they learn to communicate in social contexts (Patterson 2003:35). They could also learn a deeper musical understanding than is often the case with formal music lessons. Using music in groups corresponds to the way that learners naturally learn in family and peer settings, through informal playground games and rhymes (Sawyer *et al.* 2003:162).

The listening skill is also very important for effective social interaction. People who do not listen to those with whom they are in contact will have poor social skills, will consequently not have good friends, will feel like outcasts and will have low self-concepts.

- To develop listening skills (see 3.4.5), the learners could use the natural sounds that they collected in a quiz against the other groups. Each group must play a sound and

the rest must guess what it represented. Learners could then use those sounds to create their own audio-play, which they could present during the next lesson. It could also be fun to add vocal sound effects.

- It could be very interesting to invite individual learners play their favourite music. The class must identify the kind of music played (jazz, rock, folk) and the presenter must explain why he or she prefers that type of music. This would present an ideal opportunity for the teacher to play a few different styles of music (waltzes, marches or programme music, for instance music where birds are imitated, e.g. Vaughan Williams' *A lark ascending*).
- Singing with rhythmical activities can enhance comfortable social interaction and enjoyment. Even learners with barriers to learning will be able to relax and enjoy, because there is no right or wrong when doing music activities.

The purpose of the following exercises is to develop **academic skills**. They are suitable mainly for learners in the intermediary phase.

3.4.2 Academic skills

The problems that learning-disabled learners often experience with developmental skills may have a negative effect on their academic skills. The following are examples of music for the enrichment of academic skills:

3.4.2.1 *Language: reading, spelling and writing*

If learners experience problems with language, the difficulties will manifest themselves as problems relating to reading, spelling and writing.

Many learners, including those who experience barriers to learning, struggle with reading. Music has several attributes that can facilitate reading, such as rhythm and phrasing, which may help learners to read with greater fluency.

- Use music as the topic for reading assignment. Ask learners who have reading problems to read information relating to their favourite pop stars and to report back to the class on what they have read. Encourage them to write the lyrics of their favourite songs in a notebook. Use an overhead projector to project the lyrics onto a screen so that the class can sing them.
- Word and sentence comprehension may be developed by urging learners to pay attention to the lyrics of the songs.

Several music games are available for spelling practise. Learners sing the *spelling* of difficult words, which enables them to remember these spellings for the rest of their lives. Group games, such as filling in missing letters in a list of words containing the names of popular pop singers and high frequency words, will help learners to focus all their attention on correct spelling in a playful way.

In South African schools, *writing* is not considered to be a creative process, but rather a skill that needs to be learnt. Most learners regard writing as a chore that has little value. In reality, writing classes can not only help learners to write creatively and correctly, but can help them to master different forms of essay writing that are useful in everyday life. This, in turn, promotes creative thinking and the development of aesthetic consciousness.

Music can perform this function in the following ways:

- Start the lesson by playing a piece of music and ask the learners to concentrate on the music to help them focus their thoughts. Music may also be played while the learners are writing to allow thoughts and images to flow freely through their minds (Volbrecht 1991:41).
- In the African context, traditional music is particularly useful for writing activities since it is part of virtually all human activities and emotions. A mix of traditional and pop music, such as is found in the music of, for example, Juluka and David Kramer, is often very popular. Learners may write letters to express their views about certain statements that these stars may have made, or to say what they think about the stories told in ballads. The learners may also be asked to write about certain episodes from the lives of their favourite artists.

- The lyrics of songs sung by popular artists may be used to help learners practise rhyming or poetry skills. Learners could write new lyrics to known tunes, or add additional verses. Various interesting pop music titles could be used for this purpose, for example *Hey yah* (by Outkast), *With arms wide open* (Creed), *Lifestyles of the rich and famous* (Good Charlotte) and *The way I are* (Timbaland).

Finally, examples of how music can be used to promote mathematical skills will be discussed.

3.4.2.2 Mathematical calculations and skills

Many learners experience problems with Mathematics (mainly as a result of visual/spatial deficiencies). These problems manifest as an inability to execute calculations fluently, to monitor their own cognitive processes and to acquire skills/knowledge automatically, and poor memory and concentration skills. Research conducted by Abikoff, Courtney, Szeibel and Koplewicz (1996:238) revealed that learners with ADHD performed significantly better on arithmetic tasks while listening to music than under speech or silent conditions. Non-disabled learners performed similarly under same conditions.

It is important that learners acquire a thorough understanding of mathematical concepts. This can best be achieved in a pleasant and stress-free environment when musical activities are included. The following examples illustrate how a relaxed atmosphere can be achieved in the classroom with the help of music.

- Baroque music as background music may be played to improve learners' mathematics achievements by regulating their brainwaves.
- Automatisms, such as tables, can be learnt much more easily if presented rhythmically and in song.
- Provide learners with clues on the basis of which they have to do certain mathematical calculations. Initially they can sing these aloud, and later to themselves in their minds. In this way they learn to monitor their own work, and thus to apply metacognitive strategies.

3.5 CONCLUSION

In this chapter the inclusive classroom was discussed and authentic scenarios written by teachers from *Prospectus Novus*, a school for the learning disabled, were presented. The scenarios and the solutions proposed by the teachers to deal with the problems will be used in the programme *Music for All*. The teachers, who are the students participating in the programme *Music for All*, will get the opportunity to build onto the existing support plans to devise creative ideas with the help of music to support the learners experiencing the problems illustrated in the scenarios.

A range of typical problems that could be experienced by learning-disabled learners were discussed. The effect of music on people addresses needs of learning-disabled learners. In this chapter a variety of practical and easy examples of how class teachers can use music to solve problems were proposed.

The next chapter will focus on important concepts necessary for the development of the programme *Music for All*. Concepts which will have to be considered are Continuous Professional Learning (CPL), together with the principles of adult learning, as well as the best principles for Open and Distance Learning (ODL). The framework for *Music for All* will then be presented in Chapter 4.

CHAPTER 4

ASPECTS OF CONTINUOUS PROFESSIONAL LEARNING AND OPEN AND DISTANCE EDUCATION TO CONSIDER IN THE DEVELOPMENT OF A LEARNING PROGRAMME: MUSIC FOR ALL

4.1 INTRODUCTION

In the previous chapter, various scenarios were presented to illustrate typical behaviours displayed by learning-disabled learners in the classroom. Possible manifestations of learning disabilities were highlighted and discussed, and examples of musical activities that may be used to support learning-disabled learners were given.

Chapter 4 deals with the professional and technical aspects of the compilation of the short course, *Music for All*. On the basis of the research conducted for this study, the principles to which a programme for continuous professional learning in an open and distance learning environment should adhere to, are determined. For the compilation of the principles according to which the first draft of the programme will be compiled, the researcher uses the current education policy on inclusive education and the educational theory of constructivism as point of departure. A review of Continuous Professional Learning (including adult learning) follows, and good open and distance learning practices are determined.

Table 4.1 Aims of chapter 4

PROGRAMME: MUSIC FOR ALL		
Chapter 2	Content	Creative use of music
Chapter 3		Examples of music for Learning disabled learners
Chapter 4	Format	Principles of CPL and ODL
Chapter 5	Quality Assurance	Delphi Method

A discussion of school improvement through continuous professional learning follows.

4.2 THE IMPROVEMENT OF SCHOOL PERFORMANCE THROUGH CONTINUOUS PROFESSIONAL LEARNING

Research findings frequently point to the relationship between school improvement and the effective professional development of teachers (Hawley & Valli 1999:129; Young 2001:209). Teachers are the determining factors for learners' performance (Hawley & Valli 1999:128). The restructuring of schools, the composition of national and provincial curricula and the development of benchmark assessments are all of little value if they do not take the teacher into account (Earley & Bubb 2004:3). Teachers do not merely deliver the curriculum; they also develop it, refine it and interpret it (Brodie, Lelliott & Davis 2002:541; DoE 2005a:34-35; Richardson 2007:86; Spencer & Logan 2003:51). It is therefore important to provide teachers with professional learning programmes that will lead to the development of successful inclusive school programmes (Brodie *et al.* 2002:542; McLeskey & Waldron 2002:159; Spencer & Logan 2003:51). Such programmes must result in significant changes in teachers' classroom practices (Richardson 2007:86).

The question that needs to be asked is: 'How should a programme that equips teachers to use music creatively in an inclusive classroom be compiled to be effective in the South African context?' It is clear that old recipes do not work for the varied circumstances in which different teachers find themselves. Teachers need special skills to cope with the unique personal circumstances and the realities within which many of them work (De Witt 2007:53). Therefore they need to be trained to develop skills that will help them to operate effectively in different situations and to accommodate a variety of learners, including learners with learning disabilities.

There is a proliferation of debates on the types of skills and knowledge that teachers need to be effective in the classroom (Graham & Phelps 2003:11). However, an unprecedented consensus is emerging among researchers, professional development specialists and policy makers that the above-mentioned skills are linked to the solving of authentic problems (Aubusson & Schuck 2006:1; Perrett 2003:1). Such skills could help diminish the gaps between teachers' achievement and expected performance (Hawley & Valli 1999:127). Another reason for teaching problem-solving skills is that the teaching and demonstration of critical and creative thinking and problem solving has become compulsory since the implementation of OBE and inclusive education (Feather 2003:5). Many researchers agree that effective programmes for CPL should include the teaching of creative problem-solving skills.

To determine elements that a continuous learning programme can use to train teachers, the minimum 'requirements' that can generally be expected from competent professionals will now be discussed.

4.2.1 School improvement by means of reflexive teaching

It is only since the mid-1970s that the mental life of the teacher has become a central topic in studies of teaching (Scott Nelson 1999:4). During the mid eighties researchers regarded teachers' understanding of their subject matter, the relationship of such flexible understandings and the instruction that they provide as important (Scott Nelson 1999:4). Researchers such as Loewenberg-Ball and Cohen (2000:7,8) added that, apart from

thoroughly **understanding the subject matter** that they teach, teachers should also be able to **'read' children** in order to know what they are thinking and learning. However, other researchers (Darling-Hammond & Sykes 1999:xiii; Kelchtermans 2004:217; Loewenberg-Ball & Cohen 2000:10) maintain that such knowledge is necessary but not remotely sufficient. A very important aspect of teaching is that **teachers should also be able to draw meaning from experience** (Aubusson & Schuck 2006:5; Brady 2006:15; Mantzoukas 2007:243; Richardson 2007:86). However, this skill does not necessarily develop automatically. Some teachers spontaneously engage in reflective activities, but to others reflective and problem-solving activities have to be demonstrated (Mantzoukas 2007:242). Research (Perrett 2003:1; Guyton 1998:3) strongly suggests that intervention is needed to promote the necessary cognitive growth in order to reflect and solve problems. Despite many calls for 'reflection in action', there are few programmes of this kind (Guyton 1998:3).

According to Raynor (2002:166), there are two ways in which reflexivity/creative thinking will influence teachers' functioning in the classroom: firstly, their ability to respond appropriately to the needs of students will be influenced positively, and secondly teachers will be able to respond quickly to changing events in the classroom. Teachers' reflection, or creative thinking, will therefore be meaningful if it can lead to the development of a mature and self-sustaining instructional practice based on inquiry (Carr, Fung and Chan 2002:168; Mantzoukas 2007:242; Perrett 2003:2; Reid & Petocz 2004:48; Richardson 2007:86; Scott Nelson 1999:9). Research has also shown that certain personal advantages can be related to reflective skills (Bezzina 2002:80; Scott & Dinham, 2002:111; Sibbett, Wade & Johnson 1998:27). Teachers who reflect on their strengths and weaknesses and formulate plans to meet needs are those who acquire professional expertise as well as good learner outcomes (Guyton 1998:3) and personal accomplishments. Reflective teachers often 'acquire the capacity for self-congratulation or self-satisfaction at something well done, shame at slovenly work and even embarrassment at carelessness' (Norlander-Case, Reagan & Case 1999:29). In fact, reflection can be seen as a holistic process whereby thought and emotion are engaged (Trumbull 2006:67).

Norlander-Case *et al.* (1999:31) suggest that three levels of reflective practice can be regarded as paralleling the growth of individual teachers from novice to expert:

- The first level is characterized by effective and appropriate application of skills, materials, technical knowledge and instructional strategies in the classroom setting. The act of teaching is an intellectual process (Solomon 1999:x). This is also the level on which this study will focus. The purpose is to enhance teachers' capacity to plan, monitor, reflect upon and make meaning of their instructional and personal decision making.
- The second level of reflectivity involves reflection on the assumptions underlying specific classroom practices, as well as the consequences of particular strategies, curricula and so forth. At this second level of reflectivity teachers begin to apply educational criteria to pedagogical practice in order to make independent and individual decisions about pedagogical matters.
- The third level of reflectivity entails the questioning of moral, ethical and other types of normative criteria related directly or indirectly to the classroom. A teacher engaging at this level may be able to make decisions that would be beneficial for the long-term development of the learners in the classroom and also contribute to educational policy beyond his/her own classroom (Norlander-Case *et al.* 1999:32). Teachers can, in other words, be effective bottom-up contributors towards the inclusive practice and could influence practical policies to the benefit of other teachers who can learn from the know-how of the expert teacher.

In the programme *Music for All*, the reflective thinking of teachers will be developed mainly through authentic scenarios, which will lead to creative problem-solving activities. According to Scott Nelson (1999:7), this may be an effective way to encourage change in teachers' style of instruction. Teachers will be given examples of how problematic situations were solved by colleagues who have experience in working with learning-disabled learners. Through assignments the teachers will learn how to use music creatively to develop and enhance learner support. In the circumstances of this research study this seems to be the most effective and direct way for constructivist teacher learning (see 4.4.4). As informal ways of practicing reflection will support formal teaching and make it more sustainable, practical ways to foster reflection will be promoted in the programme and will therefore be discussed next.

4.2.2 Practical ways to foster reflection

In CPL it is important to develop the teachers' self-awareness and reflection, and in so doing help them to develop new perspectives (Aubusson & Schuck 2006:2; Bezzina 2002:75; Early & Bubb 2004:8, 9; Perrett 2003:1). If programmes are designed from the teachers' perspective and they are required to recognize and analyse their own experiences and transfer their tacit knowledge into 'working' or 'practical' knowledge (Aubusson & Schuck 2006:1; Carr *et al.* 2002:167), this may contribute towards their reflection (Perrett 2003:2). However, there are also other practical ways in which teachers can attain the skill of reflection in order to promote their personal and professional development at different levels (Brady 2006:18; Perrett 2003:3; Russel 2006:83; Stevenson 2006:118; Trumbull 2006:75; see 3.3.2). The following are examples:

4.2.2.1 *Autobiography*

An **autobiography** has the potential to be a powerful source of reflection (see Gordon 2004:35), a way of clarifying meaning and a means of affirming the significance of an individual's experience (Perrett 2003:3). It may contain themes like the following:

- Personal educational values and goals
- Personal preferred learning style(s)
- The evolution of teaching and learning strategies
- Attitudes towards barriers to learning
- Creative moments that worked in class.

4.2.2.2 *Journal*

Narrative accounts of teachers' experiences, often in the form of journals, may serve to contextualize the classroom experience for the teacher. The process makes invisible thoughts visible and engages higher-order thinking skills, such as fluency of thought, analysis of concepts and inducing from experience (Richardson 2007:141), thus providing

a richer understanding of what takes place in the classroom (Trumbull 2006:67). Keeping a reflective journal is very much a matter of personal style, but the following guidelines may be helpful:

- Journal entries should be made regularly (West-Burnham & O'Sullivan 1998:82)
- A range of styles may be used for entries: critical incidents, a thematic narrative, responses to reading, planning of lessons, dialogues with a coach, or their views of themselves as learners, linking many aspects of life to teaching (Schuck 2006:214; Trumbull 2006:79)
- Informal, spontaneous writing is valued over proper syntax, spelling, etc. (Trumbull 2006:69)
- Journal entries could be hand-written, or entered on the computer (Trumbull 2006:70).

Researchers like West-Burnham and O'Sullivan (1998:82) suggest that a journal should be confidential, but Trumbull (2006:68) shared her journal with her students, which provided the students with a deep learning experience. A journal may have therapeutic value, and could provide a way of coming to terms with a complex and demanding job. The journal can also be used in conjunction with a reading strategy, with significant extracts from for example books being copied into the journal and served as basis for reflective writing. Some of the best reflective writing starts with a brief factual account, which is followed by a relevant piece of published writing that inspires a stream of narrative exploring of issues, options, feelings and responses. This is then followed by more systematic analysis and, if appropriate, target setting. This may be essential to personal survival and professional growth.

4.2.2.3 Observation

Professional learning can happen only if a teacher attentively and purposefully gathers data for the purpose of the development of own skills in the classroom (Perrett 2003:5).

Because many teachers are not involved in purposeful observation, their decision making may be a painful process, because in almost all cases they have limited and insufficient information. For example, teachers have to take curriculum decisions, methodological decisions, decisions on classroom management and organisation, personal and professional ethics, about individual learners and their barriers, and many more. Those decisions are taken on the basis of what the teacher has observed in the classroom. Very often, instead of pro-active reflection and observation, teachers only reflect in hindsight if they question themselves on the effectiveness of their responses.

4.2.2.4 Reading

Professional reading is often one of the first casualties of teachers who have too much to do, are tired and need to devote what limited spare time there is to personal refreshment. Reading, however, gives the reader autonomous understanding and enhances the capacity to communicate (Groundwater-Smith 2006:180). Reading as part of a structured programme has the potential to support the growth of individual understanding, to enrich the world-view, to create a more sophisticated mental map and to deepen the process of reflection (Groundwater-Smith 2006:180; West-Burnham & O'Sullivan 1998:181).

With regard to the teaching of problem-solving skills to teachers, Perrett (2003:6) argues that cognitive growth takes place through discourse between the learner and tutor. Since Vygotsky maintains that development is culturally rather than biologically determined (Vygotsky & Luria 1993:84), it is the actual relationship between learner and tutor that serves as the catalyst for growth. Applied to the teaching of problem-solving skills, the following three stages are discernable in such a process:

- The student's problem-solving activities are regulated by the tutor.
- The student assumes responsibility for the problem solving in actually redefining the problem.
- The problem-solving activity becomes self-regulated.

Support in the teaching of constructivist skills in distance learning is a complicated matter (Jelfs, Nathan & Barrett 2004:85) which could include a package of study skills, along with

assistance on how to organise and approach higher education studies (see 4.4.4). The support main method chosen for this study involves dialogue in discussion classes and dialogue built into the study materials through scaffolding. The aim in developing guidance materials is to provide timely and relevant support.

4.2.3 Music in school improvement programmes

During the past decade the arts have been included increasingly in professional development programmes for non-specialist class teachers (Griffin 2006:156; Oreck 2004:55). However, although teachers in the US realise the importance of arts, they use it rarely in the classroom due to a lack of effective professional development. Surprisingly, according to research done by Oreck (2004:55), neither prior arts instruction, current artistic practice, nor years of teaching experience were significant predictors of the frequency with which teachers used arts in the classroom. This research examines the possibility of actively promoting and including music into professional learning programmes for non-specialist class teachers.

A general aim with the programme *Music for All* is to increase teachers' understanding of and efficacy in using music creatively as part of an expanded repertoire of teaching techniques in order to include and effectively teach a diversity of learners in the inclusive classroom. In the light of the Multiple Intelligence theory (see 2.3.3.1), I am of the opinion that music should form part of different (pre- and in-service) professional learning programmes for classroom teachers. Given the time pressures teachers have to face, it is advisable that the music activities be integrated with the existing curriculum. However, an analysis of the nature of, and different forms of continuous professional learning is a prerequisite for the development of an effective professional learning programme.

4.3 CONTINUOUS PROFESSIONAL LEARNING

All professions require a continuous update of knowledge and skills and, as we have discussed, teaching is no exception (Somers & Sikorova 2002:103). Teachers

internationally often bemoan a lack of fit between their training and the nature of the job for which they have been trained (Roth & Tobin 2002:2). Despite considerable research on teaching, this perceived gap persists. South Africa is a good example of a country where the skills of many teachers became inefficient when they were presented with new circumstances (see 1.2). Teachers had to adapt to change in a very short period, which means that they have an unprecedented need for ongoing professional development. However, the definition of CPL and different kinds of CPL will have to be studied before a decision can be taken regarding the format of such a programme.

4.3.1 Continuous professional learning: definition

Professional development, as defined by the Indiana State Teachers Association in 2004, is generally perceived to include ‘... those activities which systematically over a sustained period of time enable educators to acquire and apply the knowledge, understanding, skills and abilities to achieve personal and organisational goals and to facilitate the learning of students (Owen 2005:1). This broad definition encompasses a range of activities from individual teacher reading to exploring a website, individual or group attendance at a conference and action research in the classroom (Day & Sachs 2004:3; Earley & Bubb 2004:3; Griffin 2006:157; Owen 2005:2).

Professional development therefore entails the natural learning experiences and conscious and planned activities beyond the point of initial training which are intended to be of direct or indirect benefit to the individual, group or school and which contribute to the quality of education (Day & Sachs 2004:3; Earley & Bubb 2004:3; Trorey & Cullingford 2002:67). CPL is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purposes of teaching, and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues through each phase of their teaching.

A great deal of professional learning is **informal**, which means that it takes place in the course of events. Often teachers gain new understandings and learn to do old things better in a non-intentional way (Bekerman & Keller 2003:237; Knight, Tait & Yorke 2006:322).

Professional development can also be about teachers having their own learning agendas, which do not always match those of policy makers. When teachers take charge of their own professional development, the process is inspiring, morale boosting, continuous, centred around the problems that are faced in the classroom, built upon teachers' own knowledge and tailored to suit their background and needs (Groundwater-Smith 2006:185; Owston, 1998:x). Thus the usefulness of such learning is unlimited. One advantage of playing a proactive role in one's own development is that one becomes an independent learner. Although taking control requires commitment, planning and time, teachers can build their own paths which reflect their unique interests and goals (Owston, 1998:xi). However, since there are limits to informal learning, there is also a need for formal programmes to accelerate the professional growth of teachers (Carr *et al.* 2002:167). Professional development is also used in the narrower sense of professional courses (Earley & Bubb 2004:4).

Formal learning remains a significant part of learning to teach in general and learning to function in a particular system (Day & Sachs 2004:3; Knight *et al.* 2006:322), especially when practices and paradigms change significantly, as it did during the past thirteen years in South Africa (see NCSNET 1997). If the ultimate aim is to give teachers the knowledge, skills and personal qualities to foster improvement in schools and to raise standards where possible, the time factor is important, as personal qualities can only be developed effectively over a period of time (Pring 2002:24). The programme *Music for All*, which is the outcome of this study, can be completed in one year and allows for personal development.

Relevant to this study is the difference between formal and informal learning. Informal learning often implies the learning of knowledge and skills to deal with complex and ill-defined practical situations. Formal learning implies the learning of formal and partly abstract knowledge structures, which are not limited to any particular practical context (Lehtinen 2002:110). However, formal and informal attainment should not be viewed as an alternative approach. The development of high-quality expertise seems to demand both formal and informal learning (Lehtinen 2002:109).

4.3.2 The necessity of continuous professional learning

The reasons for teachers undertaking CPL may include both **individual** and **systemic** advantages. Continuing professional learning must be informed by an understanding of the relation between teachers' professional and personal lives (Day, 2002:51). In South Africa many sessions were conducted where the teachers were updated on the various policies, but they did not necessarily acquire personal skills for coping with changing situations (Lessing & De Witt 2007:54). Many teachers in South Africa have to adapt to change without proper training or the necessary support at the various levels. Changes, as they occurred in South Africa, require drastic professional, but also personal attention. **Personal development** may involve the development of teachers' self-awareness and of critical and creative skills which can be used to make a difference in the circumstances in which they are teaching (Carr *et al.* 2002:167; Early & Bubb 2004:49; Kelchtermans 2004:220; Trorey & Cullingford 2002:3). In other words, **personal development for teachers aims towards developing reflective practitioners who are able to understand, challenge and reform their practice (see 4.2.2).**

Advantages flowing from professional learning **for the individual are many.** Effective professional learning may improve the teachers' self-concept and perceived self-competence, in which case they could feel sufficiently confident to become actively engaged in promoting learners' talents (Carr *et al.* 2002:167). Teachers with a strong **sense of efficacy** tend to exhibit greater levels of planning, organisation and enthusiasm. They are more open to new ideas and more willing to experiment with new methods to improve the meeting of needs of their students. Teachers are also less inclined to refer a difficult learner for special help and support (Hoy & Spero, 2005:345).

Systemic change may relate to voids in the education system which must be addressed, amongst others the ability of '...the system to respond to the differences (diversity) in the learner population' (NCSNET 1997:11). Whilst this is an important aspect of teacher training, Day (1999:32) maintains that the context in which in-service training takes place in many European countries has and is being irrevocably altered by system-need initiatives which are parallel with government initiated reforms. Much INSET has become driven by national and local policy agendas (Day & Sachs 2004:4; Kelchtermans 2004:225). In South Africa, teachers may feel that they are seen as 'delivery agents', acting in accordance with

the statutory demands of the employer. It seems as if education organisations develop policy and then classroom teachers must implement the policy (Robinson & Carrington 2002:239). Teachers try to cope by using recipes of 'tried and true' practices legitimated by unexamined experience or uncritically accepted research findings (Day, 1999:133), which may lead to cosmetic, or 'surface' adoption of techniques or changes.

However, in the case of systemic needs identified by teachers themselves, the ideal situation is that programmes should be designed from the teachers' perspective. They must recognise and analyse their own experiences and transfer their tacit knowledge into 'working' or 'practical' knowledge (Carr *et al.* 2002:167).

Systemic advantages of effective professional learning may include the development of skills needed to adapt to needs of individual learners (Hoy & Spero, 2005:345) and to improve job performance skills of individual teachers, or groups of teachers (Craft 1996:6; Day 1999:137; Frankes, Valli & Cooper 1998:71). Effective CPL may also improve teaching and learning (Kelchtermans 2004:217; Gordon 2004:5) and create effective schools (Birman, Desimone, Porter & Garet 2000:32; Rhodes & Houghton-Hill 2000:424). Furthermore, effective CPL may help teachers to anticipate and prepare for and adapt to change (Craft 1996:6), to clarify policies (Day & Sachs 2004:14) and to develop an enhanced view of the job (Groundwater-Smith 2006:184). Different methods of professional training are available to meet different needs of the teachers.

4.3.3 Methods of professional learning

There is a wide range of methods that are used for professional learning. These include short courses, such as workshops, or more academic and longer contact, distance education (written, mixed mode) and online courses. The following are examples of the different methods of professional learning:

- Self-directed study (which could include qualifications, short courses, training etc.), normally through distance learning (Carr *et al.* 2002:166)

- On-the-job coaching, mentoring or tutoring (Day & Sachs 2004:13; Johnson & Brown 1998:84; Lerner 2004:19, 21, 23; Owen 2005:6; Spencer & Logan 2003:52)
- School-based and off-site courses of various lengths (Brady 2006:15)
- Job-shadowing and rotation (Johnson & Brown 1998:90; Owen 2005:6)
- Personal reflection, reading and writing (Aubusson & Schuck 2006:1; Gordon 2004:35; Groundwater-Smith 2006:184; Russel 2006:83)
- Collaborative learning (Aubusson & Schuck 2006:205; Brady 2006:18; Day & Sachs 2004:14; Gordon 2004:35; Owen 2005:2,3; Weir, Radloff & Hudson 2000:161; Spencer & Logan 2003:52)
- Action research (Aubusson & Schuck 2006:195; Brady 2006:18; Gordon 2004:35; Perrett 2003:1; Lynn Watt & Lynn Watt 1999:48; Zuelke & Nichols 1998:98).

Teacher education in a distance mode of teaching is used extensively to supplement the traditional college-based approach in a wide range of developing countries, particularly in Africa (Carr *et al.* 2002:166; Ravhudzulo 2003:76). This method for supplementing teacher education was also selected for this study. The advantages of CPL through distance mode are many since a large sample of students can be reached and teachers need not be replaced as they remain working while learning. In addition, the cost is relatively low. However, one of the disadvantages of teacher education at a distance that can be identified is that the quality of programmes offered is not always such that high drop-out rates can be prevented (Carr *et al.* 2002:167). To ensure good quality in CPL courses, principles for successful courses need to be considered first.

4.3.4 Principles for successful professional learning courses

When teachers learn, adult learning is implied. It is commonly held that adults learn differently from children and even from adolescents (Duffy & Forgan 2005:108). In order

for teachers' learning to be effective, the needs of teachers as adult learners should constantly be taken into account (ODL 102-G Only study guide:33).

In the compilation and provision of CPL programmes, the single most important aim is that the programme should lead to significant changes in classroom practices (McLeskey & Waldron 2002:159). It should also be borne in mind that the greatest influences on teachers' CPL are their own experiences and those of their colleagues (Day 2002:63).

The **first principle** of CPL is that teachers' **experience should be taken into account**. Teachers often have tremendous, untapped resources of strengths, talents, experience and training that can be shared (Larner 2004:19). Therefore the trainer of teachers should acknowledge and make use of their experience and prior knowledge (Gordon 2004:35).

The **second principle** of CPL is that **adults are motivated to learn if the learning will meet a personal need or interest**. A central element of CPL is to ground its 'curriculum' in the tasks, questions and problems of the practice (Bezzina 2002:75; Curzon 2006:228; Gordon 2004:35; Kelchtermans 2004:227; Larner 2004:19; Loewenberg-Ball & Cohen 2000:20, 139; Shifer, Russell & Bastable 1999:30, 31). Professional development that is well matched to teacher needs is acutely important in enabling in-service teachers to teach academically diverse classes that include learners with learning disabilities. Professional development that provides authentic, teacher-friendly, professional development, particularly for the use of instructional and learning strategies (Boudah, Blair & Mitchell 2003:3) will provide for the intrinsic motivation that may inspire teachers to find creative solutions. *Music for All* is not compulsory, therefore it can be accepted that teachers who enrol for this programme will do so because they experience a need for self-improvement.

Teachers should be involved in the identification of materials and contents they want to study, which will result in intrinsic motivation in the application of knowledge and skills (Boudah *et al.* 2003:7; Curzon 2006:230; Day, 2002:63; Duffy & Forgan 2005:108; Gallagher 2004:17; Gordon 2004:34; Hawley & Valli 1999:139; Loewenberg-Ball & Cohen 2000:139; Runco & Chand 1995:254). It is more difficult to negotiate the content in a distance education setting than in a school-based setting. However, teachers who pursue distance education normally choose the programmes they want to do.

Since **adults have a need for affiliation**, a need to be connected and supported, the third principle is **collaborative problem solving**. This can be practised during the course at the discussion classes, as well as at school, where problem-solving groups should meet regularly (Bezzina 2002:80; Duffy & Forgan 2005:112,3; Gordon 2004:35; Hanko 1995:112; Hawley & Valli 1999:141; Loewenberg-Ball & Cohen 2000:14; Lyn Watt & Lyn Watt 1999:49; Peters 2002:229; Weir *et al.* 2000:161,2; Scott Nelson 1999:10). Adults who participate in small groups are more likely to move their learning beyond understanding to a next level of application, analysis, synthesis and evaluation. Teachers should share, reflect on and generalize their experiences. The advantage of problem-solving activities away from school is that the setting might promote more effective critical reflection (Davies & Garner 1997:91).

Professional learning should be **continuous** (Day 2002:63; Gordon 2004:35; Duffy & Forgan 2005:108; Hawley & Valli 1999:141; Loewenberg-Ball & Cohen 2000:141; Scott Nelson 1999:10). Blandford (2000:xi), Professional 'learning' should be regarded as an ongoing given, as an intrinsic part of the work of teachers, just as the various domains of learning constitute the work of learners. Learning should be regarded as a journey, not an event (Bezzina 2002:74). If each step forward towards the best most effective practice is not **sustained**, the time and money spent on CPL is basically thrown away (Larner 2004:95). Many members of a school community will be committed to lifelong learning in any case. Most adult learners will be graduates and a substantial number will be considering further study, and their expertise needs to be respected (Blandford, 2000:21; Gordon 2004:19). Adults bring considerable life experience and prior knowledge to the learning situation (see first principle of continuous professional learning).

Teacher support during the course and at school is imperative. A positive, supportive learning climate is an important prerequisite for effective adult and CPL learning (Curzon 2000:265; Hawley & Valli 1999:141; Shifter *et al.* 1999:30). Study groups could be formed during the course (Sparks & Hirsh 1997: 63). Adults are 'ego-involved' and have a need for safety (Johnson & Brown 1998:89; Lynn Watt & Lynn Watt 1999:50; Scott Nelson 1999:10). Teachers often find it difficult to admit that they are unfamiliar with certain aspects of a learning situation. Learning should therefore provide support and reduce fear of judgment during learning. Trust is a vital element in enhancing cognition (Bezzina 2002:75; Costa 1999:ix). It is a well-established fact that higher-level, complex and creative

thinking closes down when trust is lacking in the environment or in the relationship. Experimentation implies that an atmosphere of choice, risk-taking and inquiry exists. People are more likely to engage and grow in higher-level, creative and experimental thought when they experience a trusting, risk-taking, cooperative climate (Costa 1999:ix).

Adults learn best when they are actively involved. Kelchtermans (2004:231) is of the opinion that ‘opportunities to talk’ provide a strong potential for professional learning, because the ‘talking’ turns the participants into a community of learners that redefine their practice. A CPL programme such as *Music for All* can also offer practical assignments based on teachers’ class experiences. This relates closely to the following point.

Teachers need to see the results of their efforts and receive feedback on how well they are doing. This means that they must try out practically what they have learnt and must receive structured feedback. Feedback and ongoing teaching are essential components in the process of transfer and learning (Day 2002:63; Duffy & Forgan 2005:108). With solid assessment practices, teachers are able to recognize what is working for learners, and what they should keep doing. With this knowledge teachers can experience a sense of efficacy and even joy. Otherwise they have only a vague sense of success, which is neither reassuring nor sufficiently valid to cause change wholly or sustain practice (Larner 2004:95). Similarly the development of inclusive schools should also be viewed as a ‘work in progress’, rather than a finished product (McLeskey & Waldron 2002:167, 8). Schools should continue to improve over time as the professional practices of teachers develop.

As teachers develop professionally, **they have an increasing need to be self-directed** (Tait 2004:98), which is one of the aims of the programme. This principle relates to the nature of a self-actualising and reflective person. Bezzina (2002:75) maintains that self-reflection and self-analysis are an essential part of a meaningful CPL programme. One of the reasons for this is that professional learning should be personalised, which is also in accordance with constructivist learning (see 3.4.2.4.3).

According to Dunn & Dunn (1999:21), there is a difference between the **learning styles** of learners with different achievement levels and learners with different intelligences. However, evidence exists that learners with the same talents and intelligences are likely to

possess essentially similar learning style characteristics (Dunn & Dunn 1999:21). Learning material for teachers should contain learning experiences that suit for the various types of intelligence.

The following table presents a summary of the principles of continuous professional learning:

Table 4.2 Principles of CPL

- The experience of teachers should be taken into account.
- Teachers, as adults, seem to be interested in learning new content when it meets a need or interest applicable to their personal or work lives.
- Teachers should be involved in the identification of what they want to learn.
- **Collaborative problem solving** is important during periods of study as well in school.
- Professional learning should be **continuous**.
- **Learning support to teachers** is imperative.
- Teachers learn best when they are **actively involved** in the process.
- Teachers need to **see the results of their efforts** and receive **feedback** on how well they are doing.
- As teachers develop professionally, they have an **increasing need to be self-directed** and should have the freedom to do so.

When the principles of professional learning courses and adult learning are taken into account, one must agree with Mays (2005:212) and Carr *et al.* (2002:167) that distance education is particularly appropriate for the ongoing professional learning of teachers.

4.4 OPEN AND DISTANCE LEARNING

Distance education and open learning used to be two different concepts which have now been combined to form a new one – open and distance learning. Over the last three hundred years learning at a distance has evolved towards the new model of Open and Distance Learning (Holmberg 1995:47).

As an out-of-classroom and out-of-regular-campus method and system, **distance education** is based on the following characteristics (Panda 2008:10; Simonson, Schlosser & Hanson 1999:2, 3; Ko 2006:69):

- The more or less permanent absence of the learning group throughout the length of the learning process, so that learners usually learn as individuals and not in groups, with the possibility of occasional meetings for both learning and socialisation purposes.
- Two-way communication is sometimes facilitated when students and tutors occasionally meet at learning centres or designated workshops, interact in peer groups and interact by means of technology.
- Support is facilitated both in the planning and preparation of learning materials and in the provision of support services, which distinguishes distance education from private study or teach-yourself programmes.
- Technical media such as print, audio, video and computer-mediated communication carry the content of the course.

Learning materials, assignments, practical exercises, tutorials, assessment systems and support systems need to be carefully designed and developed to facilitate effective student learning at a distance.

Open learning refers to both a philosophy and a learning strategy, and may be practiced within distance learning (Panda 2008:10). As a **philosophy**, open education provides for

the removal of all the institutional and other constraints for distance learners to study effectively – such as the removal of restrictions of place and pace of study, entry qualifications and age. As a **learning strategy**, it allows for greater learner control over their learning; learners largely choose what to study, how to study, what assessment strategies to follow, and how to accumulate credits. There are, of course, limits to providing openness to the learners. Open-learning packages address the issues of learner autonomy and variety of learning styles (Panda 2008:10).

4.4.1 Definition of open and distance learning

Open learning is a student-centred approach which advocates lifelong learning; flexibility of learning provision; removal of barriers to access learning; recognition of prior learning; provision of student support and the construction of learning programmes with the expectation that students can succeed (Holmberg 1995:47).

Open and distance learning is ‘the use of new methods (both technical and otherwise) to improve the flexibility of learning in terms of space, time, choice of content, teaching resources, and/or to improve access to educational systems from a distance’ (European Commission, 1998, in Williams 2000:520).

The current emphasis on open and distance learning (ODL) reflects changes in the political agendas for the following reasons: At a social level, ODL provides educational opportunities for those who missed out on education the first time around. Economically ODL provides the means to invest in human capital, a well-educated workforce and national competitiveness. Finally, ODL provides an antidote to the declining traditional source of recruitment in higher education at a socio-demographic level (Williams 2000:520).

The world trade in education represents an important growth opportunity and, increasingly, the means by which solutions to educational challenges are found. There is no doubt that ODL will be the primary mode of **lifelong education** for knowledge workers in the new millennium (Darabi, Sikorski & Harvey 2006:105; Khan 2000:11; Williams 2000:519). Lifelong learning can be described as part-time study, distance learning activities and full-

time studies for learners other than traditional young students (Williams 2000:520). Working is becoming synonymous with learning (Holmberg 1995:47). There is need for 'just in time, just for now, just for me' education, independent of location, time, schedule, age, race or gender (Hanna & Latchem 2002:115). Distance learning provides a relatively cost-effective, flexible and responsive alternative to meet the needs of a society (Carr *et al.* 2002:167; Williams 2000:519).

4.4.2 Characteristics of open and distance learning

In ODL the characteristics of openness and flexibility are important features. However, the researcher will only touch on the above-mentioned and concentrate on the DE student and the material development and characteristics of ODL which greatly influenced the development of the programme *Music for All*.

4.4.2.1 Openness

Open learning is flexible learning that makes education more accessible to students than the traditional forms of learning (Carr *et al.* 2002:167; White 2005:167). Physical absence from the specific space and time of the educational institution is central to what is recognized as **distance education** (Darabi *et al.* 2006:105; Ko 2006:69; Raddon 2006:157). Distance learning is a form of study and one way of pursuing open learning. Open learning may or may not involve distance education, whereas distance education may or may not contribute to open learning (Williams 2000:520).

The **open policy** implies that students are allowed into the system without requisite skills, a principle which is widely criticised. However, the **openness** can also be in terms of people, places, methods and ideas (Lentell 2007:2). According to Lentell (2007:2), ODL can present a hard discipline in terms of openness in the process of material development because of all the sessions where colleagues are involved in critical evaluation of the whole writing process.

4.4.2.2 *Flexibility*

Descriptions and definitions of flexible organisations and **flexible learning** programmes seem to imply increased access and independence for learners. With regard to teaching and learning the following points can be made:

- Teaching and learning can be flexible in terms of time and place (Edwards & Clarke 2002:153; Lentell 2007:1). This flexibility results in a supply of lifelong learning opportunities where learners can learn at a time and in a place convenient to them (Edwards & Clarke 2002:153; Enoch & Soker 2006:100). Flexibility is an important factor for teachers in stressful situations where burnout occurs (Sandow 1997:93). A similar situation may be applicable to the target group for the programme *Music for All*. The advantage is that this delivery method also produces high-quality study materials. Lectures written by skilled academics are delivered to the homes or workplaces of students who might find it difficult to attend classes at a regular university campus (Enoch & Soker 2006:100).
- Learning can be flexible as diverse needs can be met, changing the focus of distance education (DE) from the system to the learner (Darabi *et al.* 2006:106; Deveraux & Amos 2005:278; Gordon 2004:35; Kanuka & Jugdev 2006:154; Lentell 2007:1; Williams 2000:519).
- The liberation of place implicates that independent study within a supportive environment can be facilitated according to the needs of the learner (Deveraux & Amos 2005:278).

It is necessary to reflect on the distance education student, whose needs are paramount in the compilation of a distance education programme. In fact, the most important role of the provider of any effective education programme is to meet the learner's needs (Darabi *et al.* 2006:106; Simonson *et al.* 1999:1).

4.4.2.3 *The distance education student*

A third aspect that is typical of distance learning is that the DE student is regarded as a determining factor in course writing (Tait 2000:291). As heterogeneous as groups may be (Holmberg 1997:34), there are also common features that are typical of all DE students. The typical characteristics of these learners are:

- Distance education students are remote from the institution with few (if any) opportunities for face-to-face interaction with the lecturer (Calvert 2005:230; Carr *et al.* 2002:166; Holmberg 1995:51; White 2005:165).
- The attributes of distance education students, as the receivers and users of the course materials, have a decisive influence on course development.

To support students effectively, the learning material must be congruent with regard to the following:

- *Teacher attributes* (e.g. prior experiences, characteristics, orientations to study and beliefs) *and circumstances* (White 2005:168).
- Teachers' commitments, conditions, relationships and the presence or absence of support structures in relation to *social, family and work environment*. The presence or absence of support structures could either facilitate or impede the process of adjusting to distance learning (Kanuka & Jugdev 2006:164; White 2005:169).
- *Distance learning environment*. This environment includes the nature of the course and the context of delivery, which has been found to have an effect on the adjustment process for individual learners (Walker & Fraser 2005:292).

It thus follows that researchers argue that success will be determined by the extent to which teachers are able to manage

- themselves (being able to manage their everyday lives and their relationships with others, and having a vision and clear objectives) (Kanuka & Jugdev 2006:164; Simonson *et al.* 1999:3);
- their environment (which can include to finding a place to study, arranging commitments to allow time for study; gaining access to a computer, getting support from peers and family) (Kanuka & Jugdev 2006:164), and
- course-related arrangements (White 2005:168,169).

Students who succeed are individuals who are motivated, have the ability to continue learning throughout life (White 2005:170) and will have the ability to solve problems encountered during the studies. In distance education learners tend to learn a great deal about themselves as learners, and how to continue learning in environments that are not directly mediated by a teacher (White 2005:170). In the last instance teachers must feel that such a course is meaningful for their particular environment (White 2005:171; see 4.3.4). The aim of most distance learning institutions is therefore to provide education that prioritises the needs of the learners (Simonson *et al.* 1999:3), so that adequate support can be provided.

It is estimated that the typical student who will enrol for the course *Music for All* is about 40 years old and female. Students will most probably be subjected to change (Lessing & De Wit 2007:53; Jacobs, Kemp & Mitchell 2008:131) and will come from both urban and rural areas. The discussion of the fourth typical characteristic of teaching and learning in a DE environment, namely instructional design, emphasizes the importance of the development of learning material.

4.4.2.4 Instructional design

In ODL the learning materials take the place of the teacher. **This means that the materials have to be carefully designed** (Carr *et al.* 2002:168; Lentell 2007:2; Rausaria & Lele 2002:153). The instructional design of learning material for ODL has made this discipline strictly its own (Lentell 2007:3). ODL materials are consistently and carefully

planned, tested and revised. Instead of using textbooks, embedded learning devices are designed to encourage and support self-study. Learning materials **are created around learning outcomes** (Lentell 2007:3) and include a range of other access devices - course guides, advance organisers, self-assessment tests, clear and consistent use of headings and subheadings, summaries, glossaries and icons of various kinds (Carr *et al.* 2002:168). The material is also written in a more personal and conversational style (Holmberg 1999:58; Kanuka & Jugdev 2006:153).

Teachers should be given opportunities to build confidence and competence through using the distance education process and supporting technologies. **Learning goals and desired outcomes should be clearly linked to content and learning processes** for the course and its individual units (Rausaria & Lele 2002:153). When learning outcomes are negative, motivation is usually impaired (Hallam 2001:67). Therefore, it should be **ensured that teachers are successful without setting tasks that are so simple that they offer no challenge.**

The materials attempt to provide **two-way communication** in which learners interact with texts to construct their own meanings (Carr *et al.* 2002:168; Holmberg 1999:59). According to Carr *et al.* (2002:168), the most obvious way to do this is through activities built into the text that, for example, attempt to replicate the kinds of questions good tutors would raise in a classroom context. Learners can also be asked to relate the knowledge to their own situation and think critically about their actions. Where appropriate, explanatory feedback should be provided.

With regard to the content of the learning material for a DE course, there are two considerations that deserve attention:

- What content should be used?
- How should the content be presented?

4.4.2.4.1 Content coverage

The subject content of self-instructional materials must be accurate, comprehensive and at the correct academic level (Carr *et al.* 2002:168; Rausaria & Lele 2002:153), and should be applicable to the workplace (Murphy & Tyler 2005:466). The content should be instrumental to teaching skills and competencies for improvement and for coping with rapidly changing knowledge (West-Burnham & O'Sullivan 1998:3), which will hopefully be one of the outcomes of the course flowing from this study. Although the teaching of knowledge for the sake of knowledge is not possible (West-Burnham & O'Sullivan 1998:4), teachers specifically need to understand what creativity is to be able to be creative in the classroom (Blumen-Pardo 2002:47).

4.4.2.4.2 Content presentation

Content must be presented in such a way that the learner is able to follow easily (Carr *et al.* 2002:168; Rausaria & Lele 2002:153). Through the presentation of content, teachers should be supported to become autonomous lifelong learners and efficient professionals (West-Burnham & O'Sullivan 1998:4).

An open learning package should not only enable learners to learn at their own pace, but also to become more independent. The competency elements required, as well as the activities undertaken by the learners prior to the start of the programme, must be clearly defined. The content should be at an appropriate level for the learners and the language should be clear. Learning must be arranged in manageable chunks and enough activities should be included to involve the students/teachers. Learning material should draw on the earlier experiences of the students/teachers and clear and helpful designs and signposts should be given for activities (Rausaria & Lele 2002:154).

Concerning **the technical aspects** of content presentation, well-designed materials will typically have a clear statement of aims and objectives, and will include a range of other access devices, for example course guides, progress organisers, self-assessment tests, clear and consistent use of headings and sub-headings, summaries, glossaries and icons of various kinds. The content should also be written in a more personal and conversational style (Carr *et al.* 2002:168).

The conversational character of ODL study material (see 4.4.2.4) attempts to involve the teacher emotionally to ensure that (s)he will be more motivated and successful than when the material has an impersonal textbook character (Holmberg 1999:59). Teachers should give meaning to experiences. Time should be given for reflection on learning, for comparing intended with actual outcomes, to analyse and draw causal relationships, to synthesise meanings and to apply their learning to new and novel situations (Costa 1999:x). The fifth typical characteristic of teaching and learning in a distance education environment is the important aspect of student support, which will now be discussed.

4.4.2.4.3 Student support

Distance programmes need an element of counsellor support to provide a 'personal' dimension in what may otherwise be a rather impersonal system (Carr *et al.* 2002:169; Tait 2004:290). The correspondence learning of the early days of distance education involved very little contact between student and lecturer (Simonson *et al.* 1999:2). The contact that was available was limited to the postal system and the speed at which materials were delivered and received.

More **contact with students** is extremely important and can either be student or lecturer initiated, but both are important for student learning and retention (Simonson *et al.* 1999:3; Simpson 2004:80). Data suggests that less than one third of distance education students make contact with the regional study support system in any one year of study (Simpson 2004:80). It appears that students are more articulate and assertive, and are in many cases progressing satisfactorily. It seems probable that the students who receive the most support are the ones most likely to complete their studies (Simpson 2004:80), which means that students from apparently poor economic circumstances need more support, but actually receive less than those who do not need it as much (Yorke 2004:22).

Proactive contact is important, even in the planning stages of programme development, since such planned contact may reach students who might otherwise not make contact with the lecturer or student support system (Simpson 2004:81). However, any contact must be seen to be relevant to the teachers' needs, as this will enhance confidence and promote satisfaction with their experience (Simpson 2004:87).

Another method of contact that will aid student retention is the use of telephone calls or SMS messages by the lecturer. It is found that between two and five calls are most effective (Simpson 2004:87). The intervention of tutors before the due date of the first assignment also indicated increased student retention (Simpson 2004:91). Contact with the lecturer brings to the fore the sixth characteristic in distance education, namely the important social aspect (see 4.3.4).

4.4.2.4.4 The social aspect

Contact with colleagues, via the internet or telephone, may increase student persistence. It is important for students to develop their 'practical intelligence' (Sternberg 1997:220) through working together (Yorke 2004:28). Furthermore, a feeling that they are actualising hitherto untapped potential will help students to develop self-efficacy (Yorke 2004:29; see 4.3.2). Communication can help teachers appreciate what is expected of them and could also supply the additional psychological support which they might need to sustain their studies (Yorke 2004:28). The review of the programme, which will be discussed next, is an important characteristic of teaching and learning in a distance education environment.

4.4.2.4.5 Programme review

The programme review is an important activity and an essential step in maintaining quality in a programme. According to Williams (2000:525) accreditation and quality assurance of open and distance learning systems and programmes are still in their infancy. The focus and outcomes can vary among countries. Quality is also often defined in ODL as fitness for purpose, according to the chosen standards or criteria.

The Delphi method was chosen to ensure the quality of the programme, *Music for All* in respect of the content, programme design and practical value for teachers. The input from the chosen experts is critical for the improvement of the programme. The Delphi method of data collection will be discussed in more detail in Chapter 5. Chapter 6 will reveal the opinions of the experts about the fitness for purpose of the programme *Music for All*.

4.4.3 Constructivism in ODL

Systematic approaches to the development of creative thinking amongst higher education students appear to be limited (Morrison & Johnston 2003:145), consequently teachers often find themselves with very little practical knowledge of how to teach creatively. However, according to Holmberg (1997:34), distance education is open to constructivist learning through, for instance, problem-oriented conversation-like presentations of learning matter that may be anchored in existing knowledge. Constructive learning processes could also be embedded in **authentic contexts** that offer ample opportunities for **social interaction and collaboration** (Calvert 2005:232; Guyton 1998:4).

4.4.3.1 Case studies/scenarios

Scenarios within authentic contexts could be used as vehicles for the active construction of knowledge (Guyton 1998:4). Guyton assumes that students (teachers) are constructing their own knowledge about learners with impairments as authentic scenarios of inclusive classrooms are used as instruction tools. Advantages of the case study method of instruction are that it links with reality and fosters 'learning by doing'. Scenarios arouse the interest of teachers/students, because they grapple with 'real life' problems and in the process teachers learn to distinguish between relevant information and the relative importance of facts (Curzon 2000:344).

The following skills can be developed through the use of case studies (Curzon 2000:344,5; Forster 2004:33):

1. Analytical skills, involving the classification, organisation and evaluation of information.
2. Application skills, based upon practice and the use of principles, concepts and techniques.
3. Creative skills, which are necessary where alternative solutions to problems must be generated – an essential feature of many case studies.
4. Communication skills, developed through the presentation of arguments.

5. Self-analysis skills, emerging from an awareness of one's attitudes to the value judgments that arise in case discussions.
6. Social skills, necessary in a member of a group engaged in the social process of collective discussion.
7. Learning by doing, because it links with reality.

The aim of the programme *Music for All* is to combine left-brain activities, such as logical thinking, analysis and rationality, with right-brain aspects such as music, intuition, emotional and social skills, wisdom and judgement. However, the process continues with the feedback that the teacher initially receives from the tutor, their own reflection and data gathered by observation and practical application in the classroom. The process will hopefully foster critical and creative thinking, which should be applied in the classroom situation.

It has been argued that if instruction can be reorganised around **assignments** pertaining to problem-solving activities, it will make much more complex intellectual demands on learners. Learners should be expected to interpret and synthesise information, show relationships between various kinds of information, explain why some answers are better than others, and solve unfamiliar problems that might have more than one plausible solution (Forster 2004:34).

The following aspects regarding the assignments in distance education deserve attention: authenticity, knowledge integration and connectedness and constructivist learning.

4.4.3.2 Authentic assignments

High- and low-achieving learners benefit from intellectually challenging study materials. This includes high-quality assignments and assessments which are also 'learning experiences, stretching the learner as they create an occasion for the learner to display mastery and understanding' (Forster 2004:30). Teachers (and learners) will learn if they interpret knowledge and then relate it to other knowledge (Murphy & Tyler 2005:466). An example can be open-ended questions where learners are asked to apply their thinking and come up with ideas. A good teaching approach is to solve problems creatively. This

enables learners to define the problem, seek out information and options to find solutions, and to evaluate.

Authentic assignments have a number of salient characteristics. They

- are open-ended rather than one right answer problems;
- are solvable by applying non-routine methods;
- require substantive understanding of meaning;
- demand more time than conventional problems;
- call for bringing together different ideas from the subject matter (integration);
- often involve writing as well as formal manipulations such as computation; and
- usually have a complex product such as an essay plan, a lesson plan, or a problem set for others to solve.

It follows that authentic tasks motivate learners to become involved in topics of intrinsic interest. In addition, they foster aspects of creative thinking such as fluency, or flow of ideas, originality and willingness to take risks in thinking (see 2.2.4.1). Learners are more likely to be encouraged to do their own thinking through authentic assessments, regardless of what the teacher might be thinking (Forster 2004:35). The researcher believes that it is best to work with authentic material: scenarios can even be constructed by teachers themselves in this case.

According to Forster (2004:35), **authentic intellectual work** is in line with this quality teaching perspective as it

- is more complex and socially meaningful;
- requires original application of knowledge and skills rather than just facts and figures and procedures;
- promotes disciplined inquiry into problems; and
- allows for a meaningful product beyond school success.

4.4.3.3 Knowledge integration

Knowledge is likely to remain disconnected facts if not integrated with a larger cognitive scheme. Teachers as students need to know how content forms part of the bigger picture. Thinking skills *per se* do not necessarily transfer directly to real life unless there is a deliberate bridging by the tutor to relate the information to teachers' own life experiences (Forster 2004:35). It is advised that questions be asked that will lead students (the teachers) to see the big picture. Such questions are open-ended, invite debate and are problematic. Knowledge is much more relevant and enduring when learners utilize information to gain a 'deeper understanding' of specific problems rather than merely being familiar with the topic (Forster 2004:33). Linking new knowledge to prior knowledge constructs and integrates understanding, making it more accessible for use in everyday life. Transfer does not take place automatically – the teacher needs to help learners apply their knowledge.

This study is based on the premise that each person has the potential for creativity and for using music in the classroom. It aims to provide extended teaching methods for teachers to use their creative and musical potential for solving the problem of curriculum adaptation necessary for learners who experience learning difficulties and emotional barriers in the classroom. The teachers must also be equipped with the skill required to write a measurable goal to enable them to evaluate the success of each intervention. This will

- necessitate problem-solving activities with the teacher, and
- ensure that teachers experience success and build self-esteem.

The teacher will have to keep notes on what was learnt about the learner and to compile action plans for the rest of the term (see 4.2.2.2 and 4.2.2.3).

Implications and pedagogical principles for designing courses and learning materials will now be summarized.

4.4.4 Pedagogical principles underlying successful ODL courses

The following are pedagogical principles associated with successful ODL courses:

- There should be a comprehensive understanding, through needs analysis and analysis of learner characteristics, of who the learners are, what their needs are, what their constraints are, and how they learn (see 4.2.1).
- Learning occurs most easily when it is applied to and woven around individual and social problems (see 4.3.4). Examples, illustrations, case studies, and activities presented in the course units should be selected, designed and integrated into the instructional events and experiences.
- Isomorphic training should be done, which means that the trainees should experience what they themselves are recommended to offer to the learners. The teachers/students should be grouped in a community of learners to discuss and criticize common experiences in order to transfer some of them into their own practice (Duffy & Forgan 2005:110; Poumay 2003:229).
- The curriculum should be based on experiences, followed by abstractions and theory. **Information (theoretical inputs, examples, witnesses, etc.) and activities are proposed 'just in time' so that they can immediately be exploited for the trainee's own ODL course development.** This strategy takes into account the fact that adults are highly concerned with the usefulness and applicability of theories (Duffy & Forgan 2005:110; Poumay 2003:229; see 4.2.2; 4.3.4).
- Attempts could be made within and around the learning resources to empower and facilitate learners to be able to reflect on what they are doing and learning, including the wider applicability thereof. This involves helping them move towards deep and transformative learning. The study skills, tips, and activities in the course units, along with mentoring provided at the learning centres, should facilitate this. Additional handbooks for study skills and reading skills may be developed for this purpose (Panda 2008:10).

- Activities, not primarily content, are central to learning. This option acknowledges the importance of 'learning by doing' and of Dewey (1900) and Piaget's (1974) 'life for life' principles. To promote situated learning, these activities are as far as possible nested into problem-solving contexts (Poumay 2003:230). Learning through analysing real-life scenarios and developing strategies for supporting learners deepens their understanding and leads to improved practice (Lynn Watt & Lynn Watt 1999:53).
- Methods and resources should be varied. This enables mathematical ambivalence and learning autonomy. In general, learners appreciate and take advantage of the varied approaches (Poumay 2003:229).
- Evaluation should be adapted to suit adults. It is based on self-evaluation, on critical thinking and on negotiation. Individual portfolios, allowing for self-critical analysis of process and products, could be used. Duffy and Forgan (2005:110) explain that the 'mentor' in adult learning is a support person, not an evaluator.
- Holmberg (1999:58) regards the teaching style as being vital to successful learning at a distance. His theory of **guided didactic conversation** was his response to the impersonal elements of correspondence teaching. His idea was to try to create learning materials that would be similar to conversations in a face-to-face situation.
- The learner should be allowed freedom and flexibility in choosing what and how to study, including the pace of learning (Edwards & Clarke 2002:153; Enoch & Soker 2006:100).

Aspects of the literature research (Chapters 2–4) were combined to construct the programme *Music for All* and its evaluation instrument.

4.5 CONCLUSION

In Chapter 4 the professional and technical aspects of compilation of the short course *Music for All* were described. The principles according to which this programme was compiled were determined by examining the principles of instructional design in ODL and also the best practices of CPL and adult learning. Eventually the first draft of the programme was developed. The table of contents and the measuring instrument, which will be provided to the experts together with the programme, will feature in a later chapter.

Chapter 5 will outline the research method. A literature study was undertaken and the Delphi method was used to conduct the empirical investigation. The Delphi method is a technique whereby the opinions of experts (in this case people specialising in the areas of music teaching, creativity and distance learning) are utilised to evaluate the first draft of the programme.

CHAPTER 5

RESEARCH DESIGN AND METHOD

5.1 INTRODUCTION

A brief overview of the researcher's study plan was given in Chapter 1, while Chapter 2 presented a theoretical perspective on the creative use of music. In Chapter 3, inclusive teaching, specifically with the learning-disabled learner in mind, was researched. It was found that the creative use of music could be used effectively to help overcome some of the barriers to learning frequently experienced by learning-disabled learners. Chapter 4 provided an overview of continuous professional learning and open and distance learning and indicated how the literature studies undertaken for the previous chapters contributed towards the compiling of the provisional programme, *Music for All*. This was done to establish a sound conceptual framework for this research.

This chapter (Chapter 5) starts with a discussion of the research problem and the aim of the research, followed by a description of the research design used for this study and the data collection method. This includes an overview of the literature study and a description of how principles of the Delphi method were implemented in this research.

Table 5.1 Aims of chapter 5

PROGRAMME: MUSIC FOR ALL		
Chapter 2	Content	Creative use of music
Chapter 3		Examples of music for Learning disabled learners
Chapter 4	Format	Principles of CPL and ODL
Chapter 5	Quality Assurance	Delphi Method

5.2 RESEARCH PROBLEM

The first phase of the research process is the formulation of a research problem, which helps to focus the research.

5.2.1 Orientation

This study seeks to focus on how a CPL programme exploring the creative use of music in the inclusive classroom should be compiled to be meaningful in the South African context. While teachers lack the skills necessary to cope with a diversity of learners in their classrooms, ineffective teaching results in emotional problems like stress and a lack of motivation (see 1.1), which has a spill-over effect on the learners in class, who display weak results and have no role model for their emotional development (Jacobs, Kemp & Mitchell 2008:139). Convincing evidence exists that the creative use of music in the classroom can alleviate emotional needs and it was determined that it may help teachers attain the important critical outcome of creative learning. As far as the researcher could determine, no similar programme for teacher support exists, while such a programme could serve an existing need.

5.2.2 Formulating the research problems

The research problem investigated for this study is formulated around the development and evaluation of a CPL programme (*Music for All*) focusing on the creative use of music in the inclusive classroom. The value of such a programme can be examined more systematically when divided into smaller, more precise primary and secondary research problems.

5.2.2.1 *Primary research question*

What are the core elements that should be included in an ODL programme focusing on the creative use of music in the inclusive classroom in order to support learners with learning impairments?

5.2.2.2 Secondary research questions

A number of secondary research questions can be formulated:

1. What is the value of creativity for teachers, and eventually also for learners?
2. What is the value of music in education?
3. How do learning disabilities manifest in learners?
4. What are the principles of a good continuous professional learning programme?
5. What are the core elements that should be included in such a programme?

5.3 AIMS OF THE RESEARCH

The following aims of the research are based on the research questions.

5.3.1 Primary research aim

The purpose of the study was, firstly, to determine from the relevant literature how music could be used creatively to support learning-disabled learners in the inclusive classroom, and to design and develop a distance learning programme that may equip primary school teachers with the practical, foundational and reflexive competence to do just that and, secondly, to utilise the experience of experts, using principles of the Delphi method to add practical value to the programme.

5.3.2 Secondary aims

For the sake of the execution of the research plan, the primary aim can be further divided into the following secondary aims:

- To determine the nature of music and creativity, and then to decide how music could be used creatively in the inclusive classroom (Chapter 2).

- To describe the manifestations of learning disabilities and give examples of how music could be used creatively to alleviate the difficulties experienced by learning-disabled learners (Chapter 3).
- To find the best practices of a CPL programme in distance education for application in a generic programme that uses music creatively to support learning-disabled learners in an inclusive classroom in the primary school, and to present the outline for the programme (Chapter 4).
- To write the first draft of the programme based on the research done in the previous chapters.
- To ask a number of experts to evaluate the content and structure of the programme and to incorporate their recommendations into the draft.
- To compile the final programme.

5.4 RESEARCH DESIGN

Research entails a systematic and disciplined inquiry in order to increase knowledge and understanding (Smit 2008:2). The research design is the plan, or blueprint, of how the researcher intends to conduct the research (Mouton 2001:55) and looks towards what the end product will be (Henning 2004:36). In other words, the research design is the act of designing the study in its broadest sense. This refers to all decisions made by the researcher in planning the study, such as the overall design to be used, the sources and procedures for collecting data, the measurement issues and how the findings will finally be put together (Fouché & De Vos 2005:133; Henning 2004:30). The research design provides an indication of the types of procedure that will be followed and the techniques that will be used during this research study.

The nature of this research study is exploratory, systematic, contextual, inductive and holistic, focusing on authentic problem situations in the classroom as described by

teachers from Prospectus Novus (a school for learning-disabled learners), allowing for a better understanding of their situation while attempting an innovative solution to their problem in the form of the programme *Music for All*.

The research was conducted in three phases. During the first phase the programme *Music for All* was developed, based on current literature regarding the creative use of music in the inclusive classroom, manifestations of the problems of learning-disabled learners in the classroom and the best practices for a CPL programme in distance education. The second phase involved the evaluation of the programme by experts, whereas the third phase involved the incorporation of the suggestions made by the experts and the finalising of the programme.

5.4.1 Philosophical foundation

Researchers (De Vos, Schulze & Patel 2005:3; Neuman 2006:81) describe three main paradigms used in investigations, namely the positivistic, interpretive and critical paradigms. In this research study, the interpretive theory is applicable, since the researcher is involved in the practical situation in the classroom. By using text and music I attempt to empower teachers to deal with problematic situations, for example diversity in the classroom, to finally emancipate them.

Positivistic theory is generally applied in the natural sciences (De Vos *et al.* 2005:5; Neuman 2006:81) and emphasizes discovering causal laws, careful empirical observations and value-free research. However, as the use of the positivistic approach require a certain detachment on the part of the researcher, which would not be appropriate in this case, given the nature of this study, the interpretative and critical theories, as suggested by Fouché and De Vos (2005:102) and Henning (2004:19,20), were deemed more suitable.

Interpretive theory is applied mainly in the humanities and emphasizes the detailed examination of texts (Neuman 2006:88) to enable the researcher to develop a deep understanding of how the parts relate to the whole (De Vos *et al.* 2005:6). This research study focuses on the problematic classroom situation of the teachers, allowing for a better understanding on how the creative use of music could assist them in dealing with their daily problems. According to De Vos *et al.* (2005:7), the true meaning is rarely simple or

obvious on the surface; one reaches it only through a deep study of the text, seeking the connections among its parts. This is appropriate for a study undertaken to explore the associations between creativity, music and the learning-impaired learner, amongst others, in the inclusive classroom.

The **critical theory** does not seek to understand a politicized society, but aims to critique and change unjust social structures (De Vos *et al.* 2005:7). Although the main aim of critical theorists is seen as being one of social critique, their main objective is to emancipate people by helping to change and improve circumstances (Neuman 2006:95). While critical theory research is undertaken for the sake of human liberation, self-reflection and action is the heart of critical inquiry (Rediger 1996:127, 136). Part of this paradigm is the reconstruction of our worlds (Henning 2004:23). People can redesign their own life worlds through critical reflection. Critical theory is not used in this study, but the use of the programme developed by the researcher could enable teachers to change their habitual reactions to pro-active practices in the classrooms through self-reflection, which could lead to a healthier learning environment.

The researcher will focus on qualitative data and interpretive ways of dealing with the data, as will now be discussed.

5.4.2 Qualitative paradigm

Qualitative inquiry enables deeper, first-hand understanding (Henning 2004:3), and also explains and justifies the use of evidence from information obtained by way of a literature study (Smit 2008:2; Henning 2004:4). It is specifically concerned with understanding a social phenomenon through the participants' perspectives (McMillan & Schumacher 2006:12). This study is aimed at gaining an understanding of the situation and needs of teachers in inclusive classrooms by unravelling the professional learning process to determine the requirements for effective open and distance learning material development.

The original information was obtained mainly from personal experience, discussions with students and newspaper articles. The literature study contributed towards the analysis and understanding of the nature of creativity and music and how it could be used in an

inclusive classroom. On the basis of the information gained from the literature study, the contents and format of a provisional programme for support was developed. Journal articles provided valuable practical examples of how teachers used music creatively in their classrooms.

The Delphi method (see 5.5.2) was chosen as the preferred method of investigation because it is an example of qualitative research that fosters examination of the expert's perspectives on the quality of the programme. The diversity of fields of expertise of the panel of experts selected for this research (education, material development, music, creativity) adds value to the process. The researcher used principles of the Delphi method (see 5.5.2.3), interpreted the comments of the experts, gave meaning to the data and incorporated the suggestions into the programme. In other words, certain principles of the Delphi method were used in order to evaluate the programme (Henning 2004:47; Neuman 2006:26).

5.4.3 Exploratory character

The Delphi method is exploratory in character (Sprenkle *et al.* 1996:16). It questions researchers on their opinions and evaluations of the content, compilation and practical value of, in this case, the programme *Music for All*. This research was conducted in a new area of research and examined the cause/effect relationships between two or more phenomena (Wisker 2001:20). Firstly, it looked at the expected effect of the creative use of music in the inclusive classroom, and secondly, at how music could be used to develop an effective ODL programme for teachers to support learning-disabled learners. According to McMillan & Schumacher (2006:28) the initial qualitative phase can be used to identify ideas that could subsequently be used to design the empirical part of the study.

The literature review in the first phase was undertaken to determine the possible value of compiling a programme to help teachers to develop the skills required to enable teachers to use music creatively in the classroom, and also to find appropriate material to include in such a programme. The provisional programme was then drafted and an instrument was designed to measure such a programme (McMillan & Schumacher 2006:403). This programme was used as stimulus for the reaction of the experts during the first round of the Delphi process. They used the measuring instrument to guide their comments.

An investigative research project like this one is usually creative, which implies that the researcher must be open-minded and flexible, and that all the available sources of information must be explored (Neuman 2006:34). No other research in this particular field could be traced, therefore the goal is also to stimulate future related research (Neuman 2006:33).

5.4.4 Descriptive disposition

The research conducted is more than explorative. Using the findings of previous research undertaken on the different aspects of this study (music, creativity, learning impairment and programme development), the researcher has analysed, characterized, described and applied the connections between the various aspects to compile a meaningful, holistic programme.

Many similarities exist between descriptive and exploratory research, and these sometimes 'blur together in practice' (Neuman 2006:35). Descriptive research aims to find out more about a phenomenon (Wisker 2001:118). It usually focuses on 'how' and 'who' questions and presents a picture of the specific details of a situation or social setting (Neuman 2006:35), as can be seen in the majority of questions asked in this research study.

Descriptive designs are used to summarise the current status of a phenomenon (McMillan & Schumacher 2006:215). The contribution of this research is the detailed description of the skills that teachers need to handle the current situation in South African schools, the possibilities of the creative use of music, the benefits of music in inclusive classrooms and the process of compiling an effective programme.

5.4.5 Contextual nature

The situational description of people and events (McMillan & Schumacher 2006:215) in which the creative use of music may be effectively applied forms the context of this study. CPL results from the continuous interactions of individual teachers with their context. This

context needs to be understood in the social, organisational and cultural dimensions and in terms of the expectations of the teachers (Kelchtermans 2004:221, 224).

The exploratory, descriptive and contextual nature of this research study has been indicated. The research methodology will be now discussed.

5.5 DATA COLLECTION METHOD

The method of investigation for this study entailed a survey of literature dealing with the creative use of music. The usefulness of music in an inclusive environment had to be determined through a theoretical investigation into the possibilities of its application to learning-disabled learners. The designing of a CPL programme in a distance education milieu for teachers followed the perusal of literature on good principles for Open and Distance Learning (ODL) and Continuous Professional Learning (CPL). Following the draft of the programme *Music for All*, the empirical study, executed in line with Delphi principles, added the value of specialised knowledge and the practical experience of experts in the field to the previous theoretical investigation.

This programme was refined by using the Delphi principle, which involved obtaining the ideas and opinions of experts. Suggestions and contributions from the participants provided data that were consequently categorized, analysed and implemented to enhance the practical value and effectiveness of the programme for teachers.

5.5.1 Literature study

According to Creswell (2003:7), an answer to the research question requires a specific research paradigm and frame of reference. The literature study enhanced the researcher's insight into the field of study and the findings of other researchers on the topic. It enabled the researcher to pinpoint the topic of research, namely how a programme to facilitate the creative use of music in an inclusive classroom should be compiled.

A meaningful study can only be undertaken if the researcher is fully up to date with the existing knowledge of a subject (Strydom 2005:206). The literature study is a summary and analysis of the relevant literature about the research problem (McMillan & Schumacher 2006:75). This literature study helped to define different concepts for this study: creativity, music, the inclusive classroom, and learning problems from an educator's perspective. It also greatly helped to identify promising methods for the research and to develop the research question. It has furthermore provided for the development of a framework that will allow for the research results to be interpreted in relation to the existing theory (Fouché & Delport 2005:84; Henning 2004:27). The literature study therefore placed the findings of the researcher in context in relation to existing knowledge about the problem.

5.5.2 The Delphi method

Hogard (2007:307) maintains that a consultative method (or a collaborative method of inquiry) might be particularly apposite for evaluators who work closely together with programme providers in determining specific information for the development of a programme. The Delphi method is one of four techniques available to the evaluator adopting a consultative approach to process evaluation (Hogard 2007:307). The other three are critical incident analysis, constitutive ethnography and reconstitutive ethnography. In this study the Delphi method is preferable where evaluation models require subjective inputs to the point where they become the dominating parameters (Linstone & Turoff 1979:10). Advantages of the Delphi method include that it does not demand clinical expertise, large samples, advanced statistical expertise, or a great amount of financial resources (Sprenkle & Moon 1996:16).

The researcher preferred the Delphi method over other research methods because

- of its ability to help produce a good programme based on the suggestions of the experts prior to using it in practice;
- of the use of opinions and experience of a team of experts ;

- expert, rather than general or informal opinion, was sought since evaluation of this nature requires critical thinking and a specialized knowledge base;
- the characteristics of the Delphi method make it particularly well suited for bridging the gap between research and practice (Stone Fish & Busby 2005:251);
- the Delphi method is useful in developing (policy) issues regarding a relatively new phenomenon (Stone Fish & Busby 2005:241). Often ideas germinating in literature can be put in context by consenting experts (Stone Fish & Busby 2005:241);
- it fosters personal reflection and self-evaluation since the researcher would not want to give poor quality stimulus material to experts;
- it can be described as a creative and interactive brainstorming until consensus is obtained on the best ideas (Lumsdaine & Lumsdaine 1995:206).

A disadvantage of the Delphi method, however, can be the frustration of participants having to give written responses and the time delay for the researcher if there are many rounds (Kochman 1968:2). Due to the volume of the programme (201pages) that was used to elicit responses from the experts, as well as the fact that no contentious issues were identified, only one and a half rounds took place (the half being the returning of the summary of suggestions to the experts) in the present study.

5.5.2.1 Historical roots

The Delphi method, initially developed by Olaf Helmer and Norman Dalkey for the RAND Corporation in 1959, did not enter the professional literature until the 1960s since many of its early applications involved national security projects (Brooks 1984:24). Traditionally the Delphi method was used to **forecast future development** in areas in which the panel members possessed expertise in the military field, but later it also became widely used in education (Brooks 1984:24; Dimmit, Carey, McGannon & Henningson 2005:214; Viljoen 2005:34).

The Delphi technique is a method of pooling expert opinion about matters that do not lend themselves to traditional analysis. This technique recognises that in **non-exact disciplines expert judgment must necessarily substitute the exact laws of causality found in the physical sciences** (Kochman 1968:14). **The original justifications for the first Delphi study are still valid for many Delphi applications today, for example where evaluation models require subjective inputs** (Linstone & Turoff 1979:10).

The rationale for the Delphi is that it provides a reliable technique for polling the collective judgment of a number of experts, since the group as a whole can perform better than its best member (Viljoen 2005:34). This is called 'process gain'. The Delphi technique was designed to enhance process gain and to eliminate process loss (the negative effects of interacting groups).

5.5.2.2 Definition

The basic definition of the Delphi method (Brooks 1984:23; Egan & Akdere 2005:92; Hogard 2007:309; Linstone & Turoff 1979:3; Lumsdaine & Lumsdaine 1995:206) is that

- it is a method for structuring a **group communication** process on an **anonymous basis**;
- it is done through the systematic collection of information from a group of experts on specific questions, or issues, so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem;
- it is based on a **structured presentation of relevant information** to a **suitably constituted panel**, sometimes described as experts. The information is posted to all experts, who then respond individually to the researcher who acts as Delphi manager or coordinator;
- the researcher's consolidation of the comments and the anonymous views of the other experts are sent to each expert. They are requested to reconsider their

comments in the light of the new information and to respond again. This **process of submission, collation and resubmission is repeated until a degree of consensus is reached.**

The main advantage of the Delphi method is that interpersonal factors, which so often heavily influence the emergence of consensus in committees and working groups, are removed (Hogard 2007:309).

Although there are some common threads underlying the use of the Delphi method (see definition), an exceedingly diverse range of applications are possible (Linstone & Turoff 1979:3). The following is a comparison between the original Delphi method and the variant used in this study.

5.5.2.3 Comparison of the original Delphi to the variant used in this study

Weaver (1972:5), who states that 'one never conducts a Delphi; one always conducts a modified Delphi', differentiated mainly between the exploratory and normative Delphis. The exploratory Delphi is concerned with the probability of events happening, coupled with estimates of when those events may happen (1972:2), whereas the normative Delphi has to do with what one thinks is desirable, rather than what one thinks is probable. Furthermore, the normative Delphi is not thought of as strictly temporal (1972:3), for example, the normative Delphi (as used for this study) is not concerned with specific future dates.

According to Weaver (1972:1), one mark of the creative man is an ingenious ability to play variations on a theme. This has never been more pronounced than in Delphi studies. The following table is an illustration of the differences between the original and more 'typical' Delphi method and the one used by the researcher for this study.

Table 5.2: Comparison between the classical Delphi and the variant used

Original Delphi	Variant used in this study
Used for forecasting	Used for evaluation
Used in science projects, such as the probabilities of the prevention of war, air pollution, aerospace, technology, etc.	Used in education for programme evaluation
It is a repeated process of many rounds	One-and-a-half rounds were conducted
Continues until need for information is saturated	The information gathered in the first round provides for the necessary adaptations
Responses are returned to participants for comments	No further comments were needed after the first round
Questionnaires and open-ended questions are used (Sprenkle & Moon:1996:16)	An open-ended questionnaire, two-page summaries of their comments and interviews were allowed because of possible frustrations with regard to time constraints.
The expert opinions form the 'guide'	A measuring instrument is provided
Exploratory instrument (find out what is probable)	Exploratory and normative (determines what is desirable)
Consensus is shaped through feedback	Suggestions are incorporated
Experts give judgments and do guesswork	Rational and subjective judgments are given by experts

The question could be asked whether the researcher used a variant of the original Delphi, or whether she used Delphi principles to conduct the research. If, on account of the core characteristics mentioned in the definition (see 5.5.2.2), the method used for the study cannot strictly speaking be regarded as a Delphi variant, it would be more correct to describe this research as being conducted with the help of Delphi principles.

The alternative and original methods reveal the following similarities:

Similarities:

- A panel and their expertise were used.
- The psychological forces of group interaction are limited.
- Everybody's opinion has equal value.
- Equal value is attached to the opinions of all participants.
- The philosophical assumption is that '*n* heads are better than one'. The view that truth is relative underlies the attempt to gather a myriad of opinions on a particular topic. The philosophical underpinnings of the Delphi are more concerned with the application of useful knowledge than with an attempt to define truth.
- It structures the communication of individuals in a way that allows for a group of individuals to deal with complex problems.
- Participants express their opinions anonymously.
- The suggestions were incorporated and at least two rounds were conducted.

As the use of a panel of experts is such a crucial and an elementary factor in the successful use of the Delphi method, it will be discussed next.

5.5.2.4 Panel selection

The panellist's knowledge of the subject matter at hand is the most significant assurance of a high-quality outcome when the Delphi method is used (Stone Fish *et al.* 2005:242). Therefore Delphi panellists are chosen for their expertise rather than through a random process (Sprenkle & Moon 1996:16). One of the strengths of this method is that it allows for a conscious inclusion of different constituencies on a panel (Dimmit *et al.* 2005:217). As this is a multidisciplinary study, care was taken to include academics from different fields (psychology of education, inclusive education, music education, creativity, study material development) and other professionals, thus making use of as many diverse contexts as possible.

The selection of the panellists for the Delphi process is a subjective exercise. The chief criterion is expertise in the field of study. Literature offers different views on the optimal size for a Delphi panel. It is important though that a representative panel be selected (Bezuidenhout, Nel & Nel 2004:222). The ten panellists who were chosen to take part in this study were selected on the grounds of their expertise. E-mail addresses were obtained and, with the exception of initial negotiations, communication was conducted by e-mail or telephone. In all cases hard copies of the first draft of the programme (i.e. the study guide and a set of assignments), a cover letter and the evaluation instrument were delivered to the participants personally.

The review instrument divided the different aspects, for example the content and materials development, in components which were analysed for their specific value (see 4.5.2.7). The instrument was designed to provide some structure to the analysis executed by the panel of experts and to enable the researcher to compare the feedback from the panel members.

As this programme was developed for distance education students (teachers), the set of assignments provide mainly for exercises performed by the teachers in the application of theory and reflection on how to manage an inclusive classroom, which is the aim of this programme.

Experts were give one month for their perusal of the material (data collection).

5.5.2.5 *Composition of the chosen panel of experts*

To increase the reliability of the Delphi study, the panel of experts were recruited from four fields in which the participants are experts, namely creativity, music, inclusive education and materials development from and an ODL perspective.

The composition of the group can be described as a convenience sample since all its members live/work in relative close proximity to each other. However, knowledge and experience were not compromised. The decision to choose experts employed by Unisa was obvious, firstly because of their daily involvement in ODL study material, and secondly

because of the stature of this university in the field of distance education. The University of Pretoria is also known for the high quality of its students of music. Expert G was the only expert from the context for which this programme was designed. Unfortunately she was unable to complete her evaluation owing to time constraints and other involvements. However, with the implementation of the programme, follow-up research, which will not form part of this research study, will be conducted.

The following is the list of experts.

Table 5.3: List of experts

Expert A	Retired professor of music, UP. Extensive experience in school music
Expert B	Professor of music, UP. Extensive experience in school music
Expert C	Expert in materials development, currently seconded in advisory capacity to Management, Institute for Curriculum Development (ICLD), Unisa
Expert D	Holds a doctorate in Education, currently professor in materials development, ICLD, Unisa
Expert E	Professor of education, experience in materials development for short courses.
Expert F	Expert and author of publications on creativity
Expert G	Practising music teacher, inclusive education
Expert H	Former Professor of Education, Unisa, currently running a private school specialising in teaching for creativity
Expert I	Senior educationist, experience in subject management
Expert J	Professor in materials development, ICLD, Unisa

Gender was not considered, as I did not think that it would play a role. Age was considered, because of the premium that was put on expertise. However, probably the youngest participant expressed comments in the strongest way, but also contributed valuable ideas on how to put the principles from the literature study into practice. The

oldest expert, who is already on pension, gave extensive feedback and was also available for two interviews, one to make sure she understood what I wanted and the other to explain her notes and to give general hints.

Three of the group of seven are English speaking and four Afrikaans speaking.

All the experts received the same programme and measuring instrument/questionnaire (see Addendums 1 and 2) between 2 and 31 October 2006. Within one month seven participants had returned the questionnaires. The three experts who did not complete the evaluation offered different reasons for their failure to do so, including constraints and the size of the programme. Data could therefore be obtained from 7 out of 10 of the participants. Two of those seven completed the questionnaire, four summarized their comments and four supplemented their contributions with oral recommendations.

The results were processed by hand because of the nature and size of the data.

5.5.2.6 Data collection procedures

The information gathered by researchers during a research study is technically referred to as data (McMillan & Schumacher 2006:10). The experts were given one month to comment on the draft, after which the data were collected. The data-gathering process, also known as instrumentation, is a crucial element of the research, as the conclusions of the study are based on what is revealed by the data (Denzin & Lincoln 2003:37). The following are some examples of data-gathering procedures used during qualitative research (Creswell 2003:185; Denzin & Lincoln 2003:37). Data may, amongst others, be gathered through direct observation, interviews, the analysis of artefacts, documents, cultural records and the use of visual materials or personal experience.

Instead of using only a questionnaire, this study also used the programme as a stimulus for the responses of the experts. The panellists were afforded the opportunity to express their opinions by means of a review instrument, compiled as an open-ended questionnaire, and/or a two-page summary of their recommendations. In four cases, the collection of the material was also followed by unplanned conversations with the experts, which added to

the richness of the suggestions. As previously mentioned (see 5.5.2), the present study was limited to one and a half rounds, owing to the volume of the stimulus material. Another reason for the limited number of rounds is that no contentious matters were identified.

The experts were asked to evaluate the programme by means of a review instrument provided to them. They received a cover letter (see Appendix 1), an open-ended questionnaire (review instrument, see Appendix 2) and the first draft of the programme (available from the researcher. See list of contents 6.2.7). The review instrument was adapted by the researcher from a similar instrument used by the College of Law and originally drafted by Ms M Roman (see Appendix). The questionnaire had category headings to stimulate and guide the experts' thinking. It also included open-ended questions which could be answered by participants whose participation was not hampered by time constraints (see Appendix 2). The major headings are given under 4.5.2.9.

In the survey the experts were requested to accept or reject the data included in the study material. The data included the themes as presented in the 6 units in the first draft of the programme, as well as the presentation of the programme. Panel members were asked to insert any additional suggestions. After the completion of round one, the respondent results were analysed and their suggestions were evaluated for incorporation into the revised programme.

5.5.2.7 Data analysis

According to Mouton (2001:108), 'analysis involves breaking up the data into manageable themes, patterns, trends and relationships'. To carry out this process successfully, it is necessary that transcriptions of all the recordings be made (Holloway & Wheeler 2002:236). The first step in making the transcriptions is to code the qualitative data by means of categorization (Smit 2008:13). All the information gathered from interviews, questionnaires and reports was used to categorise the data and in so doing reveal similarities, linkages, trends, groups that present similar characteristics that may occur and also connecting findings to a broader framework.

For the purposes of this study, the researcher followed the steps suggested by Smit (2008):

- Data were collected over a period of one month through semi-structured questionnaires, two-page reports and discussions (see 5.5.2.5).
- The suggestions of each of the experts were colour coded according to previously determined categories.
- The categories were clustered together.
- Suggestions that did not fit into the existing categories were also categorised and colour coded.
- The data were rechecked against the coding.

Resulting from the character of the study, there were many categories and only seven experts, who did not necessarily complete the same material. However, the trends were clear and a wide range of data was collected.

5.5.2.8 Cover letter

Although the research was explained to the experts during the initial discussions, the cover letter repeated the information and the request. Knowing that the evaluation of all the material involved would be very time consuming, it was no easy task to approach the respondents to request their participation. The experts were not offered any financial compensation, which made the researcher even more dependent on their goodwill. At that stage it was estimated that two preliminary rounds plus a final round would be necessary. However, the reaction of the experts to the volume of the programme and the time that it would take to evaluate it, it was decided to limit the research to one full round and a final round to report on the consolidation of the experts' comments. This was considered to be sufficient in this specific case.

The anonymity of the experts was confirmed, as can be seen in the cover letter (see Appendix 1).

The package received by the experts also contained the review instrument (see Appendix 2), which will be discussed next.

5.5.2.9 Review instrument

An important reason for the need to involve a panel of experts was the practical value of their expertise for the development of the programme. The researcher felt that it was absolutely essential to tap the practical know-how of experts involved in the various areas of specialization (music, creativity, inclusive environment, materials development, continuous professional learning). The headings of the measuring instrument reflect these different fields of specialization.

See Appendix 2 for a detailed example of the review instrument. The major headings used in the review instrument were the following:

1. Learning design
2. Linguistic design (dialogue)
3. Instructional devices
4. Visual design
5. Assessment design

The review instrument also contributed to the reliability of the study, as it provided guidelines which enabled replication of the evaluation process in similar circumstances.

5.5.3 Reliability and validity

Although many instruments for programme evaluation are available (McMillan & Schumacher 2006:133), specific measures had to be used for the evaluation of this programme, therefore the researcher had to adapt a similar instrument for programme

evaluation to gather the data needed. This instrument, developed by an expert, had been used with satisfactory results on previous occasions.

Traditional types of reliability and validity are not easily obtained, or are not applicable to the Delphi approach (Stone Fish *et al.* 2005:250). Since the questionnaire contained a section that allowed for personal opinions, it would probably not be suitable for conducting typical reliability estimates. The method of determining reliability by conducting a test-retest, which requires the same group of experts to complete the same questionnaire a second time, was not considered suitable for this research as experts were likely to object to such repetition.

The issue of validity is directly related to the selection of panel experts (Viljoen 2005:35; Stone Fish *et al.* 1996:479). However, the important question is whether the experts fit the area of inquiry (Stone Fish *et al.* 1996:480). In the researcher's opinion, the choice of experts was appropriate. However, it must be admitted that when open-ended evaluations are used, as in the case of this research study, the researcher takes a bigger risk with regard to validity (Stone Fish *et al.* 1996:480).

5.5.4 Ethical responsibilities

Ethics are generally considered to deal with beliefs about what is right or wrong, proper or improper and good or bad. Different ethical principles for educational research have been published (McMillan & Schumacher 2006:142). In the case of this research study the competence of the researcher and of the experts in particular, is an important factor. The principles of voluntary participation and the right to withdraw without penalty (Smit 2008:18), were adhered to. As previously mentioned, three experts did in fact withdraw because of time constraints.

Informed consent (McMillan & Schumacher 2006:334) was obtained by the researcher from each expert during the initial discussion after the experts had been chosen, and each participant in the evaluation round will receive a final copy of the programme. Throughout the study the confidentiality with regard to the identities and/or opinions of the experts was maintained.

5.6 CONCLUSION

This chapter further elucidated the research problem, the aims of the research and the demarcation of the field of study. Details of the research design and the methodology were given and the purpose and nature of the literature study and the Delphi method were discussed. The original Delphi method was compared to the variant used in this research study, and the panel selection, data collection procedures, cover letter, review instrument, the issues of reliability and validity and ethical measures taken were explained.

In Chapter 6 the empirical findings as evidence of both the effectiveness and shortcomings of the programme *Music for All* will be discussed and interpreted.

CHAPTER 6

RESEARCH FINDINGS

6.1 INTRODUCTION

In this chapter the research questions must be answered in the light of the findings of the literature review and the suggestions put forward by the panel members.

The **primary research question** can only be answered once the suggestions of the panel of experts have been analysed. The primary research question is: *What are the core elements that should be included in a continuous professional learning programme in an open and distance learning environment, focusing on the creative use of music in the inclusive classroom, in order to support learners with learning impairments?* In order to come to a final answer in respect of the primary question, the following secondary questions will be discussed:

- *What is the value of creativity for teachers, and eventually also for learners?*
- *What is the value of music in education?*
- *What are the manifestations of learning disabilities in learners?*
- *How could music be used to support learners who experience learning disabilities?*
- *What are the principles of a good continuous professional learning programme?*
- *How should a successful open and distance learning programme be compiled?*

The literature review presented in Chapter 2 attempted to answer the first two research questions which, when combined, read:

What is the value of the creative use of music for teachers?

The literature review discussed in Chapter 3 attempted to answer the third and fourth questions which, in the combined format, read:

How can music support learning-disabled learners in the inclusive classroom?

Chapter 4 presented the research that was conducted in an attempt to address Questions 5 and 6, which relate to the appropriate format for the programme:

What are the principles according to which a professional learning programme in an open and distance learning environment should be compiled?

In the discussion that follows, an attempt will be made to answer the above questions.

6.2 DISCUSSION AND APPLICATION OF THE LITERATURE FINDINGS

The literature review was completed to justify the content and format of the programme *Music for All*. In this chapter (Chapter 6), the researcher tries to identify patterns and to cut into data from different angles (make summaries, mind maps from different angles) in order to identify relationships and develop explanations. The findings are presented so as to answer each of the secondary research questions relating to creativity, music, learning impairments, continuous professional learning and open and distance learning.

6.2.1 The value of creativity for teachers

Research question 1: *What is the value of creativity for teachers, and eventually also for learners?*

The benefits of creativity for teachers at the **personal level** are important, as creativity at the professional level is based upon personal creativity. The benefits that creativity has at the personal level could address some of the problems mentioned in 1.1. These benefits are the following:

- creativity is an everyday source of happiness and fulfilment (see 2.2.5.2);
- creative thinking can help humans adapting to almost any situation and make do with anything to reach a goal (see 2.2.2);
- a creative person who can solve problems may handle matters more efficiently (see 2.2.1);
- creative characteristics enhance the ability to tolerate ambiguity, which controls stress (see 2.2.5.2);
- creative people can cope well with life (see 2.2.4.1), and
- creativity may foster conflict resolution and the healthy expression of emotions (see 2.2.5.2).

Categories of creativity were developed by the researcher for the purpose of better understanding the different definitions of creativity the (see 2.2.1). In real life, though, the boundaries between personal and professional creativity are not as clear cut. Although the personal benefits of creativity clearly indicate that many problems experienced by teachers (1.2) can be alleviated if they develop their own creative gifts, it is also necessary to consider creativity at the professional level. Table 6.1 presents examples of specific problems mentioned in 1.2, together with appropriate creative solutions:

Table 6.1 ‘Creative’ answers to challenges experienced in schools

Challenges	Creativity ...
Feather (2003:5) determined that very few teachers even understand what creativity entails. Therefore the outcomes of critical and creative thinking are not met in schools.	assists teachers to attain the critical outcome of creative and critical thinking with their learners (2.2.5.1).
The simultaneous implementation of OBE and inclusive education (see 1.2).	enhances teachers’ ability to adapt to change and unplanned circumstances experienced in their schools (2.2.5.1).
Teachers cannot cope with their circumstances (see 1:2).	appears to have replaced intelligence as the major contributor to professional success.

Teachers not only need specific subject related and professional training, but also motivation and emotional support (see 1:2).	can prevent emotional and behavioural problems by enhancing the self-esteem of participants (2.2.4.1).
The poor quality of education in South Africa, especially in under-resourced rural areas (see 1.2).	assists teachers to reflect on their strengths and weaknesses and to formulate plans to meet their needs. These teachers not only acquire professional expertise, but also obtain good learner outcomes (3.2.1).
All teachers do not have the skills/ knowledge to be effective in an inclusive setting (1.1).	assists teachers to find solutions for the problem of effectively implementing inclusive education (2:16).
The diversity of learners and consequently the different learning needs (1.1).	helps teachers to accept differences. Flexibility could help to effectively adapt learning material to accommodate all the learners in an inclusive classroom.

Fluency, originality and flexibility are desirable skills which can be developed in teachers (see 2.2.1). If such skills are indeed developed, the researcher's aim, which is to assist teachers to become more creative in the classroom, may be met. Teachers who are fluent, original and flexible are best equipped to handle the situation in schools as described in 1.1. They are also the kind of teachers (see 2.3.6) who will be able to use music in the classroom for the purposes described in 2.3.4. Table 6.2 shows some of the advantages that result from using the mentioned creative skills in the classroom (adapted from Gunseli 2006:71):

Table 6.2 Advantages of creative skills in the classroom

<p>Fluent teachers...</p>	<p>are more capable of producing many ideas and solutions to educational/situational problems in general;</p> <p>may present problems that are expansive, allow for a variety of responses, have no fixed answers or stereotypes and encourage learners' free thinking;</p> <p>foster an openness and respect for unusual questions and ideas, an understanding that all ideas have value, and an opportunity to learn and perform without constant threat of evaluation;</p> <p>evoke more ideas in their learners' minds and lead them to use their divergent thinking skills;</p> <p>may create new alternatives to everyday problems, generate new questions to problems ignored and produce new and better ways of thinking;</p> <p>may initiate new actions in finding solutions to the problem of having to effectively implement inclusive education or assist a variety of learners in the same class;</p>
<p>Original teachers...</p>	<p>assist in developing curiosity and a sense of wonder: the growth of imaginative powers and original thinking experiences – the cultivation of creativity that produces effective surprise;</p> <p>use positive motivation to encourage learners' responses and to increase their ability to give unusual uses for common objects;</p> <p>may play an important role in raising the quality of education in developing countries and under-resourced rural areas by generating new ideas and concepts in education and by adapting easily to innovations in the educational system;</p>

Flexible teachers...	<p>may connect independent and even irrelevant-looking ideas and variables when addressing a problem;</p> <p>may model thinking to learners in generating ideas in eclectic and interdisciplinary ways;</p> <p>may act as role models for learners to enhance adaptability to innovations and nourish curiosity in their classrooms;</p> <p>may show their learners not to fear novelty and to reach a useful solution by associating existing mental schemes with the unknown;</p> <p>may find it easier to adapt to individual differences, to vary materials and activities and to attain improved flexibility in learner thinking. Teacher flexibility and acceptance of learners are the crucial determinants in an inclusive classroom;</p> <p>can set up problem situations for the learners for which there is no one correct response, so that learners can independently try out different solutions;</p> <p>tend to handle educational problems in detailed ways, produce solutions by careful analysis and may help learners to think about a solution for a problem;</p> <p>assist their learners to be more attentive, be more motivated, engage in more thinking and problem-solving and simply enjoy class more;</p> <p>are devoted to improving their own practice;</p> <p>may model self-confidence through taking risks, have faith in themselves and their students, and</p> <p>can more readily accept difference and diversity.</p>
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To answer the first question, *What is the value of creativity for teachers, and eventually also for learners?* Table 6.3, bearing the above-mentioned in mind, presents a summary of the answer: With the above-mentioned in mind, Table 6.3 summarises the answer to the first question: *What is the value of creativity for teachers, and eventually also for learners?*

Table 6.3 The value of creativity for teachers

Creativity ...

- can be developed in anyone - in teachers, and through them also in learners (2.2.1);
- is an everyday source of happiness and fulfilment (2.2.5.2);
- can foster conflict resolution and the healthy expression of emotions (2.2.5.2);
- contributes positively towards a teacher's feeling of efficacy (2.2.5.2);
- enhances the skill to tolerate ambiguity, which controls stress (2.2.5.2);
- has a distinct connection with intellectual skills (2.2.5.2);
- fosters problem-solving skills (2.2.1), therefore creative people can handle matters more efficiently;
- is a priority in contemporary education (2.2.5.2);
- assists in developing fluency, originality, flexibility and elaboration in teachers (2.2.5.1);
- appears to have replaced intelligence as the major contributor to professional success (2.2.5.2);
- prepares learners effectively for the future (2.2.5.2), and
- fosters resilience (the ability to overcome adversity) (2.2.4.1).

Although the advantages of creativity alone are impressive, the added use of music not only strengthens these advantages, but helps to develop unique attributes that help cultivate the ideal atmosphere for the development of creativity. Of great importance for this study is the investigation of the effect that music has on human beings. This will now be discussed.

6.2.2 The value of music in education

The literature review undertaken to answer the secondary **research question**: *What is the value of music in education?* revealed the following:

Since music has an effect on the physiological, emotional, cognitive and social aspects of human beings, teachers can use music to help solve the following problems that learners experience in the corresponding areas (see 2.3.1; 2.3.2; 2.3.3; 2.3.4). Table 6.4 represents a summary of the effects of music on human beings:

Table 6.4 The effect of music on human beings

Physiological:	Music ... increases/restores physical energy; assists in controlling hyperactivity; is a therapeutic aid for burnt-out teachers/learners, and can increase/decrease tension.
Emotional:	Music ... replaces negative emotions with positive ones. Healthy emotions encourage optimal cognitive development. Musical activities can create a healthy self-image.
Cognitive:	Music ... fosters attention and concentration; prepares the central nervous system for the acquisition of perceptive skills, and develops academic skills such as language (reading and writing) and second language, and mathematics.
Social:	Music ... assists in the acquisition of social skills; strengthens friendships; creates a feeling of solidarity and goodwill; creates true democracy when everyone waits their turn to play; creates healthy human relationships; assists a person in taking initiative; assists in understanding each other, and can be used to encourage discussions in the classroom.

Because of the effect of music on the whole person, and the fact that it does not have to be taught formally (2.3.1), it is clear that music is a potent source of support and development in school, not only because of the wholesome effect it has on a people, but also because music does not have to be taught formally (2.3.1).

6.2.3 The value of music in schools

Music can help to curb burn-out and stress, and can therefore enable teachers to teach more effectively (see 2.3.4.1). Music can be utilised as a therapeutic mechanism in the classroom (2.3.4.1). Through developing healthy emotions, music can foster emotional and cognitive growth (2.3.4.2); it helps teachers and learners to develop positive self-esteem (2.3.4.1); it supports effective communication and interaction (2.3.4.1), and has personal value because it optimizes concentration and helps people to cope with distractions to ensure that work is completed on time (2.3.4.3). Therefore music also supports holistic teaching and learning. It is important to note that music can aid a person in getting to know him/herself, facilitates learning in other areas. Because it has a general transfer effect on the integration of learning, it assists with the integration subject disciplines.

Music also has an effect on the different intelligences that are acknowledged by the Department of Education in South Africa (see 2.3.3). By using 'musical intelligence', a teacher can teach learners through their strengths (2.3.3.2), but music is not yet being used in classrooms to attain this goal. Musical intelligence relates to the following intelligences: language, number related, bodily/kinaesthetic, interpersonal, intrapersonal and naturalistic, as illustrated below.

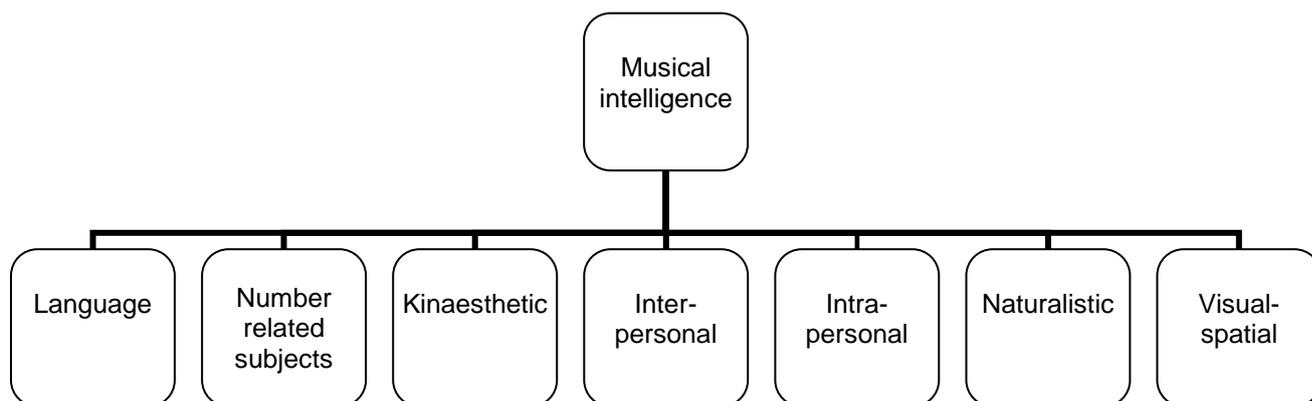


Figure 6.1 Intelligences influenced by musical intelligence

The main advantage of the relationship between musical intelligence and the other intelligences is that, through teaching with music as an aid and using the connection between the intelligences, the teacher can effectively reach learners who learn predominantly through any of the other intelligences. For teachers with many learners in the classroom, or those who cannot adapt to teaching methods, the use of music can be of considerable assistance.

To summarise the answers to Questions 1 and 2, which relate to the value of the creative use of music in the inclusive classroom, the following table illustrates the series (set, sequence) of advantages offered by the creative use of music:

Table 6.5 Advantages of the creative use of music

Creativity	<ul style="list-style-type: none"> • is, in some measure, part of every person's make-up, therefore every person's creativity can be developed (2.2.1); • is an everyday source of happiness and fulfilment (2.2.5.2); • enhances skills to tolerate ambiguity, which controls stress (2.2.4.1); • can foster healthy expression of emotions and conflict resolution (2.2.5.2); • contributes positively towards a teacher's feeling of efficacy (2.2.2); • has a distinct connection with intellectual skills (2.2.1);
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	<ul style="list-style-type: none"> • fosters problem-solving skills (2.2.1), therefore creative people can handle matters more efficiently; • prepares learners effectively for the future (2.2.5.2); • appears to have replaced intelligence as the major contributor to professional success (2.2.5.2); • is a priority in contemporary education (2.2.5.2); • assists in developing fluency, originality, flexibility and elaboration in teachers (2.2.4.1), and • fosters resilience (the ability to overcome adversity 2.2.4.1).
Creativity and music together	<ul style="list-style-type: none"> • give pleasure (2.2.4.1; 2.3.1); • enhance the healthy expression of emotions (2.2.2; 2.3.2.2); • cultivate a healthy self-image (2.2.2; 2.3.2.2); • control stress (2.2.4.1; 2.3.4.1); • elicit self-actualising behaviour (2.2.4.1; 2.3.4.2); • promote effective thinking by assisting people to operate on several cognitive levels together (2.2.5.2; 2.3.2.3), and • probably engage each person's individual learning style and intelligence in any specific learning situation (2.2.3; 2.3.3.2).
Music	<ul style="list-style-type: none"> • relates to all the other intelligences (2.3.3.2); • can therefore be used to teach according to strengths (2.3.3.2); • enables teachers to teach holistically (2.3.3.2); • assists in integrating subject disciplines (2.3.4.3); • facilitates learning in other areas (2.3.4.3); • has a general transfer effect on the integration of learning (2.3.4.3); • is a therapeutic mechanism (2.3.4.1); • is a therapeutic aid for burnt-out teachers/learners (2.3.4.1); • can heighten/lessen tension (2.3.2.2); • replaces negative emotions with positive ones (2.3.4.1). Healthy emotions encourage optimal cognitive development (2.3.4.2); • can create a healthy self-image (2.3.4.2); • has meta-cognitive value (2.3.4.3); • can aid in getting to know oneself (2.3.2.2);

	<ul style="list-style-type: none"> • increases/restores physical energy (2.3.2.1); • assists in controlling hyperactivity (2.3.2.2); • fosters attention and concentration (3.4.1.4); • prepares the central nervous system for the acquisition of perceptive skills, language (reading and writing), second language, mathematics and memory (3.4); • assists in acquiring social skills (3.3.1.7); • strengthens friendships (3.3.1.7); • creates a feeling of solidarity and goodwill (3.4.1.7); • creates true democracy (3.4.1.7); • creates healthy human relationships (3.3.1.7); • assists a person in taking initiative (3.4.1.7); • assists people in understanding each other (3.4.1.7); • can be used to foster discussions in class (3.4.2.1), and • can be used by anyone (2.3.1).
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The integrated use of music and creativity is of great value in the classroom. We know from experience that music can be used rigidly, as was often the case with music lessons in the past. Specific kinds of music and volume could irritate some listeners. However, folk music from different cultures, with controlled volume, could work well for primary school learners.

In conclusion, the research reported on in Chapter 2 to determine the value of the creative use of music for teachers and learners, affirmed that the creative use of music could be an excellent mechanism for the development of creative problem-solving skills. The literature search thus confirmed that the choice of the creative use of music as content for the continuous learning programme cannot be disputed (see 6.3.2.2).

6.2.4 Manifestations of learning disabilities in learners

The third (secondary) **research question** was: *What are the manifestations of learning disabilities in learners?*

On account of the high incidence of learning difficulties amongst learners who experience barriers to learning, the researcher focused on learning-disabled learners. Since it is not always possible for class teachers to diagnose learning disabilities, the researcher is of the opinion that teachers will cope better with this task if they are informed about the different aspects of learning that can be influenced by learning disabilities. Rather than concentrating on diagnosis, teachers should concentrate on the development of skills that learners still need to master. The following skills of learning-disabled learners could be affected by barriers to learning at different levels. At the same time these skills also represent the spectrum of perceptual and academic barriers that any learner can experience:

Table 6.6 The manifestations of learning disabilities

Manifestations of learning disabilities in developmental skills:	
1	Motor and sensory-motor problems Gross motor activities Fine motor activities Sensory-motor integration <ul style="list-style-type: none"> • Body awareness • Laterality • Balance • Rhythm
2	Perceptual problems Analysis and synthesis Perceptual closure Visual and auditory discrimination Fore- and background discrimination Visual and auditory association

	Cross modal association Overload of modalities
3	Memory
4	Attention
5	Language Receptive language Expressive language Speech
6	Cognitive development Field dependence Poor problem solving strategies Impulsive Think unsystematically and illogically Lack of ability to plan Difficulties with classification and categorization Problems with automatisms
7	Social competence
8	Emotional competence with resultant poor self-concept

Manifestations of learning disabilities in academic skills used in this study	
9	Language Reading Writing
10	Mathematical skills Computation Word problems

The academic difficulties identified were limited to language and mathematical problems. However, learning difficulties present in all learning areas at school. Music can be used creatively to support learners in all areas, although not all areas are covered in the study.

6.2.5 Examples of music to support learning disabled learners

The **fourth** (secondary) **research question** is:

How could music be used to support learners who experience learning disabilities?

This question leads to the determination of principles and/or examples of ways in which music can be used to support learners experiencing learning difficulties. In many instances the areas in which music has a profound effect in humans are the same as those where barriers to learning manifest in learning-impaired learners, as well as in all other learners on the spectrum, from the gifted to the severely impaired (see 3.3.1). Using music and rhythm, it is possible to devise creative exercises to help curb such learning difficulties (see 3.4.1). Learners benefit from exercises of this nature on the emotional, cognitive and social levels. All learners in the classroom can participate since music joy, learners' self-concepts are not threatened, and this development positively affects the future prospects of learners who might have gone down in a negative spiral of failure.

Classroom teachers can use music by doing everyday activities, for example listening to music, singing, using rhythm and movement and playing home-made instruments, which could all be integrated with the normal classroom activities and lessons. The characteristics of classroom teachers who are likely to engage in musical activities such as those mentioned above relate distinctly to the traits of creative teachers. Such teachers should be flexible, imaginative, enthusiastic, playful, have a childlike appreciation of life and a willingness to learn more about music and musical concepts.

Besides trying to improve learners' skills, the focus should be on the development of creativity, imagination, understanding and sensitivity. Learners should be encouraged to participate independently and wholeheartedly in creative activities. Factors to be taken into account to achieve a creative atmosphere are discussed under 2.3.6.

6.2.6 Continuous Professional Learning

The **fifth** (secondary) **research question** requires an answer to the following question:
What are the principles of a good continuous professional learning programme?

The outcome of the research on the CPL principles representing the best practices in the field revealed the following:

- The experience of teachers should be taken into account.
- Adults appear to be interested in learning something new if it arouses their interest or meets a need they are experiencing in their personal or work lives.
- Teachers should be involved in the identification of what they want to learn.
- **Collaborative problem solving** is important during periods of study and in school.
- Professional learning should be **continuous**. If each step towards the best, most effective practice is not **sustained**, the time and money spent on PL are basically wasted.
- **Support** is imperative when teachers study.
- Adults learn best when they are **actively involved** in the process.
- They need to **see the results of their efforts** and have **feedback** on how well they are doing.
- As teachers develop professionally, they have an **increasing need to be self-directed**. Therefore they should have the freedom to do so.

The programme *Music for All* was developed with these principles in mind. However, the best practices of open and distance learning also had to be determined.

6.2.7 Open and Distance Learning

The last secondary question, which relates to the research discussed in Chapter 4, is:

How should a successful Open and Distance Learning programme be designed?

Two features of Open and Distance Learning that proved to be of special importance in this study were the Distance Education (DE) student and the instructional design of the learning material.

6.2.7.1 *The distance education student*

A typical characteristic of distance education students is that they are remote from the institution. As the receivers and users of the course materials, their attributes have a decisive influence on course development. In the light of the important role of the target group in the writing of any course material (see 4.2.1), the following has been determined regarding the main group of students for whom the course *Music for All* was written:

Prior experience indicates that the typical student in the target group for whom course material was written is approximately 40 years old and female. These students are teachers who have had to adapt to OBE and inclusive education in a relatively short period. Many of them work in rural areas where very few or no resources are available (see 3.2). The ability of teachers/students to know, organise and manage themselves was regarded as crucially important. Therefore the first unit was devoted to the topic '*Getting to know yourself*' (see 4.4.3.3).

6.2.7.2 *The development of materials*

The second feature of open and distance learning that proved to be specifically important to this study was the development of study material.

The following principles applicable to the development of materials were derived from the literature study:

- Learning outcomes should be the starting point when learning material is created. (See experts' reactions to the learning outcomes, 6.3.1.1.1).
- The materials should attempt to provide two-way communication (Holmberg's guided didactic conversation) in which learners interact with texts to construct their own meanings and evaluate their own learning.
- The most obvious way to achieve the above is through activities built into the text, as applied in both the study guide of the programme and the set of assignments.
- A range of access devices, such as course guides, progress organisers, self-assessment tests, clear and consistent use of headings and subheadings, summaries, glossaries and icons of various kinds should be created.
- Where appropriate, explanatory feedback should be given.
- Learning occurs most easily when it is applied to and woven around individual and social problems (see 4.3.4). Examples, illustrations, case studies and activities included in the course units should address this aspect and should be selected, designed and integrated into the instructional events and experiences. Case studies or scenarios proved to be a valuable teaching tool in the writing of the programme *Music for All*.
- Isomorphic training should be done, which means that the trainees should be afforded opportunities to experience that which they are to offer to the learners in a hands-on manner. Because it is difficult to demonstrate the practical work in the study material that is mainly theoretical in nature, discussion classes once or twice a year are recommended to demonstrate to the students how the musical activities should take presented (see experts' opinions in 6.3.1.1.1).

- The curriculum should be based primarily on experiences, and then on abstractions and theory. Experimentation follows, after which the results are observed, and so the process repeats itself. **Information and activities are proposed ‘just in time’ so that they can be exploited in the trainee’s own development right away.** Discussions with the experts and their reactions indicated a general view that the above-mentioned principle is one of the most important skills that a programme writer should acquire. One expert suggested a practical solution for its integration into the guide (see 6.3.1.1.1).
- Activities (not content) are central to the course material (see 4.4.5). The researcher included frequent activities in the text and regards those, together with the portfolio and practical assignments, as being adequate. However, the balance between content and activities could not be sufficiently achieved. The reaction of the experts will be discussed in 6.3.1.1.
- According to the literature, methods and resources should be varied. In this study this principle was implemented by making use of various study materials (the programme and the practical applications or assignments) and the discussion classes.
- Evaluation should be adapted to suit adult learners. It should be based on self-evaluation, critical thinking and negotiation. Individual portfolios, allowing for self-critical analysis of processes and products could be used. In the study the researcher expected the teachers to compile a portfolio, which could later be used for reference purposes, instead of writing an examination paper.

6.2.8 The compilation of the programme *Music for All*

The programme *Music for All* can be obtained for perusal from the researcher. Owing to its volume, (201 pages) it is presented as a separate document. The table of contents of the programme is included in this chapter. The programme focuses mainly on creativity, music and the application of creative music at schools to facilitate learning for both learning-disabled and ‘regular’ learners.

On the basis of the principles determined in Chapters 2 to 4, the programme was constructed as follows: The introductory unit starts with a scenario of a chaotic inclusive classroom where the teacher is unable to manage the class effectively. This scenario was chosen to right away place the teachers in a context within which many of them might have worked. Knowledge is an important condition for skills development (see 4.2.1; 4.4.2.4.1), therefore Study Units 1-3 of the programme concentrated on the provision of the necessary (according to the researcher) background knowledge. Unit 1 (*Getting to know yourself*) explained the concept of multiple intelligences and emphasised the fact that each person had creative and musical potential which could be developed. In Unit 2 the concept of creativity and the value of creativity in schools were described in detail and examples of creative teaching were given. Feather (2003:8) concludes that teachers fail to attain the important outcome of creative teaching because they are not even able to define the term creativity. Study Unit 3 describes the effects that music can have on people and suggests types of music that could be appropriate for use in the classroom. Study Unit 4 concentrates on the creative use of music in the classroom, the value thereof, the levels at which music can be used in the classroom, and how the creative use of music could support learning-disabled learners.

Study Units 5 and 6 deal with the practical application of the previous knowledge-based units. Practical examples were given showing how music can be used creatively to support learners who experience difficulties with the attainment of developmental skills, as learning-disabled learners often do. Unit 6 also contains examples of how music can be used to support learners, for example learning-disabled learners who experience a variety of academic problems.

Regular opportunities for reflection (except for the formal reflection in each unit) are provided at an appropriate level for the teachers, which assured that the learning material is presented in manageable chunks. The following is an example of a reflective problem-solving activity which can be considered as being open ended and not necessarily solvable by applying a routine method (see 4.4.3.2): The introductory scenario describing a chaotic inclusive classroom with several problem situations arising simultaneously is discussed. The teachers are then asked what they would have done to avoid chaos if they had been placed in a similar situation, thereby inviting them to use their own experience to find a solution to the problem (see 4.4.3.3).

The programme is intended as a generic guide to show primary school teachers that both developmental and academic problems could be supported through the creative use of music. Between the ages of six and twelve years, children enjoy learning new skills and do so effortlessly (see 2.3.4.2). The primary school years are therefore the ideal time for the implementation of a programme such as *Music for All*. The table of contents for the programme will now be presented.

Table of contents for the programme, *Music for All*

STUDY UNIT 1: INTRODUCTION. BACKGROUND TO THE EDUCATION SYSTEM

1.1 INTELLIGENCE DEFINED

1.1.1 In what ways are learners smart?

1.1.2 Gardner's theory of multiple intelligences

1.2 UNDERSTANDING INTRAPERSONAL INTELLIGENCE

1.2.1 A definition of *emotional* and *social* intelligence as part of the *intrapersonal* and *interpersonal intelligences*

1.2.2 Emotional and social competence and life skills

1.2.3. Self-actualisation

1.2.4 Emotional intelligent education

1.3 INTERPERSONAL LEARNING: THINKING SKILLS AND STYLES

1.3.1 Thinking skills today

1.3.2 Metacognition

1.3.3 Critical thinking

1.3.4 Constructivism

1.3.5 Learning styles

1.3.6 Management styles

1.4 YOUR MUSICAL AND CREATIVE POTENTIAL

1.4.1 Understanding *musical intelligence*

1.4.2 Music and the *multiple intelligence theory*

1.5 REFLECTION

1.6 CONCLUSION

1.7 REFERENCES

STUDY UNIT 2: CREATIVITY**2.1 INTRODUCTION**

2.1.1 Background

2.2 WHAT IS CREATIVITY?

2.2.1 Categories of creativity

2.2.2 The creative person

2.2.3 The creative process

2.2.4 The creative product

2.2.5 The creative environment

2.3 CREATIVITY AND EDUCATION

2.3.1 The need for creative education

2.3.2 Teachers and creativity

2.3.3 Reflective teachers are effective teachers

2.3.4 The teaching of creativity in the classroom

2.3.4.1 Guiding principles for teaching creative growth in the classroom

2.3.4.2 Barriers to creative thinking

2.3.5 Overcoming barriers to creative thinking

2.3.6 Techniques to increase 'ideational' power

2.3.6.1 Brainstorming

2.3.6.2 Checklists

2.4 REFLECTION**2.5 CONCLUSION****2.6 REFERENCES****STUDY UNIT 3: MUSIC****3.1 INTRODUCTION****3.2 DEFINITION OF MUSIC****3.3 THE ESSENCE OF MUSIC****3.4 THE INFLUENCE OF MUSIC ON HUMAN BEINGS**

3.4.1 Physiological influence of music

3.4.2 Emotional influence of music

3.4.3 Cognitive influence of music

3.4.4 Social influence of music

3.4.5 Aesthetic influence of music

3.5 MUSICAL STYLES APPROPRIATE FOR USE IN SCHOOLS

3.5.1 Folk music

3.5.2 Classical music

3.5.3 Popular music

3.6 REFLECTION

3.7 CONCLUSION

3.8 REFERENCES

STUDY UNIT 4: THE CREATIVE USE OF MUSIC IN SCHOOLS

4.1 INTRODUCTION

4.2 LEVELS ON WHICH MUSIC CAN BE USED IN THE CLASSROOM

4.2.1 First level: The class teacher

4.2.2 Second level: The music teacher

4.2.3 Third level: The music therapist

4.3 CREATIVE CONTRIBUTIONS TOWARDS THE USE OF MUSIC IN SCHOOLS

4.3.1 Carl Orff (1964)

4.3.2 Georgi Lozanov

4.4 THE VALUE OF MUSIC IN SCHOOLS

4.4.1 Enrichment

4.4.2 Therapeutic benefits

4.4.3 Other

4.5 BENEFITS OF MUSIC FOR LEARNERS WITH BARRIERS TO LEARNING

4.5.1 Music for the enhancement of the developmental skills

4.6 REFLECTION

4.7 CONCLUSION

4.8 REFERENCES

STUDY UNIT 5: DEVELOPMENTAL SUPPORT THROUGH MUSIC**5.1 INTRODUCTION****5.2 THE USE OF MUSIC TO IMPROVE DEVELOPMENTAL SKILLS**

5.2.1 The development of gross motor movements

5.2.2 The improvement of perceptual skills

5.2.3 The improvement of language skills

5.2.4 The improvement of cognition

5.3 PRACTICAL EXAMPLES

5.3.1 The development of motor skills

5.3.2 The development of sensor motor skills

5.3.3 The development of perceptual skills

5.3.4 The development of memory

5.3.5 The development of attention

5.3.6 The development of language

5.3.7 The development of cognitive skills

5.6 REFLECTION**5.7 CONCLUSION****5.6 REFERENCES****STUDY UNIT 6: ACADEMIC SKILLS****6.1 INTRODUCTION AND BACKGROUND TO THE PRACTICAL EXAMPLES:**

6.1.1 Music and the development of academic skills

6.2 PRACTICAL EXAMPLES

6.2.1 Language

6.2.2 Mathematics

6.2.3 Natural Sciences

6.2.4 Social Sciences: Biology, Geography and History

6.2.5 Arts and Culture

6.2.6 Life Orientation (social skills)

6.3 REFLECTION**6.4 CONCLUSION****6.5 REFERENCES**

The suggestions made by the experts, following their perusal of the programme *Music for All*, will now be discussed.

6.3 FINDINGS OF THE EMPIRICAL INVESTIGATION

The findings of the empirical investigation will be presented in the light of the suggestions made by the expert concerning the two elements of the programme, namely the programme as such and practical applications for the teachers. The suggestions regarding the programme will be discussed under the following headings: general, content, the use of creativity in the programme and the use of music in the programme. The participants' (experts') comments and suggestions are given in italics.

6.3.1 Results of the Delphi evaluation

It was envisaged that this investigation would consist of at least two rounds. However, only one round was necessary as the responses of the participants showed a consensus of opinion. However, certain questions were followed up by way of informal discussions. In qualitative research adaptations are often made along the way (Delpont & Fouché 2005:268). Since the number of rounds forms an integral part of the nature of the Delphi, it must be stated that although the principles of the Delphi method were used, the Delphi method as such was not applied.

The instruments used to collect the data from the experts were open-ended questionnaires, two-page summaries of their suggestions, and discussions to ensure that the information provided had been correctly understood. The **open-ended questionnaire** was the measuring instrument that required the experts to evaluate the content and style of the programme *Music for All*. It was organised to correspond with the themes mentioned in 4.5.3/Appendix. These themes included the evaluation of specific aspects, such as the content, learning design, linguistic design, instructional devices, visual design and assessment design. The experts were required to add any additional information on, or suggestions regarding the measuring instrument or questionnaire. Only two experts completed the entire questionnaire. The rest used the alternative of writing a two-page summary of their suggestions. Only those aspects to which they reacted will be discussed.

For the analysis of the **open responses** (texts as well as oral) the following themes were used and compared with the literature findings: creativity, music, materials development, and how these manifested in the two documents, the study guide and the set of assignments. On account of the nature and size of the data, the results were processed by hand. The suggestions made by the experts regarding the programme (consisting of the programme and the practical application, or assignments) and review instrument will now be discussed separately.

6.3.1.1 *The programme*

The study guide consists of the introduction, which describes the educational context within which teachers operate. The headings of the six units are: *Getting to know yourself*, *Creativity*, *Music*, *The creative use of music in schools*, *Musical examples of how to support learners who experience developmental difficulties*, and *Musical examples of support to learners who experience academic problems*.

The suggestions from the experts concerning the study guide will now be discussed. The general suggestions will be presented first. This will be followed by a discussion of the suggestions regarding the study guide and, finally, some comments on the measuring instrument will be put forward.

6.3.1.1.1 General

In an attempt to place the learning material in the context of the teachers right away, the **introduction** in the study guide presented a scenario that illustrated the context within which many teachers may be working (see 6.2.7). However, four experts indicated that the **technical aspects** could have been explained and used more effectively in the first (introductory) unit. They suggested that this unit should contain a framework that indicates what follows and explains the reasons for its inclusion in the study material. The suggestions of the experts concurred with what was found in the literature (4.4.3.4.2) where a range of access devices was described. The following remarks were made by the experts:

There should be a framework with a rationale to guide the learner through the material.

No 'mapping' through the course.

... I miss the overall purpose of the unit at the beginning: What are the assessment criteria and the range? How are the Critical Outcomes incorporated? Who is this focused on?

One of the participants commented that the general lay-out was good, but made some suggestions that would also help solve the technical problems mentioned above. She said:

Use different spacing for main points and sub-points. For sub-points another font can be used, or block the information or underline the headings to guide the eye of the reader.

By numbering the activities and indicating the numbers next to the unit number, e.g. 1(1); 1(2), greater user-friendliness could be achieved.

In addition to their comments on the technical aspects, the experts also indicated that the outcomes were not clearly spelled out or met in the study guide (see 6.2.6.2). There was nothing in the research that indicated that the programme should contain outcomes. However, demonstrating the effective use of the outcomes was part of placing the programme in an authentic framework and demonstrating the style that is expected from teachers (see isomorphic training, 4.4.4). One of the participants responded:

The Outcomes are not clearly spelled out and not met in the guide.

Practical suggestions offered by one of the experts regarding the implementation of such outcomes (which the researcher did not find in the sources consulted), included the following:

*... make a list of between five and ten activities that would enable them to reach each outcome. As you devise the outcomes, do not lose sight of the fact that teachers work in a classroom situation with learners who will benefit from **a break from the normal 'chalk and talk' of day-to-day teaching.***

Activities should be created in such a way that the student will find it difficult to continue unless they have completed them.

Select the most meaningful activities from each group and decide what content will be required from the present guide to underpin the activities. Use the activities, or a selection of activities, as your assessment instruments. This will ensure that the assessment is integrated and not separate from the theory.

Another participant informed on the knowledge requirement of the programme, pointing out that such a technical requirement should be included. A complementary aspect mentioned by expert A related to the skills requirement. She suggested that, as part of the motivation strategy, the teachers' attention should immediately be drawn to **what they can do** (as described in 4.4.3.4.2). The following questions could, for instance, be asked upfront to motivate the teachers and convince them that they have the basic skills needed to learn to use music in the classroom:

- *Can you keep a tune? and dance?*
- *Can you do rhythmic clapping?*
- *Do you know approximately 10 nursery songs and can you teach them to learners?*
- *Can you play a CD in your class? Which specific CD would you like to use and why?*
- *What do you understand by creativity?*
- *Give practical examples of creativity in the classroom.*

The suggestion that could have the most far-reaching effects on the practical implementation of the programme was that any programme that requires teachers to do even more than their normal share of paper work, which carries the possibility of doing even more damage to their self-esteem, will have to **radiate motivation and invitation** to teachers. According to this expert's reaction to the draft, the programme would not succeed in motivating teachers to do the above mentioned. She reflected that:

It is difficult to work through (the study guide) and it cannot be given to already pessimistic teachers.

The literature study did not produce any suggestions on how to capture the attention of the teachers and immediately involve them in the study material, but the suggestions offered by the experts were of immense practical value. One of the experts suggested that by using a scenario at the beginning of a unit, rather than integrate it in the activities, one

could possibly involve teachers immediately. It was then suggested that once the scenario had been presented, the teachers should become involved in a problem-solving situation right away, before being provided with information on how that specific problem could be solved. However, only the necessary information to solve the problem should be provided. It is only at that stage that the practical application of the principle mentioned in 4.4.4, i.e. that *the curriculum should be based on experiences first and then abstractions*, and that *theory and activities (not content) are central*, makes sense to me personally. The following suggestions were made:

Start each unit with an authentic scenario from an inclusive classroom.

Involve teachers immediately. Follow it up with only the theory that they need to solve the problem presented in the scenario.

The use of an authentic scenario where the class situation is studied at the beginning of certain units, as well as the reaction of the teacher in the scenario, provides opportunities for discussion and problem solving and immediately places the learning material in the context of the teacher, as prescribed by the principles for CPL (see 4.4.4). This suggestion could also solve the problem of ensuring that the study material reflects the context of the teacher. One expert remarked:

*... there is almost no indication of the **context of primary school teachers in SA**.*

Flowing from the above, the experts felt that teachers should not be confronted with a chunk of difficult and unknown information (see 4.4.3.4.2). They considered the level of the study material to be inappropriate as the teachers were confronted with **too much theory**. The earlier suggestion that only the material needed to solve the immediate problem should be made available to the teachers could offer a partial solution to this problem. The participants' evaluation included comments:

Too wordy ...

Too academic ...

Not integrated in the sea of theory ...

The experts mentioned another aspect of the **principle of isomorphic training** discussed under 4.4.4, which should be demonstrated in the guide, namely the skill of instilling joy by means of the creative use of music. The (student) teachers should experience the enjoyment that comes from being creatively involved (see 2.2.5.2). Only then will they be motivated to inspire the learners. The challenge for the development of an effective programme will lie in the ability to inspire the teachers. It would certainly be much easier to inspire the teachers to use music creatively if the skill could be demonstrated practically to them!

One of the participants suggested that *the programme should be made more accessible to students to ensure **enjoyment** in their learning journey.*

The programme in its entirety should be made more user friendly by using a conversational tone to communicate ideas. This could be achieved through two-way communication (see 4.4.4). This would result in the teacher being more involved, more motivated and consequently more successful in his/her studies. Two-way communication could probably also be attained by asking the teacher to associate existing knowledge with what is presented in the study material. Two experts commented as follows:

... student's own prior knowledge and experience not acknowledged.

... activities not useful for applying new ideas and principles (not reflective).

A valuable aspect that came to the fore and which was not mentioned in the literature consulted was social transformation. Against the backdrop of the context for which the study material was written, this could be a valuable aspect to keep in mind. A suggestion would then be that if the study is not already too overloaded with ideas, social transformation could be a natural part of the transformation of schools, in other words, the existing values in the community, which overflow into the schools, could be replaced by healthier values. While the social value of music was mentioned by one of the participants, working towards social transformation could add value to the programme.

... no social transformation (i.e. teaching of social awareness) ...

Two experts commented on the literature review. They suggested that instead of including information on the references used, the guide should rather refer teachers to sources which they themselves could consult. One of the experts also referred me to a valuable source of such literature.

The bibliography must contain books that the students could read!

The literature review is without focus.

The above-mentioned themes emerged from the general suggestions of the experts regarding the programme. The suggestions made by the experts with regard to the content of the programme will be discussed next.

6.3.1.1.2 Content of the programme

The overwhelming evidence of the benefits of the creative use of music in schools resulted in no suggestions being made regarding any other content/learning material. The fact that music can be used as a mechanism to assist in the developing the perceptual and academic skills of learning-disabled learners, and the possibility of non-specialist teachers using music in the classroom evoked interest. However, the way in which the content was presented led to many suggestions, which are discussed under 6.3.1.1.3 and 6.3.1.1.4.

6.3.1.1.3 The use of creativity in the programme

Three experts suggested that the connection between music and creativity should be made as early as possible in the programme. The concepts creativity and music had dealt with separately in the draft of the programme.

Bring the creative use of music in the classroom into the first unit already.

Model creativity in your activities and in the way you link the theory to these.

The first draft of the programme does not model creativity for the students.

These suggestions indicated another way in which teachers could be immediately placed in the context of an inclusive classroom situation. In the case of the problematic inclusive situation illustrated in the scenario, music should immediately be used creatively to illustrate problem solving. The teachers should also be given an opportunity to use their own experience to react to the (practical) situation. At the beginning of the first module of the programme a scenario was presented that illustrated the woes of a teacher in an inclusive classroom, but no problem solving was done directly afterwards. This was done specifically to place the study material into the context of the teachers and to arouse their curiosity about what would follow and how the situation would be solved. Three of the participants responded as follows:

The purpose is teacher training towards the creative use of music in the classroom.

Include them (the teachers) in the meaning making and accept that they bring their own experiences into the learning situation, make them partners in the process.

The concepts creativity and music are dealt with separately in the programme, but it is vital for the success of the programme that the connection is made and that a natural flow from one concept to the other is created, but always with music and the inclusive classroom in mind.

A literature search did not produce any suggestions that concurred with the above. However, the participants' suggestions are valid and are in line with the principles of CPL which state that teachers' experience should be taken into account (3.3.4) and that they should be intrinsically motivated to learn if the material helps them to solve real problems experienced in their classrooms (3.3.4). The relationship content/format would in fact exactly demonstrate the relationship between the words and the music of the German Lieder, particularly those composed by Schubert. The accompaniment of those Lieder actually supports the story told in a poem by providing a musical sketch of the situation (*Der Jäger* by Schubert). That is what transforms the music and the poem to a whole and an indisputable work of art.

6.3.1.1.4 The use of music in the programme

The same suggestion made with regard to creativity is reiterated, namely that the creative use of music by teachers should be immediately demonstrated on the first page of the programme. An added comment is that the teachers should be prompted to think reflectively at the very beginning of the study material. One possible way in which this suggestion could be applied in the study guide would be to, as already suggested, start with an authentic problematic situation in the classroom and ask teachers to solve the problem by using their experience. Examples could perhaps be given of other ways of solving the problem under discussion. It follows that a certain amount of information could be provided, which the teachers could use to solve the problem by using a specific element of music. The following suggestion was made one of the experts:

Bring the creative use of music in the inclusive classroom into the very first chapter.

Use reflexive thought by teachers already then.

The use of music is the most important issue for this study and should be illustrated through the use of activities and examples throughout the study material. It seems that the style of the programme should change towards a guide providing examples of the creative use of music, with fewer guidelines in the text. In fact, the constructivist's viewpoint would be that the teacher should actually make sense of and learn from the experiences of others, described in a more informal the style. One of the experts said:

The core issue is the use of music, although the teacher also needs the background on creativity. More activities related to music should be brought into each unit, which will illustrate the value of music.

Whilst it was mentioned in the literature study of this research that music can be used interdisciplinary, or through the different intelligences, no direct examples were given to illustrate that aspect. Examples of the use of music to support learners experiencing academic problems also deserved more attention. A limitation of this study is that, because of the scope of the subject, too many aspects could only be touched upon. However, this study could also open up wealth of other possibilities to be explored by other researchers.

One of the participants made the following suggestion:

Think across the curriculum, advise students on using music for specific subjects as well as in general situations.

One expert suggested that the music terminology used should be explained for the benefit of teachers who are not familiar with music terms:

Musical terminology should be clarified within the text, or by means of an additional list with the explanations of musical terms and the usage of such.

Some information must be put into perspective.

The suggestion of one of the participants that the songs should be representative of the 'Rainbow nation' is valid. Since the programme is written in English, the majority of folk tunes should probably be in English, with examples suitable examples songs in the various indigenous languages. However, many of the Western folk tunes are known and used internationally. Folk tunes are usually easy, with much repetition, and can be used in different cultures. Depending on the composition of the study group (specifically in the discussion classes), examples of the folk music of different cultures could be included for the benefit of all the teachers. The suggestion made by an expert that one of the assignments should include a question that requires students to find out from grandparents and other family members what music, dances and indigenous instruments they can remember would be worth considering as this may add to the repertoire of indigenous music.

However, the purpose of using folk music is actually to use the tunes and do rhythmic exercises and movements to the tunes and to possibly supplement the lyrics with the learners' own words. *Frere Jacques* (*Vader Jakob* in Afrikaans) is an example of a tune that is well known internationally and, owing to its simplicity of tune and form, lends itself to so many varied activities that it could be used fruitfully by a spectrum of learners throughout the primary school. It could, for instance, be used in cognitive activities where learners could actually sing difficult information that they need to memorise to the tune to remember it. The form lends itself to the discussion of poetry and forms that can be discerned in poetry. One participant remarked:

Too many Afrikaans titles of songs.

The **use of scenarios** was a central theme, which also occurred in the context of music in the programme. The inclusion of a very inspiring story about the success someone achieved by using music to support learners experiencing a variety of barriers to learning in the first unit might be a good idea. In the first draft of the programme, the first scenario was intended to put the study material into an authentic context (as discussed). The other scenarios used were not really inspiring, but referred the teachers to good problem-solving material. Suggestions from one of the experts pertained to the following:

The use of a scenario could better place a student in the position where (s)he can think with his/her heart when answering questions on discipline and how to motivate learners intrinsically.

Flowing from the scenario the following question on the misbehaviour of learners could, for example, be asked: How would you motivate learners intrinsically to be disciplined?

Only two experts responded to the question whether **the aim of the programme**, which is to teach teachers the basic skills and to motivate them to use music creatively, had been attained. The first one was not sure (see 6.3.1.2) and the second, a material developer, suggested that the programme should be rewritten in an easier and more motivating style.

One aspect on which no consensus was reached relates to the question regarding the number and nature of sources that could be included in the study package. One expert wanted to know whether a **textbook** could be included. My evaluation of the responses of the material developers indicated that the draft study guide could perhaps be converted to a textbook (on account of all the information included), with a workbook (providing only the information needed to solve the problems presented in the practical activities) plus audiovisual material constituting the remainder of the package included in the programme. It is envisaged that the teachers could also create their own portfolios with examples of how other teachers have used music creatively in the classroom. The relevant literature contains many articles that could be combined with what comes to the fore in the discussion classes to suggest creative ideas on which teachers can build further.

6.3.1.2 Practical application

One of the experts stated that the set of practical tasks constitutes a very important part of the study. In fact, she described the practical application as ‘the generator’ of the programme as, in the absence of a tutor, the practical application of the programme should help to inspire and lead the teachers. Therefore it is particularly important that the creative use of music be demonstrated in such a set of tasks. She also pointed out that until the panel of experts have seen the teachers’ summative assessments on DVD or cassette, i.e. how they applied what they had learnt in this programme in a lesson, they could not really comment on the effectiveness of the draft programme. The experts agreed that the students should record their own lessons and that the final assessment should be submitted in the form of an audio-(visual) example how they conduct their own lesson.

The aforementioned expert, a professor of music, appeared to be satisfied with the idea of having a programme containing the information, with the practical application or assignments more or less saved for the practising and evaluation of skills, as presented in the programme *Music for All*. However, the material developers clearly preferred the integrated approach, as discussed in 4.4.2.4, in which feedback is given with or after the activities in the programme. Two of the material developers responded as follows:

Activities and assessment instruments (assignments) are ‘separate’ from the content of the programme.

No feedback was given.

Although assessment is an integral part of the OBE context, it was never formally discussed in this research. However, as an important aspect of the context of teachers it was addressed in practice by including the set of assignments with the programme. It is only through the assignments that the students can demonstrate that they have mastered the teaching skills and can and want to use them practically in the classroom.

Two experts made valuable practical suggestions for formative assessment:

The Portfolio of Evidence needs to contain sufficient valid, authentic and relevant evidence to assist the lecturer to support the student/teacher in the process of formative assessment. I am aware that more assignments mean more work, but it could be done in a

way that the candidate does self-assessment. Example: The student can assess him/herself and put the evidence in the POE. At a later stage the assessment is repeated and added. The two pieces of evidence are then compared and the student can assess his/her own progress.

Have the students do a work session with a learner who experiences, for instance, developmental barriers. If he/she has difficulties with coordination, do, for instance, body percussion where he/she has to concentrate on two things simultaneously, like singing and dancing, marching and singing, singing and drumming. The teacher must then record it on tape or DVD.

One of the participants also offered suggestions on how some of the assignment questions could be formulated or supplemented:

For Assignment 1 the teachers need to demonstrate that they know and can sing plus minus 15 songs suitable for the learners in his/her class.

For Assignment 2 the teachers have to ask grandparents, aunts, etc. who still know folk songs to demonstrate seven dance movements or describe how indigenous instruments can be used.

More specific questions could be asked. A question could, for instance, be to describe in which subject area they would use music and how they would go about doing it.

Formulate the question in such a way that the teacher has to illustrate his/her creative interaction with the information and music on a cassette.

Refer to sources where they can find ideas.

The questions asked in the set of assignments included one theoretical question. While the aim of the programme is to train teachers to use music in primary schools, one expert indicated that the creative use of music does not feature dominantly enough in the assignments. She expressed the opinion theoretical work should not feature at all in the assignments.

The practical application is also an important aspect for the continuous development of teachers. A valuable suggestion from one of the experts regarding continuous development (see 4.3.4) was that:

a working relationship with pre-service education students who specialise in music should be established to join the teachers in cooperative sessions for lessons at specific schools. It can be a learning experience for both pre- and in-service students.

6.3.1.3 *The review instrument*

The main comment was that music and creativity were not mentioned frequently enough in the review instrument. It should have taken centre stage. Standing on its own, this measuring instrument has value, but there must be a logical connection with the purpose and theme of the study, namely creativity and music. The following came to the fore:
You should address the terms music and creativity in a much more dominant mode.

One expert suggestions additional questions, including the following:

How can creative thinking and actions be learnt?

How do I utilise music?

How do I know that the negative situation in the classroom is 'counteracted' by the course?

Will the programme enable the student to teach creatively?

How can skills and the attitudes be changed in a distance situation?

How can I be sure that the teachers will indeed apply this in their daily teaching?

6.3.1.4 Audio-visual material

There was general consensus among the experts was that real music, either a CD or a cassette, must be included in the programme. This suggestion proved to be very practical for the following reason:

- 1 A **living role model** was needed, because the study guide contained mainly information and facts. This is in line with the aim of the programme, which is to teach the teachers musical skills (singing, dancing and listening) and to react physically to specific music. The teachers should be able to use these skills in a creative way to inspire the learners by enabling them to experience the power of song and movement with the aim of helping them to improve their concentration and experience joy. The most powerful method in this case would be for the teachers to set an example. As one participant stated:

One should be able to observe music and creativity not only by reading the material, but through your eyes and ears as well.

Practical examples are indispensable.

- 2 The researcher should provide tracks of music that may be used, as well as examples of how they could be used in the classroom. This could be a cassette, which could supplement the DVD.

Provide tracks of music that can be used in the classroom.

Broadly speaking, the suggestions offered by the experts were in agreement with the findings based on the literature study. However, certain aspects found in the literature were not effectively applied in practice by the researcher, for example:

- using access devices;
- writing the study guide in a more personal and conversational style;
- basing the curriculum on experiences first by presenting a scenario at the beginning of a unit, followed by a problem-solving session and, finally, the necessary information.

- applying the **principle of isomorphic training** in the way the study guide is developed and presented;
- the practical ability to write in a two-way-communication style.

Suggestions offered by the panel of experts for which no support could be found in the literature consulted will now be discussed.

6.3.2 Experts' suggestions that were not backed by the relevant literature

Several suggestions of undisputed practical value that were made by the experts were not backed by anything in the literature that I consulted. They were the following:

Table 6.7 Suggestions offered by the experts

Experts' suggestions not backed by relevant literature	
•	The programme should be an example of how teachers can be motivated in difficult circumstances to try the creative use of music in their classrooms (see 6.3.1.1);
•	practical suggestions as to how outcomes could be implemented in the study guide (6.3.1.1);
•	a suggestion that teachers' attention should immediately be drawn to what they can do as part of the motivation strategy used to introduce the study guide (6.3.1.1);
•	social transformation could also be addressed (6.3.1.1);
•	the literature review should refer teachers to sources that they can consult (6.3.1.1);
•	the connection between music and creativity should be made immediately (6.3.1.1.3; 6.3.1.1.4);
•	an assignment question should be included that requires students to find out from grandparents and other family members what music, dances and indigenous instruments they can remember. This could add to the repertoire of indigenous music (6.3.1.1.4);

- | |
|---|
| <ul style="list-style-type: none"> • examples of how formative and summative questions could be compiled (6.3.1.2) were given; |
| <ul style="list-style-type: none"> • the importance of audio-visual material for this specific programme (6.3.1.4); |
| <ul style="list-style-type: none"> • a working relationship could be established between pre-service students and teachers, with students joining the teachers for cooperative lesson sessions at specific schools. This could be a learning experience for both pre- and in-service students (6.3.1.4). |

6.3.3 Adapted (revised) programme: *Music for All*

The study has reached the point where the main research question can finally be answered:

What are the core elements that should be included in a continuous professional learning programme in an open and distance learning environment focusing on the creative use of music in the inclusive classroom in order to support learners with learning impairments?

After considering the suggestions offered by the experts, it was decided to adapt the programme as follows:

- 1 The learning outcomes and necessary skills, together with a **route map**, should be provided at the beginning of the course to inform the students on what to expect and to enable them to orientate themselves throughout the course.
- 2 The study material should consist of a **study package that includes:**
 - the material from the draft programme, re-written as a reference source;
 - a study guide, written in the two-way communication style and including the assignments;
 - a DVD containing demonstrations of how music could be used creatively in different contexts, and
 - a tape recorder with music suitable for use in the classroom.

- 3 The programme should be written bearing in mind the principles discussed in the literature study and the following principles and/or suggestions put forward by the experts:
- The atmosphere and style of the written material should complement the message that the study material wants to convey. The study material should be self-motivating.
 - Practical examples or scenarios should be presented before the theory.
 - The student and his/her circumstances must be borne in mind throughout the entire writing process.
- 4 The **involvement of students** in the study material can be assured by providing the following:
- Authentic scenarios
 - Taking their experience into account
 - Problem-solving activities
 - Support through cooperation.
- 5 The following summary, which integrates the research done and the suggestions offered by one of the participants, reflects the activities to be covered in the revised programme *Music for All* by making use of rhythm, singing, listening, playing home-made instruments, listening to background music and integrating music into learning areas:
- **Rhythm** could be used creatively in the classroom by
 - asking questions, or by rhythmic communication;
 - making up speech rhymes, or the teacher could clap and learners repeat; and
 - asking learners to develop a simple rap using words from the learning material.

- Ways in which **singing** can be done in a creative way in the classroom:
 - Add melodies consisting of two or and more tone (so me, so lah so me, etc.) to the rhythmic patterns.
 - Add a new verse to a well-known song.
 - Write new words for a familiar tune.
 - Make up a tune to sing a favourite poem.
 - Write your own short song.
 - Add body percussion to the song. (Body percussion means to produce a variety of sounds using the body, for example clicking with the fingers or stamping feet.)
 - Add movements to a song.

- **Listening** can realise when learners are made aware of their listening skills by responding to a descriptive piece of music
 - using movement and silk ribbons or streamers;
 - playing home-made instruments;
 - drawing a picture;
 - dramatising the musical story;
 - making up dance steps to go with an ethnic folk song; or
 - creating soundscapes (musical pictures) by using voices, instruments and body percussion. Learners could be asked to describe, for instance
 - a train starting up and travelling into the distance;
 - a stormy and then a calm sea;
 - rain falling into a pool;
 - fireworks;
 - a rugby match, or
 - an old man walking with a child.

- **The playing of home-made instruments** (coffee tins).

Body percussion first, then instruments.

Creative plans can be made to produce rattlers, drums, etc. (e.g. sand in coffee tins and bottles half-filled with water or a handful of seeds). A variety of sounds and even pitches can be obtained with a little experimentation.

- **Background music.** It is not only very welcoming for learners to hear music playing when they arrive in their classroom in the morning, but music is also calming and is an effective tool for promoting learning in the classroom. Certain types of music are known to manipulate the alpha waves of the brain, creating an ideal state for study and concentration.
- **The integration of music with other studies**
Music is ideal for integration with other subject areas as enrichment as music activities stimulate developmental skills and form connections between the neurons in the brain. Skills attained in music can be carried over to other subjects.

The following table serves as a summary of the main structure of the revised programme, *Music for All*:

Table 6.8 Suggestions for the revised programme *Music for All*

STUDY PACKAGE	<ul style="list-style-type: none"> • The material from the draft programme will be rewritten as a reference source. • A programme written in the two-way communication style will include the assignments. • A DVD containing demonstrations of how music could be used creatively in different contexts will be included. • A tape recorder with music that the teacher can use in the classroom will be added.
PROGRAMME	<ul style="list-style-type: none"> • The atmosphere and style of the written material should complement the message that the study material wants to convey. The study material should be self-motivating. • Appropriate practical examples or scenarios will be presented first, followed by the theory. • The student and his/her circumstances must be borne in mind throughout the writing process.

ROUTE MAP	This should be presented at the beginning of the programme to inform the teachers on what to expect and to help them to orientate themselves throughout the course.
INVOLVEMENT	Through: <ul style="list-style-type: none"> • Authentic scenarios • Taking their experience into account • Problem-solving activities • Support through cooperation.
ACTIVITIES	<ul style="list-style-type: none"> • Rhythm • Singing • Listening • Home-made instruments • Background music. • Integration of music with other studies.

There is no doubt in my mind that the wealth of experience so generously shared with me by the panel of experts during this endeavour has taught me a great deal, and has added more value to the study and the improvement of the programme *Music for All* than any structural exercise could have done.

6.3.4 Summary of the findings of the empirical investigation

A summary of the principles that guided the design of the first draft of the programme and the suggestions made by the panel of experts, which were incorporated in the final programme, follow below.

Principles of CPL:

- Teachers' experiences should be taken into account.
- Adults appear to be interested in learning something new if it arouses their interest or meets a need they are experiencing in their personal or work lives.
- Teachers should be involved in the identification of what they want to learn.

- **Collaborative problem solving** is important during periods of study as well in school.
- Professional learning should be **continuous**. If each step towards the best, most effective practice is not **sustained**, the time and money spent on PL are basically wasted.
- **Support** is imperative when teachers study.
- Adults learn best when they are **actively involved** in the process.
- They need to **see the results of their efforts** and have **feedback** on how well they are doing.
- As teachers develop professionally, they have an **increasing need to be self-directed**. Therefore they should have the freedom to do so.

Principles of ODL:

- Learning outcomes should be the starting point when learning material is created.
- The target group is of paramount importance for the writing of any course material.
- The materials should attempt to provide two-way communication in which learners interact with texts to construct their own meanings and evaluate their own learning.
- The most obvious way to achieve the above is through activities built into the text, as applied in both the study guide of the programme and the set of assignments.
- A range of access devices, such as course guides, progress organisers, self-assessment tests, clear and consistent use of headings and subheadings, summaries, glossaries and icons of various kinds should be created.
- Where appropriate, explanatory feedback should be given.
- Learning occurs most easily when it is applied to and woven around individual and social problems (see 4.3.4).
- Isomorphic training should be done.
- The curriculum should be based on experiences first, followed by abstractions and theory.
- Activities (not content) are central to the course material (see 4.4.5).
- According to the relevant literature, methods and resources should be varied.
- Evaluation should be adapted to suit adult learners.

STUDY PACKAGE	<ul style="list-style-type: none"> • The material from the draft programme rewritten as reference source. • A programme written in the two-way communication style, which includes the assignments. • A DVD containing demonstrations of how music could be used creatively in different contexts. • A tape recorder with music that the teacher could use in the classroom.
PROGRAMME	<ul style="list-style-type: none"> • The atmosphere and style of the written material should complement the message that the study material wants to convey. The study material should be self-motivating. • Practical examples or scenarios are presented first, followed by the theory. • The students and their circumstances must be borne in mind throughout the entire writing process.
ROUTE MAP	<p>This should be provided at the beginning of the course to inform the students on what to expect and to enable them to orientate themselves throughout the course.</p>
INVOLVEMENT	<p>Through:</p> <ul style="list-style-type: none"> • Authentic scenarios. • Taking teachers' experience into account. • Problem-solving activities. • Support through cooperation.
ACTIVITIES	<ul style="list-style-type: none"> • Rhythm. • Singing. • Listening. • Home-made instruments. • Background music. • Integration of music with other studies.

6.4 CONCLUSION

This chapter has provided the reader with answers to the primary research question formulated in Chapter 1. The question was:

What are the core elements that should be included in a continuous professional learning programme in an open and distance learning environment focusing on the creative use of music in the inclusive classroom in order to support learners with learning impairments?

The answer to this primary research question was determined after the data collected during the empirical research had been categorized, synthesized and compared to the information gathered by way of the literature review discussed in Chapters 2 to 4. In those chapters the answers to the secondary questions were first determined, and against that background the programme *Music for All*, which was given to the experts for evaluation, were developed.

In the final chapter, the conclusions, recommendations, contribution and limitations of the study will be discussed and suggestions will be made with a view to further research.

CHAPTER 7

CONCLUSION OF THE RESEARCH

7.1 INTRODUCTION

This research was undertaken in order to answer regarding the design, nature and content of a programme focusing on the creative use of music for the in-service training of teachers in distance education. While all teachers in inclusive classrooms have to support, among others, learners experiencing learning difficulties, a section that illustrates the use of music for the support of different developmental and academic learning disabilities was also included. With the above-mentioned in mind, the literature study was conducted to determine firstly the content of such a programme, and secondly its format. The first draft

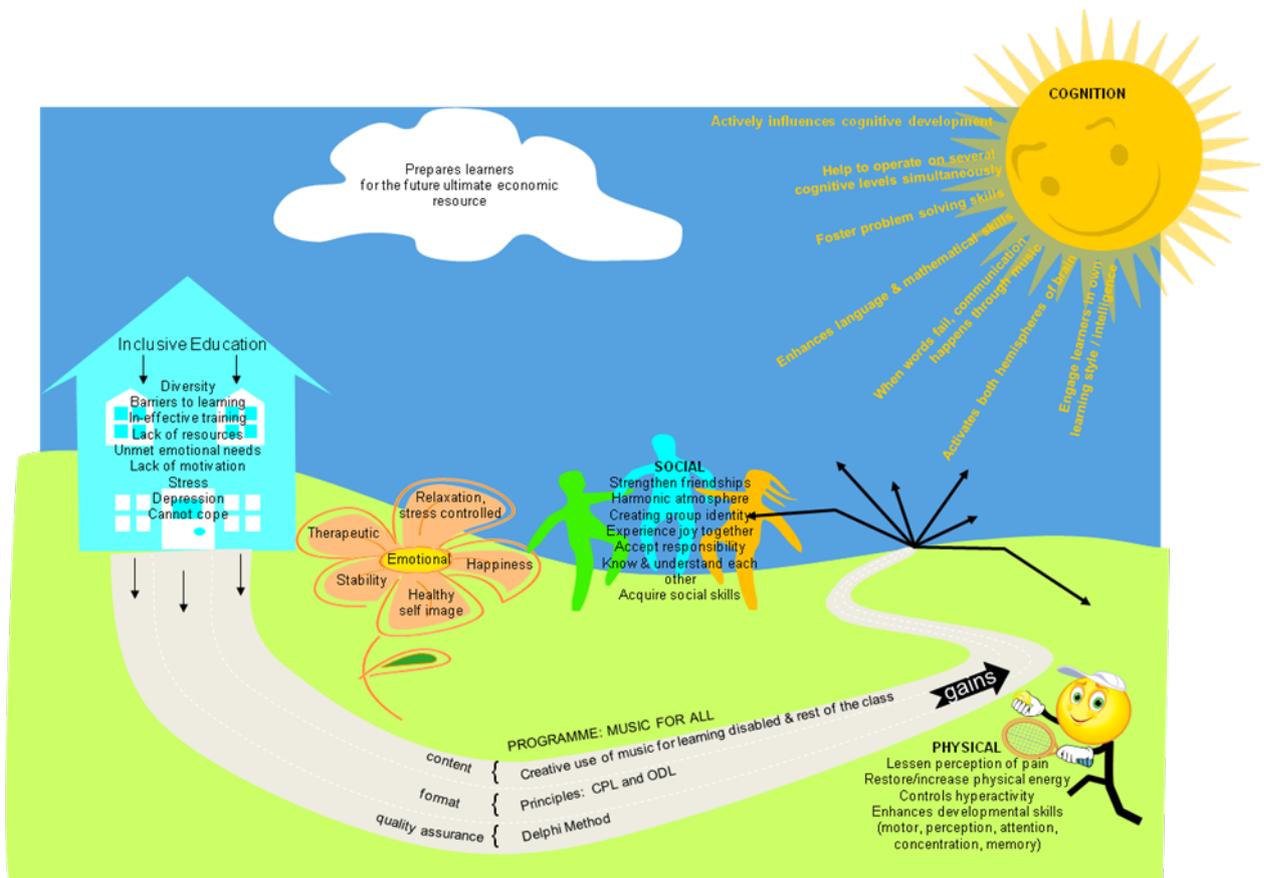


Figure 7.1 Review of the study

of the programme was developed and distributed to the experts for evaluation by means of the principles of the Delphi method. The findings of the literature study and the application of the Delphi technique were presented in Chapter 6. In this chapter the most important conclusions based on those findings will be discussed.

7.2 CONCLUSION ON THE FINDINGS OF THE LITERATURE STUDY

Different sources were scrutinized and enquiries were made with people in the relevant professions, but no evidence was found of the existence of a programme that trained general teachers to use music creatively to support learning-disabled learners in the inclusive classroom. My own experience had taught me that music was a useful but unutilised tool which could be used to reach many aims. However, the question was what core elements should be included in a programme teaching teachers to use music creatively in the inclusive classroom. The findings of the literature study, summarised under the headings, creativity, music, continuous professional learning and open and distance learning, represent the core elements to be included in the programme, *Music for All*.

7.2.1 Creativity

The literature study started with an overview of what creativity is and **the value creativity could have in the school situation**. Apart from the fact that creativity is theoretically a desirable outcome (see 1.2) and that, according to research, very few teachers even know what it means (Feather 2003:1), there are other attributes to creativity which hold important implications for the use of creativity in this study. The personal value of creative activities for teachers can include that it brings joy, relieves stress, is a tool towards self-realisation and opens up many opportunities for own development and the development of the learners in class, which can alleviate the attitudinal and skills-related problems of teachers such as those mentioned in 1.2. The characteristics associated with creativity that were found in the literature and are of importance for this study were fluency, originality and flexibility (see 6.2.1).

The **personal value of fluency, originality and flexibility for teachers** is, amongst others, that it helps them to produce many ideas and find solutions to educational problems. Teachers can initiate new actions in finding solutions for the question of effectively implementing inclusive education, a problem recorded to be experienced by many teachers (see 1.2). For instance, flexibility and originality can help teachers to support a variety of learners in the same class. Creative teachers can create new alternatives to everyday personal and professional problems, produce new and better ways of thinking and play important roles in raising the quality of education in developing countries and under-resourced rural areas. Such teachers can manage the above-mentioned activities by generating new ideas and concepts for education and by adapting easily to innovations in the education system (see 6.2.1).

It was reported that the **value of creativity in the classroom** is that creative teachers' skills can be carried over to the learners in the classroom: it can encourage learners' free thinking; help teachers understand that all ideas have value and appreciate that 'strange' answers may be an opportunity to learn; allow learners to perform without the constant threat of evaluation; evoke more ideas in their learners' minds and lead them to use their divergent thinking skills. Creative teachers can model thinking to learners in generating ideas in eclectic and interdisciplinary ways (see 6.2.1). The first secondary question on the value of creativity for teachers and eventually also for learners was thus answered.

7.2.2 Music

According to the research reported in Chapter 2, music has potential value for use in different ways because of its effect on the physiological, emotional, cognitive and social functions of human beings (see 2.3.2). In groundbreaking research done by Gardner (1987), he affirmed one of the values of music in the school setting: he redefined the concept of intelligence. As indicated by Gardner, one should not ask '*How clever is a person?*' but rather "*How is that person clever?*" The meaning of this change in emphasis when looking at intelligence is that there may be at least eight intelligences, which include musical intelligence. Note, however, that **musical intelligence** is the only form of intelligence that is connected in some way with all the other forms of intelligence (see

2.3.3.2). Through making use of music, the teacher could consequently teach learners to learn by means of their dominant intelligences, or strong capacities. Through capitalizing on learners' strengths, the real spirit of inclusive education can be realised.

Another important component of the value of music in schools highlighted in the research is that it can be used **therapeutically** (see 2.3.4.1). In schools with many Aids orphans and learners who have witnessed violence in any form (see 1.2), teachers are increasingly expected to provide psychological support which may be lacking at home. Negative situational elements such as poverty, crime, different forms of abuse and the abuse of alcohol can lead to developmental deficiencies, which can hinder a learner's potential for learning and create a downward spiral of social, emotional and academic failure. However, research has proved that music can alleviate such negative effects (see 6.2.2).

A further characteristic of music is that it can enrich **emotional and cognitive** aspects in the lives of learners (see 2.3.4.2), including economically disadvantaged learners and those with short attention spans, low problem-solving skills and problems with self-discipline. Everybody can benefit from the use of music in the classroom, and learners' brains can be stimulated to be more responsive and effective in the study of other seemingly unrelated subjects. For many learners, especially the disadvantaged, and learners with barriers to learning, school education can mean the difference between success or failure in life.

The above argument is supported by an increasing body of evidence suggesting that there may be a **metacognitive dimension** to music which actually facilitates learning in other subject areas (see 2.3.4.3). In fact, music has a general transfer effect on the integration of learning. It is indicated that the optimal phase for these general transferring qualities is during the primary school years, and that it disappears at the age of about thirteen years. Music is the perfect mechanism to help integrate subject disciplines, to use in intercultural approaches and to promote a holistic education. The research discussed in Chapter 2 provided a positive answer to the second secondary question regarding the value of music in the classroom.

It suffices to say that creativity and music are supplementary forces in the lives of all learners and should not be ignored in the education situation (see 6.2.2). If the value of

creativity in the classroom is combined with the value of music, it appears as if the creative use of music can play a major role in creating happy schools, where emotionally, academically or socially learners need not struggle unnecessarily (see 1.2). Teachers who have access to such a mechanism and know how to use it, can help many learners to reach their potential and be happy. It is apparent that success in the classroom and the influence that music can have in teachers' lives can positively affect their own feelings of efficacy, can nurture positive self-esteem and can consequently influence the effective management of their own lives and of their classrooms. Teachers need no special training in the use of music in the classroom, because music is an integral part of every human being's life (see 2.3.1).

Learning-disabled learners tend to be more rigid and more in need of 'rituals' to make them feel secure, but they do have a capacity for creativity which can be developed. Moreover, they can also benefit emotionally (especially with regard to their self-esteem and their ability to communicate in a healthy way) as well as academically (see 3.4.1; 3.4.2) through the creative use of music in the classroom.

7.2.2.1 Musical activities that general teachers can use for support in the classroom

The research conducted for this study (see 2.3.5) has clearly shown that teachers can use the basic elements of music to make music in the classroom. These elements are rhythm, singing, listening and the playing of home-made instruments. Research has also shown that background music could support learning in the classroom (see 2.3.5.1). Furthermore the integration of learning areas with the help of music could be a useful tool to support learning (see 2.3.4.3). A summary of the activities illustrating how music could be used creatively is presented in 6.3.4.

Although no intricate skills are required to use music in the classroom, success is dependent on certain conditions, as reported in 2.3.6. Above all, teachers should not prevent learners from trying new skills because of the possibility that they could make a mistake. The focus is on the development of creativity, not technical skills. It is more important for the learners to enjoy the activities, learn from them and remember what they have learnt than it is for the teacher's plans to work out. The activities should be short and

simple and could be done in groups, since learners with special needs, in particular, could benefit a lot from being assisted by their peers. Learners' strengths should be emphasised and rhythm forms the basis of all learning activities. If musical activities are executed in a relaxed way, no learner will suffer from stress and the ideal circumstances for learning will be created.

Teachers should seek opportunities for professional development. Those who are not specialists in music and movement should rely on high-quality resources, such as tapes, which can be borrowed from a library. Many teachers in the foundation phase have the knowledge and skills required to use music in their classes throughout the day, but for some reason or other the idea of using music frequently in the later phases is not taken up by the teachers. It is also possible that many teachers do not realise how effectively music can alleviate the developmental and academic problems of all learners.

7.2.2.2 *Musical examples for the support of learning-disabled learners*

Secondary question 3 on the manifestations of learning disabilities was answered with the presentation of developmental and academic difficulties of learning-disabled learners in Chapter 3.3 and the discussion of the findings in 6.2.3. Examples of creative musical activities that respond to the needs of those learners were suggested to answer secondary question 4 (see 3.4 and 6.2.4). The examples concentrated on rhythmical activities done to the tunes of well-known and simple traditional tunes. Although the activities were devised to curb problems that might be experienced by learning-disabled learners, they can also be fruitfully done and enjoyed by learners without difficulties. Consequently the whole class can be involved, without having to exclude certain learners.

7.2.3 Principles of continuous professional learning and open and distance learning

The best principles for both continuous professional learning and distance learning programmes were determined (see 6.2.5; 6.2.6), which answered secondary questions 5 and 6. These principles were then incorporated in the programme *Music for All*.

7.3 CONCLUSION ON THE FINDINGS OF THE EMPIRICAL INVESTIGATION

The aim of the literature study was to find the necessary information on how to compile an effective continuous professional learning programme for teachers in distance education, focusing on the creative use of music to support learners experiencing learning disabilities. In the empirical study the programme, which was compiled after the literature study, was evaluated by seven experts (see 6.3). This was, true to the character of open learning, a hard discipline in terms of openness where experts critically evaluated the whole writing process. The role of the experts and their constructive and positive input contributed to the quality and practical value of the final programme. I am convinced that the decision to use the Delphi technique in my study was most appropriate.

Once the summary of the suggestions of the experts had been added to the literature findings, it was possible to answer the research question:

What are the core elements that should be included in a continuous professional learning programme in an open and distance learning environment focusing on the creative use of music in the inclusive classroom in order to support learners with learning impairments? (See 6.3.3)

The value of the answers provided by the experts was significant in the sense that they added a dimension of practical experience of what could work in the classroom and in distance education, which had not been provided by the literature study alone (see 6.3.2). In my opinion the most important suggestion was that the atmosphere and style of the written material should reflect the atmosphere of the message that the programme wants to convey. In other words, the study material should be self-motivating. The learners and their circumstances should be borne in mind throughout the writing process. Other suggestions related mainly to technical aspects of which professional material developers or other knowledgeable persons would be aware and which they would implement in the study material (see 6.3.1.1.1). Suggestions from the experts in music included practical examples of how musical activities could be demonstrated (see 6.3.1.1.1; 6.3.4). Finally the suggestions of the experts also conveyed the sentiment that audiovisual material could be invaluable in helping teachers to master the practical skills (6.3.1.4).

7.4 RECOMMENDATIONS FOR FURTHER RESEARCH

Creative music programmes that foster creativity, which could contribute towards the emotional welfare and cognitive development of learners, should be phased in at least in all primary schools as they can benefit the above-mentioned learners. It has become necessary to train teachers intensively in the creative use of music to connect research undertaken on creativity with practice. An effort should be made to convince teachers and stakeholders of the potential that can be unleashed in the classroom and should be made aware of the, up till now untapped possibilities of problem solving, peace, internal motivation and healthy stimulation. Teachers must be given appropriate guidelines and practical examples of the use of creativity and music in the classroom. Staff development with a strong personal, practical and creative focus in the form of a continuous professional development programme with practical guidelines on how to use music creatively in the classroom can be an effective route to improve both teachers' and learners' emotional health and significantly add to teachers' job satisfaction and learners' success.

When new policies are implemented new ways to effectively train teachers should be considered on a continuous basis. These initiatives should be undertaken by government, other stakeholders and universities, who all should play an active role in purposeful, effective staff development. The implication is that collaboration between schools and universities will have to take place. The mode of distance education is particularly appropriate for continuous teacher learning and can therefore it could be the starting point for teacher and school reform.

A primary aim of any teaching is reflection, as reflective learning implies life-long learning. However, together with reflective learning, students/learners should also be equipped to formulate their own problems, since problems seldom present themselves as clearly defined concepts.

Close coaching by instructional design specialists is strongly recommended for programme development. In the case of this research study, there were two instructional designers on the team of experts whose suggestions regarding the first draft of the programme *Music for All* were highly valued. However, this is not enough. Instructional design for distance education is a science; it is very difficult to design a programme if only theoretical

principles are available to ensure quality. Experience, or expert knowledge, is a determining factor in the compilation of quality learning material for ODL. An exercise like the developing of a programme by a novice could easily develop into a mere 'facelift' instead of making the principles mentioned in the literature study and in 7.3 an inherent part of the writing process.

7.5 LIMITATIONS

An obstacle in this study was the sheer breadth of the subject. Many interesting aspects of music and creativity, such as possible trips, visiting students and/or musicians, creating own musical works, problem-solving opportunities, using imagination in the classroom and much more, could not be discussed. Programmes could be written to make parents aware of activities that could be done at home. Nursery schools could also use music more purposefully to prepare learners for the continuation of such activities at school. Almost any classroom activity can potentially provide a creative musical experience. However, each of these is an opportunity for further research.

Because this study was such a multi-disciplinary investigation, it was not possible to go into much depth in any of the fields. The style of this study is eclectic and diverse, as contemporary educators often take an eclectic approach to music that draws on the best features of each tradition. For instance, the researcher concentrates on the contributions of Orff in music education, while there are younger music educationists such as Murray Schaeffer. Lozanov is mentioned for the value of his emphasis on the benefits of using background music. The researcher emphasised folk and traditional music and spontaneity, and activities that learners do naturally and enjoy, using simple percussion instruments and improvisation, the way it was done by Orff. The creative use of sounds in the general classroom was inspired by Paynter (1970) and the research done by Hannaford (2005) provided ideas regarding the value of movement.

Although many Higher Education institutions have added to their teaching methods a variety of advanced educational media technologies, such as computer web-based instruction (Garrison 2000:2), this course concentrated mainly on printed material with the possibility of audio visual support. This is due to the perception that previously

disadvantaged teachers, especially in the rural areas, may in fact be excluded, or new barriers may be created for them, if this course included computer web-based instruction.

It must be admitted that when open-ended evaluations are used, as in the case of this research study, the researcher takes a bigger risk with regard to validity. However, because of the quality of experts who contributed towards the outcomes of the study, the quality and richness of the answers ensured the validity of the study.

This study reinforced the idea that content is in a certain sense relative. The purpose that the researcher wants to achieve is important. With the load of content included in the first draft of the programme, I may have unwittingly reinforced ideas that I do not necessarily agree with. Although I wanted the material to be digestible and fun, it is difficult to make the transition from an academic work to a creative, joyful and motivating guide. The attempts to do what the experts suggested were not convincing enough. The programme should be started from a fresh angle, as described in the suggestions made by the instructional designers in the team.

7.6 CONTRIBUTION OF THE STUDY

The significance of this study lies embedded in the innovative perspective on the role of music for the general class teacher in the inclusive environment. The focus moved away from specialist knowledge towards non-specialist musical skills and activities that can be attained by both teachers and learners. The primary purpose is therefore not to transform general class teachers into music specialists, but to increase teachers' understanding of music and their ability to use it to promote active and creative teaching and learning. This research explored innovative possibilities for teachers to reach the critical outcomes of creativity and also contributes towards a positive atmosphere in the classroom.

Secondly, there is often a gap between research and practice. This may be because teachers are not necessarily aware of research being done to alleviate their burden, or they may not be able to implement the research. This programme may be an example of research made immediately available to teachers in the classroom situation. The programme *Music for All*, the outcome of this study, can serve as a valuable tool for all

teachers, including those who suffer from change fatigue and who do not have enough time to study barriers to learning and inclusive education. The audiovisual material will provide practical guidelines and ready examples together with excerpts of music that can be used with learning disabled and other learners for emotional and cognitive purposes in the classroom. The programme can therefore be of value to all teachers who want to cultivate a positive atmosphere and improve their classroom practices. It could be of value to the Department of Education in their pre- and especially in-service professional learning programmes, even if they use only part of it.

Thirdly, in this study music is used as a catalyst to combine old and new research into a more potent whole. The value of music was realised in ancient times already (Spaeth 1972:120; 1 Samuel 16:23). The active research into creativity commenced in the last part of the nineteenth century (Guilford 1950:444), but the value of creativity to complement music only became apparent to me when I started this research. Newer research indicated how movement can aid learning (Hannaford 2005). This study illustrates the use of movement in the classroom through the use of rhythm. Music is used in this study as binding agent to set the three forces to work in a coordinated manner.

This study contributed towards answering the question of how learning environments should be developed to provide students/learners with adequate knowledge and skills to deal with problematic (new) situations. How should study material be structured for teaching practical skills and theoretical, abstract knowledge, which is not practical in nature, into a motivating whole? In other words: How can experience be infused into abstract material? The suggestions of the experts significantly contributed towards an answer in the specific situation of this research study.

I found that the Delphi method can be a very adaptive tool for evaluation and quality assurance purposes. However, the task of evaluation (or the questions posed to the experts) should be much more limited than it was in the case of this research study. For the Delphi method I would suggest that only a few structured questions be asked. If there are open questions, as in the case of this research study, the contribution of the experts could be even more valuable as they provided rich data, but then the material to be evaluated should be more limited in size.

The research was undertaken across different fields of study, namely different specialization fields in education, music and psychology. The value of the method of evaluation lies in the fact that it is the fruit of a brainstorming process by several experts in different fields. The programme is aimed at the development of teachers in their unique circumstances, the strengthening of their feeling of efficacy, and through that the improvement of the performance of their learners. I am convinced that any teacher who uses these strategies must experience some degree of success.

Although it is not intended primarily for teachers of Arts and Culture who have not been trained for the purpose, the programme *Music for All* may provide foundational skills in order to support them. The ODL format of the programme will make it accessible to a large percentage of teachers in the country.

7.7 MATTERS REQUIRING FURTHER RESEARCH

Although summative evaluation is not formally part of this study, the logical continuation of this study would be to organise focus-group discussions or interviews with the teachers who took part in the course in order to further improve the programme. It could then also throw light on the practical applicability of the programme from a different angle. Valuable suggestions can also be expected from teachers who actually tested the programme in the classroom.

Very little research has been done on the utilization of music or other expressive therapies with teachers in the area of stress and burnout. Music can provide teachers with a mechanism that can be used to express feelings without having to put them into words. Furthermore there is a lack of empirical research that could help teachers to adapt to such massive reform in their work environment as has been experienced in South Africa. Should such research be undertaken, attention should be given to personal factors in the process of adaptation.

Good teachers are a valuable asset to any country, and teachers deserve much more support. Support in the form of ready programmes/lesson plans will give them more time to be creative and more energy to demonstrate creative skills to learners. In a country like

South Africa, in particular, it is important to conduct continuous research to determine how teacher training can be improved to facilitate self-actualisation and professionalism. It is also important to develop more creative material that can be used by teachers.

Matters directly sprouting from this research could be the following:

- How can teachers be encouraged to enrol for a continuous professional learning programme which may be detrimental to their feelings of self-efficacy and self-image?
- Examples of the creative use of music should be developed according to the curriculums for the different grade levels to expand and enhance the knowledge, skills and attitudes of teachers.
- What are the institutional factors that could undermine teachers' efforts to use music creatively in their own classroom practice?
- Which factors could potentially enhance teachers' efforts to use music creatively in their classroom practice?
- How does a teacher's musical background influence his or her employment of music in the classroom?
- What do teachers consider to be the primary issues related to the creative use of music in their classrooms?

7.8 A FINAL WORD

This contribution to the debate on the quality of education, and more specifically effective continuous professional development to ensure quality education in South Africa, comes at a time when a participant in the debate publicly declared that education in South Africa is on its knees. From Government's side there are different opinions which do not necessarily

put onlookers and participants at various levels at ease. Currently it does not seem as if there is an effective plan that could positively contribute to the development of healthier schools.

I believe that, if all the suggestions are implemented appropriately, this programme, unlike previous in-service programmes, may have the ability to integrate the skills that are lacking in teachers at different levels. But how can I be sure that I correctly determined which skills are lacking? The strong point of this programme is that the creative use of music addresses a variety of the skills required for effective teaching. Furthermore, I hope that the programme will be truly constructivistic in the sense that it will help each teacher to develop the appropriate knowledge, skills and attitudes taught in this programme on his/her own.

For me this study was an exercise in perseverance. I experienced the truth of a remark made by a friend when she said that a thesis is written in the same way that an elephant is eaten: *bit by bit*. The academic gains include systematic thinking and the manipulation of thoughts in a playful way. I learned the lesson that this programme hopefully will also teach the teachers: that much more can be achieved in a relaxed way than when a person is all stressed up. More attention should be given to the positive and uplifting things in life and then other gains will most likely follow.

It is with awe that I thank the experts for the way in which they so willingly shared their time and experience with me in my endeavour to design a programme that will hopefully ensure a better trained teacher corps.

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APPENDIX 1

#7 Sanric Gardens
767 Arcadia Street
Pretoria
15 September 2006

Dear Reader

I would like to ask your help in my Doctorate study on the creative use of music in the classroom. As far as I could determine there are very few, if any, similar courses running in our country. I am convinced that teacher training towards the use of music in general classrooms can go a long way in making the classroom atmosphere more relaxed and conducive for learning.

This study will employ the Delphi technique, a widely used method of gathering group consensus from a panel of experts. The Delphi technique assures anonymity of responses, reduces group pressure for conformity, and takes less time for panelists than traditional methods of pooling opinion. As an expert in the field of music/creativity, materials development, or management your participation in this research will be greatly appreciated.

Please note that you should regard the review instrument as a guideline. It has been compiled as a result of review of the National Education Policy, the Unisa Tuition Policy and Open Distance Learning practices. Your comments may be done on the space provided on the instrument, or it can be summarised in the form of a one or two page report to be submitted to the course writer. You do not have to reply to all the questions if you prefer to concentrate on your field of expertise. Practical examples will be appreciated and acknowledged in the study material. The study material and assignments should be evaluated as a whole.

Because it is a rather lengthy course and I am painfully aware of the time factor, especially for you, I would appreciate it if you would see the material twice. After the first time I will implement the suggestions and changes and then ask you to scan for a second time to see whether you are satisfied. If there is anything unclear to me, I will phone the relevant person and then finalise the course material, which must run next year.

With your help, this research will greatly help in the training of teachers to use their creative potential in a positive way. I look forward to working with you in the weeks to come.

Respectfully,

Arina Kemp

SECTION B**1 Learning design****Comments and Suggestions**

<p>1.1 Outcomes</p> <p>a) How and where are learning outcomes provided? Is this effective and useful? Why?</p> <p>b) What is the quality of the outcomes? Do they cover knowledge, skills, values and attitudes?</p> <p>c) Do the outcomes meet the requirements of the profession/ industry/discipline area?</p> <p>d) How effective are the activities in terms of assisting the learner to meet the specific outcomes?</p> <p>e) How effective are the activities in terms of transferability and applicability? Will the learner be able to practise, apply and transfer the skills learnt in the activities to her/his real-life context?</p>	
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<p>1.2 Contextuality and authenticity</p> <p>a) To what extent are contextual tools (authentic case studies / real-life problems / narratives etc.) integrated in the learning experiences?</p> <p>b) How is the learner required to solve problems through activities based on his/her life and work contexts?</p> <p>c) How are local and indigenous knowledges used - different perspectives from different parts of society?</p>	
<p>1.3 Content and theory</p> <p>a) How is the learner encouraged to be involved in making and exchanging meaning in the discourse of the discipline/subject field?</p> <p>b) How effective are the activities in allowing the learner to use and apply new concepts and principles?</p>	
<p>1.4 Reflection and metacognition</p> <p>How is the learner required to think critically and reflect on her/his own actions /learning processes?</p>	
<p>1.5 Activities: learning skills</p> <p>Are activities included to help the learner communicate effectively in the language required of the discipline/learning area through sufficient</p> <ul style="list-style-type: none"> • reading guidance • writing guidance • thinking guidance? 	

<p>1.6 Feedback to activities: learner</p> <p>How useful is the feedback provided to activities in terms of the learner's</p> <ul style="list-style-type: none"> • ability to assess her/his own progress / skills / understanding? • ability to exchange ideas with a peer / a group of peers? • How effective is the feedback in terms of motivating and encouraging the learner? 	
<p>1.7 Feedback to activities: writer</p> <p>How useful is the feedback in terms of the writer's ability to</p> <ul style="list-style-type: none"> • offer advice and encouragement • predict problem areas and address them • maintain a constant dialogue with the learner • provide indications of competency levels / meeting outcomes • stretch the learner to higher levels of performance? 	
<p>1.8 Social transformation</p> <p>Is social transformation built in - does the learner have to use and reflect on community matters?</p>	

2 Linguistic design (dialogue)

<p>2.1 How accessible and appropriate is the language used for the target group? For example</p> <ul style="list-style-type: none"> • specialist or new vocabulary • sentence structure and length • paragraph structure and length 	
<p>2.2 Does the writer mostly use the active voice or passive voice? What is the perceived effect on the target group?</p>	
<p>2.3 Is the learner addressed directly? How does the writer refer to her/himself?</p>	
<p>2.4 How does the writer 'show' her/himself? How does this contribute to the creation of a dialogue between learner and teacher/writer?</p>	
<p>2.5 Is there evidence of empathy with the learner? How does this contribute to</p> <ul style="list-style-type: none"> • the creation of a dialogue between learner and writer? • motivating the learner? 	

3 Instructional devices

<p>3.1 How clear are the navigational devices (providing the learner with a consistent 'map' of the learning process & content), eg</p> <ul style="list-style-type: none"> • course overview • list of content • bulleted learning items for each digestible chunk / mindmap • marginal notes (eg. glossaries) • consistency in unit structure(eg.headings, sub-headings and chunks of learning) • consistency in numbering • cross-referencing to other units/part of units? • Are reader stoppers used effectively (eg.page break after unit; graphic line or page division; verbal text indicating a physical break in the learning process)? 	
<p>3.2 Are cross-discipline references used effectively? Are there opportunities where these can be included?</p>	
<p>3.3 If other media are used, how are they integrated? For example</p> <ul style="list-style-type: none"> • audio/video cassettes • study schools/group visits • potential group/pair discussions with peers 	

4 Visual Design

<p>4.1 How does the cover of the guide contribute to the learning experience for all the learners.?</p>	
<p>4.2 To what degree is the design appropriate to the content of the study material?</p>	
<p>4.3 How does the general layout contribute to the learning experience? Does it, for example, provide</p> <ul style="list-style-type: none"> • resting space for the eye? • the impression of an organised, open, caring learning environment-in-print? • contrast in foreground and background 	
<p>4.4 Are the heading and sub-headings clearly identifiable and easy to spot?</p>	
<p>4.5 Is the font readable?</p>	
<p>4.6 Are the tables and graphics visually appealing and clear? Do they contribute to the learning experiences? Are the visuals (pictures, photos) clear?</p>	
<p>4.7 Are the main structural elements clearly identifiable and consistent, such as:</p> <ul style="list-style-type: none"> • introduction • outcomes • activities • feedback • learning chunks • conclusion/summary? 	

5 Assessment Design

<p>5.1 Formative assessment instruments (eg. assignments, journals, portfolios)</p> <p>a) How do the activities in the materials prepare the learner to successfully complete the formative assessment instruments?</p> <p>b) How are formative assessment instruments integrated in learning materials?</p> <p>c) How is the learner guided in terms of the assessment and the relevant study material?</p> <p>d) To what degree are formative assessment instruments aligned with the outcomes?</p> <p>e) How are assessment criteria and level descriptors used for assignments / portfolios etc. provided to learners?</p>	
<p>5.2 Summative assessment instruments (examination)</p> <p>a) What is communicated to the learners about the exam?</p> <p>b) How are learners informed about examination paper format, assessment criteria and requirements?</p> <p>c) How are examination questions aligned with outcomes?</p> <p>d) Is there consistency and coherence from activities to formative assessment instruments to examinations?</p>	
<p>5.3 To what degree is a balance struck between continuous and summative assessment?</p>	