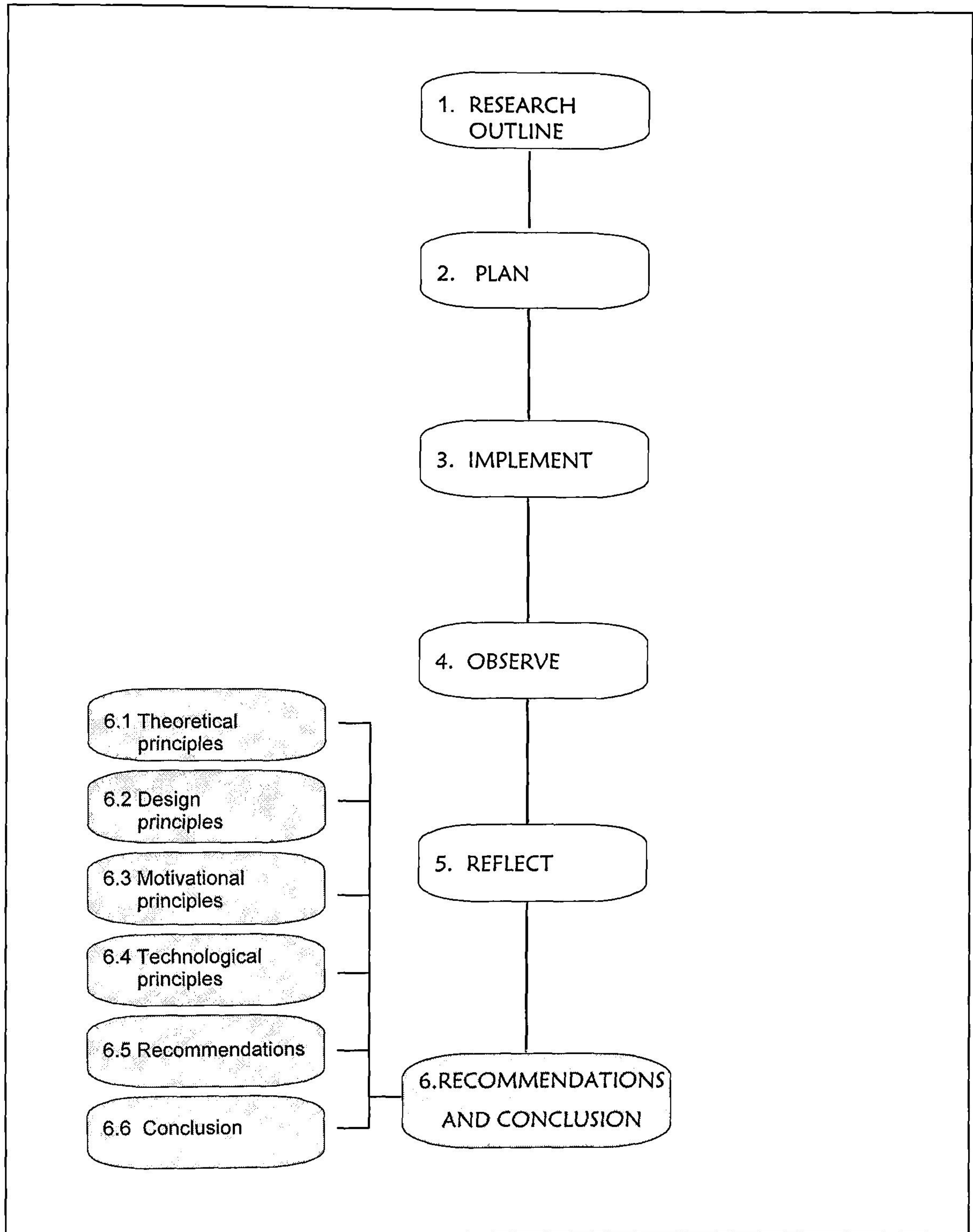


## CHAPTER 6

### RECOMMENDATIONS AND CONCLUSION



## INTRODUCTION

This thesis responded to the question:

What are the instructional design principles guiding the development of a distance Music Education programme?

This question was addressed through the action research cycle of plan, implement, observe and reflect. Action research enables the researcher to *improve* the rationality of practices, the understanding of these practices and the situations in which these practices are carried out (Seels 1995:107).

The reflection on the DMEP in Chapter 5 sorted the data which indicated that distance education could be applied to the field of Music Education through the following instructional design principles:

- theoretical;
- design;
- motivational; and
- technological.

These principles were applied throughout the research in order to determine whether the parameters of instructional design and distance education could be applied to the field of Music Education. By applying these principles to Music Education, learning could be made accessible to a wide range of learners.

The outcome of this research is a Distance Music Education Programme for a BMus Honours course at a mainly contact teaching tertiary institution. The course was planned, implemented and observed according to the suggestions of a literature review, the researcher's experience and the learner's comments. The final two phases of the design cycle of reflection, namely *critically evaluating* the consequences of the designed action; and using this evaluation to help you *plan your next action cycle* (Davidoff 1990: 46) will be addressed in Chapter 6. This was

done by sorting the results of the data from the literature review, researcher' experience and informal questionnaire though answering the sub-problems key to this study:

- What are the *theoretical* principles of distance education and instructional design?
- What are the *design* principles for distance education?
- What are the *motivational* principles involved in a distance education programmes?
- What principles determine the selection of an appropriate *technological* delivery mode?

The answers to these questions will enable the facilitator to make the necessary recommendations for the successful design of a DMEP.

## **6.1 WHAT ARE THE THEORETICAL PRINCIPLES OF DISTANCE EDUCATION AND INSTRUCTIONAL DESIGN?**

In the following paragraphs the theoretical principles that were considered in the design of the DMEP will be discussed. These aspects include the facilitation of learning and the learning process as well as the selection of distance education and instructional design models and theories.

### **6.1.1 Learning**

The diversity of the learner population of the DMEP made it necessary for the instructional designer to facilitate various learning strategies. By incorporating a variety of theories, for example behaviourism and constructivism, it could be ensured that each individual learner became an active participant in the learning process.

Throughout the DMEP it was emphasised that learners should make knowledge their own and apply it to their environments, thereby applying the principles of deep approach learning and developing their meta-cognitive skills. In order to apply knowledge, learners have to remember what they have learned and have to make use of their long-term memory. By doing so each learner, regardless of their

educational background and full time responsibilities, can benefit from the learning material at the time and pace they preferred. After the most appropriate learning strategies and theories for the DMEP had been selected, the designer had to choose a distance education model and theory.

### **6.1.2 Distance learning**

In order to enable learners to become individual, active participants in the learning process, learning should be managed. The management includes the structuring of the learning sequence and handling of administrative aspects. The direction of the learning process further includes the encouragement of two-way communication.

Learners should be prompted to share and discuss ideas and problems. The discussion should incorporate communication between learners and between facilitators. This can be achieved by selecting the most appropriate delivery mode according to the distance education model. The models enable the facilitator to select the most appropriate delivery mode through which material can be made available to learners. In order to facilitate learning according to each learner's individual needs, more than one model or theory of distance education can be selected. This is similar to the selection of an instructional design model and theory.

### **6.1.3 Instructional design**

For the purposes of the DMEP a combination of instructional theories were selected. These theories were selected for their methodological, procedural, facilitative and assessment attributes. The identified qualities were then utilised in the design according to the systems approach.

The systems approach enabled the facilitator to analyse, design, develop, implement and maintain the effectiveness of the DMEP. A cyclic approach of problem-solving was thereby facilitated. This equipped the designer to continuously focus on and assess the design principles incorporated in the DMEP.

The design of a learning programme cannot be completed in one cycle. The planned outcomes of the designed programme determine what instructional model or combination of models should be incorporated. When a stage of the design is

completed, it should be assessed and re-assessed in order to determine if the learners' needs were met. The systems approach of design should therefore be assimilated.

## **6.2 WHAT ARE THE DESIGN PRINCIPLES FOR DISTANCE EDUCATION?**

Many design checklists are available on instructional design. However, it is important to evaluate the effectiveness of these general principles with reference to Music Education and the facilitation of the practical components of the subject. The design principles focus on the role players in the design process, the learning theory in relation to design and the design of course content.

### **6.2.1 Role players in the design process**

The two role players in the design process are the distance learner and the instructional designer. It has already been stated that the distance learner should be considered to be an individual in the design process. The DMEP was therefore structured so as to give the learners choices regarding **what**, **when** and **how** to study. This was facilitated through the style and format of the text, the selection of the appropriate media, and the structuring of effective management.

By asking the three individuals in the case studies to state their expectations of the course and comparing these expectations to the topics addressed in the DMEP, the facilitator could establish whether the individual learner needs were met. From their answers it could be deduced that they found the topics satisfactorily addressed in the DMEP. When asked what could be added to the programme, they indicated that more culturally diverse material and the latest technological trends could be incorporated in the DMEP. The instructional designer should give attention to these matters in the next cycle of the systems design approach.

Facilitating the needs of the distance learner includes the facilitation of learning at the learners' preferred time and pace. Although the learners could choose when they wanted to study, they were not given the opportunity to formulate their own learning outcomes. It was expected of them to reach the outcomes suggested by the DMEP.

The second role player in the design process is the instructional designer. In the DMEP, the subject specialist became the instructional designer. This enabled the researcher to effectively apply the principles of instructional design to the DMEP. As a first time designer, the facilitator learned the principles of instructional design through a process of trial and error. The designed aspects of the DMEP had to be continuously evaluated and restructured until the desired results seemed to be achieved. Other responsibilities of the instructional designer in the DMEP included the facilitation of individualised instruction and the structuring and management of the learning content.

The design of the DMEP was done by one instructional designer. The designer was therefore responsible for each phase of the design process, including the management and maintenance aspects. The designer could deal with all of these aspects because of the relatively small learner numbers enrolled for the DMEP. It is however suggested that the necessary administrative and management structures be put into place for a possible increase in student numbers. The instructional designer was therefore responsible for the successful facilitation of the course content as well as the learning activities.

### **6.2.2 Learning theory in relation to design**

The combination of learning theories selected for the DMEP were introduced in the course by encouraging learners to take control of the learning process. This was done by challenging them to apply the newly acquired knowledge and skills to their teaching environments.

The facilitator also had to ensure that the proposed learning outcomes were met. In order to help them achieve these goals, the course content was divided into modules. The learning material was thereby divided into manageable structures and the understanding thereof evaluated through the design of various assessment activities. Apart from the outcomes given, learners should have the opportunity to formulate their own learning outcomes. This would then lead to them deciding on the sequence of the modules to be learned. This was, however, not encouraged in the DMEP. In the informal questionnaire, the three case studies did not indicate the necessity for the sequence of modules to change and did not make any recommendations regarding their order of the modules. Learners should, however,

be given the opportunity to structure their own learning sequence if they wish to do so. The facilitator should therefore reconsider how the learners could be given control over every aspect of the learning content. A solution could be to consider and incorporate these learner controlled activities in the design of the course content.

### **6.2.3 Course content**

The successful facilitation of the course content is perhaps the most important aspect of the instructional design process. The effective facilitation of the information will result in learners performing at their best. Rewarding facilitation is usually measured by the:

- clarity of learning outcomes;
- relevance of the structure and layout of the text;
- effectiveness of the icons used;
- efficiency of the self-assessment activities and feedback given;
- manner in which learners are addressed;
- descriptiveness of the illustrations;
- clarity of explanations; and by the
- effective statement of assessment criteria.

The success of these employed structures could be best evaluated by the learners. In the informal questionnaire answers it was mentioned that most of these content design principles were meaningful and easy to locate. The learners did, however, indicate that the design could make use of more illustrations and bulleted summaries to make the material 'less academic' and 'more entertaining'. More examples were requested, especially in the module on skills. Learners wanted more examples of the application of movement, creativity and notation. By explaining these skills in detail, the facilitator would be able to encourage and motivate learners.

### **6.3 WHAT ARE THE MOTIVATIONAL PRINCIPLES INVOLVED IN A DISTANCE EDUCATION PROGRAMME?**

Through the design of the DMEP the facilitator incorporated structures, student support services and assessment activities to motivate learners. Through these employed motivational principles, the learner should be encouraged and enabled to enjoy the learning experience.

#### **6.3.1 Motivational structures**

In the DMEP the motivational aspect suggested by Keller (1983:396) was incorporated. This model facilitates learners to become interested in the learning process. Learners are motivated by incorporating course content that is relevant to their environment and satisfies their expectations.

According to the three case studies, the DMEP did succeed in successfully presenting these motivational structures. They expressed that they liked learning with the material and that the DMEP encouraged them to apply their newly acquired knowledge and skills to their teaching and working environments. The assumption can thus be made that learners were motivated by the structures implemented in the DMEP.

The motivation of learners could, however, be further increased, if they were encouraged to interact with fellow learners and share ideas. This was attempted by incorporating various student support services.

#### **6.3.2 Student support services**

To keep the DMEP's learners motivated, certain student support services had to be put into place. The suggested services include the appointment of tutors and structuring of collaborative learning opportunities.

Tutors for the DMEP have not yet been identified. The result is that the facilitator had to answer all the learners' queries. This was confirmed by the three case studies, who indicated that whenever they experience learning related problems they



consulted with the facilitators. As a result, their questions could only be answered when the facilitator was available (on the phone or reachable by fax or e-mail) or when they came to the University for their contact sessions. This could mean that learners could not continue with their work before these problems were addressed.

It was suggested by the literature and supported by the case studies that study groups and tutors should be appointed and put into place. This would enable learners to consult one another or a tutor, in their vicinity, when a problem was experienced.

Because of the difficulties learners experienced regarding the solving of their learning related problems, they felt that they could not always achieve their goals and fulfil assessment activities effectively. In order to address this problem, the assessment activities incorporated in the DMEP need to be evaluated.

### **6.3.3 Assessment**

In the DMEP, various assessment activities were incorporated. These included self-assessment activities, practical presentations, group discussions and written assignments. According to the literature, group evaluation should also form part of the assessment activities of a distance learning programme. In order for assessment to be meaningful, learners should be challenged and guided towards the correct answers. By providing regular and meaningful feedback, learners will be able to monitor their progress and better their results.

The success of the DMEP's assessment activities were monitored by the questions asked in the informal questionnaire. The systems under scrutiny were practical presentations, group discussions and written assignments which were regularly used, and group assessment which was not purposefully facilitated but did occur from time to time in the contact sessions.

The three case studies regarded the practical presentations and written assignments as meaningful. On the other hand, the group discussions and assessment were considered to be of little value. Problems regarding equal group participation and standards were expressed. It was proposed that activities related to teaching be discussed, rather than spending time to answer a question or give a definition the

facilitator prompted. It was also mentioned that there was insufficient transparency regarding the assessment criteria and marks given. Learners expressed the need for feedback focusing on the improvement of results. The conclusion that can be made is that the assessment activities of the DMEP still need to be revised and adapted as learner needs changes.

#### **6.4 WHAT PRINCIPLES DETERMINE THE SELECTION OF AN APPROPRIATE TECHNOLOGICAL DELIVERY MODE?**

As we approach the turn of the century, the instructional designer is increasingly being confronted with advanced technological developments. The designer should, however, not lose sight of the purpose of the media in the design process. The **media selection** in a distance course, to some extent, becomes the facilitator's voice. Media should therefore be selected that are accessible to and affordable for all enrolled learners.

The selection of media to a large extent determines the success of the facilitation of the course content. When a delivery mode for the DMEP was selected, the facilitator had to determine what media the learners would have access to. Although many of the learners do have access to more advanced media, it was decided to make use of a paper-driven package supported by a video and audio cassette.

The three case studies commented positively on the media selection of the DMEP. These three learners do, however, have access to more advanced media and therefore suggested that the learning material for the DMEP should also be made available on these media for learners who have such access.

It is therefore proposed that the material of the DMEP be made available on the Internet and that learners could make use of CD-ROMS's to access additional information.

The case studies also indicated that additional information be made available on the video cassette. It was indicated that material regarding lesson examples for various age groups in different teaching environments be included. Learners therefore want

to see teachers in action in contrasting teaching environments, both formal and informal. The contrasts imply facilities, access to media and numbers of learners. The African learner also indicated that the incorporation of culturally diverse material was not successful. More information regarding cultural festivals and customs should be incorporated.

## **6.5 RECOMMENDATIONS**

After an in depth study regarding the application of the principles of instructional design and distance education to Music Education, the researcher could formulate recommendations regarding further development in the field of instructional design for Music Education.

In the following paragraphs, suggestions are made regarding the importance of distance education and the development of material for distance education purposes on international and national level, at the University of Pretoria, its Music Department and the specific application of instructional design to Music Education.

### **■ International perspective**

Globally, universities and education institutions need to reconsider their methods and policies regarding the facilitation of learning independent of time, place and pace. Increasing flexibility in education systems should therefore be addressed. This would enable learners to study what, when and how they wish.

On various occasions the researcher tried to make contact with other designers of distance Music Education material. No designers in this field could be located. It is therefore proposed that an international database for instructional design for Music Education needs to be established.

### **■ National perspective**

The bill on *Further Education and Training* (Parliamentary bulletin 1998) states that all South Africans have the right to further their education, and that education should be made available by the State. Learning opportunities for South Africans at all levels need to be put into place. It is further suggested that accessibility can be

promoted by providing further education in existing centres on full-time, part-time and distance basis.

Naidu (1999a:3) reports on the comments of Kadar Asmal, the new Minister of Education: '... serious gaps in fundamental knowledge, reasoning skills and methods of study ...' of South African learners. Asmal has suggested a nine point plan to better education. His top priorities include '... developing the teaching profession ... creating a vibrant further education and training system and developing a higher education system which understands the challenges facing the country' (Naidu 1999b:9).

In line with Asmal's plan, it is therefore proposed that educational institutions in the process of restructuring their learning strategies so as to facilitate equal learning opportunities for all South Africans, develop and expand their programme presentations. This can be achieved by making more distance learning opportunities available to learners and highlighting the importance of literacy and lifelong learning.

#### ■ **University of Pretoria**

In the light of the educational reforms on international and national level, the University of Pretoria is reconsidering its policy on teaching and methods of teaching so as to cope with the foreseen massification of education at tertiary level. These reforms include increased use of technology, diversifying learning programmes and facilitating distance learning. This is underlined by the Principal of the University Professor Johan van Zyl's core strategies for future development at the University of Pretoria. The proposed core strategies include the:

- promotion of access for all learners;
- development of Telematic education as an important strategy to cope with the massification of Higher Education;
- facilitation of student centred learning opportunities involving less contact; and
- continuous evaluation of existing and newly structured learning programmes (Van Zyl 1999).

Reformed education policies, including distance education, is therefore becoming an increasing part of the University of Pretoria's teaching approach. In order to cope with the increased distance learner numbers, the University needs to ensure that the

administrative aspects regarding such matters as registration and communication between departments be addressed.

In order to develop material for use as distance material it is proposed that co-operation and understanding of content be encouraged between instructional designers and subject-specialists. Lecturers should also be given the opportunity to develop their instructional design skills, enabling them to generate their own material successfully for distance education purposes.

#### ■ **Music Department**

An increasing number of learners both nationally and internationally are interested in furthering their music studies, either on under-graduate or post-graduate level, at the University of Pretoria. The preparation of material in all music subjects for e.g. history harmony, theory and technology, to be used for distance education purposes can thus no longer be ignored.

In order to cope with the increased distance education learner numbers it is recommended that possible distance education courses be identified and developed within the department. The Music Department should also formulate an action plan regarding the development of material and appointment of staff to deal with the academic and administrative responsibilities of distance learners.

In order to ensure the adequate training of learners, who could in future be asked to develop material for distance education, they should be given lectures and practical assignments regarding the instructional design of distance learning materials. This implies that all learners should first and foremost be given the opportunity to develop their computer literacy skills, regardless of having regular access to a computer.

#### ■ **Instructional design for distance Music Education**

Recommendations from the results and conclusions drawn from the planning, implementation, observation and reflection phases discussed in this research should be taken into consideration when the principles of instruction, distance education, design, motivation and technology are applied to the field of Music Education. From the research results the following recommendations could be made:

- Institutions and role models that develop distance education material, especially for Music Education, need to be identified. This will enable Music Educators to approach them for guidance and assistance when developing a DMEP.
- Publications and support material for the design of a DMEP should be compiled and made available to other designers and subject specialists.
- A network or discussion group on instructional design for distance Music Education needs to be formed where ideas can be shared and problems solved.
- The DMEP should be made available on the Internet. This will maximise the availability of the programme both nationally and internationally.
- In order to design a successful DMEP, the recommendations as summarised under Table 6.1 should be taken into consideration.

**Table 6.1: Recommendations for the successful application of instructional design to a DMEP**

<b>THEORETICAL PRINCIPLES</b>	
<b>ASPECTS</b>	<b>RECOMMENDATIONS</b>
<b>Learning</b>	Incorporate a variety of learning theories (c.f. 2.1.1). <ul style="list-style-type: none"> <li>• Facilitate individualised, learner controlled learning (c.f. 2.3.2).</li> <li>• Enable learners to take control of the learning process.</li> <li>• Encourage active participation.</li> <li>• Base the work on meta-cognition (c.f. 2.1.2) and deep approach learning (c.f. 2.1.2).</li> </ul>

(Table 6.1 continued)

<b>ASPECTS</b>	<b>RECOMMENDATIONS</b>
<b>Distance education</b>	<ul style="list-style-type: none"> <li>• Incorporate management principles in the administering and structuring of the learning process (c.f. 2.1.1) .</li> <li>• Prompt learners to share ideas and discuss problems and activities through two-way communication (c.f. 2.1.4).</li> <li>• Select a distance education theory (c.f. 2.1.4) and model (c.f. 2.1.4) according to the requirements of the designed programme.</li> </ul>
<b>Instructional design</b>	<ul style="list-style-type: none"> <li>• Single out an instructional theory (c.f. 2.2.1) or combination of theories supporting the methodological, procedural, facilitative and assessment qualities of the designed programme (c.f. 2.2.1).</li> <li>• Apply the principles of the systems approach (c.f. 2.2.2) to the design process.</li> <li>• Continue to analyse (c.f. 3.1) the design process and make the necessary changes.</li> </ul>
<b>DESIGN PRINCIPLES</b>	
<b>Role players in the design process</b>	<ul style="list-style-type: none"> <li>• Facilitate individualised instruction (c.f. 2.3.2) by giving the learner choices regarding when, what and how to study.</li> <li>• Further the design of individualised instruction through: <ul style="list-style-type: none"> <li>– formulation and structuring of learning outcomes (c.f. 3.2.1);</li> <li>– the style and format of the text (c.f. 3.2.2);</li> <li>– media selection (c.f. 2.5.1 and c.f. 3.1.4);</li> <li>– incorporated evaluation structures (c.f. 3.2.5); and</li> <li>– structuring the necessary management systems for future developments in learner numbers.</li> </ul> </li> </ul>

(Table 6.1 continued)

<b>ASPECTS</b>	<b>RECOMMENDATIONS</b>
<b>Instructional designer</b>	<ul style="list-style-type: none"> <li>• The subject specialist can become the instructional designer (c.f. 2.2.1).</li> <li>• The instructional designer should:               <ul style="list-style-type: none"> <li>– write topic outlines;</li> <li>– formulate learning outcomes;</li> <li>– design activities and feedback;</li> <li>– serve as content resource;</li> <li>– make use of a variety of instructional techniques;</li> <li>– stimulate and motivate learners; and</li> <li>– evaluate learner progress (c.f. 2.3.3).</li> </ul> </li> </ul>
<b>Learning theory in relation to design</b>	<ul style="list-style-type: none"> <li>• Empower learners to control the learning process.</li> <li>• Encourage the application of knowledge and skills.</li> <li>• Divide learning materials into modules (c.f. 3.2.2).</li> <li>• Evaluate learner achievements (c.f. 3.2.5).</li> </ul>
<b>Course content</b>	<ul style="list-style-type: none"> <li>• Compile structured learning outcomes (c.f. 3.2.1).</li> <li>• Plan a meaningful layout of the text (c.f. 3.2.2).</li> <li>• Select the icons to be used (c.f. 3.2.3).</li> <li>• Facilitate the practical components of Music Education through active participation (c.f. 3.2.4).</li> <li>• Analyse the efficiency of the self-assessment activities to be used and feedback provided (c.f. 3.2.5).</li> <li>• Address learners in a friendly manner.</li> <li>• Select illustrations for their descriptive qualities (c.f. 3.2.2).</li> <li>• Explain information clearly.</li> <li>• State assessment criteria.</li> </ul>



(Table 6.1 continued)

<b>MOTIVATIONAL PRINCIPLES</b>	
<b>ASPECTS</b>	<b>RECOMMENDATIONS</b>
<b>Motivational structures</b>	<ul style="list-style-type: none"> <li>• Assimilate the motivational aspect (c.f. 2.4) involved in the learning process.</li> <li>• Interest learners in the learning activity.</li> <li>• Make learning relevant to learners' teaching and working environments.</li> <li>• Determine learner expectations and facilitate them.</li> <li>• Satisfy learner needs.</li> </ul>
<b>Student support services</b>	<ul style="list-style-type: none"> <li>• Facilitate contact between learners and between learners and facilitators (c.f. 2.3.2).</li> <li>• Train tutors (c.f. 2.4.1).</li> <li>• Encourage collaborative learning (c.f. 2.4.2).</li> </ul>
<b>Assessment</b>	<ul style="list-style-type: none"> <li>• Incorporate diverse assessment activities.</li> <li>• Challenge learners.</li> <li>• Provide regular and meaningful feedback.</li> </ul>
<b>TECHNOLOGICAL PRINCIPLES</b>	
<b>Media selection</b>	<ul style="list-style-type: none"> <li>• Select an instructional or informational delivery mode (c.f. 2.5.1).</li> <li>• Analyse learner population and their learning requirements (c.f. 3.1.3).</li> <li>• Take modern trends and developments into consideration.</li> <li>• Determine learners' accessibility to various media.</li> <li>• Assess the efficiency of media on a recurring basis (c.f. 3.1.4).</li> </ul>

The systems approach to instructional design and the action research model on which this study is based both indicate that the **design** of a DMEP is a continuous process. The DMEP therefore needs to be adaptable to the learning environment it was designed for.

## **6.6 CONCLUSION**

The significant changes that South Africa has undergone since the new political dispensation came into being in 1995 can be compared to a renaissance, an African renaissance, and symbolises Africa's awakening from a dark age.

The concept African Renaissance suggests that the people of Africa take full control of their future, on equal terms with the rest of the world (South Africa: the African renaissance 1999). This does not only imply political, economic and social control, but also includes control over the individual's education. The vision of equal learning opportunities for all South Africans, free of time and place, should also be made possible in the field of Music Education. This can be achieved by restructuring existing learning programmes and instructionally designing material that can be specifically used for distance learning purposes.

Course design and instruction can achieve at best a good enough but not a perfect fit for successive cohorts of students, and thus that students themselves need to be pro-active in recognising their own learning difficulties and taking appropriate action to keep their own learning process alive and effective (Thorpe 1995:179).