The experience of first-year BMus music students of a movable *do*-tonic solmisation programme

by

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Abstract

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Sight-singing is one of the indispensable elements of musicianship. Pre-university students at the North-West University start the BMus ear-training course with insufficient sight-singing skills. This is because of inadequate sight-singing training on primary and secondary school levels. However, sight-singing skills can be effectively remediated by the use of the movable *do*-tonic solmisation programme.

In this study the impact of a movable *do*-tonic solmisation programme on the experiences and the improvement of the sight-singing abilities of first-year BMus ear-training students at the School of Music of the North-West University was documented. Perceptions and experiences of first-year music students were noted and a model that described the interaction between values, attitudes, motivation, performance and experiences for the study is postulated. The main research methodology of the study was action and empirical research. Questionnaires, interviews, observations and assessment data were used. The need to improve sight-singing on secondary school level is pointed out as well as the benefits of the use of a movable *do*-tonic solmisation programme.

Opsomming

Die belewing van 'n tonika-*do* solmisasieprogram deur eerstejaar studente

Bladsangvaardighede is een van die onontbeerlike musikale vaardighede waaroor 'n musikus moet beskik. Voornemende musiekstudente by die Noord-Wes Universiteit begin hulle tersiêre musiekonderrig met gebrekkige bladsangvaardighede as gevolg van onvoldoende bladsangonderrig op primêre- en sekondêre onderwysvlakke. Bladsangvaardighede kan egter effektief ontwikkel word deur die gebruik van die tonika-*do* solmisasie stelsel.

In hierdie studie is die impak van 'n tonika-*do* solmisasieprogram op die belewing en die verbetering van bladsangvaardighede van eerstejaar gehooropleidingstudente aan die Noord-Wes Universiteit gedokumenteer. Persepsies asook die belewing van die eerstejaar Bmus-studente is waargeneem. 'n Model wat die interaksie tussen die waardes, houdings, motivering, prestasie asook belewing van eerstejaar Bmus-studente tydens die studie illustreer, is gepostuleer. Die hoof navorsingsmetodologie van die studie het berus op empiriese- sowel as aksienavorsing. Vraelyste, onderhoude, waarneming en assesseringsdata is vir hierdie doel gebruik. Die noodsaaklikheid om die gehalte van bladsangonderrig te verbeter word in die studie uitgelig. Die effektiwiteit van en die gebruik van 'n tonika-*do* solmisasiestelsel as hulpmiddel vir bladsang word aangetoon.

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"Use what talent you possess. The woods would be very silent if no birds sang except those that sang best."

Henry van Dyke

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CHAPTER 1 INTRODUCTION TO THE STUDY

1.1 Problem statement and substantiation

Sight-singing is an important tool for the development of music-reading skills, according to Karpinski (2000:145). Several music educators agree with this, among them Ottman (1996:1):

> An important attribute of the accomplished musician is the ability to *hear mentally* — that is, to know how a given piece of music sounds without the aid of an instrument. Sight-singing, together with ear training and other studies in musicianship, helps develop that attribute.

According to Rogers (1984:126), singing has a vital part to play in training the ear, as well as other musical abilities; "To be able to sing is one of the most useful tools of practical musicianship." He points out, for example, that for him "the goals of sight-singing cannot be easily distinguished from those of melodic dictation." He also defines, like Ottman, the "two separate aspects namely, the vocal performance itself as well as the aural imagery." Telesco believes that sight-singing is an important facet of ear training and one of the best ways to practise it. He emphasises that sight-singing is also the beginning of learning to hear music analytically (Telesco, 1991:179).

At the ISME world conference in Bologna, Italy, in July 2008 a symposium was held on the legacy of the eleventh-century Italian monk, Guido d'Arezzo (c.995–c.1050), who recognised a need for choristers to sing at sight from music notation.

Research done at the University of Pretoria and the University of the Witwatersrand showed that undergraduate students starting their BMus course generally lacked sight-singing abilities (Pruneau, 1995:110-113). Resources for the effective implementation of music in the school curriculum have deteriorated since the 1990s (Klopper, 2004:1-2), resulting in even more deficient individual and group music training, which in turn leads to mediocre sight-singing abilities and inferior aural skills. Researchers such as Odone (2008:195), Ittzés (2008:199), Stevens (2008a:196) and Karpinsky (2000:145), to mention a few, agree about the efficiency of a movable *do* system for sight-singing. Smith (1991:22) defines important educational assets to be gained by using the movable *do*-tonic solmisation system.

Robbins states that although students attend the same class they may perceive the instructors' effectiveness differently. He argues that perception is a process by which individuals organise and interpret their sensory impressions in order to give meaning to their environment. "We tend to see the world as we want to perceive it" (Robbins, 1986:62.) Values lay the foundation for the understanding of attitudes and motivation as well as influencing perceptions. This view is supported by Aldag *et al.* (in Dessler, 1986:279), who point out that "even though the task was identical for all students, there were significant differences in how the students perceived their task". If the above findings are taken into consideration, it can be assumed that students will have different experiences of a movable *do*-tonic solmisation system for sight-singing and that the efficiency of teaching will be influenced by these experiences. The main question of this study will therefore be: What is the impact of a movable *do*-tonic solmisation programme on the experiences and the improvement of sight-singing abilities of first-year BMus aural training students at the School of Music of North-West University? To be able to substantiate the main research question, the following sub-questions will be addressed:

(a) What was the standard of sight-singing skills of BMus students starting their first year at North-West University?
(b) What were the perceptions of sight-singing held by BMus students starting their first-year at North-West University?
(c) What were the observed patterns of improvement in the sight-singing abilities of first-year BMus students?
(d) What was the change in attitudes, perceptions and behaviour of first-year music students towards a movable *do*-tonic solmisation programme?
(e) Did the observed behavioural changes follow the suggested Values, Attitudes and Perceptions Performance Enhancement model?
(f) Did the movable *do*-tonic solmisation programme prove to be a useful aid for improving sight-singing abilities of first-year BMus students at North-West University?

These questions will be investigated through empirical and action research.

1.2 General objective

The general objective of this study is to investigate the impact of a movable *do*-tonic solmisation programme on the experiences and the improvement of sight-singing abilities of first-year BMus aural training students at the School of Music of North-West University.

1.3 Terminology

Solmisation

Karpinski (2007:8) defines solmisation as "the discipline of singing syllables that correspond to pitches (or rhythms)."

Movable *do*-tonic

For the purpose of this study the term movable *do*-tonic refers to sight-singing in the movable *do* solmisation system. In this system *do* represents the tonic or first degree of the major scale, regardless of the key and the tonic of the relative major key in the *la*-minor where the tonic or first degree of the minor scale is *la* (Herbst, 1997:89; Smith, 1991:15; Telesco, 1991:180).

Sight-singing

Sight-singing is a "musical aid in the development of mental imaginary of the symbols of printed music which in turn leads to higher levels of musicianship and artistic achievement" (Ottman, 1996:1).

Ear training

According to Lloyd *et al.* (1980:xiii), "ear training is mind training. It involves recognition and memory. Store in your mind, as in a computer, the sound of each interval, type of scale, the distinctive sound of each type of triad and seventh chord, rhythmic ratios, compositional devices, such as sequence, and the sound of compositional styles".

First-year music students

In this study first-year music students passed an audition at the School of Music at North-West University to study the four-year degree in music. One of the major subjects in the curriculum of this BMus degree course is a three-year aural training course, where the three main objectives are sight-singing, rhythmic and melodic dictation and keyboard harmony.

Inner hearing

Inner hearing has been described under various headings namely: auralising (Karpinsky, 2000:49), pitch internalisation and audiation (Klonoski, 1998:81). According to Lake (1993:70), the term to "audiate" or to "hear mentally" means to give meaning to a sound by (subconsciously) assigning it to a category. Benward (1978:vii) speaks of the "hearing eye" and the "seeing ear", and defines the term "inner hearing" as a "sense of musical awareness, a sixth sense of auditory-visual kindred ship."

ANOVA

ANOVA is a statistical analytical tool to determine if the difference in the means of more than two groups is statistically significant.

1.4 Research Investigation

The study includes an investigation covering:

- Literature focused on the history and the national and international use of solmisation, behavioural aspects that impact on the teaching of sight-singing as well as constructivism in teaching;
- Empirical and action research conducted through questionnaires, interviews, observations and assessment opportunities.

1.4.1 Literature study

The literature study is aimed at three different study areas. Firstly, relevant current and historical documentation on the history and the use of solmisation internationally and nationally is studied. The second focal point is the values, perceptions, attitudes and behaviour of first-year students. The third study area is focused on constructivism as a teaching method for sight-singing.

1.4.2 Research methods

From an interpretivist framework, quantitative empirical research as well as qualitative action research is undertaken to determine the change in perceptions of first-year music students at the School of Music on the Potchefstroom campus of North-West University

as their sight-singing abilities improve (Henning *et al.*, 2005:16). This study reports on the findings of a survey conducted among this group. According to Peshkin (Leedy and Ormrod, 2005:134) a qualitative research approach is used when an evaluation of a particular programme must be done. Chadwick *et al.* (1984:294) describe the design of programme evaluation aimed at establishing whether a specific programme is producing its intended effects. Andsdell and Pavlicevic (2001:132) define qualitative research as consisting traditionally of the following six components:

- Methodology;
- Design;
- Data collection;
- Data preparation;
- Data presentation; and
- Data analyses.

1.4.2.1 Observations

Through observation, practical tests, evaluation and informal feedback from the participating students, the researcher obtained the necessary information to determine how the first-year BMus aural training students experienced the implementation of a movable *do*-tonic solmisation programme.

1.4.2.2 Interviews

During the academic year formal and informal interviews were conducted with all the participating students. Interviews were designed to determine whether the solmisation sight-singing sessions in the aural training classes were meeting expectations and were enhancing sight-singing abilities. Special reference was made to:

- The use of a movable *do*-tonic solmisation programme as an aid for improving these abilities; and
- The change in attitudes, perceptions and behaviour of undergraduate music students with respect to a movable *do*-tonic solmisation programme.

1.4.2.3 Questionnaires

According to Coleman and Briggs (2005:145), a wide audience can be accessed by the use of questionnaires, producing a large amount of information. The active involvement of all first-year BMus students in the solmisation sight-singing programme is evaluated through questionnaires. The information gained from these questionnaires was used to draw conclusions and to evaluate the success of a movable *do*-tonic solmisation sight-singing programme.

1.4.2.4 Assessments

Assessment data were collected and the information gained was used to determine the sight-singing abilities, patterns of improvement, experiences and the impact of the *do*-tonic solmisation programme on the first-year BMus students of 2006, 2007 and 2008.

1.5 The organisation of the study

Chapter 1

Chapter 1 describes the aim of the document. It also defines the field of the study and describes the study methods used. Explanations of the terms used in the study are included in this chapter.

Chapter 2

In this chapter a historical background on solmisation, a brief overview of the different solmisation systems and the use of solmisation internationally and nationally are presented. Certain behavioural aspects that influence the students' experiences such as values, perceptions, attitudes and motivation are discussed, and a theoretical overview on constructivism as a teaching theory or practice is given.

Chapter 3

In this chapter the movable *do*-tonic solmisation programme for sight-singing is presented. The methodology of the research is discussed under the following headings: data preparation, data collection, data presentation, data analyses, interviews, observations and questionnaires. A Values, Attitudes and Perceptions Performance Enhancement Model is postulated, discussed and graphically presented.

Chapter 4

In this chapter the results obtained from the questionnaires, interviews and observations are graphically presented, discussed and analysed.

Chapter 5

In this chapter results are interpreted and used to draw conclusions on the study field. Recommendations for improvements in the teaching of sight-singing are suggested. The limitations and the relevance of this research are also noted in this chapter.

CHAPTER 2 LITERATURE STUDY

2.1 Introduction

The literature study of the different study areas was conducted at the library of the School of Music at North-West University as well as through other sources such as books, periodicals, dissertations, academic search engines and technological sources, for example

- GKPV ;
- NEXUS;
- ISAP;
- ERIC;
- Web Feat;
- Pro Quest SAE publications;
- JSTOR;
- Google scholar;
- IIMP;
- EBSCO;
- http://ananzi.co.za and
- http://stardat.nrf.ac.za/.

The following areas were studied:

- Background to solmisation and the movable *do*-tonic;
- International and national use of solmisation;
- Solmisation systems;
- Factors influencing student experiences;
- Constructivism in teaching.

2.2 Background to solmisation and the movable *do*-tonic

2.2.1 Introduction

Heller and Wilson (1992:103) believe that background research by definition entails a historical perspective. If things didn't happen, they can't be written about. In this study a short historical development of solmisation is discussed as background to the investigation. This will lay the foundation for understanding the motivation of past and present practice of the movable *do*-tonic as a teaching device for sight-singing at the School of Music at North-West University.

2.2.2 Guido d'Arezzo

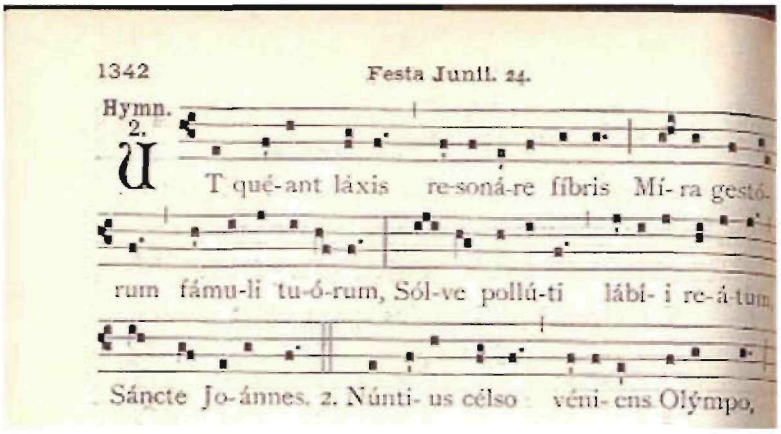
Guido Aretinus d'Arezzo was known as a theorist and teacher, and specifically for his reform of musical notation in the eleventh century (Thompson, 1975:882). Guido d'Arezzo became famous for his innovative solmisation system for sight-singing which used the syllables *ut, re, mi, fa, sol, la,* a music staff of four lines with spaces (Slonimsky, 1984:908; Palisca, 2001:522) and the implementation of the Guidonian hand as a mnemonic device for sight-singing (Thompson, 1975:882; Slonimsky, 1984:908). His greatest contribution to music theory was his work *Micrologus,* written around the year 1050. In *Micrologus* Guido d'Arezzo explained his solmisation system for sight-singing and discussed polyphonic music as well as plainchant (Palisca, 2001:522).

Scholars are unsure about the precise date of birth of Guido d'Arezzo. He must have been born between the years c.995–c.991 in a town named Arezzo, in the district of Tuscany, Italy. He studied at the Benedictine Abbey and became a monk at the monastery of Pomposa on the Adriatic coast (Palisca, 2001:522) near Ferrara (Slonimsky, 1984:908; Thompson, 1975:882). Around 1025, after disagreements with envious fellow monks in Pomposa, Guido was summoned by Bishop Theodaldus of Arezzo to the cathedral school of Arezzo (Palisca, 2001:522; Slonimsky, 1984:908). The Bishop of Arezzo assigned him the task of training singers for the city's cathedral services. During these singing sessions Guido d'Arezzo and the choristers recognised the need for a new and more rapid way of singing and learning unknown music for services at the cathedral. While training choristers at the monastery of St. Maur des

Fossés near Paris (Thompson, 1975:882), he developed a system of mnemonics which enabled singers to sing any given pitch written in staff notation (Bridges, 1982:12). This method based on a music staff of four lines influenced the teaching and reading of music in the Western world for centuries (Bridges, 1982:11; Thompson, 1975:719). In this system, known as solmisation (Thompson, 1975:882), Guido used the first seven letters of the Roman alphabet (Palisca, 2001:523), *A, B, C, D, E, F* and *G*, for naming the notes and arranged them vertically as a series of overlapping hexachords beginning on *G, C* and *F* (Bridges, 1982:11-12). The relationships between these six notes of each hexachord, as in the first six degrees of the major scale, were always the same (Bridges, 1982:12).

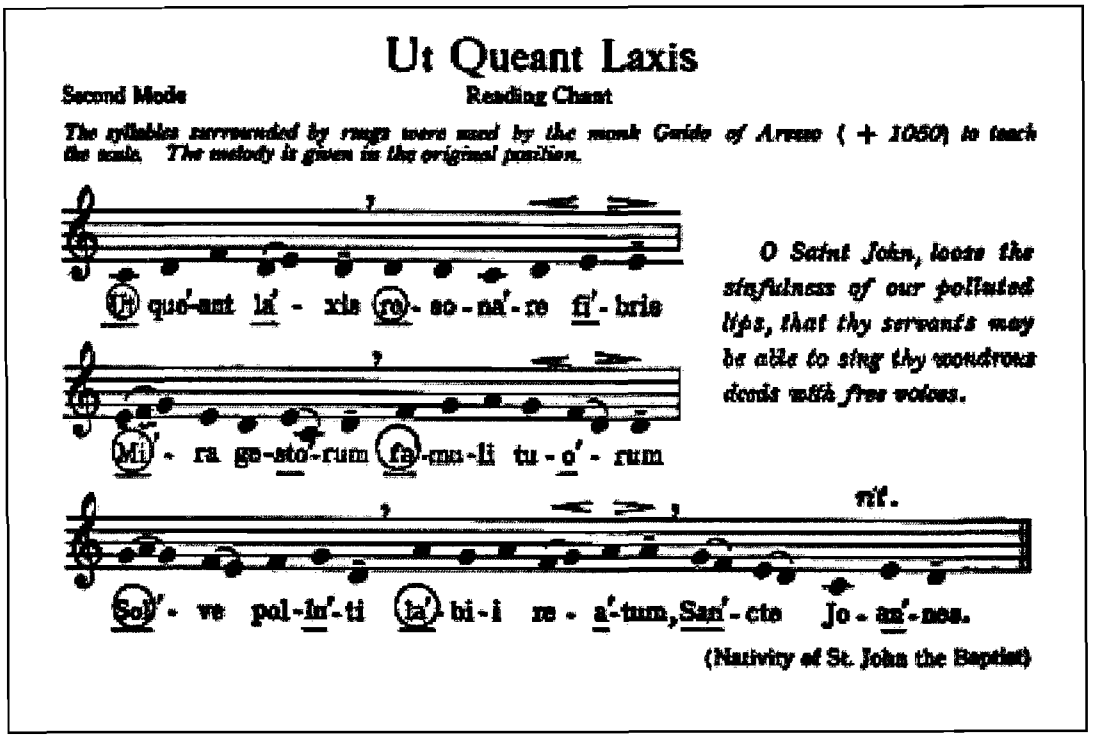
Guido taught a Latin hymn, the Hymn to St. John, to his choir boys in which each of the six phrases began with a different note of the hexachord (Palisca, 2001:523; Laczo, 2008:1; McNaught, 1893:35; Slonimsky, 1984:908; Thompson, 1975:882). The melody of this hymn was unknown before Guido's time and never had any liturgical function. Guido took the melody, transcribed and used the first six phrases as well as the lyrics, as a mnemonic device to develop a method of solmisation for sight-singing (Palisca, 2001:524). Figures 1a, 1b and 1c demonstrate the first six musical phrases of *Ut quent laxis*, the Hymn to St. John, on which Guido based his solmisation syllables.

Figure 1a: The Hymn to St. John



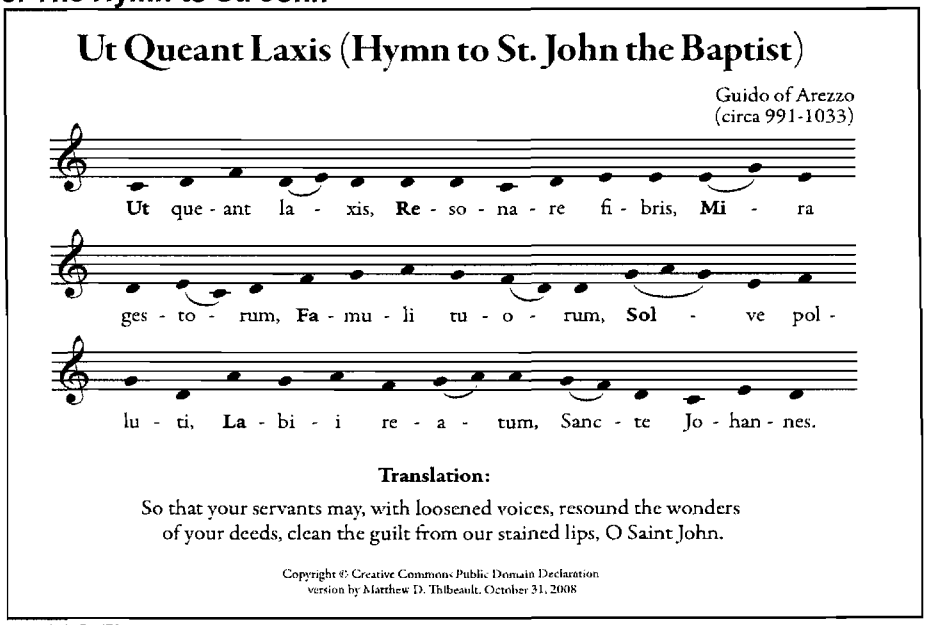
(Westminster Cathedral, 2007:1)

Figure 1b: The Hymn to St. John



(Poor-Blogger, 2007:2)

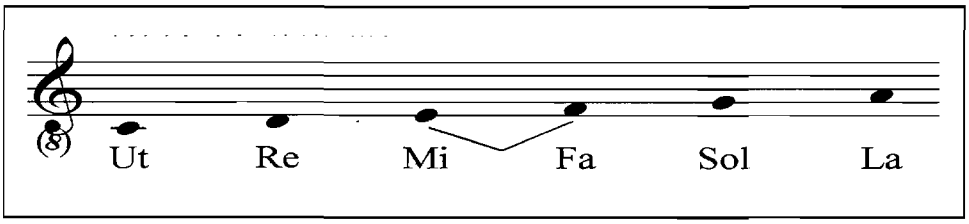
Figure 1c: The Hymn to St. John



(Answers, 2008:5)

These syllables, *ut re mi, fa, sol, la,* sung on these actual sounds, became the names of the first six notes on the staff (Bridges, 1982:12) and were called by Guido the Guidonian syllables or *neumes* (Palisca, 2001:523). Figure 2 is an illustration of these first six solmisation syllables as transcribed in staff notation.

Figure 2: The Guidonian syllables



(Palisca, 2001:523)

Later, these syllables also formed a scale named the Aretinian scale (Thompson, 1975:883), which was used as the basis of a method of solmisation, or singing by syllable, known as the Hexachord System (Randel 1986:356; Thompson, 1975:883). These Guidonian hexachords, as illustrated by the first six tones, represented the tonal succession of the major scale as known today (McNaught, 1893:35).

By overlapping a series of seven hexachords each with a semitone between *mi* and *fa*, Guido covered a range of 21 (Palisca, 2001:523) tones from G' to e' (Thompson, 1975:883). The scale begins on the note on the lowest line, bass clef, G', *gamma* in Greek. The first syllable of the hexachord was *ut*, *gamma-ut*, which is where the term for scale, *gamut*, comes from (McNaught, 1893:38; Thompson, 1975:883). The movable and overlapping hexachords of Guido d'Arezzo, are graphically represented in Table 1:

Table 1: The movable overlapping hexachords of Guido d'Arezzo

The medieval hexachordal system								
note	syllable							
ee								la
dd							la	sol
cc							sol	fa
bb								mi
bb							fa	
aa						la	mi	re
g						sol	re	ut
f						fa	ut	
e					la	mi		
d				la	sol	re		
c				sol	fa	ut		
b					mi			
b				fa				
a			la	mi	re			
G			sol	re	ut			
F			fa	ut				
E		la	mi					
D		sol	re					
C		fa	ut					
B		mi						
A		re						
G		ut						

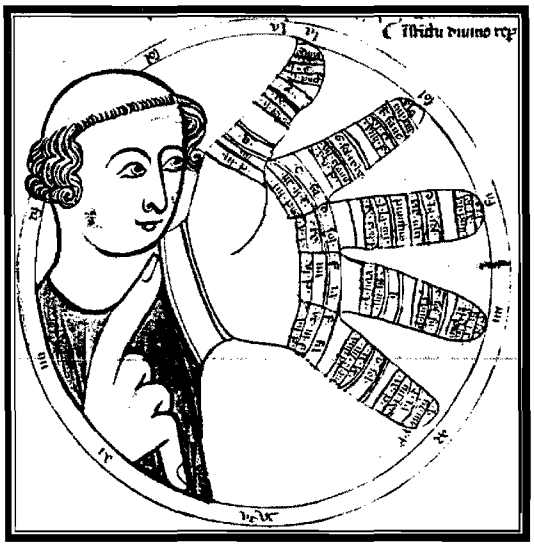
(Palisca, 2001:646; McNaught, 1893:37; Thompson, 1975:1749)

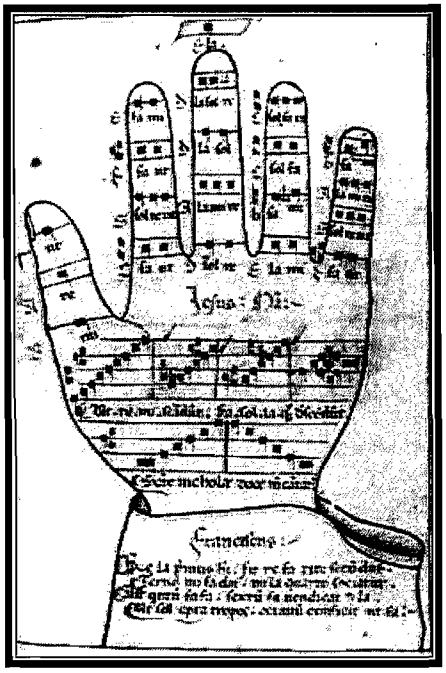
All this aroused the attention of Pope John XIX of Rome. In 1028 Pope John XIX called on Guido to explain how his new solmisation system works. Guido, accompanied by Dom Peter and Grunwald of Arezzo, visited the Pope around the year 1028 to explain solmisation, his innovative teaching methods as well as his antiphoner, a music staff of four coloured lines, to the Pope and the clergy of Rome (Palisca, 2001:523; Slonimsky, 1984:908). In spite of Guido of Pomposa's invitation to Guido to return to Pomposa, Guido decided to stay for the remainder of his life at the monastery of Avellana of the Camaldolese order near Arezzo. After several theoretical writings, Guido d' Arezzo died on 17 May 1050 in Avellano (Thompson, 1975:882).

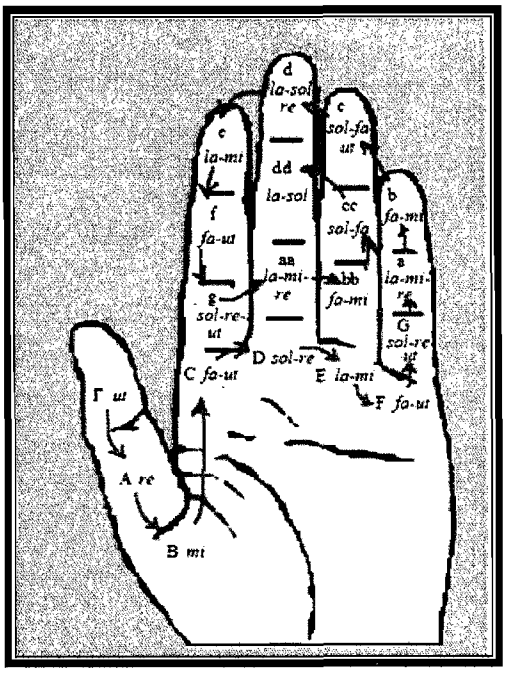
2.2.3 The Guidonian Hand

During his life Guido d'Arezzo was constantly searching for new efficient aids to improve the sight-singing and solmisation abilities of singers and choristers. Although he wasn't the founder of the so-called Guidonian Hand (McNaught, 1893:37; Randel, 1986:356), Guido adopted, applied and popularised the use of the Guidonian Hand as a device to train and lead the eyes and ears of choristers and singers by using certain joints of the palm and fingers of the left hand to indicate ascending and descending passages of Gregorian chants (Palisca, 2001:525; Rockstro, 1889:78; Slonimsky, 1984:908; Thompson, 1975:883). Each part of the hand represented a particular note within the Guidonian movable hexachord system, which spanned nearly three octaves from the *Gamma Ut* to the *E la* (Alburger, 2008:7). Although this method was intricate and relied upon the utmost concentration from choristers, a solmisation method for sight-singing was starting to develop (Thompson, 1975:883). The Guidonian Hand as implemented by Guido d'Arezzo is illustrated with the next three examples in Figure 3 (Alburger, 2008: 6-8):

Figure 3: The Guidonian Hand







(Alburger, 2008: 6-8)

During the 13th century the six-note scale of Guido d'Arezzo, *ut re mi, fa, sol, la,* was increased to seven pitches and the *ut* was changed to *do* to make the syllable more singable. The *si* was added as the seventh step (Laczo, 2008:1). In 1482 Ramos criticised Guido d'Arezzo's system of overlapping hexachords and proposed an alternative. During 1610-1612 Ramos and Johannes Lippius introduced system of syllables that span a whole octave (Medieval, 2008:1). By the late 17th century these octave-based syllables became the eight notes of a certain key, namely *do, re, mi, fa, so la, si, do. Si* became *ti*, with all major keys having their tonic on *do* and minor keys on *la* (Medieval, 2008:5). Guido's movable *do* system remained in use until musicians in Italy and France started using the fixed *do* system, where *C* is always *do*, regardless of the key (Laczo, 2008:1). In Italy solmisation is no longer popular. Although some teachers are still using the movable *do* for sight-singing and ear training, the majority prefer to use the fixed *do* system (Odone, 2008(b)). Odone insists that solmisation still has an important part to play globally in music education (Odone, 2008a:195).

2.2.4 Solmisation in the British Empire, Europe, United States of America, Canada, Hungary, Japan and the Republic of China

Sarah Glover (1786-1867) of Norwich in Norfolk, England is recognised today as a momentous contributor for using the movable *do* solmisation syllables as a mnemonic device for sight-singing from staff notation in England (Leinster-Mackay, 1981:166). Sarah Glover introduced a modulator with a scale chart which resembled a ladder for teaching singing. She used her own notation, which consisted of the initials of the old scale names (Leinster-Mackay, 1981:165; Southcott, 2008:196). Glover's teaching of children to sing from sight was such a great success that her father, Reverend Edward Glover, asked her to be the conductor and trainer of the choir at the parish in Norwich (Leinster-Mackay, 1981:165). According to Southcott (2008:196), Sarah Glover perceived four major problems with the established *gamut* notation, namely:

- The inadequate representation of the scale on the staff that made no visual difference between tones and semitones;
- The necessity of non-accidental sharps and flats;
- The range of clefs that permitted different representations of the same sounds;
- The needless complexity of symbols used to represent the same note in different octaves (Southcott, 2008:196).

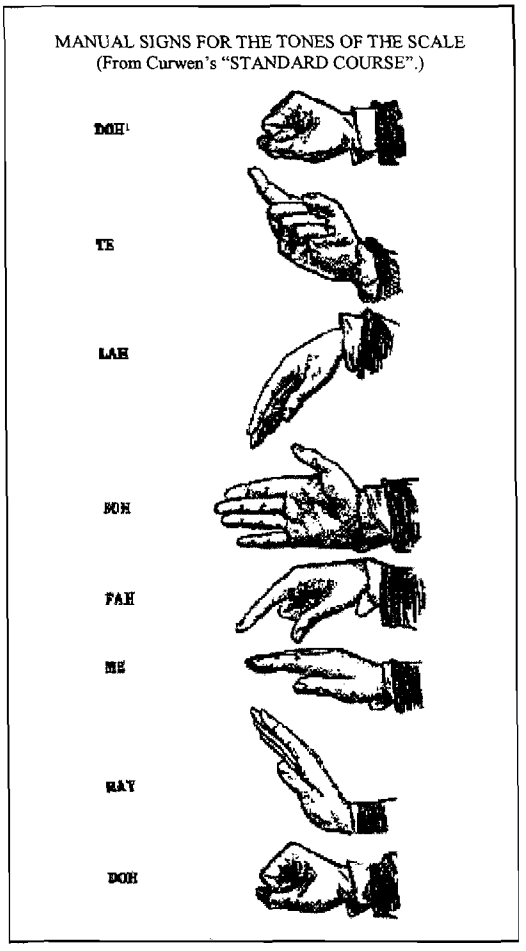
According to Southcott, Glover contributed by:

- Employing the established solmisation syllables;
- Converting their spelling to match English pronunciation: *Doh, Ray, Me, Fah, Sole, Lah;*
- Replacing the European *Si* with *Te* to enable abbreviation to a single letter to avoid confusion;
- Adding *Bah* and *Ne* to represented the sharpened 6^{th} and 7^{th} in the ascending minor and major mode respectively;
- Developing a modulator that encompasses all chromatic notes and covered all keys to seven sharps and seven flats;
- Printing of Glover's notation without recourse to expensive music engraving;
- Producing cheap music for the use in schools and churches;
- Offering a practical, theoretically sound and carefully sequenced music pedagogy that cleverly used solmisation to accomplish all she intended (Southcott, 2008:197).

Reverend John Curwen (1816-1880) became interested in Sarah Glover's sol-fa notation and her method of movable solmisation syllables in which the tonic of any key was

always *do* (Deakin University, 2008:2; Bridges, 1982:13). After a conference for Sunday school teachers in 1841, Curwen started teaching himself and his Sunday school children church hymns by using the Glover Norwich Sol-fa method (Deakin University, 2008:1; Laczo, 2008:2; Leinster-Mackay, 1981:164). During the 19th century Curwen started making use of the Glover hand signals which accompanied the movable *do* syllables system (Laczo, 2008:2). Figure 4 gives a graphic illustration of these hand signs, the Glover Sol-fa Ladder which Curwen adapted in what he called The Tonic Sol-fa Modulator.

Figure 4: The Curwen Tonic Sol-fa Modulator



(Deakin University, 2008:3)

Curwen published a number of textbooks. In 1872 *The Standard Course*, text books, vocal music and instrumental music books were published in which Curwen excluded

staff notation totally and used only the Curwen Tonic Sol-fa notational system (Deakin University, 2008:3; Leinster-Mackay, 1981:164). Curwen left a legacy of three important stages in music literacy to read from:

- Sol-fa notation;
- Staff notation in conjunction with sol-fa notation;
- Staff notation alone (Deakin University, 2008:2).

In 1860 the British Department of Education officially acknowledged and adopted the tonic sol-fa system in all English schools. In 1867 New South Wales and Australia followed in their footsteps (Deakin University, 2008:4). Curwen and Graham (Deakin University, 2008:4) refer to a Tonic Sol-fa movement and an outreach during the 19th century by enthusiastic Tonic Sol-fa followers and missionaries that spread throughout the Australian colonies, New Zealand, South Africa, Canada, India, Madagascar, China, Japan, Fiji, the South Sea Islands as well as the United States of America (Deakin University, 2008:4). Tonic Sol-fa was used throughout the British Isles as a means of enhancing Christian worship and in this way achieving social reform (Stevens, 2008b:197).

In France, Portugal and Spain prominent music teachers such as G.L. Bocquilon Wilhem in Paris, Joseph Mainzer (initially from Paris and later in London) as John Hullah taught the fixed *do* solmisation (Frega, 2008:199; Stevens, 2008b:196). This fixed *do* solmisation, which originated in France, became significant in all sight-singing practices of Latin America. However, it was the music pedagogical and ear training methods of Eslava, a Spanish composer and author of various textbooks, and of Lemoine and Lavignac that were developed, implemented and used in the conservatories of Latin America. Today the movable *do* is no longer used in aural and sight-singing training in Latin America (Frega, 2008:199).

In North America Lowell Mason (1792-1872) and other music educators of this era made use of the Tonic Sol-fa modulator to teach musical tone relationships. From 1879 up to the late 1880s Theodore Seward, John Tufts and Hosea Holt made use of the movable *do* as well as the Curwen hand signs, but had serious reservations about the merits of the Tonic Sol-fa and staff notation (Deakin University, 2008). Several methods of sight-

singing have been used in North America recently, namely the fixed *do*, the movable *do*, numbers and also only one syllable for every pitch, such as *la* (Berkowitz *et al.,* 1976:2).

During the second half of the 19th century the movable-*do* solmisation system of Curwen was implemented and introduced in English-speaking regions of Canada, namely, Newfoundland, Victoria, British Columbia, Ontario, Nova Scotia, New Brunswick and Prince Edward Island. Here, the movable *do* solmisation is still in use, especially in Ontario, Nova Scotia, New Brunswick and Prince Edward Island. However, all the French–speaking communities of Canada still use the fixed *do* solmisation system (Vogan, 2008:198).

In Hungary the Hungarian music pedagogue and composer Zoltan Kodály first became interested and aware of the Tonic Sol-fa in the 1920s in England (Ittzés, 2008:199). Jeno Adam, a music composition student of Kodály, published a book in 1943 entitled *Systematic teaching of singing in school music on the basis of relative solmisation* (Laczo, 2008:3). Kodály ordered Adam to transpose and adapt the movable *do* solmisation system for Hungarian folk music so that it could be applied in all pubic schools. Together Adam and Kodály published *Schoolbooks* (1944-1948) in which the movable *do* was introduced into the general school curriculum of Hungary (Ittzés, 2008:200). This introduction of the movable *do* turned out to be a success.

Between the years 1937 and 1942 Kodály wrote the well-known *Bicinia Hungarica* exercise books for singing with the movable *do* solmisation syllables as its basis (Ittzés, 2008:200; Laczo, 2008:3). Kodály acknowledged that the use of relative sol-fa names to symbolically represent the tonal functions of notes is better than using letter names or the fixed *do* system. For Kodály this was the superior way to develop fluency in music reading. He believed that the human voice is critical for the development of music literacy. He based his entire music education system on singing and used singing to develop a child's "inner hearing". Singing develops fundamental musical abilities and understanding such as "inner hearing", aural memory and aural perception (Choksy *et al.*, 1986: 71). Today the movable *do* is predominant and widely used in Hungary, especially for the teaching of music elements, music theory and ear training as well as in all folksong, harmonic, theoretical and aesthetic analysis of music compositions (Ittzés, 2008:200).

Analogous to developments in the rest of the world, missionaries brought the Tonic Sol-fa to China. Before the 19th century it was almost impossible to do missionary work in China. In the early 19th century, after the British Royal Navy blockade, the Treaty of Nanky (1842), the Treaty of the Bogue (1843) and the commence of British governance of 99 years, all ports in China were opened. All European and American missionary organisations started evangelical work in China. Missionaries such as the Church Missionary Society, the London Missionary Society, the English Presbyterian Missionary, the China Inland Mission and the Wesleyan Mission Society implemented the Tonic Sol-fa for music instruction to enhance Christian teaching and specially hymn singing. The Tonic Sol-fa was well received. From 1847 William Chalmers Burns (1815-1868) revised, enlarged, translated and published numerous English hymns and song collections in various Chinese dialects. Other prominent advocates of Tonic Sol-fa who contributed to the implementation of the Tonic Sol-fa in China were Douglas, Crawford, Campbell and Fryer. A translated Chinese version of the Tonic Sol-fa is still in use in China today (Southcott & Lee, 2008:213-228).

The Music Study Committee, in association with Luther Whiting Mason, developed solmisation exercise books for public schools in Japan (Howe, 2008:198). Mason introduced the Japanese music educators to the European solmisation methods (Howe, 2008:199). Solmisation syllables in the Japanese language are still currently used in the school music curriculum (Howe, 2008:199). The following *Kana* from the Japanese syllabary *ha, ni, ho, he, to, i, ro, ha,* which corresponds with the Western scales C, D, E, F, G, A, B, C, were used by Isawa Shuji, the former chairman of the Music Study Committee (Howe, 2008:198). *Ongaku,* a certain song method published in 1986, emphasises the use of music instruments to learn music and still uses the following *kana* on the keyboard and music staff: *do, re, mi, fa, so, ra, shi,* with the movable *do* (Howe, 2008:198).

2.2.5 Solmisation in South Africa

In South Africa Tonic Sol-fa was promoted through Christian missions as a means of evangelising indigenous populations that did not have any access to music training. The Tonic Sol-fa became the mainstay of community choral singing (Stevens, 2007:37;

Stevens, 2008(a):197). The use of Tonic Sol-fa was also introduced into government schools' singing classes (Stevens, 2007:37).

Stevens (2007:39) identifies three phases of development of the Tonic Sol-fa in South Africa:

- Beginnings in the Cape Colony as part of British cultural reproduction;
- Dissemination through Christian missions;
- Promotion in government-supported schools.

Christopher Birkett was the pioneer of the Tonic Sol-fa in the Cape Colony during the 1860s. Birkett was a teacher trained in John Hullah's fixed *do* solmisation method. He immigrated to South Africa 1854. In the late 1860s he taught Tonic Sol-fa in Sunday schools in Grahamstown. It was noted that he used the Tonic Sol-fa to teach the indigenous and colonial communities of the Eastern Cape choral pieces of well-known composers of that time. In 1871 Birkett published a Tonic Sol-fa book entitled *Ingoma or Penult Psalm Tunes* (in Stevens, 2007:39-40).

In 1863 Henry Nixon, inspector of School Music in the Cape, taught Tonic Sol-fa at the Wesleyan Grammar School and the Trinity Episcopalian Church in Cape Town. In 1898 Nixon published a momentous Tonic Sol-fa manual entitled *The Tonic Sol-fa System: What is it?* (Stevens, 2007:39).

According to *The Musical Herald* of 1894, a music teacher, conductor and solo singer named John Henry Ashley (1824-1898) introduced and taught the Tonic Sol-fa to the Dutch and English communities of Cape Town (Bouws, 1971?:30; Stevens, 2007:40). At a meeting of the South African Teachers Association, on 11 December 1876, Ashley discussed the possibility of presenting singing and the teaching of practical music instruments in public schools (Bouws, 1971?:32). According to numerous articles in *The Tonic Sol-fa Reporter* of 1892, up to 1899 Ashley continued his Tonic Sol-fa teaching as choir master of the Cape Town Philharmonic Society at the Cape Town Choral Society. He also extended his Tonic Sol-fa teachings to various local churches, the Scottish Mission College in Zonnenbloem, the Episcopal Churches and the Sacred Harmonic Society (Stevens, 2007:40).

Other pioneer teachers of Tonic Sol-fa in South Africa included the English dentist, Thomas Daines, who mostly taught Tonic Sol-fa in King Williams Town between the years 1860 to 1870, the Reverend George Morgan and William Thomas, who was active in teaching the Tonic Sol-fa in Stellenbosch and Somerset West (Stevens, 2007:40).

During the 19th century the missionaries of the non-conformist Protestant denominations like the Baptist, Congregational, Methodist, Presbyterian churches and French Protestant Missions implemented the Tonic Sol-fa method as part of their missionary work to encourage congregational hymn singing. The Tonic Sol-fa notation singing method spread to missionary stations in the Eastern Cape and Basutoland (Stevens, 2007:41). From 1823, under the auspices of the Lovedale missionary station, the Lovedale Press printed, published and distributed various kinds of Christian literature, school and hymn books in Tonic Sol-fa notation, as well as the Bible in Xhosa.

At Lovedale, during the late 19th century, the compositions of Reverend John Knox Bokwe (1855-1922) were published in Tonic Sol-fa notation (Malan, 1979:202; Stevens, 2007:42). The composer Enoch Mankanyi Sontonga (1873-1905), educated at the Loveday missionary station, composed the melody *Nkosi Sikelel 'iAfrika*, which was published in 1929 in Tonic Sol-fa notation in the Presbyterian Hymn Book by the Lovedale Press (Kirby, 1979:211). Today *Nkosi Sikelel 'iAfrika* forms the first part of the new national anthem of the Republic of South Africa. The Tonic Sol-fa gained popular recognition and its use spread to public and government-supported schools (Stevens, 2007:43).

Teaching pioneers such as John Ashley, Henry Nixon, Arthur Lee, James Roger, Thomas Muir and Frederic Farrington advocated, taught and implemented the Tonic Sol-fa method of reading music in public and mission schools, teacher training colleges and institutions as well as local communities in and around Cape Town and Port Elizabeth (Stevens, 2007:43).

African musicians, conductors, composers and teachers rely on the Tonic Sol-fa notation as a means to read and write music; however, the Tonic Sol-fa notation system should only be used as "a stepping stone to staff notation" (Gruber, 1973:v). The Tonic Sol-fa music notation system is currently used extensively in South Africa as a choral teaching

method and was indigenised by the local community choirs. John Curwen had exactly this in mind when he developed the Tonic Sol-fa notation method (Stevens, 2007:49).

Presently choral singing is the most popular form of musical expression among a large part of the South African population (Van Wyk, 1998:23). Numerous choir competitions are held throughout South Africa. The best known are the Caltex-Cape Argus Festival, Nation Building Massed Choir Festivals, the SASOL Choral Festival, Transnet Stica Competition and the Old Mutual National Choir Festival (Stevens, 2007:46). The Tonic Sol-fa music notation system still plays a significant role in the development of a South African music identity (Stevens, 2007:49).

2.3 Solmisation systems

2.3.1 Introduction

One of the major tasks of the users of solmisation systems is to translate pitches into syllables (Karpinski, 2000:166). Teachers cannot reach consensus on which solmisation system to use in ear training and sight-singing, although most agree that the teaching of solmisation has certain beneficial attributes (Smith, 1991:1).

2.3.2 Scale degrees

The most practical variation of identifying pitches by scale degree is to identify scale degrees by number. Numbers are therefore sung instead of any solmisation syllables (Berkowitz *et al.,* 1976:2). One advantage of this system is that students are not required to learn solmisation syllables. Another advantage is that number solmisation brings a greater degree of consistency in the naming of musical structures. For example, the tonic and the dominant are always sung as *one* and *five*, regardless of the key or mode (Smith, 1991:12). Some of the disadvantages of this system are that there is no numerical change for chromatic tones (Berkowitz *et al.*, 1976:2) and, as all modes, major and minor, are sung on the words *one, two, three, four, five, six, seven*, the number solmisation system is incapable of any phonemic modal differentiation (Smith, 1991:12). The scale degree solmisation system is summarised in Table 2.

Table 2: The scale degree solmisation system

	Inflected				Inflected				Uninflected
	Major				Minor				Major or Minor
♭	♮	♯		♭	♮	♯	×		♭ / ♮ / ♯ / ×
	one	raised	1	low	**one**	raised		1	**one**
low	**two**	raised	2	low	**two**			2	**two**
low	**three**		3		**three**	raised		3	**three**
	four	raised	4	low	**four**	raised		4	**four**
low	**five**	raised	5	low	**five**	raised		5	**five**
low	**six**	raised	6		**six**	raised	raised	6	**six**
low	**seven**		7	low	**seven**	raised		7	**seven**
	eight (one)	raised	8	low	**eight (one)**	raised		8	**eight (one)**

(Damshroder, 1995:653)

2.3.3 Letter names

In this solmisation system letter names is used to sing the different pitches. It also provides names for double sharps and double flats (Smith, 1991:6). Smith lists four disadvantages of this solmisation system:

- Chromatic alterations are bi-syllabic;
- Vowel resources are meagre and they include diphthongs;
- The phoneme for *F* ends in a consonant.

The letter name solmisation system is schematically presented in Table 3.

Table 3: The letter name solmisation system

		Inflected			Uninflected
𝄫	♭	♮	♯	𝄪	𝄫 / ♭ / ♮ / ♯ / 𝄪
Ceses	Ces	**C**	Cis	Cisis	**C**
Deses	Des	**D**	Dis	Disis	**D**
Eeses	Ees	**E**	Eis	Eisis	**E**
Feses	Fes	**F**	Fis	Fisis	**F**
Geses	Ges	**G**	Gis	Gisis	**G**
Aeses	Aes	**A**	Ais	Aisis	**A**
Beses	Bes	**B**	Bis	Bisis	**B**
Ceses	Ces	**C**	Cis	Cisis	**C**

(Damshroder, 1995:653)

2.3.4 Fixed *do*

The fixed *do* system uses the same syllable to the same note (for example, do = C) regardless of the key (Rogers, 1984:133). Smith confirms this, but defines two different fixed *do* systems. The first system uses seven syllables (*do, re, mi, fa sol, la, si*) to present the natural pitches from C to B, with all chromatic inflections (Smith, 1991:4). The name of each note is sung regardless of any accidental change in the melody (Berkowitz *et al.*, 1976:2). The second fixed *do* system, namely the chromatic fixed *do*, uses solfeggio sylables. Sharpened and flattened pitches are named by changing the solfeggio vowels to *i* and *e* respectively. Smith (1991:5) believes that both the fixed *do* systems have certain shortcomings. The chromatic fixed *do* system gives rise to difficulties in singing enharmonic alterations. Smith (1991:6) points out that musicians believe that the fixed *do* system facilitates the development of *perfect* or *absolute* pitch. This, however, has not been proven. The table that follows presents the fixed do solmisation system.

Table 4: The fixed *do* solmisation system

		Inflected				Uninflected
𝄫	♭	♮	♯	×		𝄫 / ♭ / ♮ / ♯ / ×
def	*de*	***do***	*di*	*dis*	***C***	*do*
raf	*ra*	***re***	*ri*	*ris*	***D***	*re*
mef	*me*	***mi***	*mis*	*misis*	***E***	*mi*
fef	*fe*	***fa***	*fi*	*fis*	***F***	*fa*
sef	*se*	***so***	*si*	*sis*	***G***	*so*
lef	*le*	***la***	*li*	*lis*	***A***	*la*
tef	*te*	***ti***	*tis*	*tisis*	***B***	*ti*
def	*de*	***do***	*di*	*dis*	***C***	*do*

(Damshroder, 1995:654)

2.3.5 Movable *do*

In the movable *do* solmisation system the *do* represents the tonic or first degree of the major scale, regardless of the key. Accidentals are accounted for by changing the syllables. When a melody modulates, the new tonic is called *do*, and the other notes of the scale follow accordingly. In this solmisation system *do* also represents the tonic of the relative major key of the *la*-minor scale where the tonic or first degree is called *la*. The movable *do* solmisation system develops a sense for tonality and also emphasises the relationship between the different pitch degrees of the scale (Berkowitz *et al.*, 1976:2). Smith states that the movable *do*-tonic enables musicians to improve analytical listening, intensifies aesthetic experience, provides a means to formulate tonal and harmonic relationships and improves inner hearing skills that contribute to the improvement of dictation skills (Smith 1991: 21).

The researcher found that the movable *do*-tonic solmisation system offers the most pedagogical advantages. The movable *do*-tonic

- Develops analytical skills;
- Is orientated towards the ear;
- Stands alone for its consistent naming of musical structures;
- Is singable;

- Lends itself not only to the singing of simple diatonic music, but also to modulation and atonal music;
- Has historical precedents that stretch back to ancient times. (Smith, 1991:21).

Table 5 presents the movable *do* solmisation system schematically.

Table 5: The movable *do* systems

	Major Do = tonic				**Minor Do = tonic**					**Minor La = tonic**		
♭	♮	♯		♭	♮	♯	×		♭	♮	♯	×
	do	*di*	*1*	*de*	***do***	*di*		*1*	*le*	***la***	*li*	
ra	***re***	*ri*	*2*	*ra*	***re***			*2*	*te*	***ti***		
me	***mi***		*3*		***me***	*mi*		*3*		***do***	*di*	
	fa	*fi*	*4*	*fe*	***fa***	*fi*		*4*	*ra*	***re***	*ri*	
se	***so***	*si*	*5*	*se*	***so***	*si*		*5*	*me*	***mi***	*mis*	
le	***la***	*li*	*6*		***le***	*la*	*li*	*6*		***fa***	*fi*	*fis*
te	***ti***		*7*	*tef*	***te***	*ti*		*7*	*se*	***so***	*si*	
	do	*di*	*8*	*de*	***do***	*di*		*8*	*le*	***la***	*li*	

(Damshroder, 1995:653)

2.4 Factors that influence student experiences

> The first step towards the intellectual mastery of the world in which we live is the discovery of general principals, rules and laws which bring order into chaos. By such mental operations we simplify the world of phenomena, but we cannot avoid falsify it in doing so, especially when we are dealing with processes of development and change (Freud cited in Brigham, 1991:47).

The researcher not only deals with the implemention of a device to improve the sight-singing skills of first-year students as such, but also with the expectations created by perceptions based on past experiences. Kelhoe (2003:75) emphasises that childhood experiences affect all areas of life and are responsible for values that direct perceptions and attitudes of individuals. Robbins (1986:93) states that values are mostly established by parents, teachers and others in the early years of social development.

An individual's historical and cultural background as well as past experiences and beliefs influence the process of learning. These factors influence the interpretation of new experiences, ideas and events. All experiences are viewed by the individual from personal perspectives. This is a way to give meaning to encounters with new ideas and events, which in turn leads to the acquisition of new knowledge (Lambert *et al.*, 1995:xi).

2.4.1 Values

Robbins (1986:92) states that values lay the foundation for understanding attitudes and motivation as well as the influencing perceptions. Kluckhorn (quoted by De Klerk & Rens, 2003:356) define a value as:

> an opinion or view, explicit or implicit, characteristic of an individual or a group, to which preference is given; in other words a value implies opinions or views that are enticing, desirable, preferable and influence the choice of possible actions, intentions and end-behaviour.

Some of the values necessary for success are ambition, honesty, self-sufficiency and courage. These instrumental values represent acceptable behaviour to achieve set outcomes. A second type of value identified by these authors is terminal values, which they identify as values that characterise the outcomes to be achieved (Nelson & Quick, 2006:128). Instrumental and terminal values work jointly to encourage individuals to strive and make an effort to attain set goals. Table 6 shows the highest instrumental and terminal values.

Table 6: Instrumental and terminal values

Instrumental values	Terminal values
Honesty	World peace
Ambition	Family security
Responsibility	Freedom
Forgiving nature	Happiness
Open-mindedness	Self-respect

(Nelson & Quick, 2006:129)

Group values may be stable, but individuals in a group may vary widely in their value systems. Nelson and Quick (2006:128) identify social respect as one of the terminal values that people differ about. Although all individuals' value systems may differ, the sharing of similar values in a group situation is necessary to produce positive outcomes (Nelson & Quick, 2006:130).

2.4.2 Perception

Kelhoe (2003:75) claims that "our mind will distort our perceptions of reality to make it confirm our beliefs." Robbins (1986:62) defines perception as a process by which individuals organise and interpret their sensory impressions in order to give meaning to their environment. "We tend to see the world as we want to perceive it." (Robbins, 1986:62.) Kreitner and Kinicki (2004:225) agree with these authors and describe perception as a "cognitive process that enables us to interpret and understand our surroundings."

Kelhoe (2003:77) observes that in the subconscious mind worry, negativity and restrictive thoughts will be accepted as the truth and eventually bring about equivalent negative outcomes. Robbins (1986:64) is of the opinion that expectations can distort perceptions in that experiences will be what were expected. It is not abnormal that students rate the same facilitator differently. This evaluation is not necessarily based on the efficiency of the facilitator's performance, but on the perception of the students (Robbins 1986:62). The same tasks are perceived differently by different people; for instance, students performing identical tasks perceive these tasks differently (Dessler, 1986:279). Robbins (1986:63) acknowledges that attitudes, motives, interests, past experience and expectations affect perceptions and can be recognised as the reason for perceiving tasks in divergent ways. In entrepreneurial science a perceptual stumbling block is defined by Kroon and Kroon (2008:43) as an obstacle that prevents an individual from seeing something clearly. This is a consequence of perceiving obstacles from the perspective of old and familiar patterns or habits.

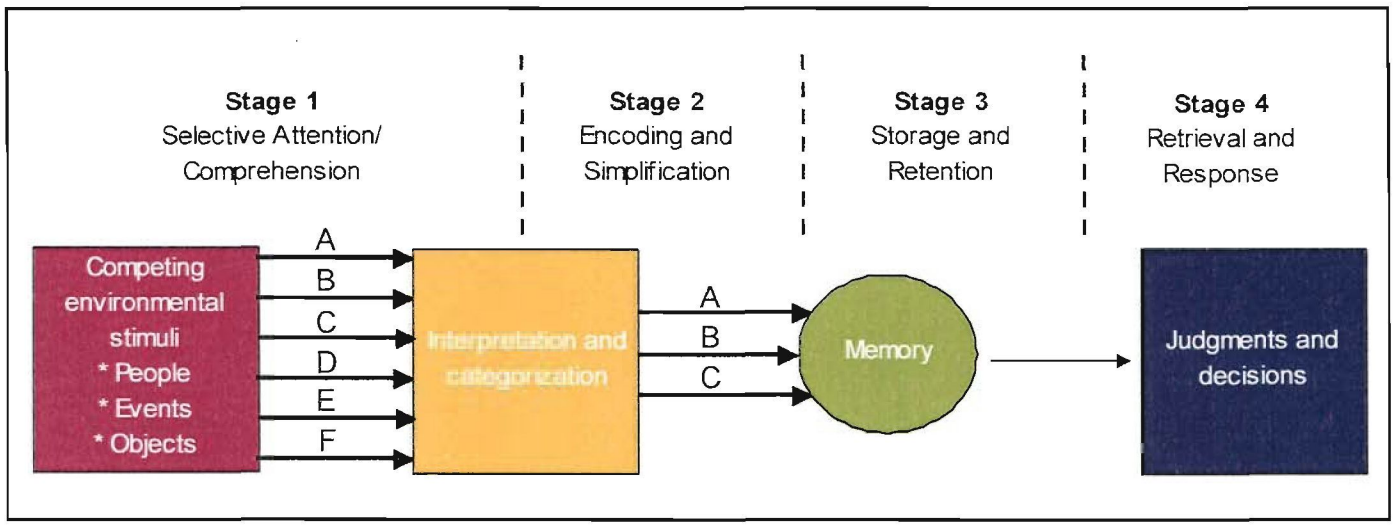
In a paper entitled "I'm not musical: Perceived barriers to participation among adults with little music-making experience" presented at the 28th ISME world conference, Bentley referred to an excerpt from one of the participants in her study who never sang and had

no sense of rhythm because of a mental block caused by a perception created by a school teacher who told her that she was tone deaf (Bentley, 2008:5). Kreitner and Kinicki (2004:225) define a sequence of four processes in information processing that could have led to the above participant's perception:

- Selective attention/comprehension;
- Encoding and simplification;
- Storage and retention;
- Retrieval and response.

The first three stages deal with how the observed environmental stimuli and information are stored in the memory of an individual, while the fourth stage deals with how mental representations are turned into real-world judgements and decisions. Kreitner and Kinicki (2004:225) developed a basic information-processing model for perceptions. This model is illustrated in Figure 5.

Figure 5: Information-processing model of perception



(Kreitner & Kinicki, 2004:225)

2.4.3 Attitudes and motivation

Among the more relevant personal characteristics affecting perceptions are attitudes, motives, interests, past experience and expectations (Robbins, 1986:63). Nelson and Quick (2006:116) define an attitude as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favour and disfavour." Robbins (1986:97) noted that "attitudes are evaluative statements." Although attitudes and values are different, they are directly linked with each other. Attitudes constantly affect the behaviour of people, but they are less stable than values (Robbins, 1986:97). Values are more general and are more deeply held than attitudes. Attitudes that convey profound values are not easy to alter, since values tend to be firmly fixed. Behaviour is established through attitudes interacting with specific qualities found in an individual, who in turn interacts with factors in the environment (Brigham, 1991:137).

Robbins (1986:63) explains contradictory attitudes by using the example of student A who prefers the anonymity of large classes, while student B likes to be part of a more intimate group setting. Depending on the size of the class, the two students will interpret what they see differently because they have different attitudes towards specific sizes of classes. Lack of performance can be blamed on insufficient motivation rather than a negative attitude (Nelson & Quick, 2006:116). People who have a high need for achievement derive satisfaction from challenging tasks (Dessler, 1986:278). "Motivation is the process of arousing and sustaining goal-directed behaviour." (Kreitner & Kinicki, 2004:150.) Positive internal feelings are generated from doing well. This leads to high levels of motivation (Hackman & Oldman cited in Kreitner & Kinicki, 2004:272). Robbins (1986:532) maintains the fact that motivated people will be more willing to apply themselves to a set task. Lambert *et al.* (1995:17) point out that knowledge and beliefs are formed within the learner; this can be accomplished through constructivism as a teaching method.

2.5 Constructivist teaching principles

Donald *et al.* (2006: 83) state that constructivism is a very important current perspective which applies to all aspects of teaching and learning. It is central to the outcomes-based approach to education. These authors' perspective on constructivism is based on a view

that knowledge is not a given. For them knowledge is actively and continuously constructed by individuals, groups and societies. Constructivism is a "theory of learning and knowing". It is an epistemological concept that draws from a variety of fields, including philosophy, science and psychology (Lambert *et al.*, 1995:1). This psychological process is developmental and thus a process in motion (Lambert *et al.*, 1995:2).

> Individuals bring past experiences and beliefs as well as their cultural histories and world views into the process of learning. All of these influence how we interact and interpret our encounters with new ideas and events. As our personal perspectives are mediated with the world, we construct and attribute meaning to these encounters, building new knowledge in the process. (Lambert *et al.*, 1995:xi)

This knowledge is shaped and reconstructed "in different social contexts and at different times" (Donald *et al.*, 2006:86). Constructivist teaching practices help learners to internalise, reshape and transform new information (Brooks & Brooks, 2001:15). Instructors therefore aren't directly part of the planned discussions, "but rather acted as facilitators, clarifying and encouraging if necessary" (Bauer, 2001:28). This constructive, interpretative work is facilitated and deepened when it is undertaken with others and with reflection (Lambert *et al.*, 1995:xii). Speaking, reading, writing and interacting within a particular discourse have "great power to shape students' construction of knowledge" (Donald *et al.*, 2006:87). Students construct meaning from their "personal values, beliefs and experiences" (Lambert *et al.*, 1995:9). Constructivists believe that learners interpret new understandings "in relation to previous knowledge and experience" (Scott, 2006:18). New understandings and experiences are therefore continuously synthesised into what they have previously come to understand (Brooks & Brooks, 2001:4). Abrahams therefore points out that "by constructing their own meaning, students connect word to world and expand their perceptions of reality" (Abrahams, 2005:14).

With other prominent theorists like Dewey, Bruner, Piaget and von Glaserfeld, Lambert *et al.* (1995:9) state that in constructivist learning "the social nature of learning is emphasised". Lambert *et al.* (1995:9) further remark that "multiple outcomes are expected and encouraged with assessment as an integral part of the constructivist learning process". Key constructivist principles and constructivist concepts of theorists

like Barron, Brooks, Donald, Duffy, Lambert, Pretorius and von Glaserfeld are summarised in Table 7.

Table 7: Key principles and concepts of theorists on constructivism in learning

Lambert *et al.* (1995:17,18)	Pretorius (2007:27)	Duffy *et al.* (1995:168-174)	Von Glaserfeld (1995:76-159)	Donald *et al.* (2006:85-89)	Brooks & Brooks (2001:vii-ix)	Wiggils quoted by Barron (2007:19)
Knowledge and beliefs are formed within the learner;	Active participation and metacognition are essential principles of constructivism;	All knowledge is constructed;	Knowledge is tied to action;	People actively and continuously construct their world;	Teachers seek and value their students' point of view;	Learners need to engage in real-life, problem-solving situations;
Learners' personally imbue experiences with meaning;	Social interaction and language motivates learning;	Many worlds are possible, hence there will be multiple perspectives;	Construction creates a world of being;	Knowledge is shaped, constructed and re-constructed in different social contexts and at different times;	Classroom activities challenge students' suppositions;	Learning situations need to be holistic in nature;
Learning activities should cause learners to gain access to their experiences and beliefs;	Multiple perspectives versus absolute truth demand a paradigm shift;	Knowledge is effective action;	Reflection and abstraction interact on various levels of mental operating;	Mediation is the means through which researchers help student to gradually acquire knowledge;	Teachers pose problems of emerging relevance;	Learners need opportunities to interact directly with the subject matter;
Learning is a social activity that is enhanced by shared inquiry;	Context is authentic and relevant;	Human learning is embedded within social coupling;	The self and others support the subject's experiential reality;	Metacognition is about being aware of thinking, planning, remembering and problem-solving;	Teachers build lessons around primary concepts and "big" ideas;	Learners need to take an active role in their own learning;
Reflection and metacognition are essential aspects of constructing knowledge and meaning;	Connecting with students by building on prior experience;	Knowing is not sign dependent;	Language is the receiver's effort to construct meaning and to communicate;	Tools of cognition are actively used to shape, transform and reflect on their experiences.	Teachers assess student learning in the context of daily teaching.	Learners need opportunities to work on their own, with peers, and with teacher support when needed;
Learners play a critical role in assessing their own learning;	Promoting diversity to accommodate students' unique learning needs;	World views can be explored and changed with tools;	The cybernetic connection is a way of thinking.			Learners need to be cognisant of the goals of the learning situation and their own progress toward goals.
The outcomes of the learning process are varied and often unpredictable.	Information is presented holistically and integrated.	Knowing how we know is the ultimate human accomplishment.				

(Lambert *et al.*, 1995:17; Pretorius, 2007:27; Duffy *et al.*, 1995:168; Von Glaserfeld, 1995:76; Donald *et al.*, 2006:85; Brooks & Brooks, 2001:vii; Wiggils cited in Barron, 2007:19)

In this study the constructivist musical cognitive apprenticeship learning approaches according to Wiggins (cited in Barron, 2007:19) were followed. Wiggins believes that learners need:

- To engage in real-life, problem-solving situations;
- Situations that are holistic in nature;
- Opportunities to interact directly with the subject matter;
- To take an active role in their own learning;
- Opportunities to work on their own, with peers, and with teacher support, when needed;
- To be cognisant of the goals of the learning situation and their own progress toward goals (Barron, 2007:19).

2.6 Summary

In this chapter the background, from a historical perspective, of solmisation and the movable *do* is discussed. The development of the use of solmisation in different parts of the world as well as in South Africa is outlined. Different solmisation systems – for instance, scale degrees, letter names, fixed *do* and the movable *do* – are described.

Factors that influence the behaviour of students as well as their experiences are considered. Values, perceptions, attitudes and motivations are highlighted because of the important role they play in influencing the experiences of students.

Constructivist teaching is central to the outcome-based approach to teaching. Currently this method of education is used worldwide. The key principles and concepts of constructivism in learning are summarised in this chapter.

CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

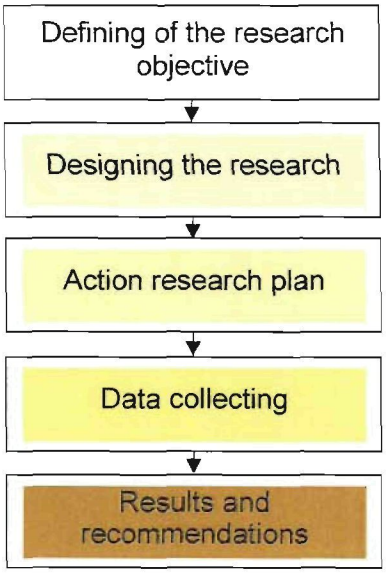
In this chapter the methodology of the research is discussed under the following headings: research methods, the research design, data collection, interviews, observations and questionnaires. The data for this research were collected during aural training contact sessions where the *do*-tonic solmisation programme was presented. The procedures that were followed to capture all the above data are tabulated. The various activities in the solmisation programme, assessment, rhythm, pitch accuracy, scales, intervals, triads and sight-singing are also described. Perceptions and experiences of first-year music students are noted and a model that describes the interaction between values, attitudes, motivation, performance and experiences for the study is postulated.

3.2 Methodology

Different methodologies were used in this research. Henning *et al.* (2005:36) define the term methodology as a "coherent group of methods that complement one another and that have the goodness of fit to deliver data and findings that will reflect the research question and suit the research question."

For the purpose of this investigation the following research process was adopted and can be viewed in Figure 6.

Figure 6: The five stages of this research



3.2.1 Research methods

Action research, consisting of reflection and observation which impacted on the teaching method, was part of the aural training contact sessions for three years (see 3.2.2). The study focuses on the impact of a movable *do*-tonic solmisation programme on behavioural aspects that would influence students' experiences with respect to values, perceptions, attitudes and motivation, as well as on the improvement of the sight-singing abilities of first-year BMus aural training students at the School of Music of North-West University. The primary methodology was action and empirical research. Questionnaires, interviews, observations and assessment opportunities were used. These were considered to be the most effective research methods. According to Donald *et al.* (2006:153), action research traditionally consists of the following steps:

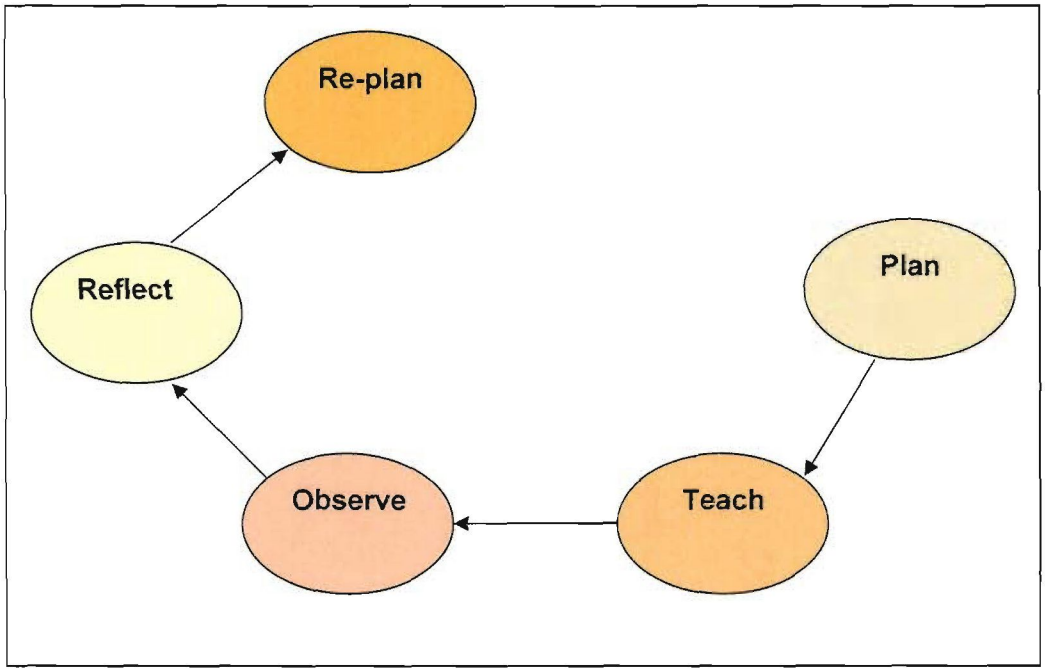
- Reflect and identify;
- Set achievable goals in the light of this reflection;
- Plan teaching strategies;
- Teach by using a plan;
- Observe and evaluate;
- Reflect;
- Set new goals, re-plan and repeat.

These principles are also identified by other authors as the major components of an action research study (Cohen *et al.*, 2001:226; Donald *et al.*, 2006:53; Henning *et al.*, 2005:47; McNiff & Whitehead, 1988:40). Cohen *et al.* (2001:232) acknowledge and define the cyclical process of planning, action, observation and reflection in action research as follows:

- Strategic planning;
- Action, implementing the plan;
- Observation, evaluation and self-evaluation;
- Critical and self-critical reflection on the results of the above three points and making decisions for the next cycle of action research (Zuber-Skerritt, 1996(a):3 cited in Cohen *et al.*, 2001:232; McNiff & Whitehead, 1988:41).

Figure 7 demonstrates the ongoing process of action research as illustrated by Davidoff and Van den Berg in Donald *et al.* (2006:53).

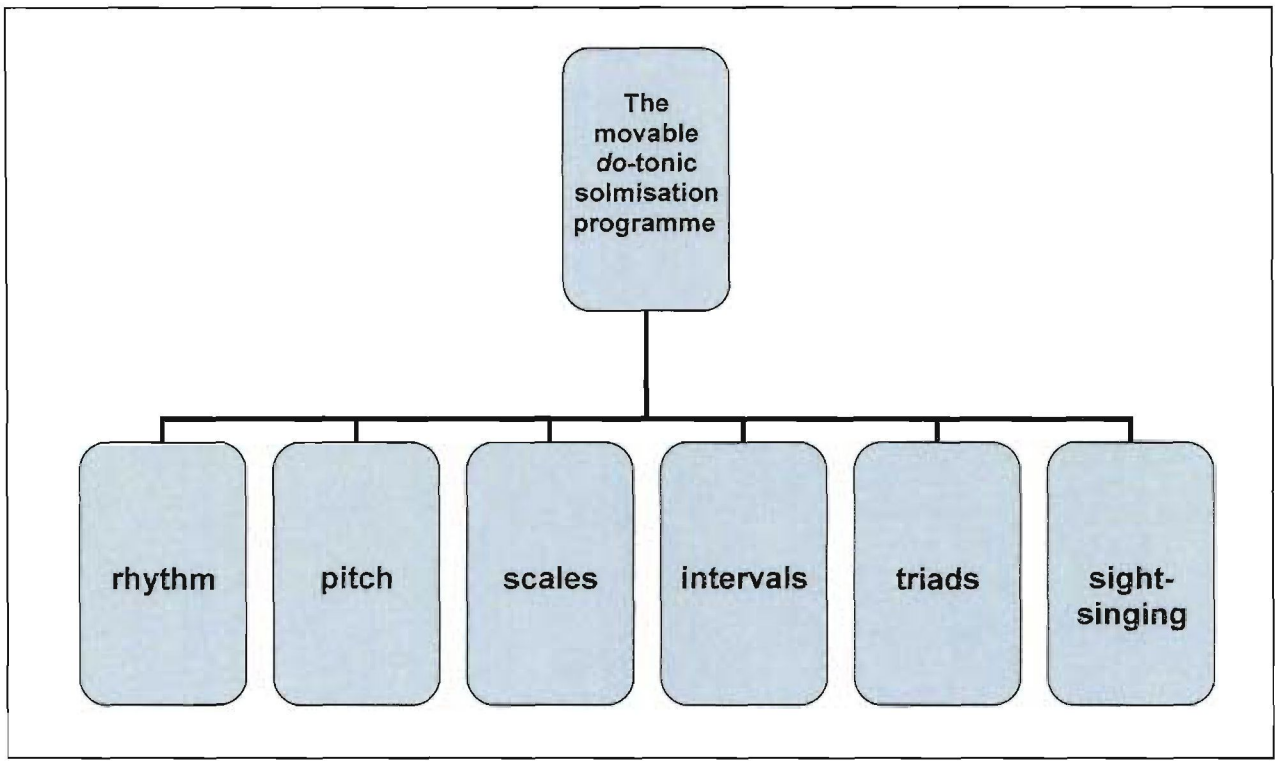
Figure 7: The action research spiral



3.2.2 Research design

A research study on sight-singing was carried out over a period of three years (2006, 2007 and 2008) in the aural training contact sessions during the first academic year of BMus students. After a serious lack in the sight-singing abilities of first-year BMus students at North-West University was identified, a detailed movable *do*-tonic solmisation programme for sight-singing was compiled by the researcher. An action study as well as an empirical study was carried out during the first BMus academic year. A constructivist teaching approach was followed. This movable *do*-tonic solmisation programme for sight-singing is presented graphically in Figure 8.

Figure 8: The movable *do*-tonic solmisation programme for sight-singing



3.2.3 Data collection

The assessment data, questionnaires, interviews and observations were of extreme significance for the study. These data were collected, calculated, analysed and discussed. The results are presented in Chapter 4. Through interviews and questionnaires the impact and the experiences and behavioural changes in attitudes and perceptions of the students regarding the execution of the movable *do*-tonic as an aid to the development of sight-singing skills were studied and are noted in Chapter 4. Conclusions and recommendations derived from this information are presented in Chapter 5.

A detailed data-collection plan by Vithal and Jansen (2003:20) has been used to format and list the research design (Table 8). The data-collection plan that was drawn up consists of the following data-collection processes:

- Observations;
- Interviews;
- Questionnaires.

The data collected by these research methods were tabulated and are graphically presented in Chapter 4 of this document. The information gained was analysed and the findings were used to draw conclusions and recommendations.

Table 8: Detailed data-collection plan

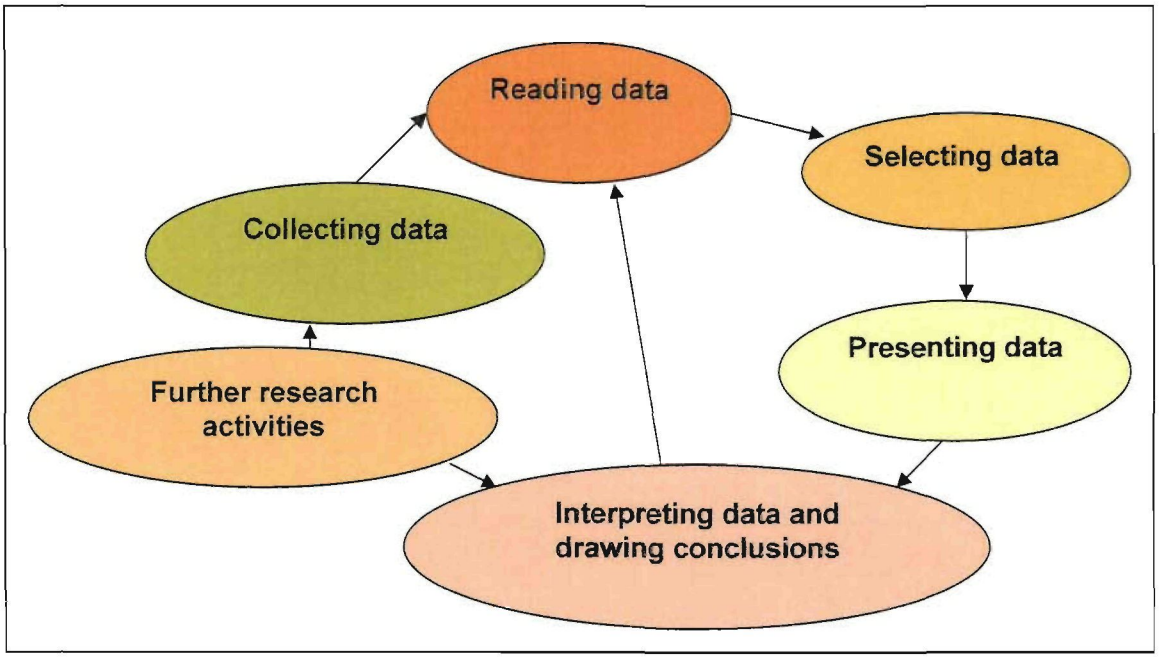
Questions	Data-collection plan
Why were the data collected?	Data were collected to investigate the impact of a movable *do*-tonic solmisation programme on the experiences and the improvement of sight-singing abilities of first-year BMus aural training students at the School of Music of North-West University.
What was the research strategy?	Empirical and action research through a constructivist teaching approach was the research strategies of the study.
Who/what were the sources of the data?	• Observations; • Questionnaires; • Interviews; • Assessments, • Semester examinations; • Evaluation; and • Informal feedback were used by the researcher to obtain the necessary information for this study.
How many of the data sources were accessed?	• 9 BMus first-year students of 2006; • 10 BMus first-year students of 2007; • 7 BMus first-year students of 2008.
Where were the data collected?	• Data were collected at the School of Music of North-West University at the beginning, during and at the end of the academic years of 2006, 2007 and 2008.

How often were the data collected?	• BMus aural training students were interviewed once in November, at the end of their first academic year; • Questionnaires to all the participating students were completed in January and November, at the beginning and the end of the first academic years of 2006, 2007, 2008 and are discussed in Chapter 4; • Observations by the researcher were carried out throughout 2006, 2007 and 2008 during ear training contact sessions, assessments and semester examinations, and are discussed in Chapter 4; • During every first academic year respectively 5 assessment and examination marks of first-year BMus ear training students were tabulated and are graphically presented in Chapter 4;
How were the data collected?	During the academic years of 2006, 2007, 2008 • Informal conversations with all the participating students were conducted and findings were used in Chapter 4; • Interviews were conducted individually at the end of the first academic years of 2006, 2007, 2008 and are discussed in Chapter 4; • semi-structured standardised interviews were recorded, analysed and stored on cassette tapes; • Questionnaires were distributed to first-year music students who study BMus at the beginning of each year and were stored in folders; • Set assessment criteria were used in assessments and semester examinations to determine the development of sight-singing skills of the participating students. These assessment scores were electronically filed and stored.
Justification for this data-collection plan. (Why was this the best way of collecting data to address this research question?)	Observations, questionnaires, interviews, semester examinations, assessments and informal conversations provided the most recent and first-hand data and information on the impact that a movable *do*-tonic solmisation programme could have on the experiences and sight-singing skills of first-year BMus students.

(Based on Vithal & Jansen, 2003:20)

To illustrate the essential elements, summarised in Table 8, the research process is presented graphically in Figure 9.

Figure 9: The research process



Miles & Huberman cited in Altrichter *et al.* (1993:121)

3.2.4 Observations

"In general observation implies seeing as well as observing with other senses" (Henning *et al.*, 2005:82). Observation is not necessarily a prolonged process but can be brief and can also be used to gain information necessary for the research subject (Henning *et al.*, 2005:82). Non-participant observation takes place with prior knowledge of what the researcher wants to observe and why he or she wants to observe the specific phenomena (Coleman & Briggs, 2005:177). During aural training classes, class tests and semester examinations, sight-singing skill levels and their improvement were observed. Set assessment criteria were applied in the evaluation of first-year music students in the BMus aural training programme.

Henning *et al.* (2005:52) see the main aim of interviewing individuals as gaining insight into what individuals think, feel and experience about certain subjects. This contributes

to determining the perceptions held by an individual in a "formatted discussion, which is guided and managed by an interviewer and later integrated into a research report."

The same authors identify two types of interviews, namely "the conventional *standardised* interview and the discursive, *constructionist* interview" (Henning *et al.*, 2005:50). In this study conventional standardised interviews were conducted with all BMus aural training students, as stated in Chapter 1. These interviews were conducted at the end of the academic years of 2006, 2007 and 2008.

3.2.5 Questionnaires

According to Coleman and Briggs (2005:145), a wide audience can be accessed by the use of questionnaires, producing a large amount of information. The active involvement of first-year BMus students in the solmisation sight-singing programme was evaluated through questionnaires. Questionnaires were distributed to first-year music students of 2006, 2007 and 2008 who were doing BMus. The information gained from questionnaires for all participating aural training students was used to evaluate the success of a movable *do*-tonic solmisation sight-singing programme, to draw conclusions and make recommendations on the study field.

3.3 The movable *do*-tonic solmisation programme for sight-singing

3.3.1 Introduction

Ottman (1996:1) defines the goal of sight-singing as the ability "to sing *at first sight*, with correct rhythm and pitch, a piece of music previously unknown to the performer." Cole and Lewis (1909:i) define sight-singing as a powerful ability "to know the units of rhythm and of relative pitch of any rational musical phrase, and to prove that knowledge by singing it correctly at first sight." White (cited in Karpinski, 2000:192) believes that:

> Singing is basic to all music. Cellists, pianists, trombonists, bassoonists, and timpanists – all of them are (or should be) inwardly singing when they perform. It is for this reason that singing is so important in the basic development of basic musicianship skills.

Ottman (1996:1) believes that inner hearing can be developed through musical strategies such as sight-singing and ear training. De Lone (1981:1) concurs with Ottman and emphasises that the "mastery of sight-singing has probably occurred when one has learnt to sing with the ear and hear with the voice."

The effectiveness of solmisation as a teaching device for sight-singing is well known. "There are reasons why musicians have been using vocables since classical antiquity and reasons why many systems have evolved." (Smith, 1991:3.) Ittzés (2008:200) agrees that "solmisation as a generic approach to teaching musical elements is very useful both in ear training and in musical analysis." Lake (1993:60) notes that solmisation acts as a means to help students tie musical concepts with sounds.

Smith (1991:21) claims that the movable *do*-tonic solmisation system offers the most educational advantages for the development of aural and sight-singing skills. These advantages can be listed as follows:

- It is singable;
- It lends itself to the singing of simple diatonic music, modulating and atonal music;
- It is orientated towards the ear;
- It helps develop analytical skills;
- It is consistent in naming musical structures (Smith, 1991:21).

Rogers (1984:133) supports the above and stresses that the movable *do* solmisation system contributes to the development of hearing skills and that "students gradually become tuned in to the nuances, directional tendencies, and structural relationships of tonality independently of particular keys or notational configurations". To enhance the teaching and fixation of the movable *do* in the solmisation programme, a constructivist teaching approach was used.

The constructivist principle of active learning is continuously emphasised. Donald *et al.* (2006:91) point out that instruction, demonstration and explaining of study material need not be experienced as passive periods of time as long as the facilitator connects with the students on their level of understanding and inspires them to ongoing reflection during the presentation of the learning activities. Activities and knowledge that are taught and experienced in the aural training contact sessions are presented holistically, integrated and directly connected to action (Boardman, 2001:52).

Active participation is an essential principle of the constructivist way of teaching (Pretorius, 2007:27; Von Glaserfeld, 1995:76). Donald *et al.* (2006:91) stress that "active learning needs to involve a variety of activities: some whole-class instruction and interaction, some group or pair activities, and some individual activities." During these contact sessions students take active part in the *do*-tonic solmisation programme to master different concepts such as rhythm, pitch accuracy, scale degrees, intervals, triads that are needed for sight-singing as well as rhythmic and melodic dictation (Wiggils cited in Barron, 2007:19). Brooks and Brooks (2001:16) emphasise that "in the constructivist approach, we look not for what students can repeat, but for what they can generate, demonstrate, and exhibit."

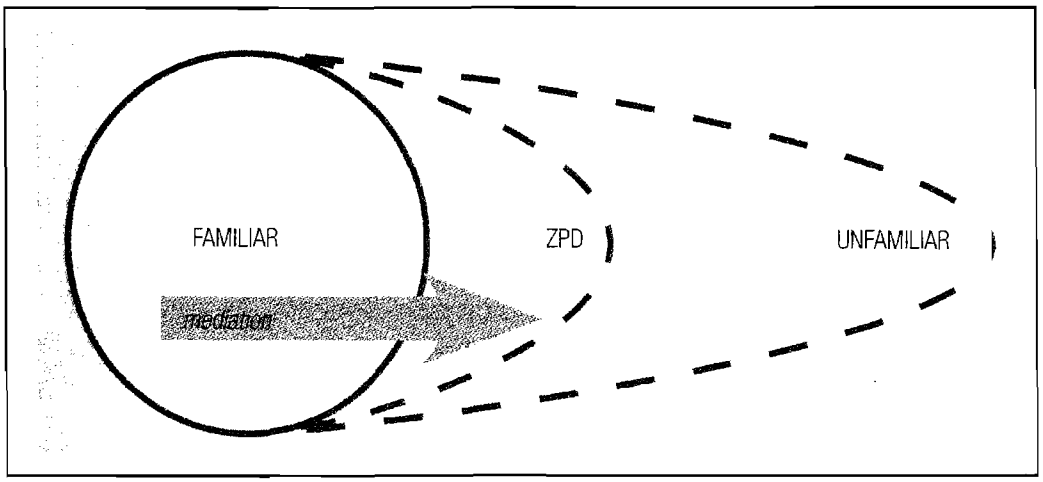
Listening, singing, playing on the piano or other music instruments, clapping, tapping, dancing and writing are the most important activities in the aural training classes that contribute to motivational learning, social interaction and the constructing and shaping of new skills and knowledge (Duffy *et al.*, 1995:170; Lambert *et al.,* 1995:18; Pretorius, 2007:27; Von Glaserfeld, 1995:80). Cole and Lewis (1909:i), the authors of a sight-singing textbook called *Melodia*, emphasise that the actual performance of multiple carefully chosen activities in the music classroom will contribute to the establishment of musical growth, whatever the chosen method of presenting the different concepts which are needed for the development of sight-singing skills.

Students are consistently positively motivated and encouraged to create opportunities to diligently practise their newly acquired knowledge, either on their own, with a class mate, in groups or with the researcher (Wiggils cited in Barron, 2007:19).

The researcher initiates social interaction by continuously creating learning situations where students can interact directly with the subject matter (in this case the movable do-tonic for sight-singing), the researcher as well as with fellow students (Duffy *et al.*, 1995:170; Lambert *et al.,* 1995:18; Wiggils cited in Barron, 2007:19). Study material is presented in such a way that the Zone of Proximal Development (ZPD) is taken into account. The Zone of Proximal Development (Donald *et al.*, 2006:59) can be defined as the area where students need "proximal interaction" with a facilitator, because the students are incapable of mastering certain subject matter independently. The material presented is challenging and stimulating, but not too difficult to master and not too easy

to lead to boredom. Figure 10 is an illustration of this concept of *mediation* by the Russian psychologist Lev Vygotsky.

Figure 10: Zone of Proximal Development



(Donald *et al.*, 2006:59)

Students are constantly enthusiastically challenged by the researcher to apply their solmisation skills to all segments of the ear training module such as sight-singing, dictation and practical harmony, and other areas of the BMus curriculum such as music theory, group music and singing (Donald *et al.*, 2006:86). This encourages the constructivist teaching principles of holism and integration (Pretorius, 2007:47). Pratt (cited in Covington, 1992:6) supports this by stating that "everything taught in [aural training] should always be related immediately to real music experience and thus be applicable by students to their every day life." Lloyd *et al.* (1980:viii) maintain that the outcome of sight-singing is to "strive for a stylistically correct as well as a tonally and rhythmically perfect performance of a sight-singing musical phrase".

Asmus (1999:25) emphasises that "assessment is one of the music teacher's professional responsibilities". In this study set assessment criteria for sight-singing performances were used. These assessment criteria are tabulated and presented in the Annexures (A-F) and are based on learning outcomes stated and tabulated in the study guide (Lambert & Lines, 2000:163); they also contribute towards recognition of the level of proficiency required in the newly acquired skills. Learners have to take note of the specific learning goals as well as their own progress toward these goals (Wiggils cited in

Barron, 2007:119). By having a clear perception of how all assessment is done, students and the researcher develop a clear view of what is expected from the other (Asmus, 1999:19; Lambert & Lines, 2000:17). Asmus underlines this in his comment that "well specified learning targets inform the student and the teacher about what is to be learned and point toward specific means for assessing and learning" (Asmus, 1999:19). Informal ways of assessing during contact sessions, such as self-assessment and peer assessment as well as individual assessment during scheduled tests and examinations, are used (Asmus, 1999:21). However, after a study on the assessing of sight-singing skills, Demorest and May (1995:165) found that individual assessing of sight-singing is an effective pedagogical way to assess and improve the sight-singing performances of students.

3.3.2 Teaching according to the strategic plan

The movable *do* was in use in the aural training module of the BMus course at the School of Music at Potchefstroom University for Christian Higher Education since the early 1970s. The researcher refined a movable *do*-tonic solmisation programme for BMus first-year aural training students by ongoing observation, reflection, planning and teaching over a period of twenty years. The three-year research was undertaken to define the development of the sight-singing abilities and the experiences of undergraduate students who participated in this programme.

3.3.2.1 Lecture procedures

Once a week a period of 40 minutes is allocated for aural training sessions. Because of the importance of physical and voice warm-ups, every session is started with well-presented, fast-paced physical movement and relaxing breathing exercises (Robinson & Althouse, 1995:7). Voice training is started with exercises in unison as described by Robinson and Althouse (1995:26-52), followed by voice warm-ups before sight-singing sessions (Lloyd *et al.*, 1980: xii). With these warm-up exercises the researcher prepared the students' voices and bodies for the sight-singing exercises and aural training in the class. Robinson and Althouse (1995:5) list the following reasons why regular warm-up exercises are very important:

- They establish focus;
- They prepare the voice for singing;
- They allow singers to hear themselves and each other;

- They establish physical readiness for singing;
- They establish proper breathing habits;
- They achieve unification of vowels;
- They establish intonation melodically and harmonically (Robinson & Althouse, 1995:5).

The lectures are compiled in such a way that the students are exposed to all the elements of aural training in an integrated and holistic way. All elements – rhythm, pitch, scale degrees, intervals, sight-singing, rhythmic dictation, melodic dictation and practical harmony – are fitted into one contact session. This approach is supported by Boardman, who makes it clear that only when music is presented holistically will learning take place. The traditional approach of teaching music "that moves from part to whole" must be replaced by "guiding students from whole to part" (Boardman, 2001:52). However, it is imperative to study the different elements to comprehend music in totality. This implies that it is unnecessary to start by listening or reading complete compositions. Teachers and facilitators can achieve this by leading students to understand how the various elements of music contribute to music as a whole (Boardman, 2001:52).

3.3.2.2 Rhythm

Rogers (1984:143) states that rhythm must transcend a mere understanding of collections of symbols into directly experienced physical activities like "pencil tapping, feet tapping or body movement". A total awareness of pulse and metre is thus indispensable to understand and interpret the rhythm of a melody (Karpinski, 1990:105). Research findings by Killian and Henry (2005:62) support Karpinski's view and they assert that, although further study is still needed, "rhythmic awareness and stability" are important elements of good-quality sight-singing performance.

A prescribed exercise book by Van der Horst (1968:1-20) is used for rhythmic exercises for the first-year BMus students. Exercises composed by the researcher, the students as well as rhythmic phrases taken from the music repertoire are also used. These rhythmic exercises are carried out in the way described below.

The right hand, with its pulse resting in a relaxed way on the table or desk, tap the rhythm of a rhythmic phrase with a pencil turned upside-down, while the left hand taps out the metre. The metre is spoken and counted out loud by the student and should be

articulated well. A variety of rhythmic drills and exercises are drawn from the music literature as a means to illustrate how primary rhythmic concepts fit into music as a whole (Brooks & Brooks, 2001:vii). Rhythmic activities such as the use of rhythmic flash cards, conducting gestures (Ottman, 1983:57), tapping, clapping, dancing, playing on wooden blocks and drums are performed. Students are also encouraged to improvise and notate similar rhythmic exercises that are performed by the class as a whole in subsequent aural training contact sessions.

The researcher has experienced that the following benefits are gained through rhythmic exercises:

- Improvement and strengthening of musical rhythmic abilities;
- Strengthening of rhythmic skills that involves pulse, metre and rhythmic flow;
- Keeping a steady beat;
- Enhancing general rhythmic reading abilities of instrumentalists and singers;
- Improvement of the ability to write down rhythmic dictations;
- Establishment of a strong sense for rhythm (Covington, 1992:16);
- Endorsement of fluent rhythmic interpretation while performing a sight-singing melody.

The assessment criteria for rhythm are tabulated in Annexure B.

3.3.2.3 Pitch accuracy

Not only is a perception of pulse and metre necessary for understanding the rhythm of a certain melody, but a clear perception of the tonic and its harmonic meaning amidst all the other pitches in a certain key is also required (Karpinski, 1990:105).

Exercises created by Marie Egmond Vol.1 (s.a.:1-50) are used to establish proficiency in pitch accuracy. These exercises are written in solmisation syllables, not key orientated, and are without any notation, clef sign or time signature. Each pitch series contains at first only stepwise melodic patterns, but gradually work up towards various interval leaps in major and minor keys.

Students sing solmisation pitch accuracy exercises individually and as a group. The researcher motivates the students to practise these exercises diligently to master

intonation, pitch accuracy and pitch memory. Students improvise and perform their own rhythmic sequences for each series of pitch exercises.

The researcher recognised that some of the many advantages of pitch accuracy exercises are:

- To develop the confidence to sing (Covington, 1992:16);
- To develop a proficiency to vocalise solmisation syllables with the movable *do* (Karpinski, 1990:106), especially in front of their peers (Covington, 1992:16);
- To get students used to singing the different solmisation syllables in any combination;
- To develop a strong sense of the tonic of a tonal system (Karpinski, 1990:105);
- To develop the ability to internalise functional harmonic relationships between all pitches (Karpinski, 1990:105);
- To enhance the development of the "inner ear" by always recalling previously sung pitches;
- To help with maintaining pitch accuracy and tonal references (Covington, 1992:16);
- To improve intonation (Covington, 1992:16);
- To develop pitch memory and pitch accuracy (Lloyd *et al.*, 1980:xii).

The assessment criteria for pitch accuracy are tabulated in Annexure A.

3.3.2.4 Scale degrees

A scale is a list of pitches in ascending and/or descending order (Karpinski, 2007:8). According to Pretorius (2007:127), scales help to teach students the concept of key. Because the major scale covers all the members of the diatonic collection of scale degrees and is familiar to all university music students, it is the ideal starting point for the training of scale degrees (Karpinski, 2000:148).

The outcomes of the syllabus determine that the first-year students must be able to sing and identify the following scale degrees when played by the researcher: the diatonic major scale, the major scale in thirds, the harmonic minor scale, the melodic minor scale, the chromatic scale, the dorian, the phrygian, the lydian, the mixolydian, the aeolian and the pentatonic modes.

During contact sessions the diatonic major scale, the major scale in thirds, the harmonic minor scale, the melodic minor scale, the different church modes (Karpinski, 2007:56) – namely the dorian, the phrygian, the lydian, the mixo-lydian, the aeolic and the pentatonic scales – are sung ascending and descending on the movable *do* solmisation syllables (De Lone, 1981:391). These teaching strategies are supported by Karpinski (2000:149), who emphasises that music students must be able to sing scale degrees ascending and descending on solmisation syllables. He lists two ways of singing and practising scale degrees:

- Beginning (in the traditional fashion) with the lowest pitch, ascending to the highest, and returning to the lowest;
- Beginning with the highest pitch, descending to the lowest, and returning to the highest (Karpinski, 2000:149).

All scale degrees are also aurally explored during contact sessions through the singing of scales on solmisation, playing them on different music instruments and structured listening to, and singing of, representative excerpts from the works of early to recent composers. Scale degrees are drawn from the music literature as a means to illustrate how scale degrees and parts of it fit into music as a whole (Brooks & Brooks, 2001:vii). Students are also encouraged to identify and play scale degrees found in compositions of their instrumental repertoire. The tonal quality, colour and character of the different scale degrees are also discussed during contact sessions.

Scale degrees are an essential part of the solmisation programme for sight-singing. The researcher has found that consistent practising of scale degrees helps the students, among other things:

- To mentally auralise the tonality of the sight-singing melody to be sung, by singing the specific scale degree in the "inner ear";
- To develop a fluency in solmisation by the singing of the different scales (Karpinski, 2007:149);
- To establish a sense of tonality, especially the tonic and dominant of a particular key (Karpinski, 2007:83; Pretorius, 2007:127);
- To recognise scale passage patterns and sequences in melodies for sight-singing;
- To apply the correct solmisation syllables to every note that must be sung;
- To engage the mind in reading and thinking in scale degrees and tonal function (Karpinski, 2007:167).

The assessment criteria for scale-degrees are tabulated in Annexure C.

3.3.2.5 Intervals

An interval can be defined as the distance in pitch between two notes (Karpinski, 2007:8). Fluency in scale degrees is necessary to pursue successful interval training (Karpinski, 2000:54). Rogers (1984:132) argues that good knowledge and understanding of intervals implies immediate aural identification and rapid reaction to the singing of intervals in a sight-singing melody. An essential prerequisite for sight-singing is the ability to hear intervals mentally and then sing them accurately from notation. Rogers (1984:132) emphasises that the proficiency of accurate interval singing ensures good-quality sight-reading in the performance of an entire melody.

Intervals are aurally identified during contact sessions through structured listening activities from a wide variety of compositions in the music repertoire. Extracts from the music literature, DVDs, CDs and reference to live performances are used to demonstrate the use of the various intervals by composers. Intervals such as the major second, major third, major sixth, major seventh, minor second, minor third, minor sixth, minor seventh, augmented fourth, perfect fourth and perfect fifth are sung on different solmisation syllable combinations as well as aurally identified (when played on the piano by the researcher). Telesco (1991:182) urges that "intervals should be taught and understood only as parts of harmonies" when practising sight-singing. It is therefore essential that not only one solmisation syllable combination for a specific interval is used, because "intervals change their function and consequently their effect, affect and meaning in different contexts" and should be experienced as such (Karpinski, 2007:54).

Intervals are sung ascending as well as descending from a given tone and on solmisation syllables. These different solmisation syllable combinations are pointed out by the researcher and are usually combinations with strong characteristic harmonic tonal positions in the different keys (Telesco, 1991:184). Intervallic drills on solmisation syllables are drawn from excerpts in the music literature as a means to illustrate how a concept such as intervals fit into music as a whole (Brooks & Brooks, 2001:vii)

The researcher believes that many benefits can be gained through the regular practising and understanding of intervals. Karpinski, Rogers and Telesco support some of these advantages, which are listed below:

- To realise, feel and hear the tonal quality and meaning of every interval in the different major and minor key contexts (Rogers, 1984:132);
- To be able to hear intervals mentally before they are played or sung (Rogers, 1984:132);
- To master the interpretation of all the constructive and artistic principles of music literature, apart from pitching and performing all the intervals correctly (Rogers, 1984:132);
- To improve harmonic listening (Karpinski, 2000:121);
- To get to know important harmonic relationships in tonal music (Telesco, 1991:182).

The assessment criteria for intervals are tabulated in Annexure D.

3.3.2.6 Triads

The simplest type of chord is the triad. Ottman (1983:11) defines a triad as a "three-note chord built in thirds that can be constructed above any letter name of the music alphabet by selecting the third and fifth letter names above the given letter name." To strengthen the ability and enhance harmonic hearing while singing a melody from sight, not only scale degrees and intervals but also knowledge and understanding of triads and their inversions are an essential musical asset to acquire and maintain. Students who learn to identify the different tonal qualities of the triads, inversions and structures can apply this proficiency to the study of harmony and harmonic dictation (Karpinski, 2000:121). "To achieve this end, listeners must become skilled in the rapid identification of isolated chord qualities and inversions." (Karpinski, 2000:123.)

In the contact sessions during the first year of aural training, triads like the major, minor, diminished and the augmented triads are sung or identified (when played on the piano by the researcher), arpeggiatively or as a chord respectively. Triads are sung on solmisation syllables, in root position with all different inversions. As with intervals and scale degrees, triads are also identified in representative excerpts and passages from the music literature, especially the choral repertoire. DVDs, CDs and live performances are used to demonstrate the many uses of triads by composers. Students are also encouraged to identify, sing and play the different triads and their inversions found in

compositions of their own instrumental repertoire. Well-known songs played on the guitar also contribute to the direct interaction with the triads (Wiggils cited in Barron, 2007:19). Paintings of well-known painters are used to make visual associations with the different triads to identify their tonal qualities and enhance multiple perspectives (Duffy *et al.*, 1993:168).

The researcher identified the following assets that can be gained through the knowledge and understanding of triads:

- The arpeggiation of triads in sight-singing melodies;
- The development of a sensitivity to harmony and harmonic listening (Karpinski, 2000:118);
- The ability to understand harmonic implications and immediate recognition of harmonic changes in music;
- The ability to think and act harmonically on the basis of the music being read (Karpinski, 2000:180);
- Enhancing the musical performance of a sight-singing melody.

The assessment criteria for triads are tabulated in Annexure E.

3.3.2.7 Sight-singing

De Lone (1981:1) points out that sight-singing is mastered "when one has learned to sing with the ear and hear with the voice" and can "scan a line or score and hear it with the mind's ear without actually sounding the music" (De Lone, 1981:1). Berkowitz *et al.* (1976:xiii) agree with the previous statement and comment that "music does not live on paper. To bring it to life there must be an instrument that can sing, an ear that can hear, and a sensitive mind that can sing and hear in the silence of thought." Once students become fluent in rhythmic reading, singing and identifying of scale degrees, intervals and triads in applying the movable *do* solmisation system, solmisation syllables provide an easy and immediate way of understanding and performing the music score (Karpinski, 2000:86).

> Whether or not he possesses a beautiful voice, anyone can achieve satisfactory sight-singing ability by constant study. Correct sight-singing is a skill, a developed ability, and can be acquired through diligent practice. The satisfaction gained in developing such an important skill will more

> than justify the hours devoted to the study of this discipline. Sight-singing is certainly not an end in itself, but only one of many necessary skills which any intelligent musician must develop. (Berkowitz *et al.*, 1976:xiii)

De Lone (1981:3) asserts that sight-singing, "like any other musical skill, demands continuing and rigorous practice." He urges students to schedule at least 30 minutes, several times per week, of regular practice time for sight-singing (De Lone, 1981:3). Damschroder (1995:ix) also stresses the fact that it requires considerable practice to master sight-singing.

During the first academic year sight-singing exercises taken from the prescribed sight-singing exercise book *Solfége I* by Hennie Schouten (1997) are studied carefully and practised until the melodies can be performed fluently and effortlessly with good vocal quality, pitch accuracy, rhythmic and melodic perfection in order to develop sight-singing skills, musical understanding and self-confidence (Berkowitz *et al.*, 1976:3). These melodies are in progressive order:

- Easy Gregorian modal melodies;
- Uncomplicated diatonic melodies in major or minor with simple rhythmic patterns, easy melodic leaps and no changes of key;
- Diatonic melodies in major or minor keys with easy rhythmic patterns and modulations;
- Melodies in major or minor keys which modulate to closely related keys, contain chromatic tones, and are rhythmically and melodically more difficult.

These exercises prepare the students to sing unknown melodies drawn from various genres of composition from the music literature and choral repertoire. These sight-singing activities strengthen, enhance and advance the sight-singing abilities as well as the general musical understanding of students.

The researcher identified numerous musical abilities that can be developed and established by studying and practising sight-singing:

- To interpret and hear a score of music without actually sounding the music (De Lone, 1981:1);
- To "render vocally at sight music of a wide variety of styles, genres and levels of difficulty, producing a good approximation of the pace, rhythm, melody, structure and style of a given passage" (De Lone, 1981:1);
- General music reading skills;

- The maintaining of a steady rhythm flow while performing a musical phrase (Berkowitz *et al.*, 1976:xiii);
- The interpretation of solmisation syllables in phrases that modulate;
- Singing and reading in different keys;
- Pitch accuracy;
- Reading ahead (De Lone, 1981:3);
- The ability to hear what can be read, is written in music notation;
- The natural singing voice;
- The ability to develop a good perception of the relationship between melody, harmony and rhythm (Berkowitz *et al.*, 1976:xiii);
- The ability read music notation ahead (Berkowitz *et al.*, 1976:xiii);
- Rhythmic relationships between sounds;
- Musical memory;
- Intervallic awareness;
- Rapid reading and interpretation of scale passages or sequences;
- Sense of tonality;
- Ability to understand and interpret "the contours, rhythms, pace and general style of a passage" (De Lone, 1981:3);
- The ability to capture and interpret what had been heard in music notation (dictation).

Many authors give instructions for the singing of a melody at first sight. The following are the steps in the mental preparation before the sight-singing of a melody as well as what to keep in mind during the actual performance:

- Establish the key;
- Establish the *do*;
- Establish the tempo and metre;
- Sing the scale of the key, ascending and descending to establish a feeling of the tonality of the melody;
- Read ahead while performing;
- Avoid singing note-to-note;
- Read and perform a whole phrase as one musical unit;
- Use slurs for breathing guides;
- Be responsive to the correct rhythm, note values, articulation, dynamics and climaxes.

(Berkowitz *et al.*, 1976:1)

The assessment criteria for sight-singing are tabulated in Annexure F.

3.4 Perceptions and experiences

"What the individual perceives at any single moment is selective; it depends on the nature of one's current schema – which is a result of the context in which the perceptual act takes place" (Boardman, 2001:52). However, in order to grow in knowledge and understanding, people have to change the way they currently think (Donald *et al.*, 2006:107). To change perceptions, the researcher must apply all possible ways and means at his disposal to present the solmisation programme as meaningfully and holistically as possible, because "if something is not meaningful to a person, he is not likely to develop concerns, interests or attitudes toward it, and it is not likely to be incorporated in his system of constructs, beliefs, values, goals, ambitions" (White cited in Hylton, 1981:288). Some of the negative perceptions which prevail among BMus first-year students and that have been changed and overcome by the intervention of the researcher, are listed below.

The researcher found that first-year students claim that they:

- Don't need aural training;
- Don't need sight-singing, because they are composers, instrumentalists or "experienced" singers;
- Don't want to sing at all, not even in the class situation;
- Cannot sing because some parent or teacher told them that they sing false, sound terrible or are tone-deaf;
- Arrive at university with a fear of the aural training module, that they won't be able "to get it right", just because somebody told them "it is so difficult";
- Don't have to practise sight-singing or prepare for aural training contact sessions;
- Practise only a week before the test or the examinations as in school before the UNISA examinations;
- Are bashful and not willing to engage in class activities.

In the learning situation these perceptions and attitudes are replaced so that barriers to learning can be removed and learning enhanced. Values that will help students to reach positive outcomes are established through positive reinforcement as well as good inter-personal relations with students by the researcher (Donald *et al.*, 2006:107). One such value is conscientious practising of sight-singing (Berkowitz *et al.*, 1976:xiii;

Damschroder, 1995:ix; 1976:xiii; De Lone, 1981:3) The following interventions are used to bring about changes in perceptions and attitudes:

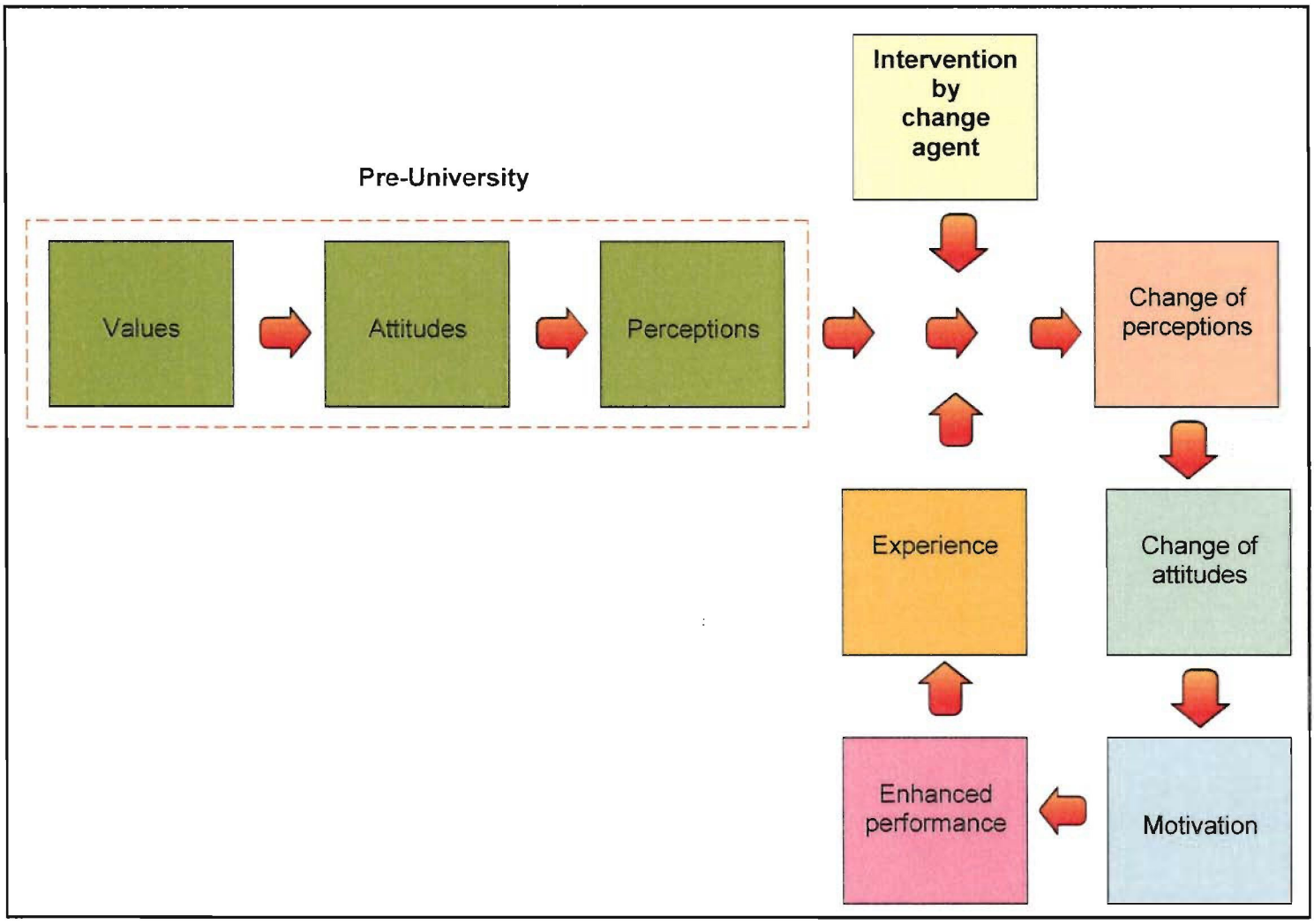
- Sight-singing is placed in perspective as a major building block in music development as a whole. Aural training is not presented as a fragmented part of music training, but forms part of a holistic, cognitive, macroscopic experience (Herbst, 1994:15);
- The study material is presented in such a way that the Zone of Proximal Development (Donald *et al.*, 2006:71) is taken into account. The material presented is challenging and stimulating, but not too difficult to master and not too easy to lead to boredom. In this way fears of incompetence are overcome;
- Regular sight-singing assessment and positive feedback are used to motivate and inspire students to work towards achieving their own latent potential and become more goal orientated (Brooks & Brooks, 2001:vii).

An atmosphere conducive to learning and group participation is created in the classroom. Regular group sight-singing activities lead to more self-confidence, especially for students who lack the ability to sing alone and in public. Pitch accuracy exercises are one of the activities that develop self-confidence to sing (Covington, 1992:16). According to Cole and Lewis (1909:i), "a high degree of self-confidence must be developed before one can 'stand up and sing' alone". If this skill is acquired, it leads to a change in attitude and motivates the student, which in turn leads to enhanced performance.

3.5 The Values, Attitudes and Perceptions Performance Enhancement Model

A model has been postulated by the researcher to put values, attitudes, perceptions, motivation and experiences into perspective. The researcher acts as a change agent in the class whose role is not only to instruct, but also to remove the barriers which are the result of previous perceptions that could lead to low motivation levels and poor performance. The model describes a continuous pattern of changing and establishing perceptions and values that will enhance performance. This is accomplished through coaching towards change and tutoring of the movable *do*-tonic solmisation programme for sight-singing. This model, called The Values, Attitudes and Perceptions Performance Enhancement Model, is illustrated in Figure 11.

Figure 11: **Values, Attitudes and Perceptions Performance Enhancement Model**



3.6 Summary

The *do*-tonic solmisation programme for sight-singing was presented. The research design and the methodology of the research were discussed, the *do*-tonic solmisation programme for sight-singing presented under the following headings: data preparation, data collection, data presentation, data analyses, interviews, observations and questionnaires. The implementation of the *do*-tonic solmisation programme for sight-singing was described under the following headings:

- Lecturing procedures
- Rhythm
- Pitch
- Scales
- Intervals
- Triads
- Sight-singing.

The perceptions and experiences have been discussed and applied to sight-singing. A Values, Attitudes and Perceptions Performance Enhancement model is postulated.

In Chapter 4 the information gathered by the questionnaires, assessment, observations and interviews with students is presented. Perceptions, values, attitudes as well as experiences and patterns that may emerge in the research are pointed out and discussed. This information is also used to assess the validity of the postulated model.

CHAPTER 4 PRESENTATION AND ANALYSIS OF EMPIRICAL DATA

4.1 Introduction

An investigation was carried out on the first-year intake of BMus students at North-West University during the years 2006, 2007, 2008. Information was collected through assessment, questionnaires, observations and interviews. Only 23 participants completed the questionnaires. These results are interpreted and elaborated on with special reference to the research question and sub-questions.

The research question and sub-questions of this study are as follows:

What is the impact of a movable *do*-tonic solmisation programme on the experiences and the improvement of sight-singing abilities of first-year BMus aural training students at the School of Music of North-West University?

(a) What is the standard of sight-singing skills of BMus students starting their first year at North-West University?
(b) What are the perceptions of sight-singing of these students starting their first year at North-West University?
(c) What are the observed patterns of improvement in the sight-singing abilities of first-year BMus students?
(d) What was the change in attitudes, perceptions and behaviour of first-year music students regarding a movable *do*-tonic solmisation programme?
(e) Did the observed behavioural changes follow the suggested Values, Attitudes and Perceptions Performance Enhancement model?
(f) Did the movable *do*-tonic solmisation programme prove to be a useful aid for improving the sight-singing abilities of first-year BMus students at North-West University?

In this chapter the results of the research are presented statistically and the findings are discussed.

4.2 Statistical analysis of assessments

Assessment data of the entire first-year BMus student groups of 2006, 2007 and 2008 were used. These students were from the former Model C schools, which changed from 1994 but strove to maintain a high standard of music education. The students geographically represent the North-West, Free State, Gauteng, Mapumalanga and the Western Cape provinces of the Republic of South Africa.

A statistical test for significance, for example gratia the t-test, can be performed to determine if the results obtained from random samples can be seen as true. A criterion called the *p*-value is used to determine the probability that the value obtained satisfies the null hypothesis (example gratia no difference between the populations means). If the p-value is smaller than 0.05, the difference between the population means can be assumed to differ significantly. In the case of an availability study the data should be considered as small populations for which statistical inference and *p*-values are not relevant. Instead of only reporting descriptive statistics in these cases, effect sizes can be determined to determine if the means differed in practice. Practical significance can be understood as a large enough difference between the population means to have an effect in practice. A natural way to comment on practical significance is to use the standardised difference between the means of two populations, i.e. the difference between the two means divided by the estimate for standard deviation (Ellis & Steyn, 2003:51).

To ascertain if the data of the three different study years differed over time and between the years, a repeated measure ANOVA analysis of variance was conducted on the assessment data and effect sizes were calculated. Frequency tables and bar charts were used to represent the combined data from the questionnaires. This analysis is presented in Figure 12, Table 9 and Table 10.

Figure 12: A repeated measure ANOVA analysis of assessment data

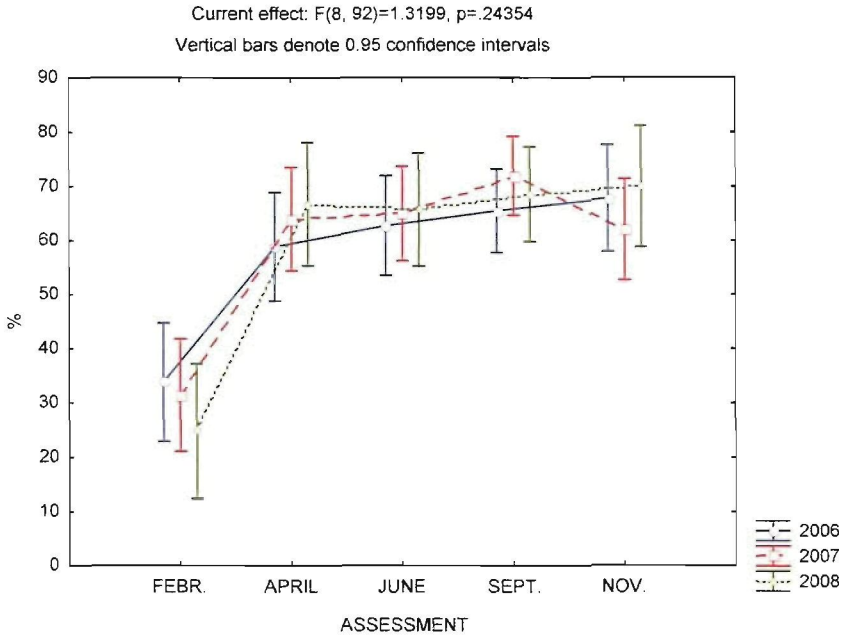


Table 9: Repeated measures analysis of variance

Effect	Repeated Measures Analysis of Variance (Data.sta) Sigma-restricted parameterization Effective hypothesis decomposition SS	Degr. of Freedom	MS	F	p
Intercept	436803.9	1	436803.9	784.6338	0.000000
Year	46.3	2	23.2	0.0416	0.959323
Error	12804.0	23	556.7		
ASSESSMENT	26323.5	4	6580.9	64.0338	0.000000
ASSESSMENT*Year	1085.2	8	135.6	1.3199	0.243542
Error	9455.0	92	102.8		

Table 10: Means of different assessment

Cell No.	ASSESSMENT; LS Means (Data.sta) Current effect: F(4, 92)=64.034, p=0.0000 Effective hypothesis decomposition ASSESSMENT	DV_1 Mean	DV_1 Std.Err.	DV_1 -95.00%	DV_1 +95.00%	N
1	FEBR.	30.08	3.14	23.58	36.58	26
2	APRIL	63.20	2.89	57.23	69.17	26
3	JUNE	64.50	2.64	59.04	69.96	26
4	SEPT.	68.71	2.21	64.13	73.29	26
5	NOV.	66.59	2.82	60.75	72.44	26

The *p*-value was used to test the hypothesis that the three years' data could be used as results obtained from one statistical population. This value is often referred to as the observed level of significance (Berenson & Levine, 1986:355). The *p*-value for differences between the three years is larger than 0.05. This indicates a lack of significance; in other words, the assessment data of the different years do not have a meaningful difference and can be used as one sample set. Also, the *p*-value for the interaction of assessment over the three years is larger than 0.05, indicating that the average assessment pattern had not changed over the three years. However, the average percentage of assessment tests differed in a statistically significant way over the year ($p<0.0001$). From Table 10 it can be seen that the average percentage in February is 30.1%, increasing in a practically significant way to 63.2% in April (effect size $d=2.16$). After that the average percentage does not increase/decrease significantly in practice (effect sizes are all smaller than 0.37). The size of the sample that was used in the study is equal to the sum of 26, which represents all the first-year students of 2006, 2007 and 2008.

4.3 Sight-singing abilities, perceptions and values of pre-university students

The two sub-questions that deal with pre-university sight-singing experiences and abilities are discussed in the next section. Assessment results are used to indicate the entrance-level sight-singing abilities of these students.

4.3.1 Assessment of entrance-level sight-singing abilities [research sub-question (a)]

To address the first sub-question,

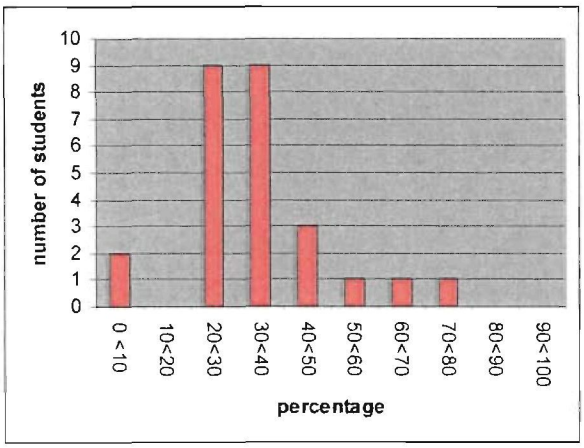
What is the standard of sight-singing skills of BMus students starting their first year at North-West University?

data were collected through interviews and questionnaires. An assessment of sight-singing abilities was done during the first week of the academic year. The same sight-singing melodies were used in 2006, 2007 and 2008. In Table 11 the assessment data are summarised. These data are graphically presented in Figure 13.

Table 11: Assessment of entrance level sight-singing abilities

	Number of students	Percentage
0 but less than 10	2	7.90
10 but less than 20	0	0
20 but less than 30	9	34.60
30 but less than 40	9	34.60
40 but less than 50	3	11.50
50 but less than 60	1	3.80
60 but less than 70	1	3.80
70 but less than 80	1	3.80
80 but less than 90	0	0
90 but less than 100	0	0
Total	26	100.00
Average %	26	30.53%

Figure 13: First-year students' averages at outset



The arithmetic mean was calculated for the assessment by summing the results and dividing the total by the number of students. This average was equal to 30.5%. The median is the middle value of an ordered sequence of data. In this data set the median value is 30.0%. When the median and the arithmetic mean are the same for a data set, the data set depicts a normal distribution, as in this case (Berenson & Levine, 1986:54).

These results revealed that the first-year sample group had poor sight-singing abilities. Some of the shortcomings that became apparent in this first assessment were:

- A lack of confidence to sing;
- The absence of rhythmic and melodic fluency;
- Poor pitch accuracy;
- No sense of tonality;
- Deficient music-reading skills.

Responses to the different questions in the questionnaire, relevant to the pre-university experiences and perceptions of sight-singing, will be discussed in the next section.

- *Was sight-singing part of regular music teaching at school?* ***(1.1)***

N=23	Frequency	%
Yes	7	30.40
No	16	69.60

Only 30.4% of the students specified that they had aural training as part of their music teaching on school level. Of these 30.4% of the students, only 42.8% did sight-singing. The response to this question indicated that 69.6% had no aural training or sight-singing at all. In this assessment 13.0% of the students scored 50% or higher. According to responses in the questionnaires, the reason was that only 13.0% were taught sight-singing at school and during choir practices. Some students indicated that the teachers were preoccupied with teaching music theory, music practice and music history to the detriment of sight-singing. This analysis revealed significant shortcomings in holistic aural training tutoring, which leads to a misperception that sight-singing is not an important musical skill. Concluding remarks on this research sub-question are formulated in section 5.1.2.

4.3.2 Sight-singing perceptions and values of pre-university students [research sub-question (b)]

To address the next sub-question,

What are the perceptions held by BMus students starting their first year at North-West University?

information gained from a questionnaire completed at the commencement of the first academic year of BMus studies is applied.

- *What was your perception of sight-singing at school?* ***(1.2)***

N=22	Frequency	%
Not important / Boring	11	50
Difficult	5	22.70
Easy	3	13.60
Enjoyed sight-singing	3	13.60

The data presented above indicate that 50% of the students held the perception that sight-singing was difficult, not important, boring and unnecessary. Another 22.7% revealed that they found sight-singing difficult. Only 13.6% enjoyed sight-singing, while another 13.6% indicated that sight-singing was easy. Some of the perceptions that were noted are:

- Not that important a part of music training;
- Thought of it and almost never practised it;
- It was something you did in the exam, but the rest of the time you rarely thought of it and almost never practised it;
- Not interested in learning the basic skills of sight-singing;
- Boring, difficult and unnecessary;
- Difficult;
- Neutral;
- Easy and fun.

Only a limited number of students experienced sight-singing as easy and fun. The rest had negative perceptions of sight-singing as was indicated by the data collected in this question. One of the major tasks in successfully teaching sight-singing is to overcome these negative perceptions and replace them with perceptions that will lead to positive attitudes towards sight-singing.

The following responses indicate the perceptions of the students of the difficulty of the aural training classes:

- *Did you expect aural training to be easy?* **(1.3)**

N=23	Frequency	%
Yes	8	34.80
No	15	65.20

Most of the students (65%) perceived aural training as difficult. However, some thought it would be easy and "would never have to practise". This mixed reaction was expected as the students were instrumentalists and singers. The response indicated that there were different values in this sample. However, in the aural training contact sessions it is important to work together and share the same values. The most relevant terminal value

in this case is achievement, which can be defined by behaviour such as working hard and developing new skills (Nelson & Quick, 2006:130).

One of the obstacles to overcome was the lack of confidence in their ability to sing. This is illustrated by the findings of the following question:

- *Were you shy to sing in front of your peers and the researcher?* ***(1.4)***

N=23	Frequency	%
Yes	15	65.20
No	7	30.40
A little	1	4.30

The response to this question indicated that the majority (65,2%) of students had little or no singing skills and were "scared" to sing in public or in front of their peers. These students were generally instrumentalists. The 30.4% of students responding negatively were students who majored in singing. However, being able to sing does not mean one can do sight-singing. This is indicated by the low scores (average 30.5%) in the preliminary assessment done before commencement of the aural training module.

The shortcoming of being "shy" and "scared" to sing in public can only be overcome if the instrumental value of courage is present in the individual. Confidence to perform and sing in front of peers, facilitator and examiners can be nurtured through group activities using the Zone of Proximal Development (section 3.3.1) during contact sessions.

The above results correspond to the different responses in the interviews with the students.

4.3.3 Results of interviews

The interviews revealed the same tendencies that were manifested in the responses to the questionnaires. Most of the students never used solmisation for sight-singing. Sight-singing consisted of a few sessions before UNISA and school examinations. The exceptions were the students who attended secondary schools specialising in the arts. At these schools the students were already versed in the use of the movable *do*-tonic

solmisation system for sight-singing. Concluding remarks on this research sub-question are formulated in section 5.1.3.

4.4 Evaluation of the development of sight-singing abilities [research sub-question (c)]

To address the next sub-question,

What are the observed patterns of improvement in the sight-singing abilities of first-year BMus students?

the assessment data of tests and examinations were used to point out patterns of improvement of the sight-singing abilities of first-year BMus students.

The first quarter of the academic year has approximately seven contact sessions. In this short space of time sight-singing skills had to be enhanced and perceptions modified and strengthened. A change in attitudes had to be accomplished. Apart from lecturing, observations played a major role in achieving the necessary outcomes (section 3.3.1). Study material used was challenging but within the intellectual and musical development levels of the different individuals in the class. Through observing individual members of the group, shortcomings were identified and remedial actions were taken.

Group activities were preferred to individual performances. This creates an accommodating learning environment, especially for students who were shy and scared of performing in front of their peers (section 4.3.2). This approach created confidence and initiated changes in perceptions. To establish the value of achievement (section 2.5.1), regular practising of various concepts of sight-singing was encouraged.

4.4.1 Assessment data at the end of the first quarter (April)

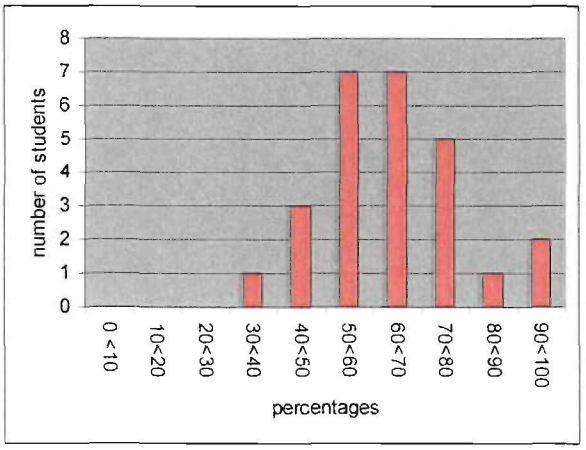
A change in attitudes was observed in the early stages of the programme. A willingness to learn how to use the *do*-tonic solmisation system to improve sight-singing skills and the relatively quick rate of acquiring these solmisation sight-singing skills were indicative of this change. Constructivist teaching strategies (section 3.3) had a positive influence on the sight-singing abilities of the first-year students. The assessment data at the end of

the first quarter confirmed this improvement. These data are presented in Table 12. Figure 14 is a graphical presentation of this information.

Table 12: Assessment data at the end of the first quarter (April)

	Number of students	Percentage
0 but less than 10	0	0
10 but less than 20	0	0
20 but less than 30	0	0
30 but less than 40	1	3.80
40 but less than 50	3	11.50
50 but less than 60	7	26.90
60 but less than 70	7	26.90
70 but less than 80	5	19.20
80 but less than 90	1	3.80
90 but less than 100	2	7.70
Total	26	99.80
Average %	26	60.11%

Figure 14: Assessment data at the end of the first quarter (April)



The success of the *do*-tonic solmisation programme is indicated by the shift in the group average from 30.5% at the onset of the BMus first-year course to an average of 60.11% at the end of the first quarter. Only four out of 26 students scored less than 50% in this assessment. A vast improvement was already noticeable after three months in the first semester of the first year.

4.4.2 Assessment data at the end of the first semester (June)

During observations in this quarter it became apparent that the students were adapting to the aural training environment. The strengthening of music concepts such as rhythm, pitch, melody, harmony and singing abilities occurred. Continuous stimulation through creative learning situations where the students interact with the movable *do*-tonic built

confidence and was instrumental in changing perceptions. More positive comments on sight-singing were aired in interactions and informal conversations with the researcher. Emphasis was still placed on group participation with a minimum of individual performances. Students were encouraged to practise in pairs, which led to higher levels of motivation. This in turn led to enhanced performances in class assessments. Students experienced a sense of achievement once they realised that they were able to master certain sight-singing exercises. The exercises were challenging but not too difficult to perform (section 3.3.1). Care was taken not to bore the more proficient students and also not to intimidate the less skilled sight singers.

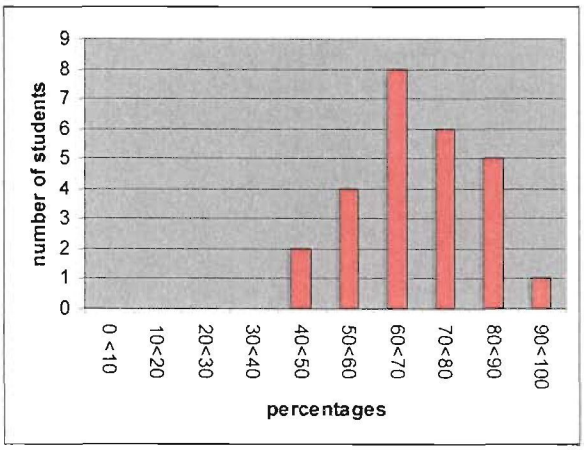
The students experienced a growth in self-esteem that led to higher levels of motivation in the third quarter. A shift in attitudes was observed by the researcher. Previous negative attitudes towards solmisation were overcome as these positive experiences occurred. The value of regular attendance and diligent practicing were also slowly being established.

The assessment data at the end of the first semester are summarised in Table 13. These data are graphically presented in Figure 15.

Table 13: Assessment data at the end of the first semester (June)

	Number of students	Percentage
0 but less than 10	0	0
10 but less than 20	0	0
20 but less than 30	0	0
30 but less than 40	0	0
40 but less than 50	2	7.70
50 but less than 60	4	15.40
60 but less than 70	8	30.80
70 but less than 80	6	23.00
80 but less than 90	5	19.20
90 but less than 100	1	3.80
Total	26	99.90
Average %	26	64.50

Figure 15: Assessment data at the end of the first semester (June)



The study material for sight-singing in this quarter was more demanding and more time consuming than in the first quarter. However, the average percentage gained in the June examinations rose to 64.5%. Only two students scored less than 50% but more than 40%. Lack of performance can be blamed on insufficient motivation (Nelson & Quick, 2006:116). In this examination students who failed dismally in the February assessment improved to such an extent that they scored between 50% and 70%.

The data set is right skewed, because the mean of 64.5% is higher than the median of 62.5%. This is due to five high scores of 80% and one of 90%. The examination was held during winter and a number of students had colds. Examination stress also took its toll. Sight-singing skills were still developing and not yet on a level of considerable proficiency.

4.4.3 Assessment data at the end of the third quarter (September)

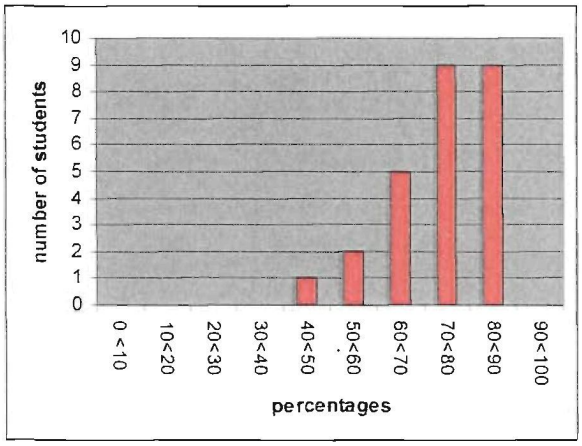
Tendencies in improved sight-singing abilities observed in the previous quarter continued to manifest in the third quarter. Attitudes and perceptions changed as the students' experienced substantial improvement in their sight-singing abilities. These abilities were enhanced to a level necessary to advance to the second academic year. The students became more comfortable in sight-singing by using their natural singing voices and could vocalise solmisation syllables in different combinations with the movable *do*-tonic. This resulted in improvement in pitch accuracy. Another essential benefit that was gained through the rhythmic exercises was the heightening and establishing of rhythmic confidence.

Negative perceptions listed in section 4.3.2 were replaced through continued intervention by the researcher. Improved sight-singing performances led to positive experiences. A realisation of the importance of sight-singing as part of a holistic music practice took place. At this stage it became evident that the Value, Attitude, Perception and Performance Enhancement Model (section 3.5) was effective. The model describes the continuous pattern of changing as well as establishing perceptions and values with the enhancement of performances.

Table 14: Assessment data at the end of the third quarter (September)

	Number of students	Percentage
0 but less than 10	0	0
10 but less than 20	0	0
20 but less than 30	0	0
30 but less than 40	0	0
40 but less than 50	1	3.80
50 but less than 60	2	7.70
60 but less than 70	5	19.20
70 but less than 80	9	34.60
80 but less than 90	9	34.60
90 but less than 100	0	0
Total	26	99.90
Average %	26	69.10

Figure 16: Assessment data at the end of the third quarter (September)



At the end of the third quarter 69.2% of the students scored more than 70% in the September assessments. Only one student had less than 50%. These results were attained even though the standard was substantially higher than in the previous semester. Consequently the average of 69.1% does not reflect the vast improvement in sight-singing abilities of the students. Figure 16 is a graphical presentation of this information. From this figure it is obvious that this data set is slightly left skewed. It depicts good performances by the group of 26 students. The mean (69.1%) is lower than the median (70%) because of the few poor grades.

4.4.4 Assessment data at the end of the first year (November)

The final assessment of the first-year BMus students revealed that the *do*-tonic solmisation programme was executed successfully. A high standard of sight-singing was expected and attained. This was to the result of changes in perceptions. An eagerness

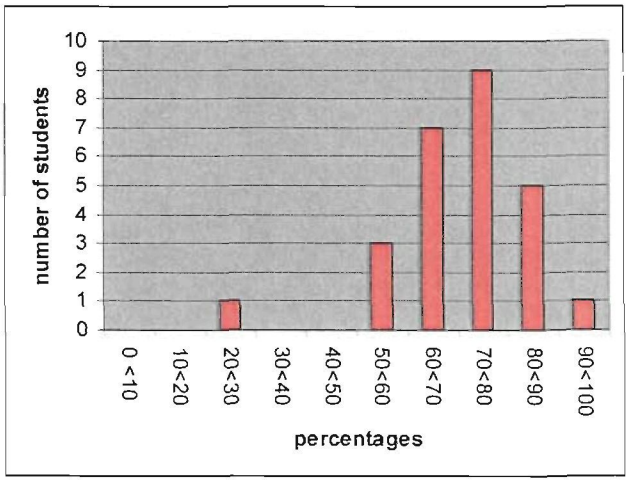
to attend classes was observed and a realisation that sight-singing was necessary for total musical development. Emphasis on achievement, which was continually communicated by the researcher, motivated the students to exert a high level of effort. This enhanced their performances and afforded them the opportunity to experience the intrinsic value of excellence. Habits of excellence, once developed and experienced, served as sources of motivation. This positive experience was one of the outcomes of the Value, Attitude, Perception and Performance Enhancement Model (section 3.5). The cyclic nature of the proposed model was proved by the continuous improvement of perceptions, attitudes, motivation and performances.

Quick and decisive thinking was stimulated by the movable *do*-tonic during sight-singing performance. Scores that were higher than 70% were achieved by 37.6% of the students. This information is shown in Table 15 and graphically illustrated in Figure 17.

Table 15: Assessment data at the end of the first year (November)

	Number of students	Percentage
0 but less than 10	0	0
10 but less than 20	0	0
20 but less than 30	1	3.80
30 but less than 40	0	0
40 but less than 50	0	0
50 but less than 60	3	11.50
60 but less than 70	7	26.90
70 but less than 80	9	34.60
80 but less than 90	5	19.20
90 but less than 100	1	3.80
Total	26	99.80
Average %	26	66.20%

Figure 17: Assessment data at the end of the first year (November)



An arithmetic mean of 66.2% reflected the high level of sight-singing skill reached. The median in this case is 70%, which is higher than the mean. This indicates that the data set is left skewed, which indicates a good performance by the students. The single poor score was due to an emotional breakdown suffered by a student.

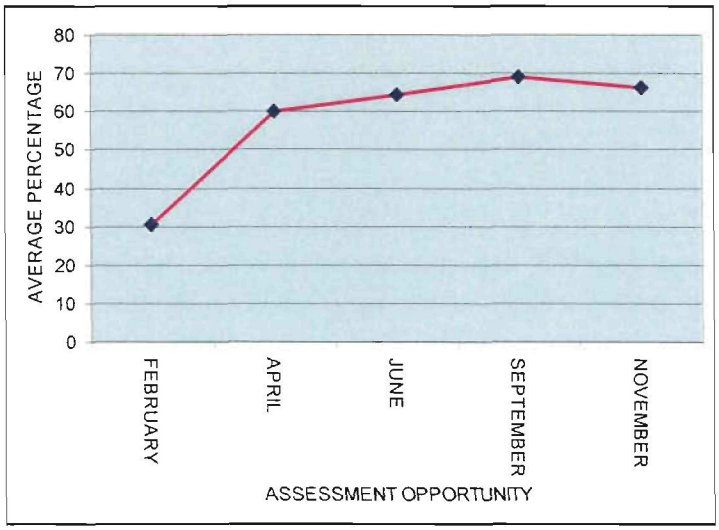
4.4.5 Patterns of improvement of sight-singing in the first-year of BMus studies

Figure 18 was compiled using data that were collected on five different assessment occasions from February to November in the first year of the BMus studies. Table 16 presents the average scores for the different assessment opportunities. The information used to collate Table 16 is available in Tables 11 to 15.

Table 16: Average percentage scored in sight-singing by the first-year BMus students during different assessment opportunities

Assessment opportunity	Average percentage
February	30.50
April	60.11
June	64.50
September	69.10
November	66.20

Figure 18: Analysis of development of sight-singing abilities as determined by quarterly assessments



The low average percentage scored in February is discussed in section 4.3.1. This was attributed to shortages in aural training at school level. The programme as discussed in section 3.3 to rectify this situation was employed. Remediation of sight-singing skills as

well as the changing of perceptions of sight-singing was implemented from the first contact sessions.

The improvement in sight-singing abilities which resulted from the implementation of the *do*-tonic solmisation programme is apparent from Figure 14. The pattern of sight-singing development is illustrated in this figure. However it should be noted that, although the average percentages from April to November stayed virtually the same, the study material became increasingly more difficult. This factor actually veils the continuous growth in sight-singing abilities of the participating students. These results are in accordance with the Value, Attitude, Perception and Performance Enhancement Model postulated in section 3.5 and graphically presented in Figure 11. Concluding remarks on this research sub-question are presented in section 5.1.4.

4.5 Values, attitudes and perceptions of students at the conclusion of the first year of academic study [research sub-questions (d) and (e)]

The following two sub-questions are dealt with under this heading. The reason is that these sub-questions are interrelated. The same questions in the questionnaire are applicable to both of these sub-questions.

To address the next sub-questions,

What was the change in attitudes, perceptions and behaviour of first-year music students towards a movable *do*-tonic solmisation programme?

Did the observed behavioural changes follow the suggested Values, Attitudes and Perceptions Performance Enhancement model?

data sourced from the questionnaires, interviews and observations as well as assessment information gained from academic year-end examinations were collated to determine the sight-singing abilities, attitudes and perceptions of students at the conclusion of their first-year BMus studies. These results were used to determine whether the Values, Attitudes and Perceptions Performance Enhancement Model described the observed behavioural changes.

Cross-checking the results of the questionnaire was done by putting the same questions in statement form. These statements were evaluated on a five-point scale. The validation questions are graphically presented where appropriate. This information is discussed in the following sections.

4.5.1 Results of questionnaires

- *What were your thoughts and feelings when you recognised that you started something (do-tonic solmisation programme for sight-singing) that was not easy to accomplish?* **(2.1)**

N=22	Frequency	%
Found it a challenge	6	27.30
Felt they needed practice	5	22.70
Felt stressful and frustrated	11	50.00

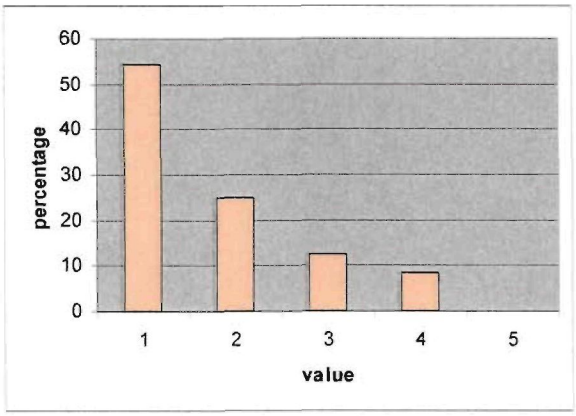
The negative perceptions that prevailed from school days are evident in the responses to this question. This result corresponds with the 50% of the respondents that thought sight-singing was not important and boring (section 4.3.2). The 27.3% who found it challenging most probably corresponds with the group that stated that it was easy and enjoyed sight-singing. The 22.7% who realised that they needed to practise hard to accomplish proficiency in sight-singing corresponds with the group who felt that it was difficult. The essence of the responses is captured below:

- I didn't like it at first, but the more difficult it became, the more challenged I felt;
- I felt frustrated but saw how it could be helpful and therefore decided that I'll try my best to master it;
- I was hopeless;
- I knew that I had to start to practise to get somewhere and to improve.

Students who had an established value system that hard work leads to achievement realised that they had to practise regularly to accomplish the needed proficiency in sight-singing. A challenging but still accommodating teaching environment was created (section 3.3.1). This is reflected in some of the responses, for instance, "It became a challenge and so it became fun".

Validation question 1:

- *Initially it was difficult for me to sing from sight with the movable do-tonic.*



1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

The percentage (54.2%) of students who strongly agree with the statement that it was initially difficult for them to sing from sight with the movable *do*-tonic corresponds with the 50% who felt that it was stressful and frustrating to do sight-singing with the movable *do*-tonic.

It was inevitable that the students' reaction to the *do*-tonic solmisation programme for sight-singing would be in line with their previous school experiences and the perceptions that were formed before entering the BMus degree programme. The situation was identified by the researcher through observations and questionnaires during the first contact sessions. Realignment of perceptions and values through intervention by the researcher as a change agent was essential. The success of the researcher's intervention as well as the implementation of the *do*-tonic solmisation programme is evident from the responses in the next question.

- *Do you think it is necessary to take aural training and sight-singing classes as part of your BMus degree programme?* ***(2.2)***

N=23	Frequency	%
Yes	23	100%
No	0	0

In contrast to the 50% of the students who stated that sight-singing was not important and boring, a total change in perceptions and attitudes manifested at the end of the first year, with 100% of the students stressing the importance and the necessity of sight-singing as a part of the BMus degree course.

Some of the remarks were:

- Yes, it is very important to develop your ears especially for sound quality and intonation;
- Yes, definitely! It helps a lot in other subjects such as theory and practical;
- Yes, it is an integral part of music training;
- Initially no, but now I understand – it helps sight reading in general and develops inner ear hearing;
- Yes! It helps me with my composition, music theory as well as in practical performances, it conditions me to listen;
- YES! It improves everything.

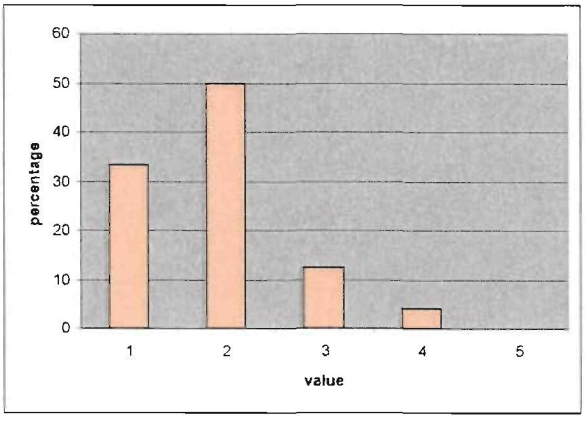
No negative remarks about the usefulness and necessity of aural training and sight-singing were documented. This can be ascribed to the successful implementation of the *do*-tonic solmisation programme for sight-singing as well as the consistent interventions by the researcher.

These findings confirm the validity of the Values, Attitudes and Perceptions Performance Enhancement Model. The total change in perceptions and attitudes led to enhanced performances as indicated by the results of the final assessment opportunity in November. Only one student failed the November sight-singing examination. This was because of personal emotional uncertainties.

In this case the statements made by students in the questionnaire were validated.

Validation question 2:

- *Sight-singing, by using the movable do-tonic, improved my inner ear.*

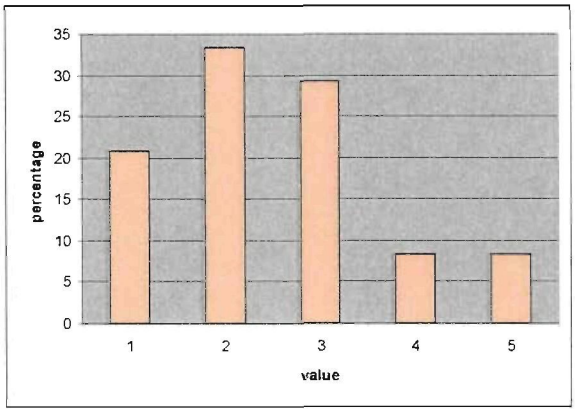


1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

The analysis of the data indicated that 83.3% of the students felt that using the movable *do*-tonic solmisation system improved their inner ear.

Validation question 3:

- *Sight-singing, by using the movable do-tonic, improved my dictation skills.*



1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

A number of students (29.2%) were unsure of improvement in dictation skills as a result of sight-singing by using the movable *do*-tonic solmisation system. However, 54.2% agreed that sight-singing by using the movable *do*-tonic solmisation system improved their dictation skills.

The next four questions deal with the value of regular practising of sight-singing and the influence of sight-singing on self-discipline.

- *Do you prepare for aural tuition sessions?* **(2.3)**

N=23	Frequency	%
Yes	8	34.80
No	6	26.10
Sometimes	9	39.10

The response to this question suggests that only 26.1% do not prepare for aural tuition contact sessions. Another 39.1% do not prepare regularly. The students had to deal with a full academic programme and had little time to practise sight-singing. It is difficult to change the perception shaped at school that it is not necessary to practise aural training and sight-singing. Recommendations to remediate this shortcoming of not preparing for ear training and sight-singing contact sessions will be addressed in Chapter 5.

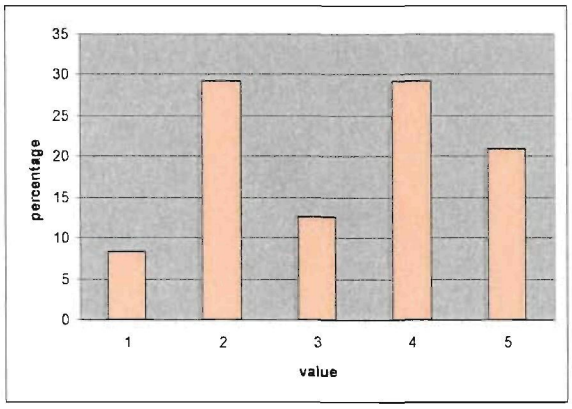
- *How often do you practise sight-singing?* **(2.4)**

N=23	Frequency	%
Sometimes	6	26.10
Once a month	1	4.30
Once a week or more	16	69.50

The majority of first-year students (69.5%) practised once a week or more. This provides a clear confirmation that the value of achievement through regular practising was understood by the majority of the students. If the 26.1% of the students who practised at least sometimes is added to the 69.5% of the students who practised regularly, a total of 95.6% is reached. This indicates that, with the exception of the one student who practised once a month, all the students realised the importance of the value of practising sight-singing.

Validation question 4:

- *I practise sight-singing once a week.*



1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

Half of the students (50%) disagreed with the statement that they practised once a week. The result does not contradict the findings of the correlating question above, because 69% of the students indicated that they practised once a week or more.

- *Does practising sight-singing form an important part of your weekly practical music activities?* **(2.5)**

N=23	Frequency	%
Yes	8	34.80
No	12	52.20
Sometimes	3	13.10

The examination of the data indicated that for 52.2% of the first-year students aural training and sight-singing did not form an important part of their weekly practical music activities. This is despite the indication from the previous question that they do practise sight-singing on a regular basis. For 34.8% practising sight-singing was an essential part of their weekly practical music activities.

- *Did your self-discipline improve through practising sight-singing for aural training classes?* **(2.6)**

N=23	Frequency	%
Yes	15	65.20
No	8	34.80

One of the advantages of regular practising of sight-singing is the enhancement of self-discipline. The 65.2% who stated that there was an improvement in their self-discipline corresponds with the 69.5% of students who practise regularly. Two (8.7%) of the first-year students mentioned that they were already well disciplined in their practising behaviour.

The changes in perceptions and values of the first-year students influenced their attitudes towards the *do*-tonic solmisation programme. The attitudes at the end of the first academic year are discussed in the next questions.

- *Do you have a positive attitude towards the movable do-tonic as an aid for sight-singing?* **(2.7)**

N=23	Frequency	%
Yes	19	82.60
No	3	13.00
Not certain	1	4.30

The response on this question provides a clear confirmation that the first-year students experienced a change in attitudes towards sight-singing. The majority of students (82.6%) indicated that they found the movable *do*-tonic helpful. Some students pointed out that the movable *do*-tonic is valuable in studying new pieces for singing or different solo instruments. The movable *do*-tonic also benefited the intonation of other students. This is in stark contrast to the attitudes observed and documented in section 4.3.2, where students stated that it was boring and unnecessary. This was achieved through the continuous stressing of the importance and the value of the movable *do*-tonic

solmisation system by the researcher and also illustrations of its usefulness in practice. The change in attitudes was precipitated by changed perceptions as illustrated in the Values, Attitudes and Perceptions Performance Enhancement Model (section 3.5).

- *Did your attitude towards aural training and sight-singing improve?* **(2.8)**

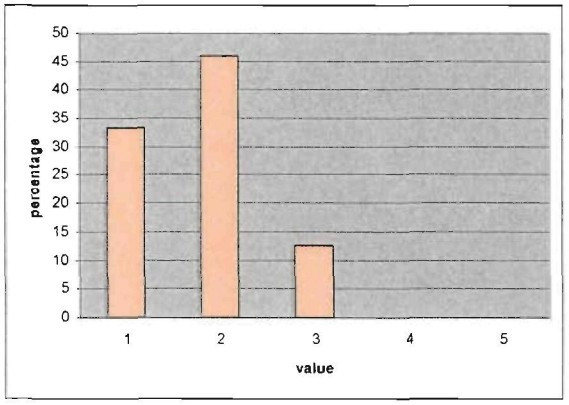
N=23	Frequency	%
Yes	20	87.00
No	3	13.00

The positive response to this question indicated that 87% of the students underwent a change of attitude towards aural training and sight-singing. Different reasons for this change are given by the students. They felt secure in participating in the group activities, while at the same time, social interaction motivates learning. The realisation that is an important aspect of their music education motivated the change in attitudes. The aural training students experienced the aural training and sight-singing classes as unique and completely different from all other classes.

The positive attitude precipitated by the researcher is a factor quoted by some students. For some participants aural training is their favourite subject. The influence of the researcher is stressed. The responsibility as well as the important role that facilitators play in determining attitudes towards a subject was highlighted by this response.

Validation question 5:

- *My attitude towards aural training changed by using the movable do-tonic as an aid for sight-singing.*



1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

The 79.2% of the students who agreed that their attitude towards aural training changed by using the movable *do*-tonic as an aid for sight-singing confirms the findings reached in the question. No negative responses were noted in the validation question.

One of the major problems in sight-singing is that the students cannot sing and find it stressful to sing in the aural training contact sessions. The researcher made a concerted effort to rectify this problem. To determine whether these efforts were successful, the following question was asked.

- *Do you find it easier and less stressful to sing in the aural training class?* **(2.9)**

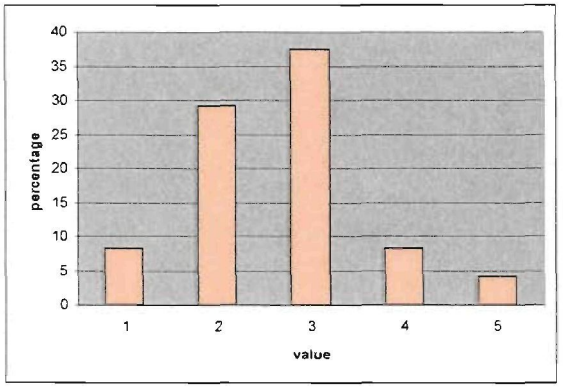
N=23	Frequency	%
Yes	21	91.30
No	2	8.70

In section 4.3.2 nearly 70% of the students responded by stating that they were shy about singing in front of the researcher and their peers. The situation was adequately addressed through group activities and using Vygotsky's Zone of Proximal Development theory (section 3.3.1) during contact sessions. The response to this question implied that the confidence of the first-year students was greatly enhanced, because 90% specified that they were comfortable about singing in the ear training class. This led to enjoyable sight-singing experiences that encouraged changed attitudes towards ear training as well as to the movable *do*-tonic solmisation system.

The improved singing abilities led to less stressful group singing encounters. Students pointed out that some of them experienced stress during assessments, where they had to sing alone in front of the researcher and the external examiner. Lower scores in formal assessments were often attributed to high stress levels. Recommendations to address this situation will be discussed in Chapter 5.

Validation question 6:

- *I can sing melodically and rhythmically complicated melodies at first sight with the movable do-tonic.*



1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

At the end of the BMus first year only 37.5% of the students felt that they could sing melodically and rhythmically complicated melodies at first sight with the movable *do*-tonic. Another 37.5% were still unsure whether they could perform more difficult sight-singing phrases. The rest of the students (25%) indicated that they were unable to sing difficult melodies at first sight. This may be one of the reasons why the students found the assessments stressful.

- *Do you enjoy all the sight-singing activities during every week's teaching session?* **(2.10)**

N=23	Frequency	%
Yes	17	73.90
No	6	26.10

Negative reactions (26.1) point to a lack of the realisation of the value of regular practising in some students. Another reason stated was that some students still had not overcome their shyness about singing. The positive reaction (73.9%) by the majority of the students was indicative of a change in attitudes towards sight-singing. The presentation of the contact sessions and the personal influence of the facilitator are accountable for the response to this question. The perceptions and attitudes of the students were adjusted by the intervention of the researcher.

- *If you had a choice would you still take aural training as a module?* **(2.11)**

N=23	Frequency	%
Yes	17	73.90
No	6	26.10

A total of 73.9% students responded positively to this question. According to this response, the students realised the value of ear training and sight-singing and described it as one of the most meaningful modules in the BMus course. Students noted that one of the prerequisites to be accepted in an international music school is passing an aural audition. This would be impossible without the necessary sight-singing skills. Given the international mobility of students, this is a motivational aspect that is often neglected.

4.5.2 Results of interviews

It is clear from the interviews that the perceptions and attitudes of the BMus first-year students changed. They had positive experiences regarding sight-singing during contact sessions. The improvement in their sight-singing abilities and higher scores during assessment occasions led to changed perceptions, attitudes and behaviour. The value of regular practising of sight-singing was established. This information is verified by the data collected in the questionnaires.

4.6 Impact of the movable *do*-tonic solmisation programme on sight-singing abilities of first-year BMus students at North-West University [research sub-question (f)]

To address the sub-question,

Did the movable *do*-tonic solmisation programme prove to be a useful aid for improving sight-singing abilities of first-year BMus students at North-West University?

a questionnaire, observation and interviews were employed. The questions and the results are presented in the next section.

4.6.1 Results of questionnaires

- *Do you think the movable do-tonic solmisation programme improved your sight-singing abilities?* **(3.1)**

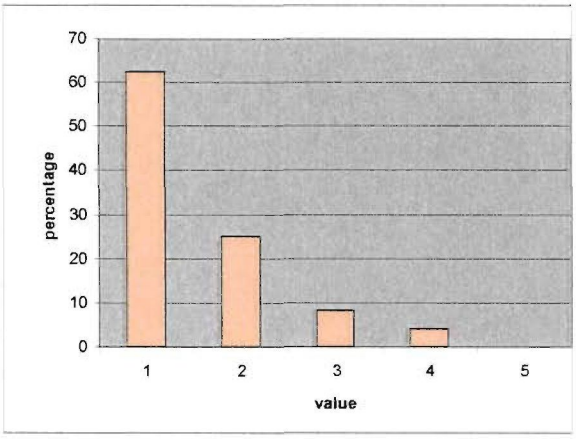
N=23	Frequency	%
Yes	22	95.7
No	1	4.3

These results are a clear indication that the movable *do*-tonic solmisation programme is an effective medium for the development of sight-singing abilities for first-year BMus students. A total of 95.7% of the students responded positively to the question whether the movable *do*-tonic solmisation programme improved their sight-singing abilities. The

implementation of the movable *do*-tonic solmisation system addressed shortcomings that were identified as problematic for students at the commencement of their BMus studies (section 4.3.1). These shortcomings in some of the aspects of their musical experiences were addressed during the first academic year, for instance, a sense of tonality, improvement of music reading skills, clear pitching of intervals, recognition of note patterns, interpretation of modulations, assistance in preparation and memorisation of performance pieces, enrichment in practical performances of instrumentalists and singers, enhanced inner hearing, improved general listening skills and the ability to sing difficult melodic lines.

Validation question 7:

- *My sight-singing improved by using the movable do-tonic.*



1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

An improvement in sight-singing abilities was experienced by 87.5% of the students. Of all the students who responded, only 8.3% were unsure if their sight-singing abilities had improved by using the movable *do*-tonic solmisation system. One student responded negatively to the question. This result correlates with the response to the previous question, where only one student indicated that there was no improvement in his/her sight-singing abilities.

- *What feelings do you experience when you sing a melody nearly fluently or fluently from sight without any intonation and pitch mistakes using the movable do-tonic?* **(3.2)**

N=23	Frequency	%
Positive experiences	21	91.30
Negative experiences	2	8.70

Positive experiences were registered in response to this question. Feelings of elation and accomplishment were noted. The sense of achievement heightened motivation, which increased self-confidence and feelings of competence as musicians. All these positive experiences helped to negate negative perceptions of the movable *do*-tonic solmisation system that were held at the beginning of the programme. Attitudes changed continuously as the year progressed. This correlates with observations made in the contact sessions and informal conversations with the students. Positive attitudes were infectious and led to higher levels of motivation that enhanced sight-singing performances. This observation is in line with the predictions of the Values, Attitudes and Perceptions Performance Enhancement Model that were discussed in section 3.5. The success that was achieved by applying the movable *do*-tonic solmisation programme to a group of students with limited sight-singing skills (section 4.3.1) is underlined by the responses to this question as well as the high scores achieved in the November assessments (section 4.4.4) and the continuous improvement as illustrated in section 4.4.5.

- *What positive changes occurred in your sight-singing skills after you started learning the movable do-tonic?* **(3.3)**

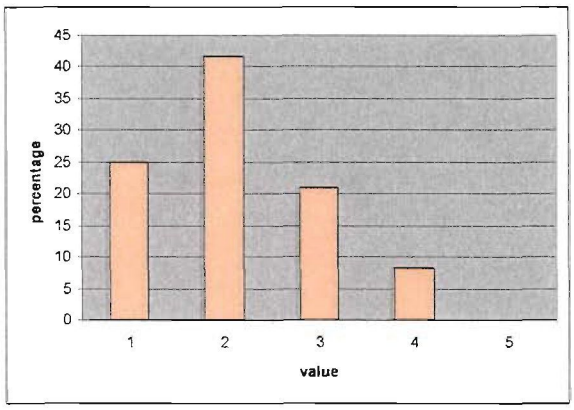
N=23	Frequency	%
Some improvement in aural and sight-singing abilities	21	91.30%
No improvement	2	8.70%

At the end of the first year 91.3% of the first-year students registered some improvement in aural and sight-singing abilities. Positive changes were noted in different aspects of sight-singing and aural training, for instance, pitch accuracy, fluency in music reading, singing, confidence and attitudes towards sight-singing. Responses of the students are

listed in Annexure G, under question 4.6. According to these responses, the movable *do*-tonic solmisation programme for sight-singing addressed a variety of shortcomings of each of the students. The next validation question established the value of the programme.

Validation question 8:

- *My singing voice as well as my intonation improved by using the movable do-tonic as an aid for sight-singing.*



1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

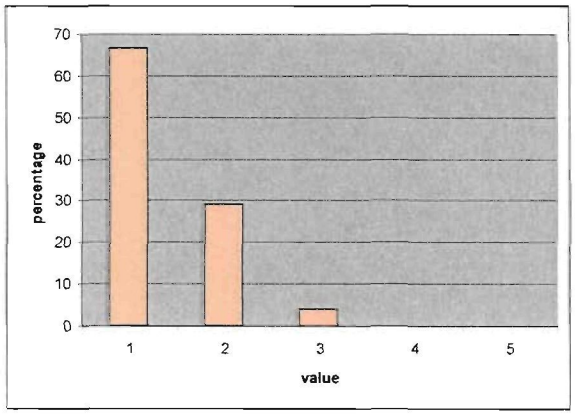
Improvement of intonation was registered by 70.8% of the students, while 20.8% were unsure whether an improvement had occurred. Some of the students had singing as their major practical instrument and were less prone to intonation uncertainties. This is only one of the benifits of the movable *do*-tonic solmisation programme for sight-singing that were cross-checked.

- *What are the most important lessons you learnt in the aural training class?* **(3.4)**

The majority of the students indicated that the most important lesson that they have learnt was that practising sight-singing and ear training is essential and can remediate under-developed hearing and sight-singing skills.

Validation question 9:

- *After the first assessment I realised I had to practise sight-singing.*



1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

The analysis of the above question indicated that after the first assessment 95.8% of the students realised that they had to practise sight-singing and aural training. This validates the statements made by the first-year students in response to the question on valuable lessons learnt.

Other statements that recurred in the comments made by students were:

- How important it is to make use of your muscle memory and inner ear;
- That no matter how easy it looks, you still have to practise a lot and the most important thing is not good marks, but improvement;
- Practise makes perfect;
- To read ahead and to listen to your inner ear;
- To know the intervals and solfa is absolutely necessary for sight-singing;
- Develop a positive attitude towards sight-singing and you will find it easier.

- *Would you recommend the movable do-tonic as an aid for sight-singing?* **(3.5)**

N=23	Frequency	%
Yes	22	95.70%
No	1	4.30%

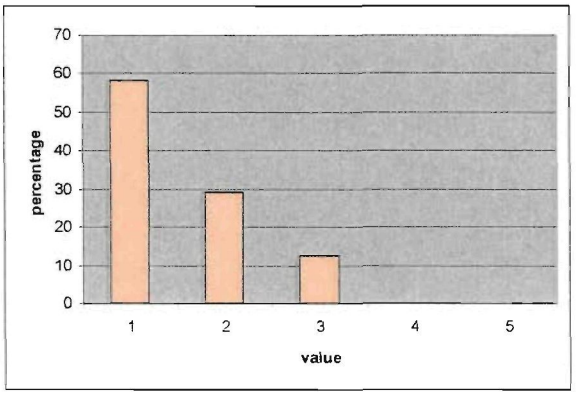
The response to the question on the improvement of sight-singing abilities and the experiences and changes in attitudes indicated in the previous questions were a clear indication that the majority of the first-year students would recommend the movable *do-*

tonic as an aid to sight-singing. 95.7% of the students answered in the affirmative with the following statements:

- Yes. It is essential to improve the inner ear;
- Yes, it is an excellent and easily applied method;
- Yes, I feel the fixed *do* is too confusing;
- Yes, I feel it is a good technique to have;
- Definitely, I don't know how one cannot use it and effectively do sight-singing;
- Yes, I think the learners should be confronted with the system at an earlier age;
- Yes, it makes things easier to understand.

Validation Question 10:

- *The movable do-tonic is an effective method for sight-singing.*



1 Strongly agree
2 Agree
3 Unsure
4 Disagree
5 Strongly disagree

In the resposes to validation question 87.5% of the students pointed out that the movable *do*-tonic is an effective method for sight-singing. The value of the movable *do*-tonic as an effective aid for the improvement of sight-singing abilities of first-year students was emphasised and 95.7% recommended the movable do-tonic as an aid for sight-singing. The responses to the two different questions correlate closely.

4.6.2 Results of interviews

Information sourced from interviews suggested that the movable *do*-tonic solmisation programme was beneficial for sight-singing. Students believed that the use of the movable *do*-tonic did not only enhanced their sight-singing, but that it also benefited their practical instrumental subjects such as piano, violin and singing. These findings correspond with information gained from the questionnaires.

4.7 Summary of results

The widespread lack of sight-singing abilities in pre-university students was identified in this study. An absence of positive experiences during secondary school aural training led to negative perceptions concerning aural training and sight-singing. Students who attended Art schools (e.g. Pro Arte Alphen Park, Pretoria) were versed in the use of the movable *do*-tonic as an aid to sight-singing. These students held positive perceptions of the value of such a system for sight-singing.

Analysis of the assessment data revealed a constant improvement in the sight-singing abilities of the first-year BMus students. Pivotal to this improvement was the use of a *do*-tonic solmisation programme for sight-singing that was implemented during their first academic year. The improvement in sight-singing abilities positively affected the student's perceptions and attitudes towards the subject. The intervention by the researcher led to higher levels of motivation as well as enhanced performances by the first-year students. This resulted in positive experiences which in turn led to further changes in perceptions. This sequence is described in the Values, Attitudes and Perceptions Performance Enhancement Model (section 3.5).

Information sourced from the students revealed that the *do*-tonic solmisation programme for sight-singing was instrumental in improving several aspects of sight-singing. Observations indicated that the *do*-tonic solmisation system resulted in further positive outcomes in other facets of aural training.

4.8 Concluding remarks

Questionnaires and interviews with the BMus first-year students of North-West University were employed. Observations by the researcher were also included in the discussions. The research was done, firstly, to quantify the influence of pre-university experiences on the sight-singing abilities and the perceptions of sight-singing of first-year BMus students, and secondly, to determine the impact of a movable *do*-tonic solmisation programme on the sight-singing abilities and the perceptions of sight-singing among first-year BMus students of North-West University. Data were collected and analysed by the use of statistical procedures. These results need to be interpreted in relation to the research question and sub-questions, highlighting the strengths and limitations of the research. These issues will be discussed in Chapter 5.

CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Interpretation of results

The answer to the main research question consists of information presented in the individual sub-questions.

5.1.1 Main research question

What was the impact of a movable *do*-tonic solmisation programme on the experiences and the improvement of sight-singing abilities of first-year BMus aural training students at the School of Music of North-West University?

Changed perceptions of sight-singing as an important asset in musicianship was one of the impacts noted. This could be attributed to the implementation of the movable *do*-tonic solmisation programme. Experiences of accomplishment and enjoyment flowed from the virtually fluent performances of sight-singing melodies. Aural training contact sessions became something to look forward to and were not just a tedious subject necessary to fill the first academic year of the BMus curriculum.

During the implementation of a movable *do*-tonic solmisation programme an observable development of rhythmic, pitch accuracy, music reading skills were manifested. Aural awareness, musical memory, inner ear hearing and a perception of tonality, especially the significance of the root tone (*do*-tonic), were strengthened. The holistic consequence that followed the implementation of a movable *do*-tonic solmisation programme for first-year BMus students at North-West University was the fluent rhythmic and melodic performances of sight-singing melodies.

5.1.2 Research sub-question (a)

What was the standard of sight-singing skills of BMus students starting their first year at North-West University?

The assessment data at the commencement of the first-year BMus studies indicated a serious deficiency of sight-singing skills in pre-university students. The 26 students who were evaluated at the onset of their BMus studies averaged 30.5% in the first assessment. The reason for this can be attributed to the state of sight-singing in secondary schools. Significant deficiencies in aural training on these school levels are revealed by the analyses. The research indicated that 69.6% of the students stated that sight-singing was not part of their regular music activities at school. Time was mostly allocated to practical instrument training and music theory. Aural tests, as prescribed for national and international music institutions, were done on only a few occasions before the specific examinations. During these aural tests, sight-singing is omitted or neglected. The lack of sight-singing skills lies at the root of the poor sight-singing performances of first-year BMus students at the commencement of their studies.

Another contributing factor is the lack of confidence and ability to sing. This is because only a few privileged learners had the opportunity to sing in school and regional choirs. Singing classes at school have been replaced with the new Art and Culture curriculum; consequently some learners do not learn to use their natural voices to sing. Instrumentalists, thinking that it is not necessary to vocalise their instrumental solo pieces, often don't see the necessity to sing. The deficiency in sight-singing practice leads to poor pitch accuracy, no sense of tonality and an absence of rhythmic and melodic fluency.

From the questionnaires and the interviews it was clear that most of the music teachers at school did not assign a great deal of value to sight-singing. The teachers are often not confident enough to sing themselves and never acquired the correct methodology to teach sight-singing. This situation is not conducive to singing or sight-singing and leads to the inadequate sight-singing abilities of first-year BMus students. The state of sight-singing on secondary school level seems to correlate with the negative perceptions of sight-singing held by first-year students.

5.1.3 Research sub-question (b)

What were the perceptions held by BMus students starting their first year at North-West University?

The theme that emerged from the responses to this sub-question was that sight-singing was not an important part of music training at school and an unnecessary subject to become skilled at. This negative perception was cultivated by teachers who relegate sight-singing to a crash course in aural tests shortly before examinations. A value, namely that it is not necessary to practise sight-singing, was established by these actions and attitudes of music teachers. This observation is supported by Robbins (1986:93), who states that values are mostly established by parents and teachers during the developmental stages of a child's life.

Learners have not been educated that sight-singing is essential for the development of their general musicianship. Through sight-singing music teachers must provide learners with a systematic approach to aural awareness. Another limitation stemming from this inadequate teaching strategy is that instrumentalists are not taught to use sight-singing to develop good intonation. This leads to the perception that sight-singing is "boring and unnecessary" (section 4.3.2).

In Art schools specialised music teachers educate learners how to apply their skills in various music activities. These learners leave school with positive attitudes to, and perceptions of, the value sight-singing as a worthy tool for their general musicianship. These learners responded in the questionnaire by stating that sight-singing was "easy and fun". This again stresses the importance of the attitudes and perceptions of teachers regarding the development of the way the learners view and experience sight-singing. My conclusion on the perceptions held by pre-university students is that teachers project their own negative thoughts and behaviour on learners, which leads to apathy about aural training and sight-singing. This state of affairs is difficult to remediate and will take time to rectify.

5.1.4 Research sub-question (c)

What were the observed patterns of improvement in the sight-singing abilities of first-year BMus students?

It is evident from the data collected from the different assessment occasions that there was a steady improvement in sight-singing abilities. This improvement, however, came from a low initial level of proficiency in sight-singing. The execution of the *do*-tonic solmisation programme (section 3.3) proved to be beneficial in redressing these deficiencies in sight-singing. This could only be brought about by the researcher's intervention as a facilitator and change agent to align the students' perceptions with new behavioural patterns. These changes in perceptions and attitudes led to motivational behavioural changes that enhanced sight-singing performances. The reason for this improvement was that these patterns were consolidated by successful achievement. The majority of the first-year students responded positively. Individual students who did not experience an improvement in sight-singing abilities, despite the implementation of the solmisation programme, perhaps lacked motivation (section 2.4.3). At the end of the academic year the researcher observed that the students who performed satisfactorily could recognise and hear basic aspects of music theory in an unknown melody without the support of a music instrument. Most of these students could sing rhythmically and melodically challenging unknown sight-singing melodies almost completely correctly and fluently.

From the April to the November assessments the averages of the first-year students improved to between 60% and 70% (Figure 18 in section 4.4.5). This leads to a false impression that very little improvement took place between those assessments. The fact is that the standard of sight-singing required in these assessments rose sharply, veiling the patterns of actual improvement attained.

5.1.5 Research sub-question (d)

What was the change in attitudes, perceptions and behaviour of first-year music students towards a movable *do*-tonic solmisation programme?

The analysis of the responses to sub-question (d) revealed that attitudes, perceptions and behaviour of first-year music students towards a movable *do*-tonic solmisation programme improved. At the commencement of the first-year BMus studies students harbour many negative perceptions and attitudes about sight-singing (section 5.1.3). The researcher's intervention throughout the first academic year as well as the presentation of sight-singing by means of the movable *do*-tonic solmisation programme brought about substantial changes in attitudes, perceptions and behaviour of first-year music students. The researcher created an atmosphere during contact sessions to overcome negative perceptions and attitudes. Perceptions that sight-singing was difficult for some and boring and unnecessary for others were adjusted (section 3.3.1).

The attainment of certain goals led to positive experiences, which in turn helped to replace negative perceptions and attitudes with behaviour that enhanced further achievements. Because of these changes the students viewed the movable *do*-tonic solmisation programme in a positive way. The students realised that through the utilisation of the movable *do*-tonic solmisation programme they acquired sight-singing skills that were an imperative supplement to their musicianship (section 4.5 and Annexure G).

5.1.6 Research sub-question (e)

Did the observed behavioural changes follow the suggested Values, Attitudes and Perceptions Performance Enhancement model?

The researcher postulated a model (section 3.5) to describe the patterns of changes experienced by first-year BMus students. The pre-university sight-singing abilities, perceptions, attitudes and values are discussed in sections 5.1.2 and 5.1.3, and are the foundation on which the intervention process starts. The information sourced from the questionnaires indicated that the behavioural changes followed the suggested model illustrated in Figure 11. The behavioural changes that are associated with this model are presented in section 4.5.1.

5.1.7 Research sub-question (f)

Did the movable *do*-tonic solmisation programme prove to be a useful aid for improving sight-singing abilities of first-year BMus students at North-West University?

Responses to the questionnaires and the validation questions as well as results obtained from the interviews and the observations revealed that noticeable improvements in a variety of aspects necessary for mature musicianship were experienced by first-year BMus students at North-West University. The movable *do*-tonic solmisation programme for sight-singing was successful in changing and strengthening the following sight-singing abilities of first-year students:

- Pitch accuracy;
- Intonation;
- Fluency in reading music notation;
- Natural singing voice;
- Perception of the relationship between melody, harmony and rhythm;
- Rhythmic relationships between sounds;
- Musical memory;
- Intervallic awareness;
- Interpretation of modulations;
- Reading and interpretation of scale passages or sequences;
- Perception of tonality;
- Inner ear;
- General aural awareness;
- Performance of music of a wide variety of styles, genres and levels of difficulty.

Because of the improvement in sight-singing abilities it can be stated that the movable *do*-tonic solmisation programme proved to be a useful aid for improving the sight-singing abilities of first-year BMus students at North-West University.

5.2 Limitations

The size of the sample was one of the limitations of this research. To alleviate the problem the information of the first-years of 2006, 2007 and 2008 were combined to form a larger sample. This sample was statistically tested and a repeated measure ANOVA analysis was done on the assessment data. The results indicated that this was an acceptable mean to broaden the sample.

Another limitation of the study is that no information about music teachers at secondary schools was collected because of the limited range of the study. However, this information would not contribute to the main question of the study. It would only shed more light on sub-questions (a) and (b) (sections 5.1.2 and 5.1.3).

5.3 Recommendations and suggestions

This research underlines and confirms the significance and importance of a programme such as the movable *do*-tonic solmisation programme.

The research identified certain deficiencies in the sight-singing skills of pre-university students who came to North-West University. To address this problem several suggestions are offered. The first step should be in-service-training of music teachers in secondary schools to:

- Establish the importance and the value of sight-singing as an element of general musicianship;
- Empower music teachers with the necessary teaching and assessment strategies for teaching sight-singing to secondary school music learners with the intention to reach a level of proficiency necessary for admission to the BMus degree course at North-West University;
- Create an awareness of the impact on the perceptions of learners that the actions and attitudes of music teachers teaching sight-singing can have;
- Develop the learners' natural singing voices by regular singing activities;
- Encourage the use of a solmisation system such as the movable *do*-tonic solmisation system as an aid to establish pitch accuracy and fluency in reading music notation;
- Provide music teachers with the required support material.

Prospective music teachers must be equipped with the necessary sight-singing skills and should be trained in the didactics of aural training and sight-singing; a one-year module in the didactics of aural training and sight-singing must be a compulsory part of BMus degree courses. South African universities should become cognisant of the importance of sight-singing as a valuable musical skill. Networking and organising of master classes between the various music departments can be undertaken to further this aim.

The implementation of the movable *do*-tonic solmisation programme improved the sight-singing abilities of first-year students of North-West University from insufficient proficiency in sight-singing to a level where its advantages in instrumental practical music as well as in singing were realised. The negative perceptions and attitudes that prevail from previous teaching methods on school level should be noted. To change these perceptions and attitudes facilitators have to act as change agents and must emphasise the advantages of the use of sight-singing. The Values, Attitudes and Perceptions Performance Enhancement model offers an insight into the experiences and the changing perceptions, attitudes and behaviour of the first-year BMus students at North-West University and can be used as a model for change.

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ANNEXURES

ANNEXURE A: ASSESSMENT CRITERIA FOR PITCH ACCURACY

Assessment criteria for pitch accuracy									
Name:							Date:		
Category	**Criteria**	Unim-provable	Excellent	Good	Above average	Average	Below average	Poor	Mark
Preparedness	Reacts quickly to lecturer's request	10	9/8	7	6	5	4/3	2/1	
Vocal quality	Conveys pitch accuracy exercises with self-confidence and pure tone quality	10	9/8	7	6	5	4/3	2/1	
Solfa	Sings pitch accuracy exercises on the given solfa names	10	9/8	7	6	5	4/3	2/1	
	Maintains a constant flow of breath	10	9/8	7	6	5	4/3	2/1	
Musicality	Sings with musical understanding, flowing and without hesitation	10	9/8	7	6	5	4/3	2/1	
Total:	50								%

ANNEXURE B: ASSESSMENT CRITERIA FOR RHYTHM

Assessment criteria for tap and count of an unknown rhythmical phrase									
Name:						Date:			
Category	**Criteria**	Unim-provable	Excellent	Good	Above average	Average	Below average	Poor	Mark
Preparedness	Reacts quickly to lecturer's request	10	9/8	7	6	5	4/3	2/1	
	Conveys tap and count exercises with confidence and rhythmically correctly	10	9/8	7	6	5	4/3	2/1	
	Maintains a constant flow in the rhythmic course	10	9/8	7	6	5	4/3	2/1	
Rhythm	Conveys tap and count exercise rhythmically accurately	10	9/8	7	6	5	4/3	2/1	
Tap	Taps the exercise with the back of a pencil with correct note values	10	9/8	7	6	5	4/3	2/1	
Metre	Shows the metre with the opposite hand	10	9/8	7	6	5	4/3	2/1	
Counts	Counts aloud as well to show the main beats	10	9/8	7	6	5	4/3	2/1	
Musicality	Taps and counts with musical understanding, flowing and without hesitation	10	9/8	7	6	5	4/3	2/1	
Total:	70								%

ANNEXURE C: ASSESSMENT CRITERIA FOR SCALE DEGREES

Assessment criteria for scale degrees									
Name:						Date:			
Category	**Criteria**	Unim-provable	Excellent	Good	Above average	Average	Below Average	Poor	Mark
Preparedness	Reacts quickly to lecturer's request	10	9/8	7	6	5	4/3	2/1	
Vocal quality	Sings scales with confidence and a pure tone quality	10	9/8	7	6	5	4/3	2/1	
Solfa	Sings scales on the given solfa names	10	9/8	7	6	5	4/3	2/1	
	Maintains a constant flow of breath	10	9/8	7	6	5	4/3	2/1	
Musicality	Sings scales with musical understanding, flowing and without hesitation	10	9/8	7	6	5	4/3	2/1	
Total:	50								%

ANNEXURE D: ASSESSMENT CRITERIA FOR INTERVALS

Assessment criteria for intervals									
Name:						Date:			
Category	**Criteria**	Unim-provable	Excellent	Good	Above average	Average	Below average	Poor	Mark
Preparedness	Reacts quickly to lecturer's request	10	9/8	7	6	5	4/3	2/1	
Vocal quality	Sings intervals with self-confidence and pure tone quality	10	9/8	7	6	5	4/3	2/1	
Solfa	Sings intervals on the given solfa names	10	9/8	7	6	5	4/3	2/1	
	Maintains a constant flow of breath	10	9/8	7	6	5	4/3	2/1	
Musicality	Sings intervals with musical understanding, flowing and without hesitation	10	9/8	7	6	5	4/3	2/1	
Total:	50								%

ANNEXURE E: ASSESSMENT CRITERIA FOR TRIADS

Assessment criteria for triads									
Name:						Date:			
Category	**Criteria**	Unim-provable	Excellent	Good	Above average	Average	Below average	Poor	Mark
Preparedness	Reacts quickly to lecturer's request	10	9/8	7	6	5	4/3	2/1	
Vocal quality	Sings triads with self-confidence and a pure tone quality	10	9/8	7	6	5	4/3	2/1	
Solfa	Sings triads on the given solfa names	10	9/8	7	6	5	4/3	2/1	
	Maintains a constant flow of breath	10	9/8	7	6	5	4/3	2/1	
Musicality	Sings triads with musical understanding, flowing and without hesitation	10	9/8	7	6	5	4/3	2/1	
Total:	50								%

ANNEXURE F: ASSESSMENT CRITERIA FOR SIGHT-SINGING

Assessment criteria for sight-singing									
Name:						Date:			
Category	**Criteria**	Unim-provable	Excellent	Good	Above average	Average	Below average	Poor	Mark
Preparedness	Reacts quickly to lecturer's request	10	9/8	7	6	5	4/3	2/1	
	Conveys sight-singing exercises with self-confidence and a pure tone quality	10	9/8	7	6	5	4/3	2/1	
	Obeys phrasing and breathing indications	10	9/8	7	6	5	4/3	2/1	
	Maintains a constant flow of breath	10	9/8	7	6	5	4/3	2/1	
Rhythm	Conveys sight-singing exercises with rhythmic precision	10	9/8	7	6	5	4/3	2/1	
Melody	Conveys sight-singing exercises with melodic precision	10	9/8	7	6	5	4/3	2/1	
Modulation	Reacts quickly to any modulations that may occur	10	9/8	7	6	5	4/3	2/1	
Phrasing	Conveys sight-singing exercises with correct phrasing	10	9/8	7	6	5	4/3	2/1	
Solfa	Conveys sight-singing exercises with the correct solfa names	10	9/8	7	6	5	4/3	2/1	
Musicality	Sings with musical stylistic understanding, flowing and without hesitation	10	9/8	7	6	5	4/3	2/1	
Total:	100								%

ANNEXURE G: QUESTIONNAIRE AND RESPONSES: BMUS FIRST-YEAR STUDENTS 2006, 2007, 2008.

Part A of the questionnaire was completed at the commencement of the first academic year.

Part B of the questionnaire was completed at the end of the first academic year.

Name:
Surname:
Age:
Sex:
Instrument:
Course code:

Part A:
Question 1: **Sight-singing at school level**
1.1 Was sight-singing part of regular music teaching at school?
1.2 What was your perception of sight-singing at school?
1.3 Did you expect aural training to be easy?
1.4 Were you shy to sing in front of your peers and the researcher?

Part B
Question 2: **Perceptions and values of students at the conclusion of the first year of academic study**
2.1 What were your thoughts and feelings when you recognised that you started something (*do*-tonic solmisation for sight-singing) that was not easy to accomplish.
2.2 Do you think it is necessary to take aural training and sight-singing classes as part of your degree course?
2.3 Do you prepare for aural tuition sessions?
2.4 How often do you practise sight-singing?
2.5 Does practising sight-singing form an important part of your weekly practical music activities?
2.6 Did your self-discipline improve through practising sight-singing for aural training classes?
2.7 Do you have a positive attitude towards the moveble *do*-tonic as an aid for sight-singing?

2.8 Did your attitude towards aural training and sight-singing improve?
2.9 Do you find it easier and less stressful to sing in the aural training class?
2.10 Do you enjoy all the sight-singing activities during every week's teaching session?
2.11 If you had a choice would you still take aural training as a module? Motivate

Question 3: **The impact of the movable *do*-tonic solmisation programme on sight-singing** **Please motivate your answers.**
3.1 Do you think the movable *do*-tonic solmisation programme improved your sight-singing abilities? Motivate your answer.
3.2 What feelings do you experience when you sing a melody nearly fluently or fluently from sight without any intonation and pitch mistakes?
3.3 What positive changes occurred in your sight-singing skills after you started learning the movable *do*-tonic?

3.4 What are the most important lessons you learnt in the aural training class?
3.5 Would you recommend the movable *do*-tonic as an aid for sight-singing?

Results of Part A

Question 1

Sight-singing at school level

1.1 Was sight-singing part of regular music teaching at school?

- No, aural training was not used at my school;
- No we rarely did it and when we did, we did not use solfège;
- Nee, dit was maar altyd afgeskeep deur my onderwysers;
- Ja, maar slegs een keer per week. Daar was meer aandag gegee aan prakties, teorie en geskiedenis;
- Yes, piano and singing sight reading;
- Nee, het musiek privaat gedoen.
- Ja, koorsang was altyd bladsang en soms bietjie in 'n les;
- No. We only sang on the day of the final exam, not on solfa;
- Yes. We had a period for aural training;
- Not at all. And I'm very upset about it. I don't have any problems doing the module but I'm sad that I didn't have that knowledge before I started varsity;
- Nee. Glad nie. Ek het dit slegs gedoen met UNISA klaviereksamens;
- Ja, maar het glad nie op die solfa gewerk nie;
- Yes;
- Nee, ons het op skool meer gefokus op uitvoering en teorie + geskiedenis;
- No, we focused on harmony & history but neglected aural training;
- From Grd.10 I had two aural training classes where we used the moveable do-tonic, but we didn't explicitly practise sight-singing.
- No not really;
- Nee maar wel baie by koor;
- No;
- No, only part of aural training was in the regular Board exams, e.g. Unisa;
- No: I didn't take music as a subject at school;
- Not regular but occasionally, yes. More in choir than school;
- Nie op 'n gereelde basis nie, maar het dit gedoen en die tyd was ook baie beperk.

1.2 What was your perception of sight-singing at school?

- Neutral;
- It was something you did in the exam but the rest of the times you rarely thought of it and almost never practised it;
- Ek was nogal bang daarvoor - het net die op-en-af vd note dopgehou en nie regtig gefokus op die intervalle nie;
- Ons het wel bladlsang gedoen, maar op nootname (bv A,C,B ens) of ("la, la"). Dit was lekker, ook het dit my innerlike oor ontwikkel;
- It was necessary, but not that interested in learning basic skills therein;
- Bladlees is 'n baie belangrike vaardigheid wat moet aangeleeer word.

- Ek het net gelees nie enige solfa of iets gebruik nie;
- I thought it was not that important;
- I didn't really have a big problem with it, but it wasn't so difficult at that time;
- That it wasn't necessary. Now it is of utter importance;
- Ek het nie veel daarvan gedink nie, omdat ek nie eintlik daaraan blootgestel is nie. Het daarmee gesukkel;
- Dit was vir my baie minder gekompliseerd;
- It was difficult;
- Ek moes dit vir eksamens doen, kan dit nie regkry nie en het nie daarvan gehou nie;
- I found it difficult;
- I enjoyed it and I tried to be as succesful as possible.
- Boring, difficult and unnecessary;
- Ek het dit net by koor gebruik en ek het maar noot name gesing;
- It was very difficult;
- Not that important part of musical training;
- Neutral;
- It was easy and fun;
- Dit verstaan en net te min gedoen.

1.3 Did you expect aural training to be easy?

- No, I expected them to be hard;
- No, as I said, I did not know what to expect;
- Nee;
- Die eerste keer het ek gedink dis baie moeilik, maar nou is dit eintlik baie maklik;
- I thought it would relatively be easy;
- Nee.
- Ek dink `n bietjie makliker as wat dit is;
- Yes. I thought I would never have to practice;
- Yes;
- No;
- Nee. Glad nie;
- Ja;
- No;
- Nee;
- No;
- Yes, because I was good at it while in school.
- No;
- Nee, maar solfa is moeiliker as om net bloot dit te sing;
- No;
- No, not too easy. Some of the aspects are quite difficult;
- Yes... easier than it is;
- Not at first, no;
- Ja!

1.4 Were you shy to sing in front of your peers and the researcher?

- Yes, I still am but it's a lot better;
- Yes, I'm not much of a singer and had not quite mastered sight-singing;
- Ja, maar dit word makliker as mens besef ander sukkel ook.;
- Ja, aan die begin. Ek het nou `n bietjie meer selfvertroue om voor iemand te sing;
- No not at all;
- Nee.
- So bietjie – as ek dit nie reg kry nie;
- Yes, but not so much anymore;
- No, because singing is my instrument;
- No;
- Verskriklik ja. Is nou nog;
- Ja, omdat ek nie alleen op solfa kan sing nie;
- No;
- Ja, is nog steeds;
- Yes;
- Yes. It feels akward using the solfa names while singing.
- Yes, very;
- Ja. Omdat ek sukkel met solfa. Om iets spontaan te bladlees is makliker;
- No;
- At the start may be a bit, but that soon changed;
- Yes;
- No, I am a singer;
- In die begin meer as ooit.

Results of Part B

Question 2

Perceptions and values of students at the conclusion of the first year of academic study

2.1 What were your thoughts and feelings when you recognised that you started something (*do*-tonic solmisation programme for sight-singing) that was not easy to accomplish?

- I always aim for things that are not easy to accomplish so the difficulty of it never phased me;
- I felt frustrated but saw how it could be helpful and therefore decided that I'll try my best to master it;
- Dit was vir my 'n uitdaging;
- Dit het vir my gevoel of daar nog 'n deur oop gegaan het in my musiek loopbaan. Dit is altyd lekker om nuwe vaardighede te leer!;
- I felt that it was a challenge. But challenges are sometimes always difficult;

- Ek was gedemotiveer, maar het gou begin om 'n poging aan te wend om te verbeter.
- Bietjie gefrustreer – ek soek nie altyd nog goed wat moeilik is om reg te kry nie;
- I had to practise;
- I was quite stressfull (about the solfege);
- I didn't like it at first, but the more difficult it became, the more challenged I felt. I do think its necessary, but it is not my favourite parttime;
- Ek was moedeloos en het nie gedink dat ek dit ooit sal kan doen nie;
- Ek het begin twyfel in myself en stres altyd vir gehoor;
- To practise it, till I can do it;
- Dit is 'n vaardigheid wat 'n mens ontwikkel met die nodige oefening;
- I found the challenge threatening;
- I realized that I had to keep on trying until I got it right.
- I didn't want to do it;
- Ek het nie van gehoor gehou nie omdat solfa vir my moeilik was;
- I was hopeless;
- A bit sad and not with too high hopes on rest of year;
- I knew that I had to start to practice to get somewhere and to improve;
- It became a challenge and so it became fun;
- Soms, maar nie as 'n reel nie.

2.2 Do you think it is necessary to take aural training and sight-singing classes as part of your BMus degree programme?

- Yes, it is very important to develop your ears, especially for sound quality and intonation;
- Yes, definitely! It helps a lot in the other subjects such as theory and practical;
- Verseker – dit sal vir enige musikant BAIE beteken;
- Ja, want deur hierdie tegniek te leer, maak jou ook nog 'n beter musikant. Dit leer jou om te luister na jouself. Ek dink dis 'n belangrike vaardigheid;
- Yes, for singing I thought it was;
- Ja.
- Ja dit is 'n belangrike deel van 'n musikant wees.
- Initially no, but now I understand – it helps sight reading in general and develops inner ear hearing;
- Yes, it is an integral part of music training;
- Yes!;
- Nee. Ek was nie bewus van die vak nie, nog minder wat dit behels het;
- Ja, dit is noodsaaklik. Ek is een v.d. wat baie met gehoor sukkel, maar het darem die afgelope jaar 'n paar goed (tegnieke) by geleer;
- Yes, to improve sight-singing with my instrument;
- Ja! Dit het my baie gehelp, met komposisie en teorie, asook uitvoering. Jy word ingestel om te luister;
- Yes;
- Some areas I find useful and others pointless, eg. Identifying triads out of a musical context does not have any value;
- Yes;

- Ja;
- Yes;
- Very important, helps with a lot of other aspects in music;
- YES! It improves everything...;
- Yes.
- Yes;
- Ja;
- Yes;
- Very important, helps with a lot of other aspects in music;
- YES! It improves everything...;
- Yes.

2.3 Do you prepare for aural tuition sessions?

- No, only for test and exams;
- Sometimes, it is difficult to find the time to practise;
- Nie so baie soos ek sou wou nie;
- Nie altyd nie, maar ek werk daaraan om dit gereeld te doen;
- No;
- Ja.
- Nie regtig nie - ek probeer so nou en dan te oefen;
- No. I never thought it as that important;
- Yes, but not every week;
- Yes;
- Ek het geen sulke toetse onderneem nie;
- Nie altyd nie, ek sukkel om te beplan;
- Not always;
- Meestal, gaan soms deur die werk;
- Sometimes;
- No, except when I have to play the piano.
- No;
- Ja. ± 1 of 2 dae voor eksamen;
- Yes, before the sessions;
- Yes, especially if a lot of work form a unit;
- Sometimes;
- Sometimes;
- Ja

2.4 How often do you practise sight-singing?

- Once every couple of weeks. Usually before a test or exam;
- Not very often, usually at least once a week;
- Die week voor eksamen;
- As ek weet daar is 'n toets/eksamen wat nader, dan oefen ek gereeld bladsang;
- In class and twice a month;
- Neutral.
- Eenkeer per week;

- The day before exam;
- At least one time in a week;
- During choir practices. 3 times a week. When the choir term is over, usually just before exams;
- Nie "often" genoeg nie!;
- Ek probeer 1 keer 'n week, maar sukkel om dit alleen reg te sing en ook te speel;
- Once a week, or every two weeks;
- ± 15 minute/week;
- Once or twice a week;
- A couple of times before the exams, starting about three days before the exam.
- Once a month;
- 3 maal 'n week maar slegs by kooroefeninge;
- 2 times a week;
- Once in about 2/3 weeks;
- Once a week;
- When I practise singing so often;
- Voorheen 2-3 'n maand, nou elke dag!

2.5 Does practising sight-singing form an important part of your weekly practical music activities?

- No;
- Not really, I tend to delay and only start a couple of weeks/days before a test;
- Nee, dit word nogals afgeskeep saam met ander akedemiese verpligtinge;
- Ek oefen nie elke week bladsang nie;
- No, it is at the bottom of my priority list;
- Ja, Ek prober elke dag oefen.
- Nie so baie nie - probeer maar wanneer ek bietjie tyd het;
- No. I only go through before the exam;
- I do not necessarily do it on solfege, but when learning new notes for pieces, I do;
- Not as much;
- Nee;
- Ja, Ek probeer, maar nee nie altyd nie;
- Yes, I learn new songs, almost every week;
- Ja;
- Yes;
- No, I don't need to practise it to get it right.
- No;
- Ja. Ons moet elke dag by die koor moeilike musiek bladlees;
- Yes;
- Not that important, I often lack the time;
- Not every week, but in the classes I get to practise;
- Sometimes, I do for my singing lessons;
- Nee, maar nou elke dag.

2.6 Did your self-discipline improve through practising sight-singing for aural training classes?

- My self-discipline has never been a problem;
- If I had practised more I would have said yes;
- Nog nie soveel as wat ek graag sou wou nie;
- Dit het nogals. Hoe meer jy gaan oefen, hoe beter word jy;
- No, not really;
- Ja. Ek moes myself leer om elke dag tyd daarvoor te maak.
- Nie regtig nie;
- No. I don't really practise;
- Yes, because of its value, I practise more;
- Yes;
- Net 'n klein bietjie. Nie baie nie;
- Ja, ek het na mate ek meer begin sukkel het ek ook meer begin oefen, maar nogsteeds nie genoeg nie;
- Yes;
- Nee, dit is maar nog een van baie;
- No, I have always been well disciplined;
- No.
- Yes;
- Ja 'n mate;
- Yes;
- Yes, in other aspects as well;
- For sure;
- Not much, it was already there;
- Ja, maar dit is moeilik.

2.7 Do you have a positive attitude towards the movable *do*-tonic as an aid for sight-singing?

- Yes, for the above reason;
- Definitely, I do not know how I coped with sight-singing before learning this method;
- Nee, ek sukkel nog om myself te motiveer agv verkeerde persepsies daarvan;
- Ja, deur dit net gereeld te oefen sal die resultaat goed wees;
- Yes, it has helped me do far in many situations, such as learning a new piece;
- Ja.
- Nie so baie nie - ek kry dit nie regtig reg nie;
- Yes;
- Yes, now. At first I didn't;
- Yes, definitely;
- Ek het gemengde gevoelens daaroor. Ek weet dit help, maar ek bly daarmee sukkel. Ek kan dit nie onder die knie kry nie.
- Nee, ek kry dit nie reg nie;
- Yes. It makes it easier;
- Ja, alhoewel ek nog daarmee sukkel;

- Sometimes, it depends on the amount of success I achieve;
- Yes, but I think it can be frustrating if it doesn't help you.
- Absolutely, it really works;
- Ja. Maar ek verkies nootname;
- Yes. It is a good point of reference;
- Yes;
- Yes, because I know that it helps and I actually enjoy it;
- Yes, but it takes time to teach and learn;
- Ja, want dit help met intonasie.
- Nee;
- Yes, I know that it helps in other aspects, like sight reading & learning a new piece because I can "predict" what it will sound like;
- Yes!;
- Yes. More self-confidence;
- Ja. Ek weet nou dat dit 'n noodsaaklike deel van my musiekopleiding is, waar ek dit van te vore as 'n hindernis beskou het;
- Ja, ek kon aan die begin niks regkry nie, en was dan baie emosioneel;
- Yes, it did;
- Ja, ek geniet dit nou meer en begin verstaan wat aangaan;
- No, I still find it terrible but at least I can breathe now;
- It stayed the same. I still regard some aspects as useful.

2.8 Did your attitude towards aural training and sight-singing improve?

- Yes, I enjoy it more now;
- Yes, I feel more positive about it and know now that I can actually do it;
- Ja, ek hou van die dosent!;
- Beslis. Aan die begin was ek nog onseker, maar my houding teenoor gehoor het definitief verander!;
- Yes, I find it more enjoyable;
- Ja, Alhoewel dit vir my onaangenaam is, besef ek die belangrikheid daarvan.
- Dit is beter as van die ander goed wat ons moet doen;
- Not all of them. Only these that are a bit easier;
- Yes, its some different from all the other classes;
- I don't like it as much, but the result is very satisfactory;
- Soms ja, soms nee;
- Ja, maar dan is dit in groepsverband. Ek's dan baie gemakliker;
- Yes;
- Ja, maar dit raak soms moeilik;
- No because I can't pitch very good;
- Yes very.
- Yes a lot, I'm not scared anymore;
- Ja. Dit is die belangrikste aspek van musiek;
- Yes, greatly;
- Yes, it improved;
- A lot. I love aural training (favourite subject & teacher!);
- Yes;
- Ja, Defnitief.

2.9 Do you find it easier and less stressful to sing in the aural training class?

- Yes, I have more confidence;
- Only when everyone sings along, yes it is less stressful;
- Ja, dis verseker makliker as aan die begin;
- Ja, hoe meer jy oefen/werk aan jou bladsang, voel jy ook meer selfvertroud en gerus;
- Yes, it is now better;
- Ja.
- Bietjie minder as die begin;
- Yes. You are not all alone & the others help a bit;
- Yes, because you don't sing alone;
- Yes;
- Dis nie so stresvol nie. Ek voel altyd gerus en in `n veilige omgewing;
- Nee, ek is altyd op my senuwees, dit maak my gehoor dan nog swakker;
- Yes, I do;
- Nee, ek is baie selfbewus;
- Yes, singing with other makes me feel less embarrassed;
- Yes, because everyone is singing and it's not very pretty
- Yes especially when everyone sings with me;
- Ja;
- Yes it is a relaxed atmosphere;
- Yes, initially it was stressful, but got better;
- I love my classmates, so it's no problem or not stressful to sing in class;
- Yes, it was relaxed and not intimidating;
- Ja, want dit is nou lekker.

2.10 Do you enjoy all the sight-singing activities during every week's teaching session?

- Yes;
- No, it's okay if everyone sings together but I don't like singing alone in front of the whole class;
- Dit is werk, en werk is nie altyd noodwendig lekker nie!;
- Ja, veral as ons dit as `n groep saam doen;
- Yes, it is challenging for me;
- Nee.
- Dit is beter as van die ander goed wat ons moet doen;
- Not all of them. Only these that are a bit easier;
- Yes, its some different from all the other classes;
- I don't like it as much, but the result is very satisfactory;
- Soms ja, soms nee;
- Ja, maar dan is dit in groepsverband. Ek's dan baie gemakliker;
- Yes;
- Ja, maar dit raak soms moeilik;
- No because I can't pitch very good;
- Yes very.
- Yes it's a lot of fun;

- Nee. Ek het wel die toonlere en terts oefeninge geniet;
- Yes, very much;
- Yes, especially when it went wrong the first time around;
- Yes;
- Yes ,it was informal but taught simultaneously;
- Ja, want ek hoor beter!

2.11 If you had a choice would you still take aural training as a module?

- Yes because it is very good for the development of the ear;
- No, it is too stressful;
- Ja, ek glo so. Dit is regtig goeie opleiding as jy ernstig is oor musiek as beroep;
- Nie juis nie, ek wil meer uitvoerend gaan. Maar ek sal wel altyd gehoor gebruik, want 'n mens benodig dit tog in jou musiek loopbaan;
- Yes, I think it should be continuously practised;
- Nee, maar ek sal graag daarmee wil aangaan op my eie tyd, sonder die druk om te moet deurkom.
- Verseker. Dit is belangrik vir 'n musikant om goeie gehoor te hê;
- Yes, but only the piano part. It helps to hear when the music is going harmonically;
- Yes, it is one of the most meaningful modules;
- Yes, I feel that one should listen to any music, not just because it's nice, but to try and figure out what melodies, harmonies and rhythms the composer used. This determines in the end if the performer played the piece good or very good, or even extraordinary, as a personal opinion of course;
- Ja. Maar net tot tweedejaarsvlak. Ek voel nie dat dit op verdere ingewikkelde vlak noodsaaklik is nie. Alhoewel, dit wel 'n uitstekende manier van my musikale ontwikkeling is;
- Ek weet dis baie belangrik, maar nee ek sou nie, my basis van gehoor is verkeerd en voor ek dit nie verbeter nie, gaan my gehoor nie verbeter nie;
- Yes, because it helps me with my instrument;
- Nee, ek verkies om te doen waarin ek goed is;
- I would because I have to pass an aural test to study post – grad overseas;
- No, it is not challenging for me.
- Definitely it's so much fun;
- Ja. Maar eerder bladsang. Gevorderde koorwerke soos Bach ens. Ek voel koorsang moet ook as 'n module erken word;
- Yes, It is an important part of my musical ability;
- Yes, important for all different aspects of BMus;
- Yes. It really taught me alot in my course and I like the subject;
- Yes I would because it is a skill that is ever improving;
- Ja, en sou dit meer gereeld wou doen.

Question 3:
The impact of the movable *do*-tonic solmisation programme on sight-singing

3.1 Do you think the movable *do*-tonic solmisation programme improved your sight-singing abilities?

- Yes;
- Yes definitely! I do not know how you can do it effectively without it;
- Ja, ek voel wel ek het gevorder – veral as ek na my sangstukke kyk;
- Ja, want as jy goed solfa kan sing, verstaan jy ook musiek beter;
- Yes, it is easy to get a central note and to sing around it;
- Ja. Die feit date klankpatrone kan erken, is vir my 'n bewys daarvan.
- Nie regtig nie – ek gebruik nie solfa met gewone bladlees nie;
- Yes. I can hear the notes, such as ti, the leading note and fa easier and to where they have to go;
- Yes, it gives more steadiness than singing on "la"or "oe";
- Yes. It ensures the singer to use the right intervals during sight-singing;
- Ja. Dit verbeter my luistervermoëns daagliks. Ek hoor *do me so la ti* in alle musiek;
- Vandat ek meer daaraan werk, dalk so bietjie ja, maar sukkel nog steeds om dit te sing en ook uit te ken;
- Yes it did, I can now sight sing more difficult pieces;
- Ja dit help baie om die korrekte intervalle te sing;
- Yes it teaches you to use certain archers like so – do etc,;
- Yes. It has especially helped me to cope with modulations when sight-singing.
- Yes it made modulations easier;
- Ja. Dit dwing jou om op 'n nuwe manier oor sang te dink;
- Yes, it helped me in my practical performance;
- Yes, to be familiar with different positions helps to make mind-shift;
- Yes. I can sing difficult melodic lined really well; it improved my listening skills as well;
- Yes it did;
- Ja, persepsie van klank en dit regtig moet klink is baie belangrik.

3.2 What feelings do you experience when you sing a melody nearly fluently or fluently from sight without any intonation and pitch mistakes using the movable *do*-tonic?

- That happens only rarely but I feel really good and I feel like I accomplished something;
- I feel elated, glad that I finally got it right;
- Dit is 'n gevoel van "accomplishment" – asof ek iets bereik het;
- Dit is altyd lekker om iets reg te kry, waarmee jy vir 'n ruk gesukkel het;
- It feels like my skills are improving as a musician, and thus motivates me;
- Goed. Dit is motiverend.
- Baie goed ;
- I feel that I have accomplished something;

- Confidence, proud, happy, at peace;
- Satisfaction and boosts self-confidence;
- Dit gebeur nie juis met my nie;
- Ek kon dit nog nooit regkry nie;
- I feel good about myself';
- Ek het dit nog nooit reggekry nie;
- I am proud of myself;
- I feel like a very competent musician.
- I'm happy and proud of myself;
- As ek moet solfa sing kan ek dit glad nie doen nie, maar dit kan ek wel doen daarsonder. Dit voel fantasties;
- I feel as if I accomplish a very difficult task,
- Thank you for aural training, Mrs. Nell;
- It feels like I succeeded in taking the course;
- It's a good feeling to hear the improvement;
- Dat iets reg gedoen is en dat dit musikaal is.

3.3 What positive changes occurred in your sight-singing skills after you started learning the movable *do*-tonic?

- Melodies are easier to sing in pitch;
- I could actually do it and get it right more times than wrong, I didn't have to "guess" where the next note is;
- Ek konsentreet nie meer so hard soos gewoonlik nie;
- Ek is meer positief oor gehoor en alles wat gehoor behels. Die skuifbare "do"-tonika maak bladsang net soveel makliker;
- I can read on sight without looking at the notes first. I can identify intervals more easily;
- Die do is vir my meer hoorbaar en stel my instaat om meer vloeiend te bladsing.
- Nie regtig enige positiewe goed nie;
- I can remember the doh-tonic and sing the rest in relation to it;
- Half-tones or chromatic movement and intervals improved;
- I was attentive to it, listening to music and listening intensively to the melody, trying to sing the melody in solfa;
- Ek kan meer akkuraat sing & het 'n beter gevoel vir intervalle en die noodsaaklikheid daarvan gekry;
- Dit het my nog nie so positief beinvloed nie, want ek sukkel nog te veel;
- I can sing more fluently;
- Ek kan intervalle en neignote makliker sing;
- My aural memory improved;
- My intonation was more accurate and I make fewer mistakes when singing tricky intervals.
- It became more fluent and I wasn't as shy as I had been before;
- Interval spronge verbeter;
- I could read music easily;
- To make sudden key changes;
- I can sing with confidence;
- The pitching on the first time improved;
- Oorgevloei na ritme en musiek maak.

3.4 What are the most important lessons you learnt in the aural training class?

- How important it is to make use of your muscle memory and inner ear;
- That no matter how easy it looks you still have to practise a lot and the most important thing is not good marks, but improvement;
- Practice makes perfect;
- Die rol wat solfege in musiek speel en dat 'n mens jou innerlike gehoor so kan verbeter deur gereeld gehoor te oefen. Dit is altyd 'n goeie vaardigheid om 'n goed ontwikkelde oor te hê;
- To read ahead and to listen;
- Om assosiasies met klank te maak om dit beter te onthou.
- Die verskillende toonlere – kan hulle nou in komposisie gebruik;
- Pitch is a part of your memory;
- Memory – to feel in your voice and head where the note is supposed to be;
- To know the intervals and solfa. It is absolutely necessary for sight reading;
- Dat gehoor wel belangrik is en dat 'n mens jou houding daaroor moet verander dan sal dit ook makliker raak;
- Jy moet elke moontlike aftydjie wat jy het gehoor oefen;
- Practice makes perfect;
- Gehoor kan wel ontwikkel word;
- Not to give up and to practise;
- Remember what is played and then you can play it to yourself in your inner – ear as much as much as you wish.
- Than solfa – singing made (makes) life easier;
- Jou ore is ontsettend belangrik;
- Be patient with yourself;
- Listen carefully, and trust your inner ear. Sometimes you hear correctly, and then have doubts. Don't underestimate initial thoughts;
- Practise makes perfect!;
- Fluent solfa from the solfege book;
- Niks is onmoontlik nie en selfdissipline om elke dag te oefen.

3.5 Would you recommend the movable *do*-tonic as an aid for sight-singing?

- Yes, it is an excellent and easily applied method;
- Definitely, I don't know how one cannot use it and effectively do sight-singing;
- Ja, ek dink net kinders moet meer op skool daarmee in aanraking kom;
- Defnitief, want dit is 'n baie maklike metode om te verduidelik/te leer aan (vir) iemand;
- Yes, it makes things easier to understand;
- Ja. Die do is 'n goeie basis om van af te werk;
- Ja, dit werk vir party mense en is seker beter as om net te skat;
- Yes. It helps to hear and remember certain pitches in your head;
- Yes, it improves your inner hearing;
- Yes. I feel the "fixed do" is too confusing;
- Verseker ja. Dit help met teorie harmonisasies & bevorder oor/luister vermoëns;
- Ja, maar dan moet dit al van `n baie jonger ouderdom af vir kinders geleer word;

- Yes, If it helps;
- Nee, ek glo in terme van Archimedes se filosofie van standvastigheid;
- Yes it is relatively easy to learn & works well with harmony;
- Yes. It is essential to improve the inner ear.
- Absolutely, it works fantastically!;
- Ja. Dit help vir moeilike bladlees;
- Yes, It helps me a lot;
- Yes, it helps a lot with many aspects;
- Yes. I know that if it worked and helped me, it would be of use for anyone;
- Yes, it's a good technique to have;
- Daar is geen ander manier nie.

ANNEXURE H: VALIDATION QUESTIONNAIRE AND RESPONSES: BMUS FIRST-YEAR STUDENTS

Vraelys: Tonika do voorstellings metode as hulpmiddel vir bladsang
Questionnaire: Moveable do-tonic as a device for sight-singing

Dui asseblief aan in watter mate u met die volgende stellings saamstem of verskil.

Please indicate the extent to which you agree or disagree with the following statement

1 ***Stem volkome saam (svs)*** **/ Strongly agree (sa)**
2 ***Stem saam (ss)/*** **Agree (a)**
3 ***onseker (os)/ unsure*** **(u)**
4 ***Verskil (v)/*** **Disagree (d)**
5 ***Verskil sterk (vs)/*** **Strongly disagree (sd)**

	Name of student:	svs sa	ss a	os u	v d	vs sd
		1	2	3	4	5
1	Initially it was difficult for me to sing from sight with the movable do-tonic					
2	Sight-singing, by using the movable do-tonic, improved my inner ear					
3	Sight-singing, by using the movable *do*-tonic, improved my dictation skills					
4	I practise sight-singing once a week					
5	My attitude towards aural training changed by using the movable *do*-tonic as an aid for sight-singing					
6	I can sing melodically and rhythmically complicated melodies at first sight with the movable *do*-tonic					
7	My sight-singing improved by using the movable *do*-tonic					
8	My singing voice as well as my intonation improved by using the movable *do*-tonic as an aid for sight-singing					
9	After the first assessment I realized I had to practise sight-singing					
10	The movable *do*-tonic is an effective method for sight-singing					