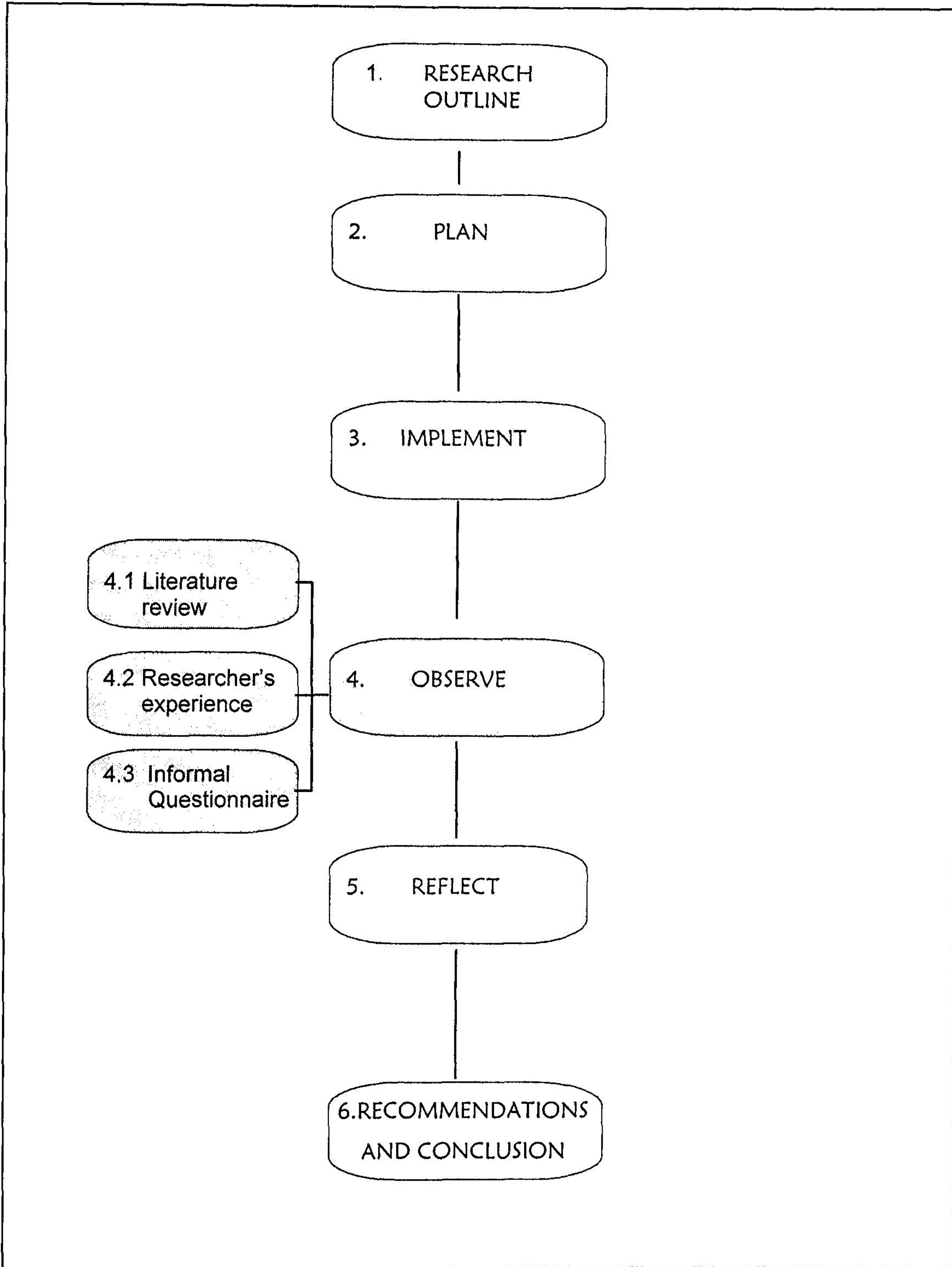


CHAPTER 4

OBSERVE



INTRODUCTION

The purpose of instructional design is to ensure that the instructional methods used and the materials designed are accomplishing the established outcomes of the learning programme. Assessment of a designed programme is therefore imperative. Melton (1997:107) indicates that three phases of evaluation are present in the instructional design process. These are evaluation **prior** to the development of the course, evaluation **during** the development of the course and evaluation **following** the presentation of the course. The importance of continuous assessment is further underlined by the following quotation:

It is all too easy to think of evaluation as a process that only gets underway once a course has been produced. Evaluation needs to be an integral part of the course development process, providing feedback on the products at each and every stage, at a time when it can be acted upon and used to help improve the products before further developing them in the next stage (Melton 1997:107).

In Chapters 2 and 3 the first two steps of the action research model, planning and design, were followed. In these chapters, assessment **prior to** and **during** the design of the programme were facilitated through formative evaluation methods. This enabled the designer to redesign and develop the modules or identified aspects of the learning programme before implementing or testing it. Seeing the programme has already been implemented, the focus of this chapter should be on assessment **following** the presentation of the course. This empowers the designer 'to collect data under real-life study conditions, on a larger scale than so far possible, and from a wider variety of perspectives' (Melton 1997:112).

It is important that the focus of the evaluation is on the strengths and weaknesses of the programme. This will enable the designer to assess the value of the designed programme. Rowntree (1997:45) compares quality assessment of a newly designed educational programme with the launch of new products in the marketing industry. As most companies pilot a product before launching it, so educationalists should test their programmes before accepting the standard thereof. The learners therefore become important role players in the determining of the success of a designed learning programme. Seeing that they study with the material they will be able to indicate where the programme should be improved or better designed.

However experienced we are and however insightful our anticipation, we can never expect to foresee all the difficulties that learners are likely to have with our courses. Pilot learners' reactions may reveal a number of errors or design faults that we can put right before launching a course on its first run (Rowntree 1997:45).

The observation of the DMEP was done as a summative evaluation. According to the systems approach, described in Chapter 2, the summative process is used to assess the standard of an implemented or pilot programme. Through summative evaluation the effectiveness of the implemented programme is evaluated on a multi-dimensional scale. This includes the evaluation of the process, instructional designer and the programme. The effectiveness of these parameters can, however, be determined only if the criteria for quality instructional design have been compiled. In this research, the assessment and effectiveness criteria were drafted through a:

- **literature review** consulting **experts' opinions**;
- reflection on the **researcher's experience**; and an
- informal **questionnaire**.

These three approaches were used to determine the criteria for successful design. The above mentioned methods were used to answer the questions key to this study. By discussing the principles or defining the terminology, assessment criteria could be formulated. The answers could then be used to determine whether the design of the DMEP was, in fact, successful. The principles are:

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

The researcher aimed at discussing these principles by making use of the following methods as highlighted by Table 4.1.

TABLE 4.1: Summary of assessment criteria

	Literature review	Researcher's experience	Questionnaire
Theoretical principles	✓	✓	✓
Design principles	✓	✓	✓
Motivational principles	✓	✓	✓
Technological principles	✓	✓	✓

The literature review, researcher's experience and questionnaire were used to determine the criteria for successful design as highlighted through the different principles. These principles include the theoretical, design, motivational and technological components of an instructionally designed DMEP. For each principle a quality assurance checklist were compiled. This was done through a literature review, researcher's experience of the design process and an informal questionnaire.

4.1 LITERATURE REVIEW

In Chapter 2 the experts' opinions concerning the theoretical, design, motivational and technological principles were given. In order to determine what the criteria for successful design are, a summary of the basic literature principles is given. The summary will be drafted in the form of questions that can be employed to determine the criteria of the various disciplines.

4.1.1 Theoretical principles

The theoretical principles incorporate the learning process, instructional design and distance education principles and models. The questions guiding the theoretical analysis are given in Table 4.2.

TABLE 4.2: Literature review - theoretical principles

Learning theory	<ul style="list-style-type: none"> Which theory or combination of learning theories should be selected to form the basis of the design of the DMEP?
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(Table 4.2 continued)

Learning experience	<ul style="list-style-type: none"> • Why should deep approach learning be encouraged? • To what extent should meta-cognitive skills form part of the distance Music Education learning programme?
Distance education theory	<ul style="list-style-type: none"> • What are the principles of industrialisation? • What are the benefits of individualised instruction in a distance education programme? • What are the advantages of two-way communication for the DMEP?
Distance education models	<ul style="list-style-type: none"> • Which distance education model should be selected for the DMEP?
Instructional design theory	<ul style="list-style-type: none"> • Which of the four instructional generations best suit the needs of the DMEP?
Instructional design models	<ul style="list-style-type: none"> • What is the value of the systems approach model to the DMEP?

4.1.2 Design principles

The design principles were compiled from instructional design parameters and principles stated in Chapters 2 and 3. The following questions, given under Table 4.3, were taken into consideration when a successful design sequence was structured:

TABLE 4.3: Literature review - design principles

The distance learner	<ul style="list-style-type: none"> • What are the principles of individualised instruction? • What choices should learners be given regarding content, methods used and materials?
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(Table 4.3 continued)

The instructional designer	<ul style="list-style-type: none"> • What are the tasks of an instructional designer?
Learning theory in relation to design	<ul style="list-style-type: none"> • What study methods should be introduced and facilitated in a DMEP?
Course content	<ul style="list-style-type: none"> • What are the principles of successful design?

4.1.3 Motivational principles

Motivational aspects can help focus the distance learner's attention on and interest in the learning process. The formulation and presentation of the motivational factors will therefore influence the learners' perception of the learning material (Rowntree 1997:10). By answering the questions, listed in Table 4.4, the designer could determine if the designed motivational factors were successful.

TABLE 4.4: Literature review - motivational principles

Motivational structures	<ul style="list-style-type: none"> • Which motivational structures could be employed in the DMEP?
Student support services	<ul style="list-style-type: none"> • Which student support services should be employed in the DMEP?
Assessment	<ul style="list-style-type: none"> • What assessment criteria and methods of assessment should be included in the DMEP?

4.1.4 Technological principles

Through selecting appropriate media, the designer can ensure that the learner becomes actively involved in the learning process and that communication is facilitated. Table 4.5 highlights the questions to be asked concerning media selection.

TABLE 4.5: Literature review - technological principles

Media selection	<ul style="list-style-type: none"> • What are the criteria for media selection for a distance education course? • What could be the most effective delivery mode for facilitating the pedagogy of the practical music skills in the DMEP?
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4.2 RESEARCHER'S EXPERIENCE

As was described in Chapter 3, the design of a DMEP was the researcher's first attempt at instructional design. Seeing that very little information on the application of instructional design principles to Music Education is available, the researcher had to rely on the general theoretical principles of instructional design and apply them through a process of trial and error. The researcher's experience, therefore, developed through the design process. The result is that the designer had to make assumptions on the successful design of a DMEP. The researcher's experience will therefore focus on assumptions that were made concerning the different components of a designed programme.

4.2.1 Theoretical principles

Instructional design theory suggests a number of models that could be used in the instructional design process. The researcher had to evaluate each of these structures in order to determine which model is best suited for a DMEP. The following questions concerning the theoretical principles were asked in Table 4.6.

TABLE 4.6: Researcher's experience - theoretical principles

Learning theory	<ul style="list-style-type: none"> • How were the learning theories employed in the DMEP?
Learning experience	<ul style="list-style-type: none"> • How was deep approach learning facilitated in the DMEP?

(Table 4.6 continued)

Distance education theory	<ul style="list-style-type: none"> • How could the theory of industrialisation be adapted to the DMEP, having small learner numbers and only one designer? • How were the needs of the independent learner met through the DMEP? • How could two-way communication be facilitated in the DMEP?
Distance education models	<ul style="list-style-type: none"> • How was the selected distance education models applied to the DMEP?
Instructional design theory	<ul style="list-style-type: none"> • How could the principles of the instructional design generations be applied to the DMEP?
Instructional design models	<ul style="list-style-type: none"> • How could the systems approach model be applied to the DMEP?

4.2.2 Design principles

The principles underpinning the theory of instructional design give a clear indication of the structuring of a designed programme. A detailed discussion on the application of the parameters of instructional design to the DMEP course content was given in Chapter 3. It will therefore not be discussed again. The evaluation through the literature review and questionnaire will give a clear indication of the success of the designed DMEP. The focus will of Table 4.7 will be on the distance learner, the instructional designer and the relation between learning theory and the design process.

TABLE 4.7: Researcher's experience - design principles

The distance learner	<ul style="list-style-type: none"> • How was the material structured to suit the individual learners' learning requirements?
The instructional designer	<ul style="list-style-type: none"> • What does the task of facilitation entail in a DMEP?
Learning theory in relation to design	<ul style="list-style-type: none"> • How could appropriate study methods be introduced and facilitated?

4.2.3 Motivational principles

The absence of the designer in the distance learning environment can be a motivational hazard. In a contact teaching environment, the designer can react to the learners' experience of the learning process. The designer would therefore be able to respond to learners being tired, bored, confused, enthusiastic and a number of other emotions. In a distance learning programme, motivational structures need to be designed into the learning experience. The designer had to imagine him/herself being part of the learning process and reacting to the learners' responses to the learning material. The researcher's experience highlighted the following aspects in Table 4.8.

TABLE 4.8: Researcher's experience - motivational principles

Motivational structures	<ul style="list-style-type: none"> • Which motivational structures should be incorporated in the DMEP?
Student support services	<ul style="list-style-type: none"> • How were the student support services introduced to the DMEP?
Assessment	<ul style="list-style-type: none"> • How were the identified assessment methods and criteria facilitated in the DMEP?

4.2.4 Technological principles

The difficulty of incorporating the practical aspects of Music Education over a distance has been referred to during the course of the research. Seeing that very little information is available concerning the instructional facilitation of practical skills,

the researcher had to rely on her own knowledge and often instinct. According to the theory, the selection of the correct delivery mode should depend on factors like the developmental costs, the preferences of the designer, the available technologies and the cost - money and time - of the delivery material. All of these aspects were taken into consideration when the researcher's decision on the selection of media was made in Table 4.9.

TABLE 4.9: Researcher's experience - technological principles

<p>Media selection</p>	<ul style="list-style-type: none"> • How were the criteria for media selection applied to the DMEP? • Through which methods could the practical aspects of the DMEP be facilitated? • Could the media selection enhance the learning process? • How was the use of media in the DMEP explained to the learners?
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4.3 INFORMAL QUESTIONNAIRE

A questionnaire was drafted so that the designer could determine how the learners experienced learning with the DMEP. After studying with this material, for the period of one year, three case studies were asked to evaluate the programme according to given criteria. This assessment was done informally. Through the questionnaire, the case studies were given the opportunity to evaluate the DMEP from their learning experience.

Two types of questions were asked. Firstly, questions were formulated where learners had to write their comments in paragraph form. The second type of question gives the learner a number of answers to choose from. In order to assess the value and standard of the programme, the same points of discussion as in the literature review were used. The questions asked in the questionnaire will be highlighted in this Chapter.

4.3.1 Theoretical principles

All theoretical issues or criteria as stated in the literature review could not be assessed through the questionnaire. Learners would, for instance, not be able to assess the industrialisation principles of division of labour, mass production and automation. The same applies to the choice of instructional generation and distance education models used. In Table 4.10 the other issues addressed are listed.

TABLE 4.10: Questionnaire - theoretical principles

<p>Learning theory</p>	<ul style="list-style-type: none"> • Through the material you were prompted to understand and apply knowledge rather than remembering it off by heart. How successful was this strategy? <li style="margin-left: 40px;">1 = Not successful at all <li style="margin-left: 40px;">2 = Moderately successful <li style="margin-left: 40px;">3 = Successful <li style="margin-left: 40px;">4 = Very successful • If you chose numbers 1 or 2 could you give a suggestion to improve the understanding of the material?
<p>Learning experience</p>	<ul style="list-style-type: none"> • Describe when you studied the material. More than one answer can be selected. Did you study the material: <li style="margin-left: 40px;">1 = Once off <li style="margin-left: 40px;">2 = Per module <li style="margin-left: 40px;">3 = Over weekends <li style="margin-left: 40px;">4 = During holidays <li style="margin-left: 40px;">5 = Whenever you got the chance <li style="margin-left: 40px;">6 = I still refer back to it • Explain why you studied at this/these particular time(s).
<p>Distance education theory</p>	<ul style="list-style-type: none"> • How did you benefit from the opportunities to discuss learning related problems with your fellow learners and course presenters?

4.3.2 Design principles

The core problem of this study focuses on the facilitation of the practical skills of Music Education over a distance. The method that was used to present the skills was discussed in Chapter 3. The question is, however, whether the method of facilitation conveyed the necessary information to the distance learner. The learners were not asked to evaluate the efficiency of the instructional designer, for they have no knowledge of instructional design principles. In Table 4.11 learners were asked if the following design principles were meaningfully employed.

TABLE 4.11: Questionnaire - design principles

<p>The distance learner</p>	<ul style="list-style-type: none"> • What were your learning expectations of this course? • To what extent were your learning expectations addressed through the learning material? <p style="margin-left: 40px;">1 = Not at all 2 = Satisfactory 3 = I got more than I bargained for</p> <ul style="list-style-type: none"> • What would you like to be added to the learning material?
<p>Learning theory in relation to design</p>	<ul style="list-style-type: none"> • How meaningful was the sequence of the learning material? Would you like the order of the modules to: <p style="margin-left: 40px;">1 = Change? 2 = Be left unchanged? 3 = Be selected by yourself?</p> <ul style="list-style-type: none"> • If you want the order to change - what do you suggest? • If you want to structure your own order- what would the sequence be? • Which aspects did you find appropriately challenging? • Which aspects did not challenge you?

(Table 4.11 continued)

<p>Course content</p>	<ul style="list-style-type: none"> • How successful was the use of icons in the locating of the <ul style="list-style-type: none"> – Practical assignments – Summaries of important information – Learning outcomes. <p style="margin-left: 40px;">1 = Could not locate them 2 = Had some trouble in finding them 3 = Found them easily</p> • How successful was the explanation of the didactic methods involved in the teaching and presentation of the following skills? <ul style="list-style-type: none"> – Listening – Movement – Playing on instruments – Singing – Being creative – Reading notation <p style="margin-left: 40px;">1 = I did not understand how I should present the skill 2 = It could be described by incorporating more examples 3 = I understood it clearly 4 = I found that I was already familiar with the methodology.</p>
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4.3.3 Motivational principles

The learners' responses concerning the motivational component of the learning material is particularly important to the success of the DMEP. The successful facilitation of the motivational factors will have a meaningful effect on the learning outcomes and/or results. In order to determine the value of the motivational aspects the questions listed under Table 4.12 were asked.

TABLE 4.12: Questionnaire - motivational principles

<p>Motivational structures</p>	<ul style="list-style-type: none"> • To what extent did the DMEP motivate you in your studies? <ul style="list-style-type: none"> 1 = I found the material boring 2 = It was moderately stimulating 3 = I liked learning with this material 4 = Learning becomes a fun experience • Did the learning material motivate you to apply it in your work and community? <ul style="list-style-type: none"> 1 = yes 2 = no • If your answer was yes, describe how you could apply the material to your work and community involvement?
<p>Student support services</p>	<ul style="list-style-type: none"> • To what extent did you make use of the following student support services when you experienced study related problems? <ul style="list-style-type: none"> – A study group consisting of learners that meet occasionally or consult on the phone – A tutor – Your lecturers <ul style="list-style-type: none"> 1 = I did not know of such a support system 2 = Occasionally 3 = Often 4 = Very often 5 = This should be encouraged and implemented

(Table 4.12 continued)

Assessment	<ul style="list-style-type: none"> • How did you experience each of the following methods of assessment? Refer in your answer to the feedback given, answers at the back of the book and the effectiveness of this type of assessment. – Practical presentations – Group discussions – Written assignments – Group assessment <p>1 = Were not used 2 = Did not find it useful 3 = Useful 4 = I learned a lot</p>
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If the design is meaningful then the learner will be motivated, encouraged and well briefed concerning the learning programme and its use. The design principles have been discussed in detail in Chapter 3. The compilation of assessment for design principles in this section will focus on the learners' experience.

4.3.4 Technological principles

The selection of the correct technological delivery mode is very important in the DMEP. The variety of backgrounds that the learners are from and their available technologies could be stated as reasons. In choosing the most appropriate media the designer should focus on where, when and how learners will be studying. These questions will be answered through Table 4.13.

TABLE 4.13: Questionnaire - technological principles

<p>Media selection</p>	<ul style="list-style-type: none"> • To which of the listed media do you have access? <ul style="list-style-type: none"> - Video machine - CD-player - Overhead projector - Cassette player - Computer - Computer with CD-drive <p>1 = I have one at home 2 = There is one at school 3 = I could get hold of one, but with difficulty 4 = Impossible to get hold of one</p> • Discuss how the audio and video cassette enhanced the learning process? • What would you like to be added to these cassettes? • How did the use of media contribute to your understanding of the practical music skills? <p>Do you have any suggestions to make the facilitation even more effective?</p>
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CONCLUSION

Having structured the evaluation of each component of the DMEP, the success of the programme can be determined. It is, however, important to remember the circular structure of both action research and the systems approach, highlighting the recurrence of the evaluation process. The problems identified through the assessment will be solved by once again analysing the target population and their needs, the course content and the formulating of learning outcomes. The problems identified will then need to be redesigned according to the structure and style of the text, the correct use of guidance structures and the facilitation of self-assessment questions. It is, however, possible that the problem lies with the development sector. If this is the case, the instructional designer should evaluate the effectiveness of the delivery mode.

Only after all the problems are addressed, will the programme be implemented and will the learner and designer once again get the chance to evaluate the effectiveness. This recurring design process will continue until the designer is satisfied that this is a meaningful learning programme. The designer should also bear in mind that the designed programme will need to be reassessed as time progresses and as the parameters of the DMEP change. These changes could include learning population, learner needs, course content, availability of delivery modes and the structure of the course.

Having completed the evaluation the DMEP, step 4 of the action model can be introduced. Step 4 will focus on a **reflection** on the programme that was designed. The reflection will be based on the answers of the assessment questions. To determine if the design was successful, the outcomes of the evaluation will be discussed in Chapter 5.