

# **Chapter 4**

## **Utilising multiple media in a sight-singing study package**

### **4.1 Introduction**

In this chapter, the author aims to provide the reader with some background information on the use of multiple media in a sight-singing study package. The sight-singing model described in Chapter 2 must be realised by means of educational media to achieve the desired learning outcomes that are described in Chapter 3. The author views communication as an important prerequisite for education, and explains in this chapter how multiple media can be used to communicate the contents of a sight-singing programme. In the last part of this chapter, the author formulates criteria for the effective use of multiple media in a sight-singing study package. These criteria are used to evaluate existing sight-singing programmes and to design a study package for sight-singing, which is described in Chapter 5.

### **4.2 A communication perspective on sight-singing**

Different forms of communication are used when teaching and learning sight-singing. Singing is one form of communication, while teaching is another form. When singing from sight, both the singer and the composer communicate with the listener. In teaching and learning sight-singing, good communication is vital. This can ensure that the learner understands the learning content and that the teacher can evaluate the learner's progress accurately. To explain this communication process, it is necessary to define some relevant terms.

#### **4.2.1 Communication**

Various authors have defined communication for different purposes. For the purpose of this project, it is necessary to focus on communication in education and communication by means of music. Burgoon et al (1994: 22) give the following definition of communication:

Communication is a symbolic behaviour that occurs between two or more participating individuals. It has the characteristics of being a process, it is transactional in nature, and it is affective. A purposive, goal-directed behaviour could have instrumental or consummatory ends.

This definition emphasises the fact that communication is an integrated process which involve more than one person. It also makes it clear that it is aimed at achieving a specific goal. Being a purposeful behaviour, communication can be used to guide learners towards achieving desired outcomes.

Cunningham (2001) explains that communication “may involve conventional or unconventional signals, may take linguistic or nonlinguistic forms and may occur through spoken or other modes.” This definition emphasises the fact that a variety of symbol systems can be used for communication. It is important that the individuals involved in communication should use symbols that all parties participating in the communication process can understand. If the one party does not understand the symbols (e.g. language) that the other is using, communication cannot be effective. This is an important motivation to learn the symbol system used in communication. With sight-singing, music notation is the relevant symbol system, which the receiver of the message should understand to benefit from the communication from the composer.

These two definitions describe communication only as a process between different individuals. According to Huebsch (1990: 3-4) there are three different types of human communication, namely interpersonal communication (between persons), intrapersonal communication (thoughts), and extrapersonal communication (between human and non-human, such as an animal or a music instrument). All three these types of communication are relevant for this project.

#### ***4.2.1.1 Interpersonal communication***

Two forms of interpersonal communication are relevant in sight-singing. The composer communicates with the singer using music notation. The singer, in turn, communicates with the audience, using vocal sounds. It could be argued that the singer is only the medium that conveys the composer’s message to the audience. In the author’s opinion, the singer plays a more important role. He has to understand and interpret the composer’s message. Then he sings it to the listeners as a personal expression of art.

Sight-singing can be re-regarded as a monologue, rather than a dialogue. The composer communicates in a monologue by notating the music without any direct interaction from the performer or the listener. Similarly, the sight-singer sings the notated music without any significant interaction from the audience.

#### ***4.2.1.2 Intrapersonal communication***

Intrapersonal communication in sight-singing is what happens when a reader looks at music notation and “hears” the music with his inner ear. The singer communicates with himself, interpreting the music notation, using his knowledge and experience. Anticipating pitch and rhythm implies that the singer must keep the previous pitch, key, tempo and the durations of the notes in mind. Notational elements such as musical terms, phrasing and tempo indications help the singer to interpret the written music. Knowledge about the style of the music and knowledge about the composer can be a further aid in understanding the music.

#### ***4.2.1.3 Extrapersonal communication***

Extrapersonal communication in music happens when a musician communicates with a music instrument. He can express feelings and create different moods through music, even without the presence of an audience. The instrument does not necessarily have to be a man-made one. If the musician is a singer, his voice is the instrument. Although the voice is not external, the singer uses it as an instrument, therefore singing can also be regarded as extrapersonal communication. Extrapersonal communication can also be relevant to learning sight-singing, when a learner is using an audio recording or computer-assisted instruction (CAI).

#### ***4.2.1.4 Sight-singing as communication***

Since the term “communication” has various definitions, the author has decided to formulate a definition for this term that can help to explain the phenomenon of sight-singing. As described in the previous paragraphs, interpersonal, intrapersonal and extrapersonal modes of communication are involved in sight-singing. The communication process in sight-singing can also be described as decoding the written information (reading), recoding the information to understand and interpret it (internalisation), and encoding the information in a new code, namely vocal sounds.

Usually two different people are involved in the monologues of sight-singing, namely the composer who communicates to the reader by encoding his music in the code of notation, and the singer who reads and interprets the music and communicates the music to the audience by encoding the music as vocal sounds. By verbalising the music notation, the singer as well as the composer communicates with the audience.

The following definition should help the reader to understand sight-singing as a form of communication between the composer, the singer and the listener. It also serves as a guideline for selecting appropriate educational media for a sight-singing study package.

*Sight-singing within the context of communication refers to the purposeful process when individuals share information by means of music notation which was encoded by a composer, and is decoded, interpreted and sung by a sight-singer. It has a transactional and affective nature and we can distinguish between interpersonal, intrapersonal and extrapersonal communication.*

#### **4.2.2 Role players in communication**

Various role players are necessary for communication to take place. Sight-singing requires the same person to play different roles in the communication process. These roles are briefly described in the following paragraphs, to make it clear exactly what the respective roles of the teacher, the learner and the educational media are.

##### **4.2.2.1 Sender**

The sender is the person who initiates the communication process in order to influence another person's thoughts or actions (Huebsch 1990: 6). In the didactic situation the sender can be either the teacher or the learner. In sight-singing both the composer and the singer can be seen as senders. The message originates with the composer who "sends" it by notating the music. The singer as sender interprets the composer's message and communicates it in the form of vocal sound. Although the message originates with the composer, the singer also plays an important role, interpreting and singing the music. The same piece of music does not sound exactly the same when different singers perform it. The author therefore regards both the composer and the singer as senders of the message.

#### ***4.2.2.2 Receiver***

The receiver, or decoder, receives the message, interprets it and reacts to the message, although not always visibly. To enable good communication, language and comprehension are essential (Huebsch 1990: 6). In this thesis the words “language” and “comprehension” include the understanding of the relevant code of communication that is used in the specific context, namely music and music notation. The receiver is an active partner in communication that has to interpret the message that he received. In sight-singing, the singer as well as the listener can be regarded as receivers. The singer receives the composer’s message in the form of music notation. He decodes and interprets the notation and re-codes the message as musical sounds. The listener acts as receiver by listening to the sight-singer’s version of the music. He decodes the message and reacts to music in an affective way. The listener’s reaction may be to appreciate and enjoy the music.

#### ***4.2.2.3 Message***

The message is the content that is communicated between the sender and the receiver. This message can have different forms, depending on the encoding thereof. Van Jaarsveld (1985: 14) states that signs are essential in all communication. These signs are used symbolically to represent something else than itself. By representing something else, the signs become symbols that can be used to communicate information and ideas between individuals. The sender expresses the message in the form of an appropriate code, which the receiver can decode and interpret. The code consists of different symbols (e.g. musical notes) which can be combined in symbol systems (e.g. music notation). Different types of codes, such as spoken language, written language, music sounds or music notation, can be used to communicate the same message.

In music, the message is not necessarily a cognitive one, but it can communicate ideas and feelings and create certain effects or moods. The sight-singer is confronted by the decoding of a message, written in one symbol system, as well as the encoding of it, using vocal sound as symbol system.

#### **4.2.2.4 Medium**

A message is always communicated by means of a medium. The medium can be described as “the human or non-human intermediary that carries the message from the sender to the receiver” (Freysen et al 1989: 7). Examples of communication media within this context are the human voice, music instruments and printed books.

#### **4.2.3 The communication process in education**

In education, the roles of the teacher and the learner as sender and receiver constantly change. In some instances the teacher acts as sender, communicating a message to the learner, and in other instances the learner acts as sender while responding to the teacher’s message, or communicating another message. This transactional nature of communication is particularly important in education. It is of great importance that the learner should understand exactly what the teacher means. By asking questions or by listening to sight-singing efforts, the teacher can confirm that the learner understands the learning content. In a similar way, the learner can ask the teacher to explain some aspect again. The learner is an active partner in the communication process by communicating with the teacher and fellow students to solve problems in the process of mastering the learning content.

#### **4.2.4 Communication in teaching and learning sight-singing**

After the general description of communication, it is necessary to concentrate more specifically on the communication process involved in teaching and learning sight-singing. Knowledge of this process enabled the author to evaluate various sight-singing programmes and to suggest criteria for a study package for sight-singing. This study package should be effective not only for training choristers at the Drakensberg Boys' Choir School, but also for learners in the music classes in schools, as well as other musicians. It could also be a great help for choral conductors and music teachers to develop their own sight-singing skills. To apply the communication process to a sight-singing programme, it is essential to consider the different elements involved in such a programme. These elements are the learner, the teacher, the learning content, the encoding of the learning content, and the listener as receiver of the message.

#### **4.2.4.1 The learner**

For any communication to succeed, it is crucial that the communication will be at an appropriate level so that the learner will understand the message that is communicated. Therefore the author limits the scope of the suggested study package to learners with at least certain knowledge and skills.

The author presumes that the learner:

- can read English fluently,
- can do basic mathematics (add, subtract, multiply and divide),
- is motivated to learn sight-singing,
- has the necessary hardware available to utilise a multi-media training study package.

Based on these assumptions, the learning content can build on the existing knowledge and skills that the learner already possesses. In the author's opinion and experience, age is not an important factor in teaching and learning sight-singing. It is more important that the learner should realise his lack of knowledge and skills and have a desire to learn. Knowles (1980: 58) explains that the differences between adults' learning and children's learning are only the different assumptions about their learning. He states that many of the same educational principles are as relevant for children as for adult learners.

#### **4.2.4.2 The teacher**

A teacher of sight-singing should be able to sing well from sight. This implies that he should have mastered the knowledge and skills relevant to this subject. Again, the author makes assumptions about the teacher to ensure that the study package will have the maximum benefit to the learner.

The teacher should:

- be able to read music and perform it by singing and by playing it on a music instrument,
- have good aural skills to enable him to identify learners' mistakes, and
- be able to sing with a good vocal technique as a role model for learners to follow.

The author is aware of the fact that many music teachers do not possess the essential knowledge and skills to teach sight-singing effectively. Often teachers with no, or very limited, musical training are required to teach general music in South African schools (Hugo & Hauptfleisch 1993: 17-19). It is therefore of the greatest importance that these teachers should improve their own abilities so that they can teach their pupils how to sing from sight. The suggested sight-singing study package should help teachers as well as their pupils to master the art of sight-singing.

#### ***4.2.4.3 The learning content***

The learning content for a training course in sight-singing consists of knowledge about the symbol system of music notation and its use, as well as the necessary skills to reproduce the music by singing it accurately. The relevant learning content for sight-singing is described in Chapter 2.5.

#### ***4.2.4.4 Encoding of the learning content***

Various symbol systems are used to encode the message involved in sight-singing: each of these systems fulfils a specific function in sight-singing.

- **Staff notation** is encoded by two apparently complementary symbol systems. The one system uses different heights of notes on a stave with five lines, symbolising pitch. The other system uses black or white note heads, stems and flags, symbolising duration. Staff notation is the combination of these two symbol systems. The combination of these two symbol systems is known as staff notation.
- **Sound** is the essence of music; therefore, no learning about music can be complete without the music's sound. The music notation can be encoded by singing, playing a music instrument or by a mechanical or electronic production/reproduction of the sounds.
- **Language** is probably the most effective symbol system to explain subject matter. English, in this case, is used in spoken form, as well as in its written form. Written language also forms an integral part of staff notation as lyrics to the music and as performance indicators (which are usually in other languages than English).
- **Meta language** is the sight-reader's interpretation of the music that he reproduces. This interpretation includes factors such as the context of the music, emotions conveyed through the music, appropriate voice production and correct intonation.



The symbol systems involved in a training programme for sight-singing are staff notation, sound, language and meta language. Each symbol system needs to be encoded in an appropriate way to ensure that effective communication is possible in this didactic situation.

### **4.3 Media attributes for a sight-singing study package**

All communication is dependent on the use of media to get the message from the sender to the receiver. According to Schramm (1977: 273), research on instructional media indicated that “learning seems to be affected more by what is delivered than by the delivery system.” This implies that different media can communicate the learning equally well. As an example: a gramophone record, a CD (Compact Disk) and an audiocassette can each reproduce the sound of Beethoven’s Fifth Symphony. The teacher has to consider the practical implications of using each of these media in his specific teaching situation. Therefore, the teacher has the opportunity and the responsibility to select media that will be the most suitable for his learners and for the specific lesson he is planning.

Considering the attributes of the different educational media should guide teachers to select appropriate media for teaching and learning sight-singing. Salomon (1981: 14) makes an important statement in this regard: “It is not a medium of communication that makes a difference in learning, but rather a specific attribute it potentially entails.” These attributes are not independent qualities (e.g. colour, pace or difficulty) but they are combined with other attributes related to a certain medium. Before he can select media, the teacher should determine the media attributes that can communicate the coded learning content.

Salomon (1981: 14) divides media attributes into four classes:

- attributes related to conveying content,
- attributes related to encoding these contents, using symbol systems,
- attributes related to the use of technologies to gather, sort, encode and convey the contents and
- attributes related to the typically use of the media in different situations.

Each medium contains all four classes of media attributes, but these attributes are not equally important in learning. This division of media attributes can help teachers to select appropriate media for education. A great variety of educational media is available to the teacher, ranging from a blackboard and chalk to computerised instruction.

The media attributes for teaching and learning sight-singing are twofold. These media should be able to convey **music notation** and reproduce **sound**. In Table 4-1, the attributes of selected educational media are summarised.

The reader will notice that several media share the same attributes: a handbook and a computer both convey text, while media such as a music instrument, a CD and a computer can produce or reproduce sound. This gives a choice of educational media to the teacher and for authors of educational programmes.

Only selected educational media are included in Table 4.1. Various other media can be equally useful for teaching and learning sight-singing. The media that are mentioned in the table are those that the author sees as the most suitable to form part of a sight-singing learning package.

Table 4.1 indicates which media are suited to convey specific aspects of a sight-singing study package. Referring to the table makes it simple to compare the potential use of educational media in a sight-singing study package.



#### **4.4 Educational media in evaluating sight-singing**

Evaluation of sight-singing enables both the learner and the teacher to monitor the learner's progress. This evaluation is equally important in formal and in non-formal situations. In both cases the teacher as well as the student should monitor the student's progress. By evaluating sight-singing regularly, the learner can know whether he is reading and singing correctly. The teacher can monitor each of his students' progress and change his tuition accordingly. This evaluation serves as a motivation for the learner and as a guideline to the teacher.

To evaluate sight-singing implies utilising the necessary media. The singer needs a copy of the notation that he should read. He also needs to compare his version of the music to one that is definitely correct. In order for this comparison to take place, he needs to hear a correct version of the music. Various types of evaluation are relevant for sight-singing and for teaching and learning this skill. To select media attributes and, consequently, media for evaluation of sight-singing, it is essential to determine the importance of these attributes.

##### **4.4.1 Self-evaluation during sight-singing**

In the sight-singing model proposed in Chapter 2.7, evaluation forms an integral part of the sight-singing process. For self-evaluation, the singer needs the sheet music as well as an audio role model. He should then compare the sound he produces to the music that he anticipated. At the same time the sight-singer should listen to fellow singers and the accompaniment (if there is any).

##### **4.4.2 Self-evaluation after sight-singing**

After singing a piece of music from sight, the singer can evaluate his own sight-singing by comparing his efforts to a version of the music that is definitely correct. To compare his singing, it is essential that an audio example of the correct singing should be available. The sound of the music remains the essential media attribute for self-evaluation. A variety of media that produce sound can be used for this evaluation:

- A live singer can sing the same part, enabling the sight-reader to compare his version of the music to that of the role model.

- A recording of a singer can serve the same purpose. Any medium that can reproduce a recording of music accurately can be used, from a gramophone to a computer.
- The sight-singer can play the music that he sings on a music instrument. He can then compare the melody he sang with the one he hears on the instrument.

Recording the learner's sight-singing and playing it back afterwards can help him to realise his mistakes. Such a recording can be especially effective if the learner can compare it to a correct version of the music.

#### **4.4.3 Peer-evaluation of sight-singing**

A singer can be asked to evaluate the sight-singing efforts of his fellow student. Often the teacher is not available to help a sight-singer or to comment on his efforts. A fellow learner can be a suitable substitute for the teacher, enabling the teacher to focus on learners who need more attention. A prerequisite for the evaluator is that his sight-singing skills should be at the same level, or better, than those of the learner being evaluated. It is important that the evaluator should understand his role in the learning process, and realises that he can also benefit from evaluating his fellow learner.

#### **4.4.4 Teacher-evaluation of sight-singing**

The teacher is probably the best person to evaluate a learner's sight-singing efforts. The teacher should have the necessary knowledge, skills and experience to evaluate sight-singing. It is important that the teacher should keep the learner's age and level of sight-singing in mind, and not expect perfect sight-singing every time. Working with children, the author observed that positive responses from the teacher about sight-singing that is not absolutely perfect can produce much better long-term results, instead of insisting on perfect sight-singing every time.

Unfortunately, it is extremely time-consuming to evaluate each sight-singer individually, especially if the teacher corrects some of the singer's mistakes. In a normal choir or music

class, the conductor or the teacher usually does not have the time to evaluate each sight-singer's efforts frequently. Various choral conductors interviewed by the author indicated that a lack of time is a reason for not teaching sight-singing (see Chapter 1.8.2). Combining music education with the other arts into one learning area, Culture and Arts, in South African schools implies that less time will be available for this subject. Sight-singing will, most likely, be neglected in the new educational dispensation. Most schools and choirs do not have the same hours to spend on sight-singing training, as is the case in a specialised choir school such as the Drakensberg Boys' Choir School. Because the sight-singing teacher is a very valuable evaluator, it is important that he should try to evaluate his pupils' progress regularly.

#### 4.4.5 Computer-assisted evaluation of sight-singing

The computer as an educational medium has almost endless possibilities for both the teaching and the learning of sight-singing. To utilise these possibilities, the teacher should keep the media attributes of the computer in mind. Lock (1995: 184-186) lists some essential aspects of Computer-assisted instruction:

- *Based on proven learning theories.* Computer programs can be designed according to different learning theories. Currently much emphasis is placed on the learning process and the learner's ability to explore the subject and to solve problems. In a sight-singing study package, the computer can provide different types of exercises to stimulate learning.
- *High engagement value.* Learners can be actively involved in the learning process by interacting with the computer. As a part of sight-singing training, the learner can sing exercises that the computer asks, and receive immediate responses on the performance of these exercises.
- *Appeals to different learning styles.* Computer-assisted instruction can be designed in such ways that those learners with different learning preferences can all benefit from the study package. Graphics, sound text and movement are features that can be used to accommodate different learning styles.
- *Empowers the child.* The learner can control the tempo of learning when working individually on a computer.
- *Easy to use.* Learners with very little computer skills can use these educational programs on the computer. A variety of music education programs that can help

learners to master certain aspects of sight-singing is available for the computer. Many of these programs are easy to use and require very limited computer skills.

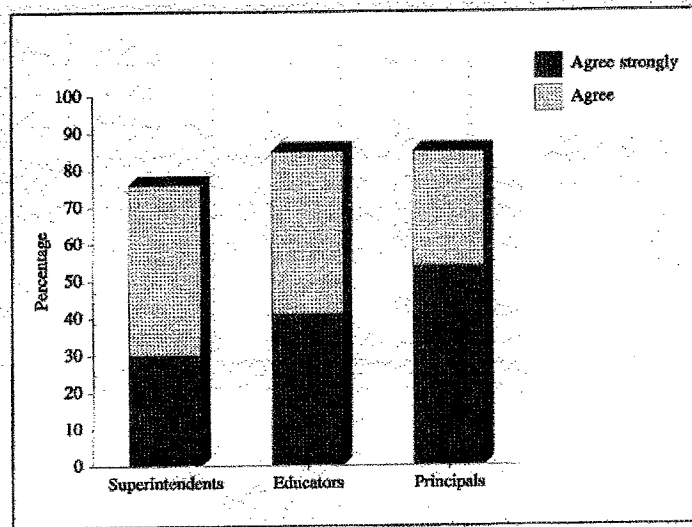
- *Combines fun with learning.* There is a variety of music learning programs commercially available that are fun to use and develop the learner's musicianship. Examples of these programs are *A musical tutorial* (Swerdfeger 2001) and *Alfred's Theory Games* (Wren 1995).
- *Intelligent.* Artificial intelligence can be built into a program to adjust to a specific learner's profile. This feature can be most useful when the computer must evaluate learners' singing.
- *Encourages life-long learning.* Effective learning can encourage learners to keep widening their knowledge and skills. Computer programs can often be effective without the help of a teacher, making learning more widely accessible.

Discussing the qualities of the computer as an educational medium clearly indicates that the computer can be a very useful teaching and learning resource, especially in a subject such as learning to sing from sight. A great variety of music educational programs is available to explain musical concepts, act as a source of information, or even evaluate sight-singing.

#### **4.5 The South African reality regarding the availability of resources for music education**

Hauptfleisch (1993:55) states that there is not adequate provision of resources for Class Music tuition in South Africa. (Although Hauptfleisch's research report is already ten years old, the situation regarding resources for Class Music did not change significantly, making the report's findings still relevant.) These resources can include music instruments, CD players and overhead projectors. She also mentions that there is a great need for teaching materials in Class Music. Although Hauptfleisch does not specifically refer to sight-singing tuition, this skill is an important part of music education. The author believes that the sight-singing study package described in Chapter 6 will be a great help for sight-singing teachers. This study package can provide graded teaching materials to use in class.

Van der Walt, Roets and Hauptfleisch et al (1993:45) describe the need for Class Music teaching materials in the following figure. The opinions of superintendents of music, teachers and principals are summarised in this figure.



**Figure 4.1: The need for teaching materials for Class Music tuition**  
(van der Walt et al 1993: 45)

Van der Walt et al (1993: 45-46) indicate a need for the following teaching materials for music in South African schools: schemes of work, study guides, lesson series, accompaniment cassettes and cassettes for listening. These researchers found that many teachers experience a need for songbooks, instruments, sound apparatus, and cassettes. Questioning a great number of Class Music teachers on the problems they experience, van der Walt et al (1993: 48) concluded, "Class Music tuition is currently experiencing a crisis of provision of resources."

#### 4.5.1 Printed media

Although printed material is the least expensive educational medium, there is not enough printed material, such as songbooks, available for Class Music teachers (Hauptfleisch 1993: 55). At the beginning of the 21<sup>st</sup> century, many schools have duplicating facilities that enable them to produce their own songbooks or to copy existing ones. Unfortunately, a great number of schools still do not have such facilities.

#### 4.5.2 Human media

According to the work of researchers such as van der Merwe (1986) and van der Walt et al (1993), the majority of Class Music teachers did not receive sufficient training to teach this



subject effectively. This corresponds with the opinions of music teachers and choral conductors interviewed by the author (Chapter 1.6.2). Therefore, it is essential to explain all the musical concepts relevant to sight-singing in a study package designed for this subject.

It cannot be assumed that there will be a knowledgeable teacher available to guide the learners towards mastering sight-singing. In many cases, the music teacher or the choral conductor may be the one learning to sing from sight.

#### **4.5.3 Audio media**

Hauptfleisch (1993: 55) states that there is a strong need for audio media in South African schools. The cost of apparatus such as CD players, cassette players and music instruments is undoubtedly a limiting factor in the use of these media. Although special listening rooms with the most modern equipment may be the ideal for every school, portable cassette players or CD players can also be very effective.

#### **4.5.4 Computers**

The computer is one of the modern media with the most possible uses for music education. Unfortunately, this versatile medium is very expensive and requires specialised skills from the operator. While many South African schools have the most basic facilities, some do not even have electricity. It is unrealistic to suggest introducing technologically advanced and complicated media in these schools.

Some of the neighbouring schools of the Drakensberg Boys' Choir School, in the rural areas of Kwa-Zulu Natal, are good examples of schools with very limited facilities. Many of these learners still live in traditional circumstances and have to walk long distances to the school. It seems that the greatest priorities for these schools are proper classrooms, textbooks, and qualified teachers. Most likely, even in remote places, schools have at least access to a battery-powered cassette player, if not a CD player. It is therefore a realistic possibility to use a textbook and an audio CD or cassette (with the optional use of music instruments) as media for a sight-singing study package.

This description of the South African reality, the media for evaluating sight-singing, as well as the attributes needed in a sight-singing study package, are used as guidelines for selecting suitable media for the suggested sight-singing study package (described in Chapter 6).

#### **4.6 Selected media for the suggested sight-singing study package**

After considering the various factors described in the previous paragraphs, the choice of educational media can now be limited to those that are essential for a sight-singing study package. According to these considerations, the author selected the following educational media:

- Printed media:
  - Workbook
- Music instruments:
  - Piano / electronic keyboard / melodica
- Musical aids:
  - Pitchfork in A
  - Metronome
- Human media:
  - Teacher
  - Learner
  - Fellow learners
- Auditory media:
  - CD or cassette.

In accordance with the idea of *learner-centred education*, the media are selected to enable each learner to work at his own pace. Each of these media has different possibilities in a sight-singing study package. The following description of each of these media and their use in a sight-singing study package justifies the author's choice of media.

#### 4.6.1 Printed media

Printed media is one of the oldest educational media and it is probably the most widely used educational medium all over the world. It can store different types of symbols for an unlimited time and is simple to use. Using printed media to teach and to learn sight-singing has several advantages.

##### *4.6.1.1 The advantages of printed media in a study package for sight-singing*

The use of printed media is so well established in education that education is often associated with books. Erickson and Curl (1972: 82-83) describe the advantages of using books in education:

Books are superbly compact, economical and practical devices for storing and retrieving information [...]. You can easily put a book down, mark your place, and pick it up later again – or go back and review what you read [...]. Books of all kind can be extremely valuable instructional media.

This statement underlines the importance of using this everyday educational medium. The most important prerequisite for using a textbook is that the user should be able to read the symbol systems which are written in the book. These symbol systems include language, music notation, and graphic diagrams. Textbooks are equally well suited for individual learning as for groupwork.

The media attributes of print make this educational medium ideal to use for teaching and learning sight-singing. The printed media can be used to explain concepts by using language, and it can present exercises using music notation.

Another factor that favours the use of printed media is that it is relatively inexpensive. Henry (1994: 13) mentions that print can be the cheapest medium to produce. Although South Africa spends a huge amount on education annually, these funds have to provide education for a great number of learners. With limited funds, the cost of educational media is always an important factor to keep in mind. Printed matter therefore remains one of the most important educational media to use in South African schools.

#### 4.6.1.2 *Workbook*

The term “workbook” refers to a book with exercises, used by a learner (Pollard 1994: 927). With this term, the present author refers to a book with written exercises and sight-singing exercises as well as explanations of the relevant concepts, music examples in the form of notation and illustrations (e.g. a picture of the piano keyboard).

Since sight-singing is about reading music and singing it, the workbook should be the most important medium for teaching and learning this skill.

#### 4.6.2 **Auditory media**

The term *auditory media* refers to all media which use sound as the primary mode of communication. Auditory media include the radio, telephone and different types of audio recording and playback apparatus. According to Knirk and Gustafson (1986: 161), the teacher can also be regarded as an auditory medium. For the purpose of this discussion, the author will focus on audiocassettes and CDs as auditory media.

##### 4.6.2.1 *The advantages of auditory media for a sight-singing study package*

An audio recording can be a very useful tool in a sight-singing course. Because sight-singing is essentially about making music, a medium that can reproduce music should be an appropriate one to use. It is of the utmost importance that learners of sight-singing should have access to good audio examples of the intervals and phrases that they are expected to sing from sight. When a teacher is not directly available to sing the example, a recording of someone singing it can provide the examples. Such a recording can also be of great value to those teachers who cannot sing well or feel unsure of their own singing. A recording of someone singing can most probably never have exactly the same value as a live role model. Nevertheless, the author is convinced that it is much better to have good examples on a recording than to have bad examples performed live.

Auditory media have the following unique qualities:

- “*Auditory media can accommodate digital codes (in the language concerned) as well as analogue codes (e.g. tone, pauses, emphasis and music)*” (Freysen et al 1989: 112). Digital codes are purely symbolic and there is no noticeable similarity between the digital symbol and reality, e.g. written language or music notation. A CD recording uses digital codes that have to be processed by a computer to

produce sound. Analogue code refers to a realistic depiction of reality (Salomon 1981: 36), e.g. recorded music or a painting. A gramophone record uses analogue codes that can be played back with a simple device using a needle. The ability to reproduce the analogue code of music (sound) ensures that auditory media can be an integral part of a sight-singing study package.

- *“They are directed at the sense of hearing exclusively”* (Freysen et al 1989: 112). Good listening skills are crucial for every musician. By using auditory media the learner can be encouraged to focus his attention on listening and in the process develop listening skills. Singing from sight implies the use of two senses, namely *sight* (to observe the notation) and *hearing* (to observe the sound being produced). Learners have to use both these senses effectively to make progress in sight-singing. When singing from sight, the association between the visual music notation and the aural sound is of vital concern. The author therefore suggests that auditory media should be used in combination with a workbook.
- *The sound quality of the reproduction can be very good* (Knirk & Gustafson 1986: 165). Modern recordings, especially CDs, can reproduce sound very realistically. This high quality of sound enables auditory media to be an acceptable replacement for the teacher or a music instrument, where these are not readily available.
- *The user can control the playback of a recording.* He can decide what to listen to, when he wants to listen to it, how loud it should be. He can play the whole recording or parts of it as many times as he likes, or he can leave out certain parts. The ability to control auditory media makes it suitable for use in large groups, as well as for individual learners. Utilising the ability to control the recording enables the student to learn at his own pace. This is an important principle in learner-centred education. Teachers can also use the flexibility of auditory media to fit their pupils’ learning pace.
- *Audio media are accessible to many people, even in “quite remote parts of the world”* (Henry 1994: 14). Even where electricity is not available, audio apparatus can be operated on battery power. Unfortunately, the lack of electricity is a reality in many rural schools in South Africa as mentioned earlier. Using battery powered audio apparatus can be a way to overcome the problem of no electricity. Another advantage of using portable auditory equipment is that the learner has more freedom to listen to the recordings where and when he wants to.

This discussion justifies the use of audio media in education, and more particular, in a study package for sight-singing. An audio recording along with a workbook can be sufficient media for a basic course in sight-singing. The recording abilities of auditory media can enable learners to listen to their own singing. It can also enable teachers to evaluate and compare learners' efforts at sight-singing. Two types of audio media seem ideal to use in a study package for sight-singing, namely a CD recording or an audiocassette.

#### ***4.6.2.2 CD recordings***

CD recordings are probably the best form of audio recording to use as part of a study package for sight-singing. A CD has several advantages compared to other audio media. These advantages are:

- The quality of sound reproduction is very good. The digital reproduction of sound is very realistic. There are no extra sounds such as a needle touching the record.
- Even with repeated use, this quality does not change. A CD does not stretch like the tape of an audio cassette and does not wear out like a record.
- CD players are relatively cheap and easy to operate. Portable models are available that can use battery power.
- It is easy to find a specific place on the CD. It is also easy to repeat or to skip certain parts of the recording. Most CD players indicate the number of the track that is playing. Some CD players also indicate the time that a track or the whole CD has played. This can help the user to locate a specific moment on the CD very accurately.

#### ***4.6.2.3 Audiocassettes***

The sound quality, durability and control of an audiocassette can definitely not compete with those of a CD, but this medium may be the best choice for some learners. The advantages of cassettes are:

- The cost of cassette players is low, making cassettes more affordable than CDs. Many learners have their own cassette players, enabling them to work at their own pace.
- Many cassette players are compact, making this medium portable, so that it can be used anywhere.

- The cassette player is simple to operate. This enables even young learners to use a cassette player with confidence.
- Many cassette players have a counter, enabling the operator to locate a specific place on the cassette.
- An audiocassette can be used to record the learners' sight-singing efforts. Making a cassette recording is much simpler than making a CD recording and learners can easily record their own singing on cassette. This can enable the teacher to evaluate learners' progress when listening to these cassettes. Learners can also evaluate themselves by listening to their own efforts and comparing it to a role model's singing.

Giving learners a choice to use CDs or cassettes can make it possible for a great number of learners to benefit from the suggested study package. Producing both CDs and cassettes is technically easy. The same content can be recorded on both media.

#### **4.6.3 Human media**

The teacher as well as the learner and fellow students can act as educational media by explaining learning content and evaluating the learner's response. The human as educational medium is very versatile and can fulfil a variety of functions that are necessary for the education process.

##### ***4.6.3.1 The advantages of human media in a study package for sight-singing***

Human media can fulfil some functions that no other media can. By utilising the teacher, fellow learners and the learner as human media, the learner can get immediate feedback on his efforts, enabling him to realise his mistakes and to correct them. Interacting with other people such as the teacher, or fellow learners, can motivate a student and inspire him to master the relevant knowledge and skills for sight-singing.

Being part of a vocal ensemble or a choir can be a practical demonstration of the importance of sight-singing. Having to sing new music regularly can be an excellent reason for a learner to improve his sight-singing skills.

#### **4.6.3.2 The teacher as human medium**

The teacher's role has changed from being the main source of information in the class, to being a facilitator of learning (Knowles 1980: 19) and a resource person for self-directed learners (Brandes & Ginnis 1986: 15). The teacher should, therefore, possess the necessary knowledge and skills and be available to guide and evaluate learners. Olivier (1998: 40) suggests several ways in which teachers can facilitate learning, which are relevant for teaching sight-singing.

Teachers should:

- *“impart knowledge which is inaccessible or needs to be explained to learners.”* Several concepts of music and music notation may be difficult for learners to understand and to implement. The teacher can explain these concepts when it is necessary.
- *“demonstrate”*. Learners need a good role model to follow when they are learning to sing from sight. By demonstrating musical concepts clearly and with good singing technique the teacher can be the role model.
- *“direct learners to capitalise on acquired knowledge, skills and processes”*. In a sight-singing study package, the teacher should guide learners to apply their acquired knowledge and skills to the music that they perform.
- *“mentor, assist and guide [...] the process towards achieving outcomes.”* The teacher should evaluate each student's sight-singing to ensure that he has mastered the necessary knowledge and skills and that he applies these newly acquired abilities correctly. During the sight-singing course, the teacher can ask a learner to sing from sight a voice part that is different from the one that he normally sings in the choir.

#### **4.6.3.3 The learner as human medium**

The learner's meta-involvement has an important role to play when learning to sing from sight. He should:

- gather the necessary knowledge to understand the concepts involved in music notation,
- apply the knowledge and skills by singing exercises and songs from sight,



- practise sight-singing until he has achieved the desired level of competence in sight-singing,
- evaluate his own attempts at sight-singing by comparing the pitch he is singing to that of a music instrument at different moments in an exercise or a song. In a similar way, he should compare his beat to that of a metronome. The sight-singer's self-evaluation is described in more detail in paragraphs 2.7.7, 3.4.1 and 3.4.2.

In any study package, it is essential that the learner should accept responsibility for his own progress. Awareness of this responsibility should encourage the learner to be critical of himself and to aim for perfection.

#### ***4.6.3.4 Fellow learners as human media***

Peer tutoring can also be a very useful medium for evaluating sight-singing. When the learner listens to himself and evaluates his own sight-singing attempts, he can easily make mistakes without realising it. A fellow student who is on the same level or a more advanced level of sight-singing can help to identify and correct mistakes. Using peer tutoring can have the following advantages to learners:

- Another person evaluates his sight-singing, identifying and correcting mistakes.
- The peer tutor can explain and demonstrate concepts that the learner finds difficult.
- A fellow learner listening to his efforts should motivate a singer to concentrate better on his sight-singing.

Helping fellow students can also have several advantages for the peer tutor:

- The peer tutor's aural skills should improve while listening to a fellow student. The peer tutor has to listen critically to evaluate the fellow student's singing and in this process learns to listen critically and attentively.
- This process can also improve the peer tutor's inner hearing. When he evaluates his fellow student's sight-singing, he should constantly compare that singing to the music notation. In the process of evaluating someone else's sight-singing, the peer tutor has to anticipate the music and compare the sight-singing with the sounds he anticipated. If the two versions of the music do not correspond, there is a mistake at some point.
- The peer tutor's sight-singing abilities should improve while helping fellow students.

#### 4.6.4 Realia (music instruments)

Already in 1972, Erickson and Curl (1972: 86) mentioned that real things from the environment can provide learning content and stimulate learners. When studying music the reality is sound and therefore the instruments that produce the sound should be seen as “realia”. The teacher or the learner can use various music instruments as educational aids when teaching sight-singing.

##### 4.6.4.1 *The advantages of realia in a study package for sight-singing*

A CD with recorded singing as well as music instruments can be a great help to the sight-singing student. Both melodic and non-melodic instruments can be useful in teaching and learning to sing from sight.

**Melodic instruments** can be used to:

- give the key and the starting pitch,
- play melodic intervals,
- play a melody or phrase, or
- play other notes of the harmony, or a counter melody.

The teacher can demonstrate pitch and intervals to learners by playing a melodic instrument. Hearing the correct pitch can help learners to sing with good intonation. When learners play the instruments themselves, it can easily happen that they concentrate exclusively on playing the instrument, with the result that they forget to listen to the music. The author suggests that learners should use melodic instruments only to play the starting pitch or short phrases that may be difficult to sing. The learners should resist the temptation to play the whole piece that they should sight-sing on an instrument. Once they have heard the music, it cannot be regarded as sight-singing any more.

**Non-melodic instruments** can also be used to make it more interesting for learners to perform different rhythmic patterns. These instruments can be used to play:

- a steady beat,
- an ostinato pattern,
- different rhythmic patterns, or
- the rhythm of a piece or phrase.

Many music instruments such as flutes or violins require a high level of skill to produce a good tone and pure intonation. Learning to produce a pure tone on such an instrument can be very time-consuming. To produce a pure tone without spending time to master a music instrument, the author suggests using a pitchfork to play one specific pitch (A or F). A piano/keyboard/melodica can also be used to play intervals, and a metronome can give a steady beat. Although a pitchfork and a metronome are not real music instruments, they are included in this discussion because they are valuable aids that can provide musical clues to the learner.

#### ***4.6.4.2 The piano/keyboard/melodica***

The musical keyboard provides a visual representation of different pitches, coinciding with the symbol system of writing notes, sharps and flats on a staff. Learners do not have to learn advanced piano technique to play single notes on a piano. Although a piano is an expensive instrument and not portable, many schools have one or more pianos that learners can use. If there is not enough pianos available, teachers and learners can use an electronic keyboard or a melodica instead. These instruments have limited ranges, but learners can still see the keys and hear the pitch accurately.

#### ***4.6.4.3 The pitchfork***

The pitchfork produces a single pitch very accurately and clearly. It is small enough to use anywhere and is not expensive to buy. In a sight-singing study package, it can be used to give the starting pitch and to check the pitch at different points in a piece as well as at the end of the piece. In this study package for sight-singing, the author suggests that learners with a high voice use an A-pitchfork and learners with a lower voice use an F-pitchfork.

#### ***4.6.4.4 The metronome***

A metronome is an excellent medium to help musicians to keep a steady beat and not to change the tempo. Various authors such as Lewis (1996: 1) and Campbell (1998: 4) advocate the use of a metronome when *practising* to sing from sight. Using a metronome should encourage sight-singers to maintain the flow of the music.

Learners should decide on a suitable tempo before singing an exercise and keep that same tempo throughout the exercise. Having selected a suitable tempo, the sight-singer should listen to one or two bars of beats before starting to sing, to ensure that he will start at the correct tempo.

The prices of metronomes vary between large mechanical ones and small electronic ones. Teachers or learners can build a simple electronic metronome. This should cost only a fraction of the price of the ones for sale at music dealers. To build such a metronome, basic soldering skills and some knowledge of electronic components are needed. Metronome kits with all the components and instructions on how to assemble it are commercially available. Alternatively, one of many electronic circuit diagrams can be used to construct a metronome. A diagram for a basic metronome can be found as part of the “555 Timer IC tutorial” (van Roon 2001).

This metronome is quite simple, and easy to assemble. It uses a 555 timer IC to generate a pulse and a linear potentiometer to adjust the tempo. Learners may also find it exciting to construct their own metronomes. Here a good opportunity presents itself for a learning experience across different subjects, combining music (sight-singing) with subjects such as electronics and construction. (The idea of learning experiences combining different disciplines is strongly advocated in Outcomes-Based Education.) When the learner uses a self-constructed metronome, it can be a motivation to use it frequently. This, in turn, can help to improve the learner’s ability to keep a steady beat.

Lewis (1996: 1) emphasises the importance of the metronome as a “practise aid”. She states that using a metronome is a specific skill that can be taught. Learners should practise using a metronome so that they can concentrate on their sight-singing and not only on the metronome. When learners have mastered the skill of using a metronome, this instrument should help them to improve their ability to maintain a steady beat.

It is very important that the metronome should be set to a suitable tempo. Wollitz (1982: 65) warns recorder players not to set the tempo too fast. He advises learners to select a “moderate tempo well within your abilities”. This advice is equally important for sight-singers. By selecting a tempo within his abilities, the singer can anticipate each note and sing it accurately.

## 4.7 Summary

Teaching and learning as well as sight-singing are different ways of communicating with other human beings. Understanding sight-singing tuition and learning as forms of communication makes it possible to select the most appropriate media attributes for the suggested study package.

The different media attributes, essential for teaching and learning sight-singing, are discussed in this chapter. It is essential that these media can convey music notation or that it can reproduce sound. Various media have these attributes, but not all of them are realistic for South African circumstances. Not all South African and African learners and schools have access to technologically advanced educational media. This limits the choice of educational media.

Considering all these factors, the author concluded that a printed textbook, with an instructional audio recording on cassette or CD, is the most essential medium to use in a sight-singing learning package. Media such as music instruments and music education aids can be included to guide students more effectively towards mastering the skill of sight-singing.

This information about communication and media selection is used to evaluate existing sight-singing programmes (Chapter 5). In Chapter 6, the reader will find suggestions for utilising the selected media in a study package for sight-singing.

The criteria for media selection which are stated in Chapter 4 are used to evaluate a number of sight-singing programmes in Chapter 5 and they are used as guidelines for the design of a new multiple-media study package for sight-singing in Chapter 6.