TEACHING BRAILLE MUSIC NOTATION TO BLIND LEARNERS USING THE RECORDER AS AN INSTRUMENT
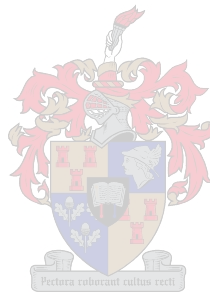
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the degree of Doctor of Philosophy in Music
at the University of Stellenbosch

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DECLARATION

I, the undersigned, hereby declare that the work contained in this dissertation is my own original work and that I have not previously, in its entirety or in part, submitted it at any university for a degree.

J E Wootton   **Date**

SUMMARY

The researcher encountered the following problems while teaching braille music notation to blind learners at the Pioneer School in Worcester:

- Young learners learning to read braille music notation with the piano as medium appeared to struggle technically. For example, blind children experienced difficulty finding the correct keys over seven octaves; they had generally weak posture; they had to learn to play one part with one hand while the other hand would read; they had to memorise the music for each clef individually and then combine them cognitively; they had to memorise the soprano, alto, tenor and bass parts of a piece; they often experienced discouragement because of the very slow progress they made compared with their sighted peers.

- Although learners seemed to find the recorder technically more manageable, currently available braille recorder tutors proved to be inadequate. This inadequacy was a result of the tutors having been designed for the sighted child.

The researcher thus set out to design a more appropriate approach than is currently available for teaching braille music notation to the blind, with the recorder as medium.

The research method was qualitative and included a literature survey which covered the following unique needs of the blind learner:

- psychological
- emotional and social
- concept development
- motor skills (orientation, laterality, posture, coordination)
- tactile perception
- creativity and self expression.

The qualitative research also included video observation of a series of individual and group lessons. The lesson material emerged from a programme designed

by the researcher and was based on the literature study. An observation panel, together with the researcher, evaluated the lessons on predetermined coded assessment criteria. The lessons and programme were adapted according to feedback from the lessons.

The qualitative research includes interviews with five blind learners and six teachers of braille music notation. The interviews were designed to gather information on how blind learners can more appropriately be taught the braille music code.

The unique needs of blind learners, in particular those concerning orientation and perceptual awareness, are considered in this alternative approach for teaching braille music notation to blind learners. The alternative programme is skills based and can be used conveniently in conjunction with the Outcomes-Based Education (OBE) model.

OPSOMMING

Die navorser het die volgende probleme ondervind tydens haar onderrig van braille musieknotasie aan blinde leerders by Pionierskool in Worcester:

- Dit wil voorkom asof jong leerders wat braille musieknotasie moet aanleer met die klavier as medium, tegniese probleme ondervind. Blinde kinders het dit byvoorbeeld moeilik gevind om die korrekte toetse oor sewe oktawe te vind; oor die algemeen was hulle houding swak; hulle moes leer om een stemparty met een hand te lees terwyl die ander hand gespeel het; hulle moes die musiek vir elke sleutelteken apart memoriseer en die stemme kognitief bymekaar sit; hulle moes die sopraan, alt, tenoor en bas stempartye van 'n stuk memoriseer; hulle is baie keer moedeloos, weens hulle stadige vordering, in vergelyking met hulle siende portuurgroep.

- Alhoewel dit gelyk het asof leerders die blokfluit tegnies meer hanteerbaar gevind het, blyk huidige beskikbare braille blokfluit handleidings nie geskik te wees nie. Hierdie ontoereikendheid is as gevolg van die feit dat die handleidings vir die siende kind ontwerp is.

Derhalwe het die navorser gepoog om 'n meer toeganklike benadering te ontwikkel as wat tans beskikbaar is vir die onderrig van braille musieknotasie aan die blinde, met die blokfluit as medium.

Die ondersoekmetode was kwalitatief van aard en het onder andere 'n literatuuroorsig ingesluit wat die volgende unieke behoeftes van die blinde leerder ingesluit het:

- sielkundig
- emosioneel en sosiaal
- konsep ontwikkeling
- motoriese vaardighede (oriëntasie, lateraliteit, houding, koördinasie)
- gevoelswaarneming

- kreatiwiteit en eie vertolking

Die kwalitiewe navorsing het ook observasie ingesluit in die vorm van die waarneming van video-opnames van 'n reeks individuele en groeplesse. Die lesinhoud het ontstaan uit 'n program ontwerp deur die navorser en gebaseer op die literatuurstudie. 'n Waarnemingspaneel, saam met die navorser, het die lesse op grond van voorafbepaalde gekodeerde assesseringskriteria geëvalueer. Die lesse en program is aangepas volgens terugvoer uit die lesse.

Die kwalitiewe navorsing sluit ook in onderhoude met vyf blinde leerders en ses onderwysers wat braille musieknotasie ken. Die onderhoude is ontwerp om inligting in te samel oor hoe die braille musiekkode op 'n meer effektiewe manier aan blinde leerders onderrig kan word.

Die unieke behoeftes van blinde leerders, veral diè met betrekking tot oriëntasie en perseptuele bewustheid, word in ag geneem in hierdie alternatiewe benadering om braille musieknotasie aan blinde leerders te onderrig. Die alternatiewe program is vaardigheids-geöriënteerd, en kan maklik binne in die Uitkoms Gebaseerde Onderrig (UGO) model gebruik word.

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Miss M Snyders

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The only handicap that the blind have, is that

imposed upon them by a sighted society.

(J.E. Wootton)

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TEACHING BRAILLE MUSIC NOTATION TO BLIND LEARNERS: A COMPLEMENTARY TOOL

CHAPTER ONE

THE PROBLEM AND ITS SETTING

1.1 INTRODUCTION

This chapter explains the researcher's initial awareness of the problem of teaching braille music notation to blind learners. The chapter is based on a careful consideration of this problem to refine awareness of it. Ultimately a concise research question states the problem exactly. The chapter then sets forth the envisaged aim of the enquiry, that is to develop a complementary method to assist certain blind learners in the learning of braille music notation. Reasons are then put forward as to why this research project was deemed important for the academic community and to people engaged in practical work. The specific field to be examined is clearly demarcated. The research method and procedures to be followed are enunciated and graphically represented. Finally, the organisation of remaining chapters is set out.

1.2 BACKGROUND STUDY

1.2.1 Initial awareness

In 1999 the researcher was employed at the Pioneer School for the Blind in Worcester. It was her responsibility to learn braille music notation in order to be able to teach music to blind learners[1] in Grades one to seven. This experience gave her a very clear idea of the

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[1] "Blind" refers to those who have no sense of vision whatsoever. "Visually handicapped", however, refers to the total group of children who require special educational provisions because of visual problems (Lilly 1979:338 and Wang & Reynolds 1989:138). The researcher prefers to use the term "blind" in this research project, because it helps to differentiate between braille users and the partially-sighted, who use a regular enlarged alphabet.

problems and frustrations her learners were likely to encounter. She began by teaching the learners by ear, since in the early stages she did not feel confident to share her limited knowledge of braille music notation. Gradually she began locating braille piano tutors and gave her first lessons. Immediately she noted that blind children have technical difficulties unknown to the sighted. She also found that all the piano tutors she tried moved far too quickly for the blind children with whom she was dealing. The difficulties encountered in using the piano and piano tutors as vehicles for teaching braille music notation sent the researcher in search of a more user-friendly instrument and tutor. Her exposure to the blind also made her aware that not all learners have the same musical needs. It appeared that certain learners benefited from learning braille music notation more than did others.

1.2.2 Considering the awareness

Having specialised in playing the recorder, the researcher chose to explore the possibilities of this instrument for the initial teaching of braille music notation. While searching for a suitable braille recorder tutor, she again began teaching the learners by ear. The teacher noticed that many learners were progressing very quickly on the recorder, with fewer technical difficulties compared to those she had encountered while using the piano as a teaching instrument.

The teacher began using a couple of the few braille recorder tutors available, namely by Goodyear (1965) and Giesbert (1940). It was at this point that she discovered that the transcription of a tutor for the sighted into braille is profoundly inadequate for the blind child and fails to take into account their special needs.

Further investigation showed that the recorder teachers at Prinshof School for the Blind in Pretoria and Athlone School for the Blind in Cape Town teach the recorder by ear, since they agree with the researcher that the existing tutors are inadequate for the needs of the blind child. Smith (in Hoare & Hoskins 1993:32) also pointed out that beginners learning the recorder often do so by ear. The possible danger of the aurally gifted blind pupil learning to play music by ear is that they thereafter have difficulty learning the braille

music code. The reasoning behind this is that when a sighted person learns to read music, they first play and then remember, whereas the blind person first has to read and then memorise before they can play. The significance of this is that it is easier for a blind person with a very good ear to hear and then play immediately, than first to read, then memorise, and then play. So once they are in the habit of playing by ear, it can be difficult for them to concentrate on learning to read the braille music code, because there is an extra step involved before they can play. Thus, to play by ear, the steps for the blind person are simply: hear – play. The steps involved in reading the braille music code are read – memorise – play.

The researcher became aware that for blind learners who are not that aurally advanced, the extra step of reading employs an extra sense to make up for the lack of sight. Literacy for these learners then, can be regarded as a tool towards their musical development. Use of the tactile sense helps embed the reading in the memory. On the other hand, though, it was realised that slow learners and slow readers, and those with especially quick ears, may be able to progress faster when learning only by ear. In fact, there were those learners who were really being impeded because of the extra step of reading. Any approach to teach braille music notation would therefore have to take into account that certain blind learners are better candidates for learning braille music notation than are others.

It was found that one of the most recently published recorder methods in South Africa – by I. Winkler-Haller (1989) – is also inappropriate for blind students learning braille music notation, because their technical and physical needs have not been considered. For example, blind learners require particular guidance in handling the instrument to achieve the best technical results. The researcher's international search for a braille recorder tutor written specifically for the blind child proved fruitless. Even the Royal National Institute for the Blind in England (hereinafter RNIB) also use the Goodyear tutor mentioned above.

1.2.3 Refining the awareness

An awareness of the necessity for an appropriately progressive programme for teaching

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braille music notation to certain blind children intensified. The researcher thus set out to explore means by which all the specific needs of these blind children could be met.

Experiments with various approaches and methods of teaching braille music notation were initiated. While this exploratory stage was in progress, the idea for writing a programme based on the outcome of these trials and research was born.

The researcher was becoming ever more conscious of the special requirements of the blind child in learning to read braille music notation. Up until the end of the 1960s the teaching of braille had borrowed the conventional techniques and materials used for the teaching of print reading. During the 1970s, however, there was an increasing awareness that teaching braille requires material specially developed so as to take account of the complexities and difficulties imposed by the braille system. Research from 1912 to 1965 indicates that the code emphasis method produces better results. Henderson (Barraga 1976:46) also recommends a code-emphasis method only as a beginning reading method - a method to start the child on - and he does *not* recommend ignoring reading-for-meaning practice. "Code-emphasis method" means the introduction of braille characters, based on ease of tactile perception.

The significance of the above explanation for this study is that similar research in the field of braille music notation is lacking. The researcher has applied the "code-emphasis method" to the alternative programme wherever possible.

The researcher furthermore observed that the learners who had not consolidated the literary braille alphabet experienced increased confusion and frustration in learning braille music notation. This fact was confirmed in counsel with six other teachers of braille music notation. Every problem encountered produced a fresh impetus to discover an approach which could not only be used for this researcher in her situation, but by other teachers of braille music notation and appropriate learners. She asked the learners and colleagues their opinions on various solutions. She consulted piano and recorder tutors, both sighted and braille, for information and advice. The most fitting ideas were noted for future use.

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Finally, the researcher realised the unique position and appropriate circumstances she found herself in for conducting this research project; they were:

- Researching a most relevant existing problem;
- Real interest in the problem;
- Experience in the problem area;
- Her education and training;
- Location; daily personal involvement;
- Access to world-class libraries and specialists in braille music notation;
- Enjoyment of working with people;
- An urgent need for research in the area of education in braille music notation.

1.3   STATEMENT OF THE PROBLEM

The problem that will be investigated concerns the difficulties of teaching braille music notation to blind children in Grades 1 to 4.

Teachers of braille music often find the use of braille piano tutors problematic, since they mostly begin with the note **C**, which is the same as the letter **D** in regular braille (e.g. Mark & McGuire 1984:1). Especially children in Grade 1 who are beginning to learn regular braille tend to be confused by this (Smith in Hoare & Hoskins 1993:12).

Observation and consultation as well as the literature study (Hoare & Hoskins 1993:14) exposed the following additional difficulties which could possibly be caused by using the piano as the instrument of instruction for many learners:

- Technical difficulties for the blind child of finding the correct octave and keys in it;
- Small size or stretch of children's hands;
- Generally weak posture of the blind child, and hanging of the head (Smith in Hoare & Hoskins 1993:20);
- Having to play one part with one hand, while the other hand reads;

- Having to memorise the music for each clef individually and then combining them mentally;
- Having to memorise the soprano, alto, tenor and bass parts of a piece;
- Discouragement caused by very slow progress compared to that of sighted children.

In order to address the above problem in its many aspects, the following issues are examined:

- How to accelerate the braille music learning process for the blind child;
- How to meet the special need for creative self-expression in the blind learner (Lowenfeld 1974:81);
- How to use ensemble playing to meet the particular social and self-esteem needs of blind learners (Stagg in Hoare & Hoskins 1993:46; Frampton & Rowell 1939:82, 166; Lowenfeld 1974:257).

Therefore, the main problem addressed in this study is how braille music notation can be effectively taught to specific blind learners in Grades 1 to 4, against the background of their special needs.

1.4   AIM OF THE STUDY

The aim of this study is to develop a suitable approach for teaching braille music notation to specific blind learners, in Grades 1 to 4, using the recorder as an instrument.

1.5   IMPORTANCE OF THE RESEARCH

It is apparent to the researcher that no one programme can totally fulfil the needs of every teacher and student of braille music notation. It is equally apparent that not all blind learners are appropriate candidates for learning braille music notation. It is, however, the researcher's desire to show why current approaches are inappropriate to teachers and

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learners of braille music notation, as evidenced by the preliminary literature study. She wishes to explore an alternative approach which will possibly be adaptable to many teachers and learners of braille music notation worldwide. She proposes to supply a more fitting solution to the problems encountered across the board. Ultimately, she aspires to improve the efficiency of learning braille music notation internationally by taking into account the specific needs of the blind learner, as identified through the research.

The alternative approach endeavours to meet blind children at their specific point of need. Since blindness creates special needs, the factors to be taken into consideration are concept formation, laterality, motor skills, movement, posture, self-esteem, social disadvantages and braille reading. The researcher believes that it is the ignoring of these issues in currently available braille recorder tutors that render them inadequate for the specific needs of the blind.

Owing to the limited recent research in this area of study, the researcher hopes to provide a groundbreaking research project, with widespread implications for teaching and further research.

1.6   METHODOLOGY AND RESEARCH DESIGN

Figure 1 graphically represents the course of the research.
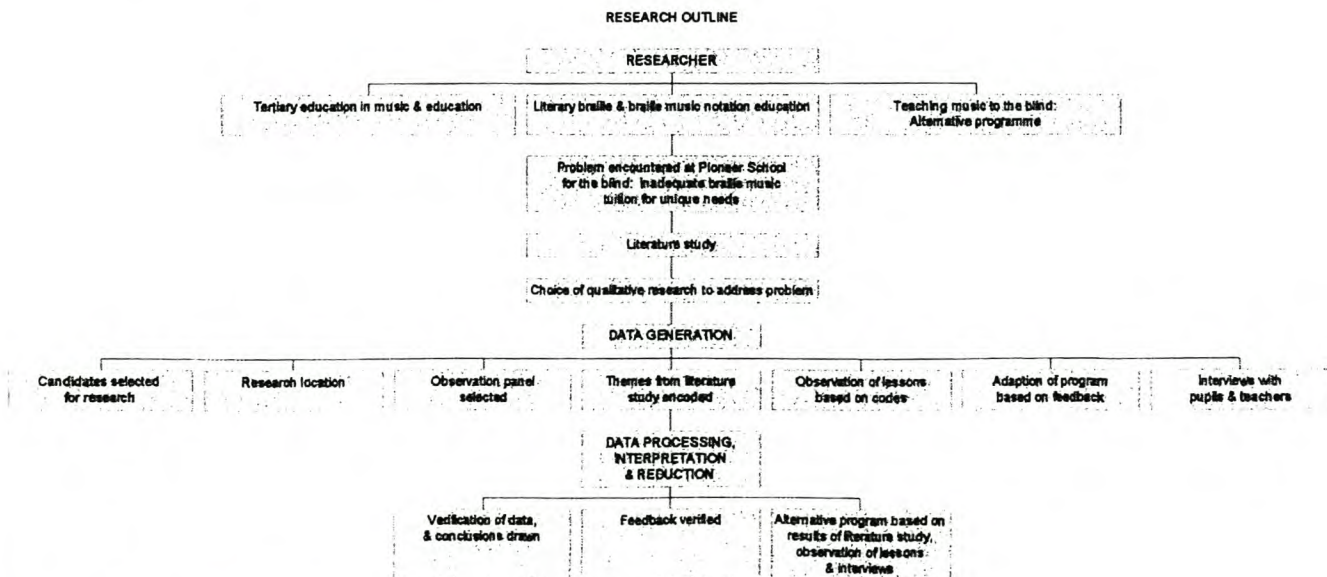
Figure 1: Graphic representation of the research

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1.6.1 Literature study

A survey of the literature on contemporary and relevant material regarding teaching braille music notation to blind children has been done. This includes an appraisal of selected braille piano tutors (e.g. Partridge 1994, Burrows 1997, Hadley, www.loc.gov, which is for older learners and also for the keyboard, and Fletcher 1950) and braille recorder tutors available from Holland, Germany and America (e.g. Giesbert 1940). The reader will notice how dated the Dutch source is. The reason for this is that braille music notation is no longer being used on a large scale in the Netherlands as it is regarded as a cumbersome method. The blind are therefore largely being taught music aurally in recent times in the Netherlands. Chapter Two elaborates on this issue.

Evaluation of tutors takes into account the new Outcomes-Based Education model in South Africa, which is skills-orientated. Specific outcomes specify the need for knowledge, techniques and skill in arts and cultural processes and products, as the old methods did not adequately fulfil the needs of the blind learner (Department of Education 1997: Specific Outcomes numbers 1, 2, 6 and 7). Primers and manuals giving advice on how to read braille music notation in general were also assessed, e.g. Krolick 1975 and 1998. Curriculum perspectives of Dalcroze, Montessori, Orff, Kodály and Suzuki were examined to gain a wider perspective on the order and speed of presentation of material such as movement, rhythmic values, group involvement, creativity, etc. The literature study includes material on the broad indirect social benefits of music education, enhancement of self-esteem and learners' needs for creative self-expression through music (Elliott 1995; Peery & Draper 1987; Abeles, Hoffer & Klotman 1984; Armstrong 1987 and 1993). The researcher sees the above concepts as relevant to the problem at hand, because, according to Elliott (1995:122) self-growth, self-knowledge and musical enjoyment are the aims of music education.

After having explored the above areas of importance to the study, the researcher became aware of how specialised the topic really is. The Pioneer School for the Blind research library in Worcester, which is regarded as a world-class establishment with high

international standing, revealed that there is a paucity of recent research in this particular sphere. An investigation further abroad, at the Royal National Institute for the Blind in London, the American Library of Congress and the Canadian National Institute for the Blind, confirmed this finding. The search for more recent sources was then widened. International Educational web sites were consulted, but the information gained was merely a repetition of what had been chronicled many years before, except for a few recent journal articles that the researcher has consulted.

The researcher was initially frustrated by her unsuccessful attempts to uncover recent research on braille music education. The reason for the paucity of new research in this field was then found to be the following: in the UK and the USA blind learners are currently being mainstreamed instead of accommodating them in special schools for the blind. This fact translates into the situation we have today, where, because the "specialisation" element has been removed by the removal of special schools for the blind, few teachers of braille music notation in the mainstream schools see the need for further research and specialisation.

The literature search failed to uncover current or more recent approaches to teaching braille music notation to blind learners, using the recorder as medium. Campbell (in Hoare & Hoskins 1993:11) notes that, although there is a good deal being done with single-line instruments for which braille music scores are mainly more manageable, the pity is that often these instruments are being taught aurally (by ear). Campbell also feels that one of the needs to be met by the RNIB (Royal National Institute for the Blind) is a demand for music that can be read by beginner instrumentalists. This is proof indeed of the dire necessity of this research. The researcher therefore hopes to make a real contribution to the task of teaching braille music notation to blind learners.

The reader is reminded that one of the necessary limitations of the present study is that it could not also cover braille music education using technology like computers in full. There are a number of such programmes available, for example that being offered by the Shodor Education Foundation in Britain, and "Dancing Dots", prepared by R. Taesch

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(www.dancingdots.com). Both these programmes are mainly for keyboard use and cannot yet replace regular braille music reading as a means of education. According to the Pioneer School for the Blind music librarian, these programmes still require much editing.

Chapter Two, under paragraph 2.12, provides a broader perspective on music technology.

1.6.2 Programme for teaching braille music notation to beginners

A programme for blind learners who are learning braille music notation has been drawn up by the researcher. It is based on preliminary research, which included interviews with colleagues, teaching experienced gained and a literature survey. In the early stages of the research the researcher planned to use ideas from both sighted and braille piano and recorder tutors, folk songs (e.g. Oxtoby 1968), Christmas carols (e.g. Bergman 1960), choruses, hymns and pieces arranged from the classical repertoire. As the study progressed, however, the researcher became increasingly aware that all the examples used in the tutor would have to be totally original, since they would have to be based on how the blind learner – and not the sighted one – learns to read.

The exercises used in the alternative approach (see Chapter Four) are therefore entirely original. The approach is also holistically orientated, including note learning, theory, composition, performance and individual and group-learning. At each step the specific needs of the blind learner are considered. In addition, guidelines for teachers are included. The programme has been periodically adjusted and refined according to findings gathered and assessment done during the research process. The research was therefore exploratory and investigative.

Bresler and Stake (1992:76) and Miles and Huberman (1994:6-7) corroborate that qualitative research is exploratory, investigative and comprises inductive logic. Inductive research was done in this study by virtue of the fact that a specific situation was observed in order to discover general patterns, or themes. Qualitative analysis is not directed by hypotheses, but by questions, and a search for patterns.

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1.6.3 Qualitative research

The researcher has made use of qualitative research, which typically yields qualitative data and observations not easily reduced to numbers. Qualitative research is not about the verification of existing theories and hypotheses, but rather about descriptive discovery (Hitchcock & Hughes 1995:297). Frequently, this type of field observation is a theory-generating activity as well. The researcher will seldom approach the task with precisely defined hypotheses to be tested. More typically, one will attempt to make sense out of an ongoing process that cannot be predicted in advance, that is, the alternation of induction and deduction (Babbie 2004:282).

Similarly, in this research, the researcher sought to develop a more appropriate approach to teaching braille music notation than that which currently existed. If, as in this case, there is a lack of appropriate literature, a qualitative design can provide the researcher with the freedom/flexibility needed to explore a specific phenomenon so that important variables may be identified (Leedy 1995:109; Leedy & Ormrod 2001:154). Furthermore, qualitative methods allow the researcher to study selected issues in depth and detail, as he/she identifies and attempts to understand the information that emerges from the data (Terre Blanche & Durrheim 1999:42).

Qualitative research is especially effective for studying subtle nuances in attitudes and behaviour and for examining processes over time. As such, the chief strength of this method lies in the depth of understanding it permits. One can modify the field research design at any time, whereas one could not as easily initiate a survey or an experiment (Babbie 2004:307).

Leedy (1998:109) underpins the researcher's choice of method, by suggesting that if one wishes to examine a specific phenomenon in-depth with a relatively small number of participants, a qualitative approach is essential. He adds that qualitative research is primarily an inductive process of organising data into categories and identifying patterns (relationships) among the categories (Leedy 1998:107). The researcher describes exactly

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how she went about this in Chapter Three. The research had a deductive element in that the provisional programme was assessed and then adapted accordingly.

Programme evaluation or evaluation research was undertaken. "Programme" is taken to refer to any intervention or set of activities mounted to achieve external objectives, that is, to meet some recognised social need or to solve an identified problem (Rutman in Babbie and Mouton 2002:335). Rossi and Freeman define evaluation research as "the systematic application of social research procedure for assessing the conceptualisation, design, implementation, and utility of social intervention programmes" (in Babbie and Mouton 2002:335).

Formative programme evaluation typically involves collecting data for specific periods of time in order to make suggestions about improvement, to solve unanticipated problems and to make sure that participants are making the required progress towards the desired outcomes. Improvement-oriented evaluation usually, then, utilises information systems to monitor programmes, to track implementation, and to provide regular feedback to programme managers (Babbie and Mouton 2002:339).

This qualitative study is exploratory and interpretive in nature and, according to Hitchcock & Hughes (1995:295), in exploratory research one is not always sure what one is looking for, and will interpret and make sense of information as it is received. Exploratory studies are used to make preliminary investigations into relatively unknown areas of research (Terre Blanche & Durrheim 1999:39), as in the case of this study. Moreover, in cases where very little previous research has been conducted, the researcher will typically attempt to collect new data (Mouton 1996:102).

Bresler & Stake (1992:76) state that the qualitative research approach is especially suitable for the study of a unique situation. In this research project, a singular setting of the teaching of braille music notation to blind learners was examined. Babbie and Mouton (2002:343) note that a programme is, by definition, conceptualised and designed to address the needs of a particular target group, which could be a small group of people

(students in a special programme in an educational institution).

Qualitative research is furthermore naturalistic and the research in this study took place in a classroom under fairly natural conditions, except for the presence of the research panel and a video machine. The candidates selected were those already involved in the music education programme and the only ones available to take part in the research.

Babbie and Mouton (2002:357) add that qualitative evaluation should take place when the focus is more on describing the implementation process rather than on the outcomes or impacts of an intervention. Furthermore, the purpose of the evaluation is formative and developmental in nature (improvement oriented) rather than summative (judgement oriented). For these reasons, a control group was not used (Babbie & Mouton 2002:349).

The target group included three blind participants in Grades 2 and 3 from the Pioneer School for the Blind in Worcester. Three girls participated, two of them being Afrikaans speaking and the third English speaking. This selection was due to the fact that it is a very small school. A better cross-section was therefore not possible. They were chosen to represent different levels of progress on the recorder and the piano. Permission for their involvement was gained from the Western Cape Education Department, the school Board and the parents. Evidence of this is in the safe possession of the researcher.

Because the researcher was involved in the teaching of the programme being studied, her role could be described as a participating researcher. She also fulfilled a significant role as assessor.

Empirical research in music is grounded on empirical observations obtained in the study of musical talent, musical ability, achievement, attitude and/or preferences (Rainbow & Froehlich 1987:24). In this study, the achievements of learners are studied with respect to the development of braille music notation reading, using the recorder as medium - as individuals and in group situations. The elements of musical composition, writing them down, and performance in front of an audience are/were also taken into account,

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especially with respect to motivation and self-esteem.

Qualitative research is furthermore descriptive. Most of the analyses were done by verbal descriptions. These descriptions were then grouped by the researcher, which rendered them amenable to comparison, contrast and distillation into patterns and themes. The results of the research are provided using the descriptive method. The results are illustrated and validated by references to relevant sources.

Qualitative research focuses on people's real experiences and so insight is gained into the meanings that they attach to happenings, processes and structures, as well as their observations, realisations and preconceptions (Miles & Huberman 1994:9-10). The above theory is applicable in this study's data collection in that the subjects in the research were aware that at all times they were free to submit their opinion or interpretation of their experiences.

An advantage of qualitative research is that the results of the research done in the classroom lead directly to practical application, which was the case in this study (Lemmer 1992:293; Bresler & Stake 1992:76; Brown 1992:144; Le Compte & Preissle 1993:95).

This project is essentially also a case study. The chief purpose of case studies may be descriptive; the in-depth study of a particular case can yield explanatory insights. Case study researchers may seek only an idiographic understanding of the particular case under examination, rather than a basis for the development of more general, nomothetic theories (Babbie 2004:293).

In a case study a particular individual, programme, or event is studied in depth for a defined period of time. An educator might study and analyse instructional strategies. Sometimes researchers focus on a single case, perhaps because its unique or exceptional qualities can promote understanding or inform practice for similar situations. This is not a *multiple* or *collective* case study, where two or more cases are studied to make comparisons or propose generalisations (Leedy 2005:135).

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A case study may be especially suitable for learning more about a little known or poorly understood situation. It may also be useful for investigating how an individual or programme changes over time, perhaps as the result of certain circumstances or interventions (Leedy 2005:135).

The researcher deliberated whether or not to use a control group, but decided that a weakness of the experimental method lies in its artificiality (Babbie 2001:234).

In a *general* or *generalising* strategy (experimental), social objects or phenomena are studied for their interest as representative examples of a larger population of similar objects or phenomena. In a *contextual* strategy (qualitative), however, phenomena are studied because of their intrinsic and immediate contextual significance. Studies in social science, where the aim is to investigate a single case (or a limited number of cases) in an in-depth manner, form part of the *contextual* category (Mouton 1996:133). The primary aim of the investigator in this study is to produce an extensive description of the phenomenon in its specific context. The project proposes a very specific method that may be used under a restricted set of conditions, which may or may not prove to be generalisable.

Experimental studies, comparative studies and various kinds of sample studies, with a view to generalising the results, are not in any way superior to qualitative studies. They are all legitimate forms of inquiry and the researcher decides on the most appropriate strategy in terms of the objectives of the study (Mouton 1996:133).

1.6.4 Data generation

One of the major areas of data generation was the direct observation of the three learners being taught on a weekly basis. Detailed written field notes were collected by the research panel and from the video footage. Three panel members, all schooled in braille and in music, were used as observers to ensure reliability and validity. In order to increase the reliability and validity of this qualitative analysis, the process of "triangulation" was

implemented, i.e. multiple methods of data collection (observation, interviews, informal discussions and document study).

The systematic observation of the lessons took place in order to determine the possible advantages of using a monodic instrument instead of a keyboard instrument for the teaching of braille music notation to blind learners and to determine a viable order and speed at which the braille music notation characters should be presented. Observation also determined the efficacy of individual and group tuition using a monodic instrument. The research panel and researcher also observed performance and composition as possible aids in this teaching programme.

During the observation phase, data on teaching braille music via the recorder, individually and in groups, were gathered. These observations were done by means of video recordings, with three additional observers noting coded categories to improve reliability and credibility. The learners' reactions and speed of progress were documented systematically, following Miles and Huberman (1994:9). The social and self-esteem benefits gained by the blind learner from the study of music were noted. In addition to using predetermined categories for observation, the observers constructed theories that generated categories and posited the linkages among them (see Denzin & Lincoln 1998:89). Unstructured interviews were employed as a further means to determine how the learners experienced braille music notation on the recorder. This type of interviewing technique was chosen in order to give the respondents more freedom to elaborate on their views. Interviews are especially valuable as a source of data for enhancing triangulation (Denzin & Lincoln 1998:382). The participants were questioned about their experience of learning in order to determine the possible advantages of the instrument. They were asked about their experiences of learning individually and in groups, and about their experiences of composing as a means of learning braille music notation. Before the lessons, the goals, teaching material and strategies to be used were noted. Achievements and reactions of learners, goals achieved and any important happenings were described after the lessons. When necessary, alterations in lesson content and strategies were made for the following lessons. These too were described.

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The researcher did not plan to assess the process in a conventional sense. She appraised and, in collaboration with validating colleagues, judged whether or not a contribution in enhancing the quality of education was being made. The criteria used were based on the literature review. Action research was adopted as the methodology for this study, since, according to Burgess (1985:157), action research is trying out an idea in practice with a view to improving or changing something, trying to have a real effect on the situation. Action research is not directed to the development or testing of a theory, but to the solving of a practical problem. McTaggart (1993:11) sums this up by saying that action research means "research that affects actions".

Finally, the researcher's choice of action research is justified, since it took place in far more naturalistic settings than does experimental research and, as such, this type of research has advantages for educational researchers in reducing the communication gap between teachers and researchers (Burgess 1985:148).

1.6.5 Data transcription, reduction and analysis

The data analysis was qualitative by nature and included three concurrent activities, namely data reduction, presentation and the drawing of conclusions, or verification, following Miles & Huberman (1994:10-11) and Bresler & Stake (1992:76).

Data reduction took the form of summarising and analysing the transcribed data according to shared themes. The data were synthesised by way of explanation and interpretation. Conclusions were then drawn and verified.

While transcribing interviews and reviewing participant-observation notes, similar phrases and common sequences were identified, as well as distinct differences. Categories and themes relative to the research concerns were identified and then codes were created for emerging themes, insights and information related to specific research questions, key concepts and common patterns. After all the data had been coded, they were compared. As patterns and interrelationships emerged, the links between the concepts were specified

and refined.

1.6.6 Validity and reliability

Mouton and Marais (1989:79) inform us that reliability is based on four variables: the researcher, the individual or group being studied, the assessment tools, and the research location or circumstances.

In this study the researcher gained the necessary knowledge and skills for conducting this research from the following sources: three degrees in music education; an Honours degree in Education; specialisation in recorder performance; directorship of Cape Town Recorder Guild; courses in English and Afrikaans literary braille and braille music notation at the Pioneer School for the Blind; a literature study in qualitative research, braille music tutors and all relevant material surrounding the topic; 15 years of music teaching and five years of teaching braille music notation to blind learners; an intense interest in improving the current programme for teaching music to the blind.

All original material from the data collection is in safe keeping. This includes cassettes, videos, transcriptions and feedback from the panel. Another major way in which the teacher-researcher attempted to validate the interview data externally was to go back to the respondent with a summary of the main themes or emerging categories. The researcher used a second interview to focus upon themes and issues which emerged or those on which the researcher was not clear, in accordance with Hitchcock & Hughes (1995:182). All subjects involved in the research have corroborated the distillation of feedback carried out by the researcher.

On the ethical side, the pupils, parents, headmaster of the Pioneer School and Department of Education have authorised the research. Furthermore, various methods of triangulation were used in the assembling and analysis of data to verify reliability.

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1.6.7 Triangulation

Triangulation means that a number of different methods were used in order to gather information, thereby increasing reliability. Interviews were performed with primary and secondary school pupils; congenitally blind (born blind) and adventitiously blind (became blind later on) candidates, who had been exposed to the piano, recorder and braille, were interviewed; interviews were performed with sighted and blind music teachers, all of whom had been exposed to braille music notation, the piano and the recorder; observation took place by a panel who had all been well schooled in music and braille; a video was used for observation; the literature survey included international educational libraries; all main websites connected with braille music education of the blind were visited; observation of progress by pupils in the reading of braille music notation was strictly monitored by three persons, plus the researcher. By having made use of a variety of methods of data collection and treatment, prejudice and preconceived theories were largely limited, and therefore validity and reliability enhanced.

1.6.8 Generalisation of the findings in qualitative research

Generalisation, or external validity, according to Henning (1995:32) and Colwell (1997:6), includes the basis of a strong theoretical grounding. The researcher therefore provided the basis in Chapter Two, in order to support the methodology and improve reliability and validity. A further attempt at generalisation was to enquire which methods were being employed for teaching braille music notation at the School for the Blind in Athlone in the Western Cape, Prinshof School for the Blind in Pretoria and the Royal National Institute for the Blind in London. Teachers from the schools were interviewed. At an international level, tutors from England, Holland and America were examined.

1.6.9 Refinement of the programme

Refinement of the programme finally took place, based on the outcomes and conclusions of the data analysis. As a consequence of this study, recommendations for future research

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are made and will hopefully result in yet further improvement of the programme.

1.7   ORGANISATION AND STRUCTURE OF THE STUDY

In Chapter One, the problem was set out, as well as the aim of the study, the importance of the research and an overview of qualitative research as a research method in general and in the context of this study. This was to show that the study was based not merely on the experience of the researcher but on well-founded theories which were the result of valid research. The research resulted in an approach for teaching braille music notation to blind learners, which is an alternative to those approaches already in existence. The recommended programme may also function as a complementary tool for use alongside existing material. The demand for appropriateness, according to the unique needs of the blind child, could consequently be met more effectively.

Chapter Two provides a survey of the literature available. The survey will include the following: the psychological, emotional, cognitive, physical and social aspects of being blind; braille reading and writing; an examination of current braille piano and recorder tutors; group work; creativity; performance; and Curriculum 2005. Chapter Three covers the generation and analysis of data.

Chapter Four sets out the findings of the research and the resultant alternative programme for teaching braille music notation to blind learners.

Chapter Five provides conclusions of the study and recommendations for further study.

This is followed by a bibliography and other references. Three addenda include codes used for data analysis, interview questions and transcription of interviews.

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CHAPTER TWO

LITERATURE REVIEW ON THE WORLD OF THE BLIND

2.1   INTRODUCTION

This literature review reveals the physical, mental and emotional differences between the sighted and the blind, and the special importance of music to the blind. The value of group work, composition and creativity, and performance is examined. The review shows how the differences between blind and sighted learners affect the way in which blind children learn to read and write braille. Based on the information gained in the literature review, various literary and music reading schemes are appraised in order to determine which method best suits the unique needs of the blind.

All of the applications are discussed within the context of Curriculum 2005 and outcomes-based education (OBE).

The researcher is aware that she refers to a number of secondary sources. This was not due to indolence but, on the contrary, every avenue was followed to acquire primary sources in South Africa and abroad. Internationally, a number were out of print. The reason for the paucity of recent sources is that very little research has been carried out in this field of study. This is firstly due to the fact that major countries have resorted to teaching the blind by ear, and secondly, that blind learners are generally being mainstreamed in Europe and America rather than being housed in specialist schools, thereby rendering further research redundant.   (See Chapter One for further substantiation).

2.2   DEFINITIONS OF "BLINDNESS"

The American Medical Association officially accepts that for admission into a school for

the blind the visual acuity in the better eye must be 20/200 with best correction or a visual field restriction of 20% or less. Legal blindness, then, is having a visual field of 20% or less (Frampton & Rowell 1939:117; Kirchner in Wang & Reynolds 1989:138; Olmsted 2001:1 in http://www.olmstedcenter.org).

Section 69 of the Education Act, 1921, reads: blindness is "too blind to be able to read the ordinary books used by children"; and the Blind Persons Act defines blindness thus: "so blind as to be unable to perform any work for which eyesight is essential" (Arnold 1938:19).

Barraga (1976: 12 &14) quotes Halliday and Faye's definitions of blindness: "Those who have only light perception without projection, or those who are totally without sense of vision" and "Educationally, the blind child is one who learns through braille and related media without the use of vision, although perception of light may be present and useful in orientation and movement."

Arnold (1938:22) believes that the fact that the definition of blindness under the Education Act is wider than that under the Blind Persons Act means that a child covered by the former definition and not by the latter unfortunately finds himself/herself at the age of 16 a member of the sighted community, ineligible for the benefits of the Blind Persons Act.

Barraga (1976:12) lists the historical terminology available over the last 150 years:

medically blind, economically blind, braille blind, educationally blind, functionally blind, congenitally blind, visually handicapped, partially seeing, visually defective, visually disabled, visually impaired, visually limited, adventitiously blind, legally blind, partially blind, vocationally blind, low vision, residual vision, subnormal vision.

Definitions of blindness have not changed much in recent years. Here follow some of the latest elaborations:

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Legal blindness: The criteria used to determine eligibility for government disability benefits and which do not necessarily indicate a person's ability to function. In the USA, the criteria for legal blindness are:

- Visual acuity of 20/200 or worse in the better eye with corrective lenses (20/200 means that a person at 20 feet from an eye chart can see what a person with normal vision can see at 200 feet)

or

- Visual field restriction to 20 degrees diameter or less (tunnel vision) in the better eye. Note that the definition of legal blindness differs from country to country and that the criteria listed above are for the USA (Medical Dictionary definitions of popular medical terms in http://www.medterms.com 2003:1).

Legally blind: A person is considered LEGALLY blind when the best corrected visual acuity is 20/200, or the person's visual field is 20 degrees or less. It is not true that all blind persons have absolutely no sight; in fact, most blind persons have some remaining vision. A person may be considered blind when he/she can no longer drive safely, has difficulty reading a newspaper, or cannot see objects to the side (http://www.medterms.com 2003:1).

The term "legally blind" refers to people who are partially sighted as well as those who are totally blind. Eighty-five percent or more of the legally blind population has some vision; the remaining are totally blind, "seeing" nothing but darkness (http://www.medterms.com 2003:1).

Functionally blind: One is considered FUNCTIONALLY blind when he/she is experiencing essentially the same disabling conditions as the legally blind, yet may not be regarded medically as such (speech delivered by Dr. Kenneth Jernigan in http://www.nfbidaho.org).

Princeton University (2001:1 in http://www.websters-online-dictionary.org) simply defines blindness as "lack of sight".

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The researcher has chosen to use the simple term "blind" in this study, meaning children who have such poor vision that they are forced to use braille as a medium of written communication.

2.3   VALUE OF MUSIC TO THE BLIND

It would appear that the study of music has great value to the blind, especially with respect to their self-esteem and emotional well-being. Elliott says that Aristotle recognised that human beings seek self-esteem and happiness more than anything else, (1995:122). Elliott elaborates on the idea by saying that people are happier when they have the knowledge and the opportunities necessary to achieve "flow". Most musical practices are dynamic domains of effort that provide the necessary and sufficient conditions for self-growth, self-knowledge and flow, and therefore for the ongoing development of self-esteem. Self-growth, self-knowledge and musical enjoyment are the aims of music education overall and the primary goals of every music teaching-learning episode.

Concerning the value of music and self-esteem, Elliott (1995:130-133) makes the following point: music education is essential to the full development of every student, because the primary values of music overlap essential life values: personal growth, differentiation, complexity, enjoyment, self-esteem and happiness. People who are often in flow (gained from a challenge) have higher self-esteem than those who rarely experience flow. Self-growth, self-knowledge, flow and self-esteem do not result from setting and meeting trivial goals.

With the development of the appreciation of music and of blind children's ability to enjoy it, and with growing confidence in the intrinsic worth of their performance and a satisfying knowledge that their successes are not attributable to the sympathy or generosity of their companions but to real skill and ability, their handicap becomes a challenge and a sense of personal power takes the place of a feeling of inferiority and defeat (Frampton & Rowell 1939:352). Mason and McCall corroborate this old source by agreeing that music can promote self-confidence, nurture aspirations and give satisfaction, through both solo and

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group work (2001:271).

Several studies have attempted to compare the self-concept and adjustment of visually impaired children and youth with their sighted peers. Most researchers found no significant difference between the two groups (Pringle 1964:64).

The researcher, though, has discovered by way of informal observation that handicapped children often do have low self-esteem. Van Weelden (1967:5-6) explains this view: "The minimal expectations and negative attitudes experienced by the blind person contribute to lowered self-esteem. When any child is made to feel strange, different, unwanted, incapable, or inadequate, his or her self-esteem is jeopardised."

Furthermore, there is a tendency for blind or visually impaired children to feel that sighted peers are superior. Music is an area in which they can perform on an equal footing and even surpass their sighted mates. This is therefore an excellent environment for the development of self-esteem.

Further research is needed to determine the effect on self-esteem of the constant demands for adjustment and readjustment occasioned by blindness and reactions to blindness. Blind persons who are struggling through the first four phases of the adjusting process (trauma, shock, mourning and succumbing) experience a more negative overall self-esteem; those in the latter three phases (reassessment, coping and self-acceptance) are in the process of rebuilding their self-esteem (Tuttle 1984:57). In the blind there is a tendency toward immaturity, isolation, withdrawal and passivity (Fitts in Tuttle 1984:57).

The level of self-esteem of blind persons is a function of the degree of assimilation they experience in society, a measure of the dignity and worth of the individual (Resnick as quoted by van Weelden 1967:12).

All other things being equal, persons who are visually impaired are potentially capable of, but may lack the opportunity for, proving their competence. Music can help in this

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regard, since competence can be accomplished on equal terms with the sighted. Since feelings of competence are a main source of self-esteem, and since attainment is more difficult for people who are visually impaired, professionals need to assist blind persons to develop and exercise competence, productivity and responsibility (Tuttle 1984:92).

A little confidence gained from a successful experience has a way of generating even more confidence. Increasing confidence and self-esteem in one area can motivate a person to acquire skill in other areas and thus, little by little, self-esteem grows (Tuttle 1984:213).

The research literature is filled with reports indicating that cognitive learning increases when self-concept increases. The data suggesting this conclusion is quite extensive and overwhelming. The recommendation is to make each learning step small enough so that the student only has to take small risks. The teacher should aim to help blind children build up their supply of success experiences so that they will have a surplus with which to take risks (Canfield & Wells 1976:7). This is implemented in the alternative approach by activities that ensure maximum opportunity for success. Independence (gained from braille music reading) and a sense of responsibility should be encouraged, as these improve self-esteem (Sacks et al 1992:153).

Furthermore, Wattenberg and Clifford identified that self-concept was a better predictor of reading success than Intelligence Quotient. Children with poor self-concepts did not read as well as children with good self-concepts (in Canfield & Wells 1976:3).

Shehan (1986:73) suggests that blind music students are apt to find that music in their life is more important than it is for seeing students. If they are talented and willing to work hard, music provides a more rewarding profession economically, socially and spiritually, than most other occupations. There is a widespread belief that music has a special value for children with disabilities – both as a unique medium of self-expression, and as a means of promoting wider learning, development and wellbeing (Ockelford 2000:197-217). Ockelford proposes that music education for children with severe or profound and multiple disabilities should be considered as having two distinct strands: activities which

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are undertaken primarily for their intrinsic musical value, and those whose main function is to promote wider learning and development.

At the five-yearly conference of the International Council for Education of the Visually Handicapped in Paris in 1977, Borg made the following statement with regard to the blind and music: "After years of experience one can only conclude that, of all the avenues of communication open to the blind, music is the most important. Without doubt music can and does provide a meaningful function in expediting the normal development of the visually handicapped physically, intellectually, socially and emotionally. The teacher's part is the obvious one" (in MacLeod 1988:45).

Alvin (1965:26) agrees with the above conclusion: for handicapped children, perhaps even more than for normal children, music can reflect and assist emotional maturation because it is closely related to their emotional life. Since maturation is characterised by a growing awareness of self, the process may be distressing to handicapped children who realise increasingly the amount and the consequences of their disability in the present and the future. It is essential for them to find support in some emotional outlet of a creative nature such as music, through which they can express themselves. Alvin points out that blind children may also find in music feelings, emotions and moods to which they can relate and respond with their whole being, as well as, and perhaps better than, sighted children. They may be touched more deeply by the spiritual element in music because they relate it to fewer concrete experiences (Alvin 1965:59). Also, all musical experiences under proper guidance have value in the emotional maturation of any child, and especially of the handicapped, whose experiences are necessarily so limited (Alvin 1965:11).

The researcher has observed that handicapped children react to musical experiences in essentially the same way that sighted children do. They are not more sensitive to music than others, but to them music can have special significance because it may be a substitute for impossible things, or a means of self-expression and communication - even sometimes the only possible one. This view is corroborated by Walker (in accordance with Hoare & Hoskins 1993:52).

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Music can contribute to the general growth of the handicapped child in many ways: for instance, as a substitute for other activities; as an agent of sensory development; as an emotional outlet; as a mental stimulus and as a means of socialisation. These aspects are integratory since they involve the mind, body and emotions in one experience. The maturation of handicapped children is often delayed or unevenly distributed on account of their sensory, emotional or mental disability which prevents a general co-ordinated development. Physical, intellectual, emotional and social developments are so closely interwoven that a handicap affecting only a specific area of the child's development is bound to hamper harmonious growth. It is thought that the most valuable means of maturation are those which can integrate the different parts of children's development and appeal to their whole being. This applies particularly well to music, since it can offer handicapped children a vast number of sensory, emotional, intellectual and social experiences, some of which they may not be able to get by any other means (Stagg in Hoare & Hoskins 1993:46-49).

So it appears that musical experiences can help children's social and emotional integration, and influence their attitude towards play and work, towards themselves and others. It is a way to reduce immature behaviour and mannerisms.

Brambring (2002: lecture) sums up the above discussion by stating that, whereas touch is important for the brain, sound and music are the most important ingredients for the soul and for emotional wellbeing.

2.4   EMOTIONAL INTELLIGENCE QUOTIENT AND MUSIC

According to Goleman (1996:34), Intelligence Quotient contributes about 20%, at best, to the factors that determine life success. The existing data suggest that emotional Intelligence Quotient can be as powerful and at times more powerful, than Intelligence Quotient. Abilities such as being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one's mood and keep distress from swamping the ability to think, to empathise and to hope; to cooperate; and to

avoid procrastination - these crucial emotional competencies can be learned and improved upon by children - if we take the trouble to teach them. How well a person reacts to the vicissitudes of life means far more in the long run than does Intelligence Quotient or high grades.

The researcher has deduced from the above discussion that handicapped, and therefore disadvantaged, children can be put at an advantage by helping them to develop Emotional Intelligence Quotient, and therefore to realise their potential. Learning music helps to develop Emotional Intelligence Quotient, since the process includes self-awareness, perseverance under frustration, self-motivation and deferment of gratification (control of impulses and emotions).

Elliott (1995:115) argues that music making and music listening are unique and major ways of bringing order to consciousness and, therefore, unique and major ways of achieving self-growth and self-knowledge, or constructive knowledge.

2.5 PSYCHOLOGY OF THE HANDICAPPED: EMOTIONAL ADJUSTMENT, SELF-ESTEEM AND SOCIAL ACCEPTANCE

Because of the close relationship of emotional adjustment, self-esteem and social acceptance in the psychological make-up of the handicapped, these concepts are discussed in an integrated fashion and not under separate headings.

There are three schools of thought with regard to the psychological problems of the handicapped. One of them is based on the belief that there is a specific psychological pattern for the handicapped as a group. Another contends that there is a pattern for each area of handicap. In contrast to these, a third school of thought favours the thesis that there is no specific psychology for the handicapped, either by area or in toto, and that the deprivation pattern and its ramifications are ample to explain any deviations which occur. If a specific psychology does exist for the handicapped, either as a whole or for any given area, it has not been studied enough for it to be presented in usable form (Frampton &

Rowell 1939:70).

The consensus of opinion among scholars of the subject is that there is no special psychology of the blind, produced by the loss of sight itself. Frampton and Rowell (1939:139) believe that the minds of blind persons are simply reacting normally to a problem environment - including the impaired visual mechanism in the environment of the psyche. Blake (2003:2), in an article on the Royal National Institute for the Blind website, supports the early research by saying that visual impairment affects a person in many ways. It affects the way blind persons learn about, understand and move about in the environment, the way they access information and communicate ideas, their social relationships, their accomplishment of daily tasks, their perception of the views of others about blind persons and even their perceptions of themselves. The vision of the Americans with Disabilities Act (ADA) in 1990 begins by having all children learn side-by-side in an integrated classroom to ensure that they all have the skills and experiences necessary to live together in the community (Male 1997:29).

Brambring's empirical finding (2002: lecture) demonstrates that there is a developmental delay in social and emotional skills in the blind, because they forego nonverbal information, observation and imitation. He suggests therefore that it is extremely important to structure the day for the blind child in order to reduce anticipatory difficulties. Teachers of the blind would be wise to take this advice. Brambring's finding is supported by Beach, Robinet and Hakim-Larson (1995:531-540), and Holbrook and Koenig (1992:44-47). They maintain that self-esteem is affected by the loss of communication or other skills, but regaining these skills via alternative methods can be difficult if the feelings about vision loss and related issues have not been addressed.

Van der Poel (1997:76 & 148) adds that low vision or a total absence of vision in the child inhibits the development of a strong affective bond as a prerequisite for a stable inner balance and a feeling of security. This results in a strengthening of the child's need for dependence. It leads to over-dependence in the child, poor ego development and a negative self-concept. Van der Poel (1997:145) also notes that visually impaired

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children's reduced ability to orientate themselves increasingly effectively in a larger environment restricts the development of self-confidence. Furthermore, blind persons' different ways of communicating, their body movements, eating and drinking habits and general social behaviour, compared to those of the sighted, may cause them to enter their socialising world with a poor self-concept (Van der Poel 1997:151).

Barker (in Pringle 1964:11) thinks that probably the most important fact yet discovered about the psychology of the blind is the relatively small amount of personality disturbance that accompanies it. He believes that how persons can accommodate to so radical a shift in psychological living conditions without greater changes in behaviour has important implications for those concerned with the adjustment of the blind.

Allen and Pearson (1928:13) agree with the above sentiments, namely that it is society's reaction to the handicapped which constitutes the main source of maladjustment in the child. Putman (1997:10) illustrates the above sentiment by noting that many blind people feel that agencies for the blind take advantage of the needs of blind people to create and maintain employment for sighted people, and thus employees treat clients as people who are dependent on their help rather than people who should be enabled to help themselves. Tuttle (1996:11) clarifies this thinking by saying that unless they have had previous positive interactions with people who are blind, sighted people may not relate "normally" to the blind person upon the first encounter. Some may treat the blind with pity or as children, while others treat them as being as capable as any other person. Still others may believe that blind people have special abilities, and this belief may cause them to treat a blind person as "amazing".

Cherigny and Braverman (in Pringle 1964:20) concur that feelings of frustration and melancholy are assigned by society and the blind person who is dependent on society's charity must conform to society's image.

Sommers (in Pringle 1964:44) also concludes that society's reaction to blindness is the

main source of maladjustment in the child. Sommers continues by listing the following main types of maladjusted behaviour which have been noted in blind and other physically handicapped persons: withdrawal, lack of initiative, shyness and self-consciousness, obliteration (a refusal to recognise real conditions and limitations), inferiority, resentment, emotional immaturity, isolated and asocial behaviour, unrealistic aspirations, paranoid reactions, a craving for affection and attention, aggressive competition and bravado, anxiety and tension, autistic behaviour, and mannerisms, that is, so-called "blindisms".

As a further explanation for the so-called behavioural problems in the blind, such as "clinging", Brambring (2002: lecture) prefers to describe them as idiosyncratic of blindness, or common to blindness, or stereotypical behaviour. He also considers it important to search for the reason for this behaviour. In most instances it can be explained as being an adaptive strategy, hence adaptive behaviour, or a defence strategy, hence defence behaviour. An example of this might be a blind child's clinging to an attendant in panic when they hear a dog barking: this would be explained by the fact that the child was not able to anticipate the dog's barking, and cannot see what is barking. Unless someone had taken the trouble to "show" them a dog, they would not know the concept. Brambring's interpretation of the above premise is that when dealing with blindness, the sighted tend only to think in terms of sighted rather than blind norms.

Gesell and Amatruda (in Pringle 1964:4) maintain that the various mannerisms, such as eye rubbing and poking, body swaying, repetitive vocal tics and finger flicking before the eyes, are considered to be symptomatic rather than constitutional. These so-called "blindisms" are, in their view, substitute activities which can be prevented by making sufficient provision for the young blind child's need for self-expression.

Prescott (in Jastrzembska 1976: 68, 69) explains the above idea by stating that in animals stimulus-seeking behaviour (thumb-sucking, cage-swirling, abnormal hand movements, eye-poking and head-banging) is done in order to maximise the sensory stimulation they were deprived of. The rocking of isolation-reared monkeys and institutionalised children is similar. Isolation-reared animals put onto moving dummy-monkeys did not develop

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body rocking. This movement simulated the baby being carried on the hips or on the back.

Cutsforth (1951:4) tested twenty-six congenitally blind children, asking each one to respond with the first quality he/she associated with a certain object. Learners preferred to give a doubtful visual response rather than to choose a familiar sensory attribute from their own experience. For example, they might refer to notes as "black" and "white" (following the teacher's terminology) rather than as "notes above", "below" or "between others". The whole tendency towards verbalism (using words without meaning to them) shows a tendency to unreality. These children are organised intellectually without reference to themselves or to their own experiential world.

Based on the above literature dealing with the psychology of the handicapped, the researcher has made the following applications in her alternative programme:

- Firstly, the teacher should note how critical it is to create a loving and secure atmosphere for the blind, where they are not made to feel inferior to the sighted (be prepared to offer plenty of physical contact);

- The teacher should make sure the child enjoys success experiences at every lesson (not too many new concepts at a time);

- By reducing the number and length of written and oral assignments for learners with visual impairment and learning difficulties, the teacher is not only increasing their attention, but is also reducing their anxiety and frustration (Sacks & Silberman 1998:180);

- Teachers should avoid making concessions and excuses because of the visual impairment. While success experiences are necessary to develop an adequate self-concept, some experiences with failure may provide the necessary ingredient for developing a realistic self-concept;

- The teacher should apply the programme in such a way that the learner is constantly challenged - this will help to boost self-esteem by providing the experience of psychological "flow".

- The teacher should not force the blind into the sighted world by expecting them to use visual terms, when they can respond better using a sensory attribute familiar from their own experience. For example, rather than describing the d on a keyboard as the donkey's white face, and the d flat and d sharp as his black ears, refer to the d as being the note <u>between</u> the d flat and d sharp. (The blind learner might have no conceptualisation at all of what a donkey looks like);

- The teacher should encourage the blind to express themselves by letting them choose between a couple of pieces to play, and guiding them to create their own tunes;

- The teacher might ask the learner to repeat what they have just said, rather than asking, "Do you understand?" (Lynch 1992:56). By so doing, the learner does not feel pressured to say they understand when they really do not.

2.6   CONCEPT FORMATION

Perceptual development leads to the formation of concepts. The breadth of perceptual experiences determines in large measure the breadth of conceptual development. To be meaningful, concepts must be based on sensory experiences (Scholl 1986:75). For example, instead of simply clapping a rhythm, the learner could beat it on a drum while walking in step and counting aloud simultaneously.

A visual impairment places a child at a disadvantage in cognitive development, particularly in the areas of sensory stimulation, concept development, and communication. He/she may require more direct instruction to compensate for the lack of imitative learning. Other sources of sensory input must be exploited to the maximum (Scholl 1986:76, 77). Van der Poel agrees that a delay in cognitive development results, since the extent of available perceptual learning experiences is restricted (1997:151&152). Smith *et al.* (1998:209) note that concept development can depend on tactile experiences, that is, synthetic and analytic touch.

Scholl (1986:78) also advises that teachers of young blind children often need to provide

them with more physical contact than is typical for children with vision. The greater need for being close to an adult may be due in part to the delay in being handled and in part to a desire to obtain the security and acceptance that the child with vision receives from eye contact.

Some efforts have been made to discover by what methods blind children build up their conceptual systems. Suzuki asked blind children how they knew various properties of objects and events. The children's introspective reports revealed that for the congenitally blind subjects visual properties are understood through association and imagination from non-visual senses (1958:18-26). If one were to say to a blind learner, "Look here," they would associate the instruction with their ears or sense of touch, not with their eyes, since they "see" with their ears and fingers.

Comprehension of words by blind children was investigated by Ishida (Wallace 1967:194). The responses to words related to visual perception, given by his subjects, showed that they tended to understand colour in terms of brightness and objects by means of touch, olfaction, taste and conceptually related objects. Words which are intangible through non-visual senses were hardest for the blind children to understand. For example, it is difficult for a blind learner to imagine something like an elephant or a high-rise building.

Bliss and Crane carried out studies on tactile information processing. Their findings indicate that information is processed in essentially the same way independently of whether the incoming information is visual or tactile (Athearn *et al.* 1944:38).

Up until the 1980s much research was being done in the realm of the education of the blind, since Europe had so many specialist schools for the blind. As mentioned before in this study, specialist schools have gradually been withdrawn and blind learners have been mainstreamed with their sighted peers. Little motivation for specialist research has consequently been generated, and especially not in the arena of braille music notation, since the trend has developed to teach the blind by ear, or to use tutors designed for the sighted child. The above deliberation has thus strengthened the researcher's quest to

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collect data not primarily from a dated literature base, but from up-to-date observation and interviews.

Regarding the number of secondary sources used in the researcher's consultation of all the major international braille music libraries, it was noticed that the same relatively small number of researcher's works was continually being referred to. This also attests to the fact that new research is simply not being carried out, but that researchers have been manipulating and using original research results.

Educators need to be aware of potential difficulties in the area of concept formation and particularly should emphasise meaningful concrete experiences in order to maximise concepts that have relevance for the child (Lowenfeld 1974:82). Harley *et al.* (1979:37) felt that blind children were taught to accept verbal descriptions of the sighted, but that they could attach little meaning to these descriptions because of a lack of concrete experience. According to Zweibelson and Barg (1967:4), the blind child usually has limited success in progressing to the abstract level. Because of the absence of vision and, therefore, reduced effectiveness of the tactual sense, the blind child seems to function primarily on the concrete and functional levels. These discoveries concerning concept formation in the blind are taken into account in the alternative programme, for example, by the inclusion of movement to better understand rhythm, and an examination of the order and the speed at which new items are introduced and consolidated. One way in which this is done is by the use of the Kodály method, which is reciting notes in rhythmic fashion, while at the same time playing on an Orff instrument. Games are used as a further concrete measure to facilitate consolidation of concepts. The braillette is also recommended for learners with weak orientation skills. This is a device which requires that the learner practises placing pins into holes on a little wooden board. The holes outline the six-dot braille cell.

In writing about blind people, Lydon and McGraw (1973:2) state that due to lack of vision, the blind child falls behind the sighted child in the area of concept development. Hayes (in Lydon & McGraw 1973:2) states in one of his studies that blind children up to

the age of eighteen tested lower than the seeing in all of the Standford-Binet Intelligence Quotient test items which could be classified under "thinking" or "reasoning". In a later study Hayes finds that blind students between the ages of ten and seventeen received lower scores than sighted on the Similarities Subtest of the Weschler-Bellevue Intelligence Scale. He furthermore notes that if concepts have not been introduced and learned at the maturational stage at which they are ready to be learned, they are lost. The Similarities Subtest of the Weschler-Bellevue Intelligence Scale tests the similarities and differences between the blind and the sighted.

It is important to know why the blind counterpart falls behind in conceptual attainment. Lydon and McGraw (1973:3) reason that sighted children learn to perceive objects at greater distances and are able to see them in their "wholeness". In their exploration and manipulation of objects, they are able to see them in greater perspective. Thus objects begin to have permanence sooner for them than for the blind child.

Cutsforth's premise (1951:4) is that once an object is out of the physical grasp of the blind child, it is gone. Similarly, sounds, unless they are attached to meaningful and understood sources, will fade into meaninglessness or nothingness. Both objects and sounds will be coming and going out of nothingness. The blind child will, therefore, take much longer to develop a sense of object permanency.

Koenig and Ashcroft (1994:41) derived five basic principles of teaching blind children: individualisation, concreteness, unified instruction, additional stimulation, and self-activity, that is, the teacher monitors his or her comprehension before adapting his or her reading strategies to the task at hand.

Implications of the above research for the alternative programme are indicated below:

- The teacher should, whenever possible, avoid the abstract and provide concrete examples and experiences for the blind child. This translates into encouraging the learner to associate difficult visual concepts with experiences gained via the other

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senses. This view is supported in the literature review (Salt in Hoare & Hoskins 1993:6).

- The teacher should teach the learners individually as far as possible, and use group activities for fun, performance and socialisation.

- Unified instruction is necessary for the blind child, which means that the teacher should approach the teaching in a holistic way, so that the child's understanding of musical concepts results from the stimulation of as many senses possible. Games help in this regard.

- Since self-activity is of particular importance to the blind child, the programme will include opportunities for the development of independence. To illustrate, the learner can be given a short piece to decipher for homework, or asked to compose a short piece using the notes and values he/she already knows, or allowed to choose between a few pieces to play, or guided in writing down his/her composition.

Wickelgren (1974:40), in a study done for the U.S. Department of Health, Education and Welfare, advises that the total length of a session for a six-year-old should probably not exceed twenty or thirty minutes. In addition to the desirability of short total sessions, only relatively short periods of sustained attention can be demanded of a young child. Thus, a continuous learning task longer than thirty minutes may be unreasonable for even sighted children below the age of about eight or nine.

2.7   MOTOR SKILLS

In a study of the divergence in the development of skills in sighted and blind children, Brambring (2002: lecture) notes that 21.6% of blind children had an extreme developmental delay compared to the sighted. The reason for the delay is that there is often an orienting demand, i.e. to fetch something from somewhere or to put away something. A further reason for the delay may be that there are high demands on manipulative skills. Brambring concludes that if there is a combination of these problems, there will be extreme delay in the particular developmental skills.

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Early visual tracking motivates the infant to reach and grasp, Scholl notes (1986:73, 74). Lack of vision deprives the infant of this critical motivation and frequently causes a delay in the acquisition of physical skills, particularly in using the body, in hand coordination, and in development of the fine muscles. The normal infant is stimulated to hold his head up in order to enjoy the object world. Lacking the motivation, the infant and young child with a visual impairment will often not develop good muscular control of the head, neck and trunk muscles.

Furthermore, the lack of visual stimulation may result in a lack of motivation to move about and use muscles that are essential to gain good control of the body as well as to explore the environment. Many children with visual impairments are retarded in their physical growth and development because of environmental factors, particularly the early environment of the home.

Still following Scholl (1986:74), the development of good gross and fine motor skills is an important prerequisite for developing and refining reading and writing skills. Intervention during the early school years should include activities that continue to develop fine hand coordination. Opportunities to satisfy the basic need for movement and activity must be provided from earliest infancy, otherwise children with severe visual impairment will seek to satisfy the need within, rather than outside of, themselves. They gain satisfaction from seemingly aimless physical activities, or stereotypical behaviours, sometimes referred to as "blindisms". This latter term is a misnomer, because most of these behaviours have been observed in other handicapped, developmentally delayed and emotionally disturbed, as well as in some non-handicapped, children.

Brambring (2002: lecture) has noted that there is more of a delay in object-related as opposed to body-related skills, and that there is less of a delay where holding an object is involved. Where complex coordinated skills are involved, there is extreme delay.

The significance of this finding for the alternative programme is that, because a blind child will be in much closer bodily contact with the recorder than with the piano during play

(holds it), the child will possibly find the recorder the easier instrument to manage on a motor skill level. Recorder playing also is a less complex coordinated skill than is piano playing. Botha (2001: interview) corroborates that the recorder requires less complex coordination than does the piano.

A second application of the above findings is that, if the teacher is aware of a developmental delay in gross-motor skills in blind children, he/she may expect to have to be more patient in this area. This can remove some of the frustration and pressure from the teacher.

Visual impairment often delays the acquisition and refinement of motor skills during childhood (Sacks *et al.* 1992:28). There is a danger in trying to teach the fine motor activities of reading and writing before the gross motor muscular system is developed. This may result in children rejecting all attempts to get them to read and this may be long-lasting. One has to make sure that the learner is ready in every way, from fine motor to emotional readiness. Playing a musical instrument is a fine-motor activity and this applies to the piano even more so than to the recorder. A lack of poor fine-motor coordination could translate into poor posture at the piano and influence spatial awareness. This is one reason for the initial use of the recorder in the alternative approach developed by the researcher for teaching braille music notation to the blind.

2.8 RIGHT-HAND AND LEFT-HAND DOMINANCE (LATERALITY); SPATIAL ORIENTATION

Unlike visual reading where the eye, while still, is able to see many words at a time, braille reading requires movement of the hand from left to right. Reading a braille character is a miniature experience in orientation and mobility, and requires spatial awareness. Van Heerden, the national director of the division for the multi-handicapped at the Pioneer School for the Blind, suggested in an interview (2002) that the reader uses his or her own body as a frame of reference, to know what is left and right of the cell or the paper, and what is up or down.

Many problems exist for the blind child attempting to cope with spatial concepts, for example, laterality. Laterality refers to left- or right-hand dominance. Blind children seldom develop dominance of one hand, because they always grasp an object with both hands, rather than with the dominant one. Furthermore, dominance is not developed because the blind child does not use a writing implement as does a sighted child. Garry and Ascarelli (1960:143) state that the person without sight has no direct experience that pulls space or location together for him: space can only be understood through perceptual abstraction. Van der Poel adds that it is important to develop temporal awareness in the blind child (Van der Poel 1997:145). Blind children have especially weak strategies to solve problems in cognitive spatial orientation (Van der Poel 1997:153). In this regard classroom management and lighting (for those with light perception) are very important for individual needs (Gulliford and Upton 1994:118).

Juurmaa (1967:141) found a tendency for people who were totally blind to be inferior in tactual discrimination and kinesthetic mastery of hand positions. This was confirmed by the researcher in her observation of young blind piano learners who had location difficulties.

Cratty in Kirk & Gallagher (1979:253) confirms that laterality is not well established in the congenitally blind. This is one of the researcher's reasons for the choice of the recorder above the piano in the beginning stages of the alternative approach, since a far greater development of laterality is necessary in piano than in recorder playing. This is due to the fact that, once the left hand is positioned on the recorder, it does not move from this position, but in piano playing the brain is having to decide regularly which hand is which, and this slows down learning of braille reading. Furthermore, one has to learn to read with both hands for piano playing.

Brambring (2002: lecture), from the University of Bielefeld, Germany, is an orientation and mobility specialist, who teaches the blind to move independently. He confirms via e-mail communication that there are not any up-to-date comparative studies in the lateral dominance of the blind and sighted child. In order to gain up-to-date information on this

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issue, the researcher interviewed a number of persons involved in the reading of braille. Olden, who is the National Braille Consultant at the Pioneer School for the Blind in Worcester, and who is herself blind, suggested in an interview (2002) that a possible reason for the underdeveloped laterality in the blind is that they do not develop right-left dominance. She believes that, in contrast to the sighted child who develops right or left dominance because they grasp for things with the hand which feels the most comfortable, the blind child generally takes hold of things with both hands to avoid dropping them, and also as a means of gaining added information about the object. Furthermore, the sighted child develops hemisphere dominance because it is necessary for holding a writing implement from a very young age, while this is not valid for the blind child. The blind child writes using both hands on the Perkins Brailler.

Van Heerden (2002: interview) corroborates that in her experience blind children do not gain right-left dominance, since it does not have significance for them.

Botha, a former music teacher for the blind at the Pioneer School, reasons that a likely explanation for the discrepancy in lateral development between the blind and sighted is that blind people are introduced to the concept much later than are sighted children (2001: interview).

Lydon and McGraw (1973:1) believe that many students (congenitally blind and partially blind) experience difficulty in such areas as position, location and direction. Many, if not most, of these problems are a result of poor concept development. Unlike sighted children, who attain good concept development through visual assimilation, visually handicapped children must have concepts specifically taught to them.

In an interview with Walton (2002), he mentioned an interesting discovery regarding laterality: for people who were born to be left-handed but were forced at school to use the right hand, there is often a contest between the hands as to which one will perform a certain task. Of particular use was his advice that this battle between the two hemispheres appears to be more problematic on a horizontal than on a vertical plane, for example, taps

that are positioned vertically above one another rather than horizontally, cause less of a "fight" between the two hands. The significance of this discovery is that young blind learners who have undeveloped laterality should find the playing of the recorder easier than the piano, due to it being held vertically rather than horizontally during play.

Lorimer (1974:16) found that there appears to be no clear connection between hand preference in reading and handedness in other activities. In a more recent study, however, Rudel and Denckla (1976:26) studied the functional asymmetry of braille letter learning in normally sighted children. The results indicated that the left hand functioned better than the right hand. They concluded that touch reading becomes a right hemisphere function of the brain in right-handed people. To Lowenfeld and Abel (1967:17), it appears that the best braille reading hand is opposite from the dominant hand.

The significance of the above information for the researcher is that, because of weak laterality in young blind children, it would appear sensible to start them on the recorder rather than on the piano as a means to learning braille music notation. The researcher has observed that the blind child requires less hand dominance on the recorder than on the piano. Since the recorder is held in the left hand, the learner may read a few notes or a bar or two with the right hand, in order to memorise them. The learner's intelligence and memory ability will determine the number of notes memorised. However, young readers will generally require both hands to read, so the instrument will have to be placed where it cannot roll away.

As part of the alternative programme devised by the author, the music teacher consolidates the concept of laterality, using movement and rhythm. For example: beat the drum with your left hand; put your right foot forward first. Once dominance has been developed, the child can be transferred to the piano.

2.9   MOVEMENT

Movement to music may be more to the blind child than an emotional outlet and an

expression of life. Frampton and Rowell think this may also represent a conquest of space through an activity creating joy and harmony (1939:147). In a more modern source, van der Poel (1997:152) notes that without vision, the image of the environment is discontinuous and deficient, and so movement of the body and locomotion is extremely essential. Smith (in Hoare & Hoskins 1993:29) recommends that clapping games and the use of percussion instruments should be the regular music lesson of a blind child. Mood music can be introduced and music and movement lessons: music for skipping, running, jumping and stepping of rhythms. Smith agrees with Frampton and Rowell in believing that this is very beneficial for a visually handicapped child, since it helps discover the body and space. The researcher has based the optional pre-programme on the above thinking. Walker, in Hoare and Hoskins' compilation of articles (1993:52) advises that initially the youngest children feel movement from between hands that grasp their shoulders and legs that are placed astride their bodies. This method proves to be the best way of getting flow into a small stiff frame. The contact with the whole of their body gives them confidence and automatically they relax and move in harmony.

Coertzen (1994:86, 87, 105) draws together some major thinking on the importance of movement: Montessori maintains that the basic rhythmic movements such as marching, running, galloping, walking, swinging and jumping should spearhead the education of the young child. These activities, and also improvisation on the pentatonic scale, are the key to Orff's educational work. Furthermore, the earliest musical experiences according to the Orff approach are not instrumental, but those of movement and singing. Orff instruments include rhythmic instruments, e.g. the drum, and single-voiced instruments, e.g. the recorder and glockenspiel.

Opportunities for movement are important for visual learners, who gain information best through the sense of vision. This is because they learn best by doing, due to their superior spatial awareness. They do not learn well by listening. Visual learners are creative by nature (Flick 1998:93, 94), which means that the teacher should encourage learners to create new ways of learning by doing. A visual learner, who learns best visually, and who cannot see, therefore has a double problem. Brambring (2002: lecture) deduces that,

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because blind children on average move 40% less than the sighted do, blind visual learners will learn 40% less. These observations are reflected in the alternative approach by initially teaching rhythmic concepts with the use of movement and non-melodic percussion instruments and by consolidating new concepts via improvisation on Orff instruments.

Barraga (1976:13) notes that, without vision to cause them to imitate the body movements of others, blind children must experience the movement in their own muscles before they can know that a specific action is possible, or can understand verbal instructions from others. Hearing actions described has no meaning to young blind children unless they are simultaneously performing the action with their own bodies. This concept is applied in the alternative approach in the following way: when the teacher is "showing" the child how to finger certain notes, the child should be holding the instrument and following the teacher's verbal instructions. The teacher should not push the child's fingers into position, since blind persons resent being "pushed around". It is an affront to their dignity and independence, and they will learn better by doing.

Blind learners should be encouraged to walk, run, hop, jump, leap, gallop, skip, because these activities improve balance, coordination, flexibility and strength for gross motor movement and consequently improved posture. These actions also contribute to the child's spatial awareness, fine motor development and laterality, which will be of great help when they begin the piano.

2.10 POSTURE

Frampton and Rowell (1939:139) say that blindness is often attended by poor physique, lowered vitality and consequent lassitude. Disease, impairment of the nervous system and general neglect are all too frequent concomitants of blindness. The occupational therapist on the research panel (Botha interview: 2000) agreed that especially young blind children have poor muscle tone and thus poor posture. Van der Poel (1997:152) confirms that the visual perceptual modality is deeply integrated with the development of posture and normal dexterity. Zimmerman (2001:271) therefore recommends that special

considerations for children who are visually impaired will include attention to body posture in singing and playing.

Brambring (2002: lecture), who has specialised in comparative studies between the blind and the sighted, notes that blind children generally move up to 40% less than do sighted children. This affects their gross muscular development deleteriously, and consequently their posture. It is often difficult to motivate the blind child to maintain good posture. This is because many of the postural abnormalities are due to fear of movement and an uncertainty of the surrounding environment. It will be seen from the preceding discussion on "movement" that the music teacher can be of great assistance in this domain, using the alternative programme.

Perhaps the most common posture fault in the blind is that of dropping the head, which causes the shoulders to go forward. The researcher discovered from one of her blind learners that this is done consciously, in order to improve hearing. A probable cause of "round shoulders" is the habit of holding both hands in front of the body at about hip level, when walking. The music teacher should attempt to motivate the child by pointing out the benefits of good posture and the adverse effects of poor posture, when playing an instrument. The blind child has to be taught to hold a good posture. The blind learner should be shown how to stand with one foot slightly ahead of the other for balance. The arms should not be pinned against the sides, as this affects breathing, sound and technique. The point of the recorder should be lifted slightly, so that the sound may be projected.

Regarding posture in reference to braille reading, Nolan and Kederis (1969:106) believe that certain letters are more troublesome than others, for example the letter 'e', but this is quite frequently due to bad position and posture on the reader's part. If readers sit square to the table and keep erect, they should find it fairly simple to recognise that the two dots are in a slanting line. If they sit hunched forward, however, it is much more difficult to detect the slant.

The researcher has found that a single loose sheet is much better than the same sheet in a

book (and is also easier to transport home). It is suggested that the single sheet be fastened onto a board with drawing pins or Prestik, because the board is smaller than the table, and the child's orientation will consequently be even more secure.

2.11   READING POSITION

Athearn *et al.* (1944:105) suggest placing the braille book flat on a table or desk of comfortable height with the bottom edge of the book parallel to the reader's body and his/her two hands parallel to the surface of the book. Kersten (1997:22) believes it is very important when teaching beginners braille music notation to place their lessons on single sheets of braille paper or thermaform on solid clipboard. This clipboard can be placed on the music rack above the keys or on the bench next to the student's reading hand. The researcher successfully applied this technique in the target group's lessons.

The position of the hand on the paper is important, according to Lochhead (1954:4). He therefore proposes that the teacher keeps watching its position very carefully in the early stages. The main weight of the hand should rest on the thick part just below the wrist; the palm and upper parts of the fingers should be just clear of the paper; the points of the fingers should be just clear of the paper; the points of the fingers and the side of the thumb should rest lightly on the surface of the paper. In this position the point of the forefinger has only its own weight to carry, and the pad lies evenly on the dots to be felt. It is of paramount importance that the learner feels with the pad of the finger, not the tip.

The researcher is convinced that the teacher of braille music notation should have some background about teaching the blind child to read, so that they can work with the literary braille teacher and not against them. Otherwise they might be allowing bad habits to develop rather than being able to correct basic errors.

The following section, which deals with how blind persons learn to read braille, was corroborated by M. Snyders (2003: interview), a specialist teacher of braille at the Pioneer School for the Blind. She agreed that even though the source material is dated, these are

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the very sources which are being used currently. The research done is therefore still relevant today.

2.12   READING BRAILLE

2.12.1 Reading braille: an overview

Braille is made up of 'cells' of up to six dots, of which sixty-three combinations are possible. Arter, Mason, McCall, MacLindin and Stone (1999:38) note that, while the eye can easily take in a whole word at a glance, the finger can only perceive one character at a time. This letter-by-letter approach in braille reading means that children who use braille will rely heavily on phonic approaches rather than whole-word recognition in the early stages. In music, the top four dots show the pitch of the note while the presence or absence of dots on the bottom half of the cell show the rhythmic value. Special signs are placed before the note to show the octave or an accidental. A measure is ended with a space. A voice student can read braille and sing at the same time. A piano student reads a few measures of one hand part while playing with the other hand, then reversing hands to do the other hand part. The segments are put together until the whole piece is memorised (Goldstein 2000:35). A recorder student needs both hands to play the instrument, so that each bar, or as much as the learner can remember, is read with the recorder close at hand. The section is then played and memorised. When a sighted person has to learn music notation, there are a few paradigm shifts to be made. The first shift is that where staff notation uses a vertical image, braille music uses a horizontal one. The application for the alternative programme is that dynamic markings, articulation and phrasing have been omitted. This is to avoid the braille looking cluttered, which slows down reading and therefore the progress of the beginner. The second difference between sighted and braille notation for the piano is that for braille notation the signs underneath each other are unrelated. The application for the alternative programme is that a single-lined instrument is used, i.e. the recorder (Botes 2003: 6-7). See Figure 2 for an outline of the braille music notation code.

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Figure 2: Braille music notation code

There are countless similarities in teaching children who are blind and children with normal vision to read and write, as well as untold similarities in the way that blind and sighted children learn. However, there are also unique aspects in the way children who are blind learn and hence in the way that they are taught, for example, aspects of tactual and visual reading and writing; development of sensory discrimination and perception; the use of touch; the role of memory, movement and assimilation (Koenig & Ashcroft 1994:25).

Koenig and Ashcroft (1994:25) continue their discussion by saying that, unlike the visual sense, which allows for simultaneous perceptions of various aspects of a single object or concept, the tactual sense requires that information must be derived by the exploration of one aspect at a time. The learner must engage in multiple explorations to gain information comparable to that gained by the sighted learner in a single viewing.

Braille instruction is a controversial issue within the blind community. The Annual Report on Special Education in Connecticut (2000: chapter 2) reported that some advocacy groups want to enact legislation requiring braille instruction for all legally blind students in order to promote literacy. They point out that children who read and write proficiently have a better chance of success in their adult lives. Others believe that decisions about instruction media and methods for students who are blind must be made on a case by case basis and one approach cannot meet every child's needs. Those opposed to mandatory braille instruction suggest that if a child does not want to learn braille, he or she cannot be forced to do so.

The researcher believes that blind persons should be given the option of literacy, both for literary braille and braille music notation.

For blind persons who are inappropriate candidates for learning braille music notation, there are various technological options available. There are also supports for those who do know braille music notation. Here follow a number of available items:

Cakewalk SONAR 4: The advertisers purport that Sonar 4 Producer Edition is the

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perfect solution for composing, recording, editing, mixing, and remixing music productions, and for providing voice over, score, sound design and post audio for film, TV, video, commercials, and games (Twelve Tone Systems 2004:1 in www.cakewalk.com).

Goodfeel Braille Music Translator, from Dancing Dots Braille Music Technology:
"Goodfeel automatically converts several kinds of music files to *braille* - the same files used to print the score for sighted players. To prepare and transcribe these files with *Goodfeel,* you do not need to know how to read braille music" (McCann 2004:1 in http://ace.acadiau.ca). This is a support for those who do know braille music notation, but need a specific piece to be braillised.

Braille Music Software: TOCCATA is a tool for parents, teachers and braille transcribers to quickly produce accurate braille music in a variety of formats, either from scanned sheet music, or from scratch, using Toccata's Notation Editor (http://members.optusnet.com.au).

Photoscore professional 3: This package claims to scan and read printed music fast and accurately, transpose all scanned notation, and play back scanned music with astonishing realism using the Espressivo feature licensed from Sibelius (http://www.neuratron.com).

QuickScore Elite: This is comprehensive, integrated software for music composition, incorporating notation, arranging, MIDI sequencing and recording together in one package (http://www.sionsoft.com).

"There is a music software programme called "Slow gold" which slows the tempo down as much as you want of any CD without distorting the sound" (Rickard 2003:3 in http://www.slowgold.com).

In braille music notation, single items of information are presented consecutively and what may be expressed quite simply in staff notation can often be more complex when written

in braille. Beaizley (1993:10) expands on this observation by noting that for the braille reader, a greater understanding of musical concepts and structures is necessary, especially in the earlier stages. Because of the way in which the braille music system is constructed, one misread braille dot can render a bar of music totally meaningless. He recommends that a more painstaking approach is therefore essential. In addition, mistakes are possible in braille music reading for which there are no equivalents in staff notation, for example, the failure to detect, or recognise an octave sign.

According to Barraga (1976:46), the highest level of tactual-kinesthetic development is discrimination and recognition of symbols in the form of braille characters that represent letters. Symbol recognition through the visual sense requires a high level of visual coding and association, but the tactual discrimination and recognition of symbols in the form of braille characters is an even more abstract level of perceptual-cognitive association. The blind child must not only recognise the symbols tactually (which in itself is a high-order task), but he/she must also interpret their meanings in relation to other surrounding braille characters and also in the context of the material he/she is reading. This places a burden on tactual-kinesthetic memory and requires immediate decision making on the part of the child in relation to recognition, memory, association and interpretation. The suggestion therefore is that the level of intellectual ability needed for efficient braille reading is greater than for print reading. Goldstein (2000:35) has noted, however, that the learning of the braille music itself is not as much a problem as the resistance a student who has always learned by ear may put up to reading music.

Up until the end of the 1960s the teaching of literary braille borrowed the conventional techniques and materials used for the teaching of print reading. Research from 1912 to 1965 indicates that the "code-emphasis" method produces better results. The "code-emphasis method" means the introduction of braille characters, based on ease of tactile perception. From the 1970s onward there was furthermore an increasing awareness that teaching braille requires material specially developed so as to take account of the complexities and difficulties imposed by the braille.

It is significant to note that the teaching of braille music notation has not kept track with the developments in literary braille, hence the need for this research project. This means that braille music tutors still by and large borrow the conventional techniques and materials used for the teaching of print reading for the sighted. Furthermore, the "code-emphasis method" has largely not been applied, that is, the introduction of braille characters is not based on ease of tactile perception. The writer has therefore researched the development of a programme for learning to read braille music notation, that is "blind friendly", or specifically tailored to suit the reading needs of the blind learner. Moreover, the researcher has applied the principle of "code-emphasis" in the alternative programme, by introducing the braille characters which the interviewed candidates were tactually able to identify the easiest.

At the American Printing House for the Blind (Barraga 1976:46) a major programme has been carried out to develop a set of beginner reading materials, specifically designed to minimise problems encountered by the beginning reader of literary braille. The subordinate objectives of this programme were stated as follows:

- to write detailed coordinated specifications for braille readers' braille work-book materials, and teachers' manuals using all relevant information from research on braille reading and print reading;

- to analyse common word lists to identify words to be used as vocabulary in specially designed braille readers;

- to write special braille readers based on these specifications and vocabulary lists;

- to write teachers' manuals meeting these specifications;

- to submit all materials as developed to review by an expert committee and revise as required.

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This programme was carried out over three years and was completed in 1978. The set of specifications used in order to develop the materials was based on a review of research in the areas of braille reading, general tactile perception, development of concepts by blind children, and general practices in teaching reading.

The introduction of vocabulary was based on four factors:

- First, categories of braille code: these categories are based on the difficulties children learning to read braille have in the discrimination of characters or signs;
- Second, individual characters of the braille code: these categories are based on the difficulties visually handicapped children have in the recognition of the above. These are, in order of difficulty, as follows: missed dot errors, ending problems, reversals (mirror image), added dots, association errors, gross substitutions, vertical alignment and horizontal alignment:

Missed dot errors:	The identification of a character as having fewer dots than the stimulus
Ending problems:	The addition or deletion or misidentification of the terminal characters in a word
Reversals:	The identification of a character having the same number and configuration of dots as the stimulus but rotated in a different direction from that of the stimulus
Added dots:	The identification of a character as having more dots than the stimulus
Association errors:	Incorrectly pre-empting what will be the next braille character
Gross substitutions:	Substituting one braille character for another
Vertical alignment :	Configuration of dots as the stimulus but in the up-down position. The identification of a character having the same number and position of the cell opposite to that of the stimulus
Horizontal alignment:	The identification of a character having the same number

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and configuration of dots as the stimulus but on the side of the cell opposite to that of the stimulus;

- Third, frequency of errors - these specifications contain information regarding braille characters and clusters of braille characters which frequently present difficulties to students who read braille.

- Fourth, orders of difficulty - this refers to orders of difficulty for all the characters of braille music notation (based on number of errors; recognition time and number of dots).

"Patterns", the Primary Braille Reading Programme, was marketed by the American Printing House for the Blind in September 1984. In the Braille Research Newsletter, Gill (1981:14) explains that the programme was developed in an attempt to overcome the significant problems young braille students had experienced in learning to read. These problems resulted primarily from the fact that the only materials available to teach these students to read were print materials transcribed directly into braille. Because they were visually oriented, the order of presentation of vocabulary and skills in these materials was based on the print code, not the braille code.

Print music tutors (the term for tutors for the sighted) are based on notes, values and signs according to a systematic sequence of difficulty, frequency of occurrence, and so on. Transcribing these tutors into braille fails to take into account the differences in the music braille code. Since the two codes are vastly different, the vocabulary and skills in the transcribed braille materials were not ordered appropriately for the braille code. For many years teachers of literary braille have had to contend with this major deficiency in the reading programme. Exercises were geared to the sighted child and the sighted code.

The researcher discovered identical problems with the currently available piano and recorder tutors which have been transcribed directly from print (music for the sighted) into the braille music code.

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The order of presentation of braille characters is problematic, since certain print code musical signs, for example, semibreves, are more difficult for the braille reader to decipher, than quavers. Furthermore, the speed at which new items appear is far too quick for the average braille reader, since each braille character requires much consolidation, in order to avoid confusion with a previously learned character.

Nolan and Kederis substantiate the above finding by showing that training in quick and accurate character recognition is essential (1969:303). In a study of elementary and middle-grade braille readers, such character recognition training resulted in a reduction of reading time by almost half and a reduction of mean number of errors by over 80%. Poor readers made the greatest gains from the training.

The most significant differences between the reading processes for braille readers and for print readers concern the modes of sensory perception and the unique characteristics of the embossed code itself. Fertsch (1946:128-131) says that vocabulary during the early levels of literary braille reading is controlled for difficulty, rate of introduction and sufficient repetition for mastery by most students. An accompanying workbook designed to provide additional practice on specific skills as needed by students is generally included in the literary braille tutor. A teacher's guide offers suggestions from which teachers may select learning activities. The above programme, "Patterns", is modelled on the basal reader used to teach visual reading, which is a carefully designed, scientifically sequenced instructional programme. The procedures used in the development of "Patterns" were designed to overcome, or eliminate, these problems.

A characteristic of braille which was examined for its effect on recognition time was the position of the character in the cell - that is, whether the lower-cell characters in the study were recognised in the same amount of time as their counterparts in the upper part of the cell. Nolan and Kederis (1969:63) found that the lower-cell characters required 55% more time to be recognised. The number 3 and number 6 dots were the hardest to recognise. They were missed in 49% of the cases (Kederis 1969:67). Recognition of braille words (three braille characters or more) is a far slower process than recognition of individual

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braille characters, which is exactly opposite to the behaviour of sighted readers identified by Nolan and Kederis (1969:84). Of considerable interest was the finding that fast and slow readers do not differ greatly in the types of errors they make.

Certain ideas used in the basal readers used to teach visual reading, have been employed in the alternative programme: musical vocabulary has been controlled for difficulty, rate of introduction and enough repetition for the grasp of most learners. A supplementary set of exercises has been designed to provide extra practice in areas of common error, for example, the octave rule, and easily confused braille characters, like the notes "a" and "d", which are mirror images.

From the interviews and the observation done, the researcher discovered independently that learners have difficulty with dots 3 and 6, which are lower cell characters and represent the minim and crotchet time values respectively. This has been taken into account in the alternative programme by very gradual introduction and careful consolidation of these concepts.

The researcher has taken advantage of the plus factors built into the braille music code. The practical research project exposed those patterns of braille characters which are the easiest and most logical to read. The noticeable shape or arrangement of dots, rather than the number of dots in the braille character, is one of the most critical variables in the reader's ability to recognise it and attach meaning. Some aspects are easier than in print reading. This has been incorporated into the alternative programme. Certain braille signs have been introduced because of the logic of the configuration of the dots rather than for the logic of a musical concept. Confusing braille sign patterns have been delayed for later in the programme.

The braille code slows down the learning of musical concepts because the learner has to memorise a phrase while reading it, before playing. For those learning the piano, the same process takes place with the other hand, and then the learner has to combine the two parts in his/her mind. For this reason, in the design of the alternative programme the researcher

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had to decide whether a new musical concept or a new braille sign would be more beneficial and logical. Lochhead (1954:18) explains that a combination of dots that seems simple to the eye may be a difficult proposition to the finger, and a group of dots that looks difficult to the eye may be quite easy to the finger. To the seeing teacher touch will always be secondary. To the blind touch must be the first consideration. Therefore sighted teachers should not base instruction too rigidly on their own experience. In order to help determine the most logical order of musical concepts, interviews were held with blind people well versed in the learning and teaching of the braille music code.

Lochhead (1954:13) points out that in ink print the various punctuation signs are totally different from the notes and generally insignificant in size. In braille, however, the signs have the same construction as letters. Braille punctuation signs are therefore of more importance to a reader's finger than the print equivalents to a reader's eye. In literary braille, punctuation is initially kept to a minimum.

Musical punctuation signs are introduced slowly in the alternative programme because they are not as distinctive as they are in print. For example, no double bar lines or phrase marks are used initially, and introduction of dynamics is also delayed. The main aim of the programme is for the learner to read fluently, easily, accurately and comfortably.

Literary braille programmes start with spaced letters, that is, a space between each two braille characters. The same applies in the beginning stages of the alternative programme, but the child has to be accustomed to un-spaced characters, since a space in the braille music code implies a bar line.

Because of the uneven movement with which the fingers of the beginner travel across the page, it is possible that the lines in the first pages of braille should be wider apart than for average adult readers. It is the conviction of the writer, however, that the use of a wider line spacing should not continue for many months, since it probably retards the children's progress in forming efficient muscular habits.

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Athearn *et al.* (1944: 113-115) propose that the following factors will also affect the learning of braille: age of onset of handicap, intelligence, tactual perception and language ability. The above proposal translates into the need for individual tuition as far as possible.

2.12.2 Memory and learning by ear

There are various programmes available which encourage the blind to learn music by ear. These programmes will be particularly valuable to those learners with very good musical ears, visually impaired learners who do not know literary braille, those who do not wish to learn braille music notation, slow readers, adventitiously blind persons and the older blind person wishing to learn music.

"By Ear Intro" is now one of the music courses available to the blind and visually impaired. The "Intro to" course series is available through the National Library Service (Library of Congress). Also available are the "Piano By Ear" and "Guitar By Ear" title series that consist of individual cassettes teaching songs using no written or braille notation (Brown 2004:2).

"Intro to the Piano for the Visually Impaired" (Brown 2004:2): This beginning piano or keyboard course talks the student through the basics of playing the piano using no written or braille materials or visual references. The course comes in an attractive bookshelf quality four-cassette album that is fully brailled (tapes and album spine) and includes a free "Piano by Ear" instructional cassette tape. On the three tapes that make up the course, the student will learn how to sit at the piano or keyboard, how to find the notes on the piano, the names of these notes, the names and location of the flats and sharps, the C and G scales, the C and G cadences, various songs and Minuet in G by Bach in the original contrapuntal style. The course is taught in a detailed step-by-step process with several built-in breaks that allow the student to rehearse what was learned before moving on. The teacher for the course is Bill Brown, the owner and creator of "Piano By Ear". For further information, contact http://www.musicvi.com.

There is a programme called "Simply Music", which was developed shortly after the

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founder taught a blind child. It uses shapes and sentences and patterns to relate the music to the student (Cathy in www.simplymusic.net).

The Suzuki method is a method where you learn by ear. To quote a successful user of this method: "I started learning when I was three. I didn't learn how to read music till I was about twelve years old. I am now writing musicals" (Natasha 2002:3 in http://www.afb.org).

The following are comments from letters received concerning "Guitar by Ear" and "Piano by Ear" audio teaching products, and learning by ear in general:

"I think these tapes are a great resource and I would like to recommend them to anyone that wants to learn how to play, especially the blind. Finding resources that are accessible to us are extremely hard" (Aaron in http//www.musicvi.com).

"Hi, my name is Liz. I'm a visually impaired violinist, piano, and guitar player. I've been blessed with the gift of perfect pitch which has enabled me to learn everything from symphonies to fiddle tunes by ear. I don't have enough vision to read music but I understand and can teach sighted people how to read it. I also give violin lessons and may be starting piano. I took about a year of braille music lessons but found using my ear to be easier. I think a teacher who understands how the blind learn would be best. They also need to be patient and willing to experiment with new learning techniques" (Fiddler 2004:1).

"Hi. I am a piano teacher in California. I teach an incredible program called Simply Music. The program was developed shortly after the founder taught a blind child. It uses shapes and sentences and patterns to relate the music right into the student's hands. We have several students with disabilities including blind students. Beginning students, with no attention on having to read music, are free to relate directly to the piano, and within months easily and naturally begin to establish a 'hands-on' and personal 'feeling' for the instrument as they build a play-list that includes popular, classical, blues and jazz styles, as

well as develop the ability to play chords and modern accompaniments" (Cathy 2003:2).

The researcher most certainly believes there is a valid place for the above technological advancements and programmes. She also believes that there is a very strong counter-argument for literacy and independence, and that there are still appropriate conditions under which blind learners should learn braille music notation. For certain learners, braille music notation can be used as a complementary tool to learning by ear. The process of using an extra sense (motoric) to make up for the lack of sight aids in memory. The researcher has noticed that learners who are naturally good readers tend to benefit greatly by reading braille music notation, while those who have very good aural memories tend to have an internal block towards reading braille music notation. This could prove to be an impediment rather that an aid to their musical development. There is currently quite a controversy raging about this very issue (see page 62, regarding the literacy movement).

There is a Music Education Network for the Visually Impaired. Here we learn that Valley Forge, developer of GOODFEEL, the world's first braille music translator, has taken another step in the advancement of music opportunities and independence for blind and low-vision students and professionals worldwide. Working with author Richard Taesch of the Southern California Conservatory of Music, Dancing Dots has published "An Introduction to Music For the Blind Student", a course in braille music reading to meet the basic need of blind music students to become literate in music braille (Taesch 1997a:2).

"Every blind and visually impaired person, young or old, deserves at least a chance to learn and experience music through the braille system", says Dancing Dots founder and president, Bill McCann. "With this new curriculum, we hope to provide a resource that gives the same opportunities to learn music that have always been available to sighted people." No prior experience is needed. One of the main benefits McCann sees to the curriculum is that it is flexible and equips the mainstream educator who has no prior experience in braille to teach and learn music braille. "Braille music has traditionally been taught as the sighted musician views it from print music," says Taesch (1997a:3).

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McCann continues by saying that this course differs in that it is a true instructional course curriculum in music fundamentals (music reading, theory, etc.) using the international braille music code as the medium. Print music is included for the convenience of the sighted teacher or tutor (in Taesch 1997a:3).

The course is intended to teach the essentials of music reading regardless of the student's chosen instrument. Separate instrumental supplements will eventually become part of the course (Taesch 1997a:3).

At present a literacy movement exists which is fighting for the blind to be given every opportunity to read both literary braille and braille music notation. Taesch (1997b:2) has the following to add to the counter-argument: "As professional music teachers, few of us would question the value of the music reading skill as an indispensable and tangible communication medium. No person should be denied personal access to information and the freedom of choice it provides. Who has told the blind learner that braille music reading is only a luxury, and that he or she must remain dependent upon tape recordings made by the sighted? Perhaps the answers to some seem to be a definite connection between resistance and all types of literacy".

There is a belief that music reading for the blind is impractical, too slow, and that it is impractical to memorise everything. But the blame cannot be placed upon the innocent learner who has not been informed properly nor given the choice to become independent and "literate." We must provide our students with every available means of self-reliance.

Taesch (1997b:2) adds that, when playing by ear, stimuli enter via the ear senses. With the sight or touch medium (as in braille reading), the intellect must first decipher the tangible communication medium. The ear and the eye methods, much to the surprise of ear-only supporters, have much in common. Both reach to an outside source to receive processable data. The ideal, of course, is to merge both senses in order to "hear with the eye (or touch)," and to "see with the ear." In this way the blind and sighted learner or performer share the same means of input.

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To learn solely by using the finished product (pre-recorded music) as a model denies students access to their own unique interpretive process. There must be a vehicle separate from the finished product. The medium itself must be flexible and capable of varied application. Using the finished product for a pattern as in the ear-only approach cannot replace such a medium.

Taesch (1997b:2) believes that to learn by listening only is merely a form of plagiarism. Reproduction is strongly influenced by the interpretation of the version being copied. For a blind performer, there is little opportunity for personal interpretation of data initially perceived through aural communication. Even with "talking books" for the blind, the language/communication medium is being interpreted and translated by the intellect. Pictures and meanings are then formed and evaluated, accepted or questioned. Music by ear alone, therefore, is dependency upon performance by the sighted -- there is no translation process taking place.

Taesch (1997b:2) says the following on the subject of literacy:

"The right to choose the translation process should be available to all. For the blind learner, it seems the choice not to read is based upon a lack of exposure to the braille music medium at the earliest levels. From what source does this prejudice come? It cannot come from an experienced teacher of music who is, at least, aware of the logical clarity of the braille music language intended by Louis Braille himself. A music teacher in charge of a blind student need not know anything about braille to recognise the right of that student to make a choice for music literacy. Written music is extremely important in educational situations. Consider the blind student in the study of composition at college level. Would anyone recommend the study of orchestration and arranging without being able to see the range and movement of the various instruments? Who is going to record a three-hundred-page theory or harmony text with music examples on cassette? Other examples include lyric and chord symbol placement for basic accompaniment. Jazz music lead sheets, chord progressions, improvisation

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layouts, and song form are not easily approached by ear only. The ear is the final judge".

Most information and research about the role of memory in literacy learning is related to visual memory (Athearn *et al.* 1944: 113-115). Athearn *et al* say that the work that has been done in the area of tactual memory has concluded that information is processed in essentially the same way in the visual and tactual modes. The smaller capacity of the working tactual memory and the somewhat more rapid rate of decay of information certainly have implications for instruction in literacy. Furthermore, memory plays an important role in the development of language, concepts, and reading and writing skills. Thus, teachers must provide children who are blind with sufficient and appropriate opportunities, from the concrete to the symbolic, to fill their memory stores and to utilise what has been stored. The research carried out by Athearn *et al* 59 years ago is still very applicable today. In fact, the researcher has noted that Athearn *et al's* deductions of the smaller capacity of the working tactual memory and a more rapid rate of decay of information also has implications for the learning of braille music notation. This indicates the necessity of a much slower introduction of musical concepts for a blind than for a sighted child, because the learning is primarily based on tactual recognition, rather than on the cognitive or musical domains.

The researcher has noticed that people have in recent years become increasingly aware of the importance of music education to the entire child, particularly with respect to developing their skills in mathematics and logic. Reading and writing braille music notation could also benefit a learner's development in the area of logic, improve self-reliance and self-esteem. The educational consequences of weak fundamentals for a blind child studying music can be just as devastating as the inability of a sighted child to read or write. Though these fundamentals may successfully be taught aurally, many blind learners studying music could still benefit by using braille music notation as a complementary tool. The learning of staff notation is beneficial in the theory of music and musical analysis. This is particularly necessary if a blind person teaches music to a sighted person.

2.12.3 Chunking

At an average of 60-65 words per minute, blind learners read one-fifth to one-fourth as fast as the sighted. Tests using the *Readers' Digest* indicate that blind school children read on average one-fourth as fast as the sighted. In order to explain this phenomenon, Nolan and Kederis (1969:131) summarised the conclusions from studies on perceptual factors in recognising braille words. They concluded that children learn braille, not as word wholes, but by the integration of the braille characters (chunks). In applying this principle to braille music notation, the researcher encourages the learner to see whole pulses at a time, and to be aware of a whole bar at once. In a group context the learners are taught individually, since they all read at different speeds. The group would then practise together to perfect a piece.

Athearn *et al.* (1944:108) report two distinct approaches from the literature regarding the increasing of braille-reading rates. One involves the training and improving of character recognition. The argument is that, if braille involves the sequential integration of individual braille characters, then, by increasing the speed of recognition of these characters, reading should proceed correspondingly faster. The other approach involves improving the way, and increasing the rate, of moving the fingers over the braille page. The technique is based on rapid visual reading techniques and assumes that a totally different tactual perceptual process can be learnt.

The results of research by Nolan and Kederis (1969:148) indicate that whole-word reading is not characteristic of braille readers and that the perceptual unit in word recognition is the braille cell. Supportive evidence for this conclusion was drawn from their results which show that training in character recognition can result in significant increases in accuracy of silent reading. Nolan and Kederis made the following recommendations in the teaching of braille reading:

- Emphasise character recognition in the early stages of reading instruction;
- Design beginners' materials that minimise ambiguities.

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Kusajima (1974:29) found that good readers grouped letters perceptually into words and phrases, not unlike sighted readers. He based his theory of Gestalt reading on the basis of movement of the fingers. Up and down movements indicated letter-by-letter reading whereas smooth, horizontal lines indicated Gestalt reading. Uneven pressure indicated symbol-by-symbol reading and even pressure indicated perception of whole words and sentences. Bliss and Crane (1969:269) attest that the ability to "chunk" symbols in working memory, functions for blind persons as well as for seeing individuals in the reading process.

Kusajima (1974:29) expects that instruction in braille reading and writing may also account for the differences in comprehension and rate of words per minute. He says that the limited perceptual unit of braille tends to direct the reader - and often disposes the teacher to instruct the child - to read cell by cell. Rather, the reader should be encouraged to "think" in chunks and to utilise the redundant parts of words and sentences, which will increase the rate of reading and improve comprehension. Kusajima emphasises that reading is not merely perception, but perception combined with the ability to use such peripheral cues as context, expectation and stored information during reading. Random guessing is a bad practice, but intelligent anticipation is good and the teacher should encourage it.

When the ability of sighted readers to chunk (perceive) two to ten letters in a single fixation is compared to the ability of blind readers to perceive a single cell of braille, one can understand why children who are blind will usually read more slowly than do children with normal vision. However, those who have done comprehensive investigations of the braille reading process (Kusajima 1974:29) have emphasised that reading is not merely perception, but perception combined with the ability to use such peripheral cues as context, expectation and stored information during reading.

The researchers mentioned above did groundbreaking work in their day, since no new studies reporting anything contradictory have been unearthed by the researcher at any of the major braille institutes around the world.

2.12.4 Hand movement

Movement is another unique aspect of literacy learning for people who are blind. Whereas visual reading takes place when the eye is at rest and the perceptual span of an eye fixation relates directly to the number of symbols perceived during chunking, tactual reading takes place only if movement occurs. Smooth and rhythmic hand movements that utilise redundancy and the ability to concentrate on key portions of words and phrases can offset the limitation of the single cell as the tactual perceptual unit (Kusajima 1974:29).

Athearn *et al.* (1944:105) suggest that in order for the tactile sensitivity of the fingers to be utilised to the full, their physical movement over the braille characters should be smooth and even, and the pressure on the dots light.

Even, parallel flow rather than "rubbing" the letters should be encouraged. Lowenfeld and Abel (1967:81) discovered that braille readers who "rub" their letters are hardly ever superior in reading efficiency to those who do so occasionally or often. Also, braille readers who read over the lines in an even flow are superior braille readers in comprehension as well as in reading rate.

Studies done by Olson, McBride, Crandell, Wallace, Harlow and Williams (1981:314-317) concluded that substantial gains were made at speed-reading workshops. Olson *et al.* concluded that it was best for training in faster speeds to begin at even the pre-reading stage. This idea has been incorporated into the alternative programme, by having the child practice tracking in braille music notation, while the teacher plays the piece.

Silent reading of braille music notation should be emphasised before oral reading. This gives the child opportunities to self-correct any mis-readings. The aim of teaching braille music notation is independence. Initially it is useful to have the learner read aloud so that one can test that they know the signs and do not miss any, but this slows them down and will not aid in "chunking", or seeing a few characters at a time, and therefore they lose meaning.

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Familiarity with the content helps the fingers to move quickly and the student has a feeling of success, which is very important. In the alternative programme the teacher may read, sing or play a known piece aloud, while the student follows with fingers. This encourages fluency and speed.

2.12.5 Reading hand

Maxfield (1928:36-58) has contributed one of the most important books in the teaching of reading to blind children. This book presents fundamental differences between blind and seeing children in the teaching of reading. She found that the use of both hands was best and most efficient in reading. She observed that the best readers read ahead with the left hand before finishing the preceding line with the right hand. She recommends light pressure of the fingertips, using an acute angle of the finger with the braille, and maintaining good posture.

Fertsch (1946:28), in using filmed records to study sixty-three subjects, established that good readers were those whose hands functioned independently of each other. The good readers moved their hands to the beginning of the new line independently of each other and without retracing a line of braille. The poor readers retraced a line of braille with one or both of their hands to find the beginning of the next line. She concluded that it would be desirable to teach learners to move directly to the beginning of a new line without tracing a line of braille.

In a later study, Wormsley (1981:139) trained elementary-age blind readers to use the hands independently. He found that skill in tracking and use of efficient hand movement pattern was closely related to perceptual ability. He therefore recommends combining motor aspects of a task containing perceptual aspects, with beginning reading instruction. This discovery comes into play once the learner starts learning the piano.

Lochhead (1954:4) recommends that, if learners wish to feel with their right hand, let them do so, but if they will try with their left it is much better. The left hand is often more

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sensitive, and it is easier to develop two-hand reading with a left-hand reader than it is with a right-hand reader. However, they should be given a choice, after recommending the left hand. This information on the "reading hand" is really for the teacher of literary braille, but the music teacher at least can encourage the learner to be able to use both hands for improved fluency. Lowenfeld and Abel (1967:88) agree that readers should be motivated to read with both hands and encouraged to find the next line with the left hand, and later, to read ahead with the left hand while the right hand finishes the preceding line.

Lowenfeld and Abel (1967:79) found that the superior readers in the eighth grade held their books parallel to their bodies. Also, their comprehension was superior. The music teacher can monitor this as well.

Athearn *et al.* (1944:105) agree that good readers read a considerable amount of material with the hands functioning independently and the right hand covering approximately twice as much material alone as does the left hand alone. Apparently this independence does not develop naturally with reading experience, but must be taught. For this reason the researcher includes this information for the music teacher in the alternative programme.

Fertsch (1946:128-131) said that one of the major problems of the braille reader is lack of speed. When compared with the print reader, the average speed is two to three times slower. The speed of print music notation cannot of course be compared with braille music notation reading, since it is impossible to read the latter by sight. But the most well-proven approach for improving literary braille reading speed is by training in character recognition, and this can certainly be applied to braille music notation. In the alternative programme, one of the means employed for practice in character recognition is the use of games.

2.12.6 Reading finger(s)

Lappin and Foulke (1973:237-241) wanted to know if tactual information could be acquired simultaneously by several different fingers. Their results indicated that the most

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accurate reading occurs when the index fingers of both hands are used simultaneously. The results which indicated that little advantage occurs from using more than one finger on each hand are similar to the results of Kusajima (1974), who added that one finger reads, while the other checks and confirms what has been read.

Lowenfeld and Abel (1967:88) believe that the use of more than the index finger(s) should be encouraged in the teaching of braille reading, but individual preferences should be readily allowed. The above information on reading finger(s) also appears in the alternative programme.

2.12.7 Whole-word approach

A major finding from the study done by Harley, Henderson and Truan (1979:18) was that most teachers in day schools and residential schools used the whole-word approach in the teaching of beginning reading to blind children. Arter *et al.* (1999:38) disagree. They believe that the letter-by-letter approach in braille reading means that children who use braille will rely heavily on phonic approaches rather than whole-word recognition in the early stages. The Uniform Type Committee (1913) found that the lower-cell, whole word contractions required considerably more time and produced many more errors than fully spelled words. The emphasis on the whole-word approach would seem to indicate a direct transference of methods used for teaching print reading to teaching braille reading. It is precisely this notion that the researcher set out to counter.

2.12.8 Giant dot

The giant dot refers to a much increased size of the six-dot braille cell. It may be referred to as an enlarged or expanded cell, or a jumbo dot. Lochhead (1954:2) believes that the giant dot is a bad opening for braille beginners. He says that it leads learners to identify letters "dot by dot", or rather mountain by mountain. One wants to train a sensitive strip on the pad of the learner's finger which can feel a character in one movement. The braillette is no good for teaching lightness of touch either. On the contrary, Lochhead is

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convinced that its use definitely retards lightness and brings about heaviness.

The sign for the note F as a semibreve covers six dots and a vast space, so if the giant dot were used, the learner would feel the character in six movements. When the learner comes to ordinary-sized braille, they would be very upset by the small dots and their closeness. All the movements would be wrong. The researcher agrees with Lochhead that each braille symbol must be learned and recognised by touch as a whole, not as a collection of separate dots. It sounds so simple to tell your learner that when they have learned notes cdefgab as quavers; they only have to add a dot six to each to make them crotchets. For example, the note C as a quaver becomes a crotchet when dot six is added. This practice, in fact, requires the learner to make two cognitive decisions instead of one. One is thereby encouraging them to feel C and then pick up the extra dot - two movements instead of one - and then they also have to remember that the note C is the letter D. The letter D with an extra dot is the C as a quaver. Meanwhile the finger is waiting. They must rather feel each sign as a sign. The teacher should make sure that the learner is feeling each letter as a shape with the left to right motion. Each note must be a definite shape to the reader. See Figure 3.

Figure 3: The note C as a quaver, and as a crotchet

In order to read, a blind person must learn to feel dots embossed on paper. The "feeling" is the essential point. A bad feeler will never make a good reader. Lochhead (1954:9) recommends that washing hands with soap and hot water gets rid of a film of sweat and stimulates circulation, thereby improving sensitivity for feeling. It is equivalent to polishing one's spectacles, and also keeps the braille clean for future users.

Lochhead (1954:3) recommends that the teacher should not mention the dot numbers. This was corroborated in an interview with A. Botha, a retired blind teacher of braille music notation. The reason for this is that the learner gets the idea that they must

remember that the note C is composed of dots 1, 4 and 5, and if it's a crotchet a dot 6 is added, and if it is a minim a dot 3 is added, and if it's a semibreve a dot 3 and a dot 6 are added. The learners are concentrating on dots, not on shapes. They may link them with some shape they know and find some help, but Lochhead says one should not suggest outside shapes to the learner. Their minds are not the same as the teacher's. The comparison that helps the teacher may only confuse the learner. Numbers are useful when teaching writing, but only once the learner has mastered the chief reading difficulties.

Enlarged cell material generally has been rejected because it encourages dot-by-dot perception rather than character perception, and up-and-down motion of the reading finger(s), while standard-size braille is conducive to horizontal movement of the reading finger(s) (Lowenfeld & Abel 1967:24). But from Tobin's (1972:116) investigation of braille readers in former readers of ink print, a division of opinion was revealed between reading teachers on this question of use of an enlarged cell. In a subsequent investigation of this question, he found that a teaching programme using an expanded cell resulted in the best results in the initial stages of learning.

The researcher has decided to reject the use of the giant dot, since this stance would be in line with the more generally adopted view.

Understanding the differences between visual and tactual learning is crucial in formulating strategies to teach literacy in braille music notation. Readers display individual preferences for the height of the braille dots. Some students prefer dots that are relatively low and rounded. They will, if possible, avoid the use of a new braille book, stating that the high dots irritate their fingers. The researcher has decided not to use braillon paper but regular paper in the alternative programme, because braillon paper has a firm, plastic consistency, and can therefore be irritating to the sensitive finger tips.

2.12.9 Character recognition

Nolan & Kederis (1969:38) believe that the perceptual unit is the single cell. The student

could be allowed to experience how the standard braille cell will fit beneath the face of the forefinger, while they feel the fullness of the complete cell. Allow the individual to perceive the difference in the tactile sensation of the full cell as compared to vacancies created within the cell when letters are formed through various combinations. Allow the student to verbally describe, not how many dots he/she felt, but where the dots are in relation to his/her finger. Example: the cell may be described as being "light in the middle", "heavy at the top", "light at the bottom"; or "larger at the top and smaller at the bottom". With newly blinded people, make analogies to the fact that some print letters are heavier at the top and smaller at the bottom; or they are thicker or thinner. Do not forget that the forefingers should be moving consistently from left to right. There should be no pauses. This does not mean rapid movement, but constant movement.

2.12.10 Games

The importance of training in character recognition as a means of improving reading speed has been highlighted in this study. The use of games makes this tedious task fun. Games are effective for instructing children with weaknesses or gaps in specific learning areas, for example, the octave rule. The following games (based on Harley *et al.* 1979:154-167) are explained in detail in the alternative programme, since games offer the reader fun opportunities to practice their braille skills in new contexts.

- **Pointing words:** The pupil is to point out all patterns with lower g signs (dots 2356 of the braille cell), for example. These braille music characters represent the repeat signs in music for the sighted.

- **Draw pointing words for each other:** The learners may take turns preparing certain braille music notation characters for each other to point out.

- **Provide missing symbol:** The teacher may, for example, play a tune for the pupil, which contains staccato notes (short and detached from each other). Then the teacher can show the same tune in braille music notation to the pupil, but with

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the staccato signs missing. The pupil is to identify the missing symbol.

- **Fishing:** The teacher may prepare a fishing net with various braille music notation characters on little pieces of braille paper. The pupil is to catch a fish, and then identify which fish they have caught, for example, the note C as a crotchet.

- **Card games:** Rummy, for example, can be adapted, using braille music notation characters.

- **Grade the paper:** Have a piece with errors to be detected.

- **Roll the dice:** A set of dice can be created using braille music notation characters for the pupils to identify. The dice may also be used to move on a board, depending on a pre-arranged configuration of dots to move on. For example, if all six dots of the braille cell appear on the dice, one may move six squares. Six dots represent the note F as a semibreve or a semiquaver.

- **Teacher makes statement that must be judged true or false:** For example, the teacher may suggest that the note C as a crotchet contains dots 1 and 2. The learner should know that this is false and give the correct answer. Learners can also create riddles for each other. This game would also be appropriate for older learners.

- **Detecto:** To discover through listening the number of times that a designated braille character appears in a sentence. Go on a detective hunt for a certain sign for example, "Ed".

- **Snakes and ladders:** The teacher may include trick patterns that do not exist (configurations of the dots of the braille cell). Wrong identification by the pupil could mean they must skip two places, for example, or go back a block, or go home, or to jail.

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- **Jackie hangman:** Correct carrying out of aural exercises can be the basis for getting hanged or not.

- **Bingo:** Learners examine their bingo cards for a certain sign called out by the teacher.

- **Flash cards:** The teacher is to have a set of cards containing braille music notation characters for the pupils to identify as quickly as possible. A competition may be set up for the pupils, and prizes provided for excellence.

Lieberman and Cowart (1996:140) suggest some tips for teaching games to students who are visually impaired: They recommend using sound to help the learner. One's voice leads and directs a visually impaired child within the environment. Get the learner's attention before giving instructions, since a moving speaker confuses a blind child. Furthermore, these authors believe that one can build the child's self-confidence by letting them try. For example, take the child through an activity or game a couple of times before requiring independent movement. Ropes taped to the floor help visually impaired learners to identify activity boundaries.

Arter *et al.* (1999:36) suggest that the blind will need activities that will develop flexibility, dexterity and strength in their wrists and hands. Activities in physical training and games can help encourage coordination in gross and fine motor movements.

Wilkins (2001:xi) recommends that with visually impaired learners, teachers should acquire the following equipment for game playing: portable sound sources that can be set to play different sounds at various pitches and speeds (these can be used to help direct learners and are particularly useful when activities involve running to a particular location); beepers and balls with sound-makers for learners, e.g. bells on bracelets.

2.12.11 Common braille-reading errors

Koenig and Ashcroft (1994:140) realised that most errors occurred when using lower whole-word signs and contractions governed by variable spacing rules. The researcher also came to this realisation, particularly with the different repeat signs. See Figure 4.

Figure 4: Repeat signs

Nolan and Kederis (1969:87-94) noticed that the most frequent braille reading error was missed dots (that is, the reader seeing fewer dots than the stimulus suggests). They found a bias towards the upper left hand side of the cell. In the case of familiar words, contractions aided recognition; however, the situation is reversed in the case of unfamiliar words. The characters which represent the letters IE and J H are often confused. In the braille music code this refers to the notes A D and B E. See Figure 5.

Figure 5: Confusion of braille characters

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Gill *et al.* (1984:2) experimented and discovered that many more correct responses occurred during learning the names for the a-j items (upper braille cell configurations) than for the k-p items (configurations of the Braille cell contain dots in the lower half of the cell). See Figure 6.

Figure 6: Learning of braille characters

2.13 WRITING BRAILLE

Some contradictory ideas prevail on the matter of when to begin teaching the writing of braille. Lowenfeld and Abel (1967:21) found it much more satisfactory to have the youngsters well into beginning reading before starting the writing - otherwise they tend to be too analytical, trying to figure out words letter by letter. Some learners, however, find writing easier, and learning to write their reading vocabulary enhances their progress in reading. Furthermore, children can feel a sense of accomplishment in putting something down.

Koenig and Ashcroft (1994:5) espouse the current view of reading and writing regular print as integrated language processes. This view stresses that reading and writing are two interrelated components of language development and are not discrete skills to be taught in isolation.

When it comes to writing braille, Lochhead (1954:3) advises not to teach writing until the learner is adequately advanced in reading. Firstly, writing draws the attention to the individual dots. Learning to read and write braille are both intellectually challenging activities. They are made more difficult still, when learning the two activities concurrently. Lochhead advises that the learner should first have mastered Grade One braille before

learning to write. Time lost is compensated for by progress later on. Randall *et al.* (1979:80), who are braille users, agree that writing should not begin too early - many fine muscle activities are needed to develop the finger strength, coordination and dexterity necessary for the operation of the braille keys.

Especially in braille music where writing the rhythm of a note, the learner has to be aware of whether a dot 3 or 6 or dots 3 and 6 must be added, and the concentration becomes focussed on the dots rather than on the configuration. See Figure 7.

Figure 7: Addition of dots to denote rhythm

The researcher has thus decided to adopt the stance that the writing of braille music notation should be delayed at least until the learner can read un-spaced characters, because in the braille music code, a space suggests a bar line. Initially when the learners are introduced to braille characters, they have more than one space between them, for ease of separating the cells.

The teacher should take note of the following criteria when choosing braille writing exercises:

- Does the material comprise a course of training which progresses by well-defined stages, or is it practice material only?
- Is frequent revision included?
- Is frequency and ease of recognition taken into account?
- Do the pages lie flat for reading?
- Is manilla paper rather than braillon used?
- Is concept development taken into account?

2.14   BRAILLE PIANO TUTORS

In examining currently available braille learning systems, the researcher discovered a plethora of different approaches in braille piano tutors. Some tutors start with the note C, some with the note D. Some tutors start with the left hand, some with right hand, some with alternate hands. Some tutors include octave markings, fingering and double bar signs, while others exclude them. Some tutors begin with C D E as crotchets, others as semibreves, some only C, as quaver, minim or semibreve. Some introduce a crotchet, then its rest almost immediately afterwards, while others enter the semibreve with its rest immediately. Every author, as with adherents of different religions, believes he/she has the best method. Yet the researcher can see advantages and disadvantages with every method she has examined. Why would she believe her method to be superior? All the tutors created thus far have always been a distilling of teaching experience - something that worked for that teacher with those learners; something that seemed logical to that teacher's brain.

The alternative approach is also a crystallisation of experience, and also a result of having struggled to learn braille music notation as a sighted person at the age of 40.

There can be no perfect system, because there are simply too many variables, such as the learner's and teacher's intelligence, musicality, interest, dedication, etc. In the alternative programme material is not included simply because it appears logical for the writer and her learners. In the practical research, trends emerge for the ways in which blind children learn. The material is presented in such a way that the teacher may make adaptations for the particular learner. The material will also not be appropriate for all blind learners.

2.15   ADVANTAGES OF THE RECORDER OVER THE PIANO

It is the researcher's view that it is advisable to start the child on a monodic instrument before assessing the child's aptitude for reading music. Alvin (1965:50) agrees that inability to read music may be a stumbling block and a source of frustration to an

otherwise musical child. This inability is an impediment that impairs or stops the musical progress of the child.

The practical research sets out to compare the teaching of braille music via a monodic instrument, as against a keyboard instrument. Various authors in the compilation of articles edited by Hoare and Hoskins (1993:7) contribute to this issue. Salt (1993:7) makes the point that some visually impaired children who display any interest in music are too often put on the piano almost automatically, which may be good for some of them but for others some other instrument might be more appropriate. Campbell supports this view by saying that most musicians would agree that for pianists the memorising of keyboard music from braille and the successful combining of the hands is something that will tend to come slowly in all except a few cases (Salt 1993:11). Advantages of a monodic instrument, that is not blind-specific, are the size and portability, inexpensiveness, the need to read only one line of music, and the practicality of the instrument for group work. In the same compilation of articles (Salt 1993:37), Donaldson supports the advantage of a monodic instrument by suggesting that recorder books are often particularly good for slow pupils who need lots of simple tunes using only a few notes.

Brambring (2002: lecture) says that with certain complex coordinated movements, for example, tower building with blocks, the blind child cannot only do it tactually, as a sighted child can do it visually - the blind person has to solve the problem cognitively as well. Brambring refers to Piaget's suggestion that one does not start a child too young with certain things which require cognitive ability, because this uses far too much energy and time. The child should be led just one step at a time in cognitive development. The import of this for the alternative programme is that, since the playing of the recorder is less of a cognitive challenge than is piano playing, it would be an appropriate instrument on which to begin a young blind child.

2.16 INADEQUACY OF BRAILLE RECORDER TUTORS

For the blind child one problem associated with all available developmental recorder reading programmes is that they are developmental in terms of the print code. The orthography of braille music notation is such that the relative difficulty of musical concepts is not comparable in the two codes. The burden of learning new characters or braille signs in the early reading materials is increased for the braille reader because a number of embossed patterns may have to be learned for only one sign in print. The fact that the blind person is only able to perceive one braille character at a time has not been taken into account in available music braille music recorder tutors, for example, the sign for the double bar line, words signs or pause. See Figure 8.

Figure 8: Double bar line

The octave marking in braille music notation does not exist in print, so that print authors do not have to plan for the frequency of repetition that would be necessary for mastery of a new braille character. The octave rules have previously been explained. See Figure 9.

Dot four = octave one
Dots four & five = octave two
Dots four, five & six = octave three
Dot five = octave four

Dots four & six = octave five
Dots five & six = octave six
Dot six = octave seven

Figure 9: Octave markings

In braille, many variants of concepts are new characters or new patterns for the beginning reader, for example, the note B as a crotchet or as a minim. See Figure 10.

Figure 10: The note B as a crotchet or as a minim

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The researcher agrees with Athearn *et al.* (1944:119) that print code transcribed into braille code does not provide adequate instructional material to deal with the special aspects of the braille code. The same applies to the braille music code, in that sufficient practice is not given for the pupil to tactually learn a new braille music character, for example, lower cell contractions. The researcher has observed that there is a natural tendency for inexperienced readers of braille music notation to overlook lower braille cell signs, like those for the repeat signs and punctuation signs. See Figure 11.

Figure 11: All types of repeat signs

For further examples of how the braille music code differs radically from that for sighted persons, and therefore needs special practice for each concept, see Figures 11 and 12 for examples of doubling practice.

If a sign is to appear more than three times, for example a staccato sign, the sign is doubled and then only appears again before the last staccato note. See Figure 12.

Figure 12: Doubling of signs

Braille-code rules, like context changing the meaning of a braille sign, e.g. semi- and demisemiquaver, where the context decides whether are not they are semibreves or minims, need extra consolidation. See Figure 13.

Figure 13: Semibreves and semiquavers; minims and demisemiquavers

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Further inadequacies discovered when examining currently available braille recorder tutors are that:

- No alternative is provided for the finger charts available for sighted players;
- No consideration is given to the fact that the braille music system is built totally differently from the sighted music notation. For example, whereas sighted notation is placed on lines and spaces and uses clef signs, braille notation uses octave markings;
- No exercises are therefore provided for the practising of correct octave location and understanding the octave rule, which should be a paramount consideration;
- No alternative is given for the pictures provided to show how the instrument should be handled;
- Contracted braille (comprising short forms) is used for titles and words of melodies.

We cannot teach any child anything unless we begin where he/she is, at his/her own mental, perceptual and emotional level. This approach has to be an individual one, since a handicapped child rarely fits into a general pattern (Alvin 1965:39).

When we teach music to handicapped children, we have to try unorthodox methods and use an imaginative approach not to be found in textbooks (Alvin 1965:15). This is precisely what the alternative approach seeks to do.

2.17   INDEPENDENCE

Blind children, more so than the sighted, need to be told the reasons for doing things. In every possible way their environment should be planned so that independence is encouraged. It is supremely important that the teacher of young blind children should never do anything for them that they can do for themselves, even if they can only do it slowly and badly (Arnold *et al.* 1938:98). Therefore it is not a good idea to push the children around when dealing with sitting position and technique. Rather, time should be taken to carefully explain what one wants done, while they are doing it. Learners are

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made to feel inadequate and humiliated when their fingers and bodies are pushed into various positions.

Sacks *et al.* (1992:182) believe that continually reducing assignments for the visually impaired child, eliminating difficult tasks, or doing a task for the individual because it is easier for a sighted person to do so, are symptoms of lowered expectations, often resulting in learned helplessness.

Arnold *et al.* (1938:77) postulate that some measure of self-government and self-direction in schoolwork would be even more valuable to the blind than to the seeing, because blindness can so readily become an excuse for refusing to accept risks and responsibilities. Therefore an increase in the number and scope of the attempts should be made to give the children themselves a greater share in planning and organising school activities, for only in this way can the children be trained to face the larger responsibilities of later life with a bold and independent spirit. This is implemented in the alternative approach, for example, by asking the learner if they would like to carry on, or whether they would like to do the same exercise again. They are sometimes allowed to choose what the next activity will be.

A further conclusion to the above discussion would appear to be that the learning of braille music notation as opposed to playing by ear, enables blind children to be self-reliant, since they can study on their own, and this answers their deep need for independence. Many teachers of blind learners teach music by ear even though the children are well able to learn the braille music code. Playing by ear can kill the appetite for the later learning of music notation and deprives the child of a necessary opportunity for self-reliance.

2.18   GROUP WORK

According to the cognitive-structural model, the social development of blind and visually impaired children through interactions with peers may be impeded by the children's slower physical development and their reliance on sighted mediators' perceptions to make sense of the environment and to initiate positive social experiences. Sacks *et al.* (1992:1&2)

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therefore note the importance of providing experiences that maximise positive social contacts for children. This is so especially for the blind and visually impaired children, who may be at a disadvantage in acquiring the same level of social competence as their sighted peers, because they lack the visual input that is critical to develop relationships and to move about independently and take charge of their environment. They also can experience a lack from their inability to play team games, or join in any task without help.

For this reason the teacher must endeavour to widen to the utmost extent the spheres in which the blind can move independently, perhaps most important and difficult of all, the sphere of social relationships. The alternative approach takes cognisance of this fact, with the use of group work, including the playing of own compositions in front of peers.

Frampton and Rowell (1939:59) find that the child who integrates in a small music group can transfer this integration to larger social groups. Moreover, group work is a socially integrating force, the effect of which may go far beyond the value of musical achievement, and whereas handicapped children may have little hope of individual achievement in music and therefore little ambition, their contribution to a successful group may be a substitute. Carl Orff concurs with the notion that by doing music in a group, the child becomes part of the success of the group (Coertzen 1994:105).

It is also important to note that peer acceptance is extremely important to learners in Grades 4 to 6. Group work, project work and peer assessment should, therefore, feature prominently in their learning (Department of Education 1997:5). Snell and Brown also believe that socialisation via group work leads to a growth in self-concept (2000:404). A strong body of research has emerged demonstrating that students do not require one-on-one teaching arrangements to learn functional academic skills, but can learn well in small groups. By teaching in small groups, teachers can maximise the amount of instruction students receive and minimise "down time" when little learning takes place. However, the slower readers in the group may yet have to have extra individual lessons.

Moreover, through group work each student gets the chance to discover his or her

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strengths and weaknesses, thereby gaining a clearer sense of identity. One of the main benefits of group work (or "co-operative learning") is higher self-esteem based on self-acceptance (Gaikwad in Sutcliffe 2001:436).

Also, the researcher finds that group tuition improves listening skills, individual and group performance skills, theoretical and general music knowledge and musical creativity. Group work emphasises sharing, waiting turns patiently, listening quietly and following directions.

The researcher has discovered that by scheduling a change in pace every six to nine minutes, one finds increasing attentiveness and co-operation. This was another consideration when drawing up the alternative approach.

2.19   COMPOSITION AND CREATIVITY

Ideas are more important than grammar, spelling and punctuation. The children who make up a tune are probably not yet able to write it down, and the teacher guides them. This can stimulate the children's interest in musical notation. Creative activities are an emotional outlet of the greatest value, which integrate the child's emotional, physical and mental experiences. The blind child, more perhaps than any other, needs continual incentives to break the closed circuit of unexpressed ideas (Arnold et al, 1938:75).

Arnold et al. (1938:137) put it well when they say there are some subjects, which in schools for the seeing are still too often regarded as being accessories or, in some sense, ornamental, which are of the highest importance in the education of the blind. Music is certainly one of these. To blind children music largely takes the place of the aesthetic gratifications of which they are deprived through lack of vision. They can know nothing of colour or composition in pictorial art, and little of design or decoration in sculpture or architecture; but the counterpart of these things blind children will obtain in tone and melody and in the form of musical compositions (Arnold et al. 1938:137).

2.20 PERFORMANCE

Music is a performing art, so the researcher believes in performing at the end of each lesson as a form of recapitulation. Each lesson is a microcosm of the whole. Music is available for use and exists only in performance (Elliott 1995:172). Therefore performance forms part of the alternative approach, in that every opportunity is provided for this, individually and in groups.

Herewith follows a review of the literature concerning Curriculum 2005, as espoused by the Western Cape Department of Education. The Revised National Curriculum Statement of 2002 will also be considered. The procedures of outcomes-based education in the current study are to be noted.

2.21 CURRICULUM 2005, THE REVISED NATIONAL CURRICULUM STATEMENT AND OUTCOMES-BASED EDUCATION (OBE)

Curriculum 2005 was the first major curriculum statement of a democratic South Africa, deliberately intended to simultaneously overturn the legacy of apartheid education and catapult South Africa into the 21st Century. No longer would the curriculum reproduce the limited interests of any one particular grouping at the expense of another. It stands as the most significant education reform in South African education of the last century. Introduced into schools in 1998, Curriculum 2005 was reviewed in 2000 to assess its structure and design, accompanying teacher development processes, learning materials developed to support the curriculum, provincial support to teachers in schools and implementation timeframes. The approaches to religion in education **and to learners with special needs** accord with national policy (Department of Education 1996:1 & 2).

The curriculum can play a vital role in creating awareness of the relationship between human rights, a healthy environment, social justice and inclusivity. The Revised National Curriculum Statement has tried to ensure that all Learning Area Statements reflect the principles and practices of social justice, respect for the environment and human rights as

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defined in the South African Constitution. In particular, the curriculum attempts to be sensitive to issues of poverty, inequality, race, gender, age, **disability**, and such challenges as HIV/ AIDS. **The special educational, social, emotional and physical needs of learners are addressed in the design and development of appropriate Learning Programmes** (Department of Education 1996:10). The Revised National Curriculum Statement is not a new curriculum, but a streamlining and reinforcement of Curriculum 2005. It remains true to the principles, aims and core of Curriculum 2005 and affirms the commitment to outcomes-based education (Carl 2004:18).

The previous Minister of Education, Professor Kader Asmal, in his introduction to the White Paper 6 (Department of Education 2001:6), which concerns Special Needs Education, made these recommendations: that we work together to nurture our people with disabilities so that they also experience the full excitement and the joy of learning, and to provide them, and our nation, with a solid foundation for lifelong learning and development (Department of Education 2001:4). His report also suggested that we should ensure that there is a supportive and inclusive psycho-social learning environment, developing a flexible curriculum to ensure access to all learners.

The researcher has therefore especially attempted to develop a programme which will be accessible and appropriate to blind learners.

The White Paper (Department of Education 2001:12) defines inclusive education and training as:

- Enabling education structures, systems and learning methodologies to meet the needs of all learners;
- Acknowledging and respecting differences in learners, whether due to age, gender, ethnicity, language, class, **disability**, HIV or other infectious diseases;
- Changing attitudes, behaviour, teaching methods, curricula and environment to meet the needs of all learners (Department of Education 2001:6).

In line with the foregoing definition of inclusive education, the researcher has set about preparing a programme which concentrates on respecting the significant differences between blind and sighted learners.

The White Paper notes that different learning needs may also arise because of:

- Negative attitudes to and stereotyping of difference;
- An inflexible curriculum;
- Inappropriate languages or language of learning and teaching (Department of Education 2001:7). These needs mentioned are precisely those which motivated he researcher to investigate a more fitting "language" for teaching music to blind learners. Accordingly, the White Paper arises out of the need for changes to be made to the provision of education and training so that it is responsive and sensitive to the diverse range of learning needs (Department of Education 2001:12).

This White Paper further advocates inclusion based on the principle that learning disabilities arise from the education system rather than from the learner. Notwithstanding this approach, the Paper makes use of terms such as "learners with special education needs" and "learners with mild to severe learning difficulties". This terminology is part of the language of the approach that sees learning disabilities as arising from within the learner. There should be consistency between the inclusive approach that is embraced, viz. that barriers to learning exist primarily within the learning system and the language in use in our policy papers. As such, the White Paper adopts the use of the terminology "barriers to learning and development". It retains the internationally acceptable terms of "disability" and "impairments" when referring specifically to those learners whose barriers to learning and development are rooted in organic/medical causes (Department of Education 2001:12). The researcher has taken note of the new terminology in use, but will throughout use the term "blind", since it is this condition which precipitates the need for braille.

The approach in the White Paper to addressing barriers to learning and inclusion is consistent with a learner-centred approach to learning and teaching. It recognises that

developing learners' strengths and empowering and enabling them to participate actively and critically in the learning process, involves identifying and overcoming the causes of learning difficulties. So what are curriculum and institutional barriers to learning and how do we remove these? One of the most significant barriers to learning for learners in special and "ordinary" schools is the curriculum. In this case barriers to learning arise from different aspects of the curriculum, such as:

- The content (i.e. what is taught);
- The language or medium of instruction;
- How the classroom or lecture is organised and managed;
- The methods and processes used in teaching;
- The pace of teaching and the time available to complete the curriculum;
- The learning materials and equipment that is used (Department of Education 2001:19).

All of the above are barriers that the researcher discovered to be present in the current approaches to teaching braille music notation to beginners.

The White Paper 6 (Department of Education 2001:49) will require that all curriculum development, assessment and instructional development programmes make special efforts to address the learning and teaching requirements of the diverse range of learning needs, and that they address barriers to learning that arise from language and the medium of learning and instruction; teaching style and pace; time frames for the completion of curricula; learning support materials and equipment; and assessment methods and techniques. The researcher therefore proposes to aid in the fulfilment of the requirements set forth in White Paper 6, from the Department of Education.

The Manifesto on Values, Education and Democracy from the Department of Education, 2002, finds expression in the Revised National Curriculum Statement, and includes:

- Infusing the classroom with a culture of human rights;

- Ensuring equal access to education. This includes equal access to education for those with disabilities and impairments.

The relationship between human rights, a healthy environment and social justice is addressed in each Learning Area Statement in the above manifesto. The Learning Area Statements provide a guideline of requirements and expectations from Grade R to 9 for schools in the General Education and Training band. These principles include Human Rights and Inclusivity (Department of Education 1996:10).

The researcher has attempted to apply the principles of the Revised National Curriculum Statement in the alternative programme for teaching braille music notation to blind learners. The principles are: social justice, a healthy environment, human rights and inclusivity, a high level of skills and knowledge for all, clarity and assessability, progression and integration, and outcomes-based education, rather than content-based education.

With specific application to this project, and in support of the Revised National Curriculum Statement goals, the alternative programme for teaching braille music notation to blind learners makes use of an outcomes-based approach in the following respects:

- It considers the process of learning as important as the content;
- Both the process and the content of education are emphasised;
- The outcomes and assessment standards emphasise participatory, learner-centred and activity-based education;
- They leave considerable room for creativity and innovation on the part of teachers in interpreting what and how to teach;
- Outcomes-based education is aimed at stimulating the minds of young people so that they are able to participate fully in economic and social life;
- It is intended to ensure that all learners are able to develop and achieve their maximum ability and are equipped for lifelong learning (Department of Education 1996:12).

In fulfilment of the general requirements of The Revised National Curriculum Statement, a holistic or integrative method is used in the alternative approach, namely the inclusion of as many different areas of learning as possible: performing, listening, reading, writing and composing.

2.22 SUMMARY

This chapter has reviewed the literature that deals with the differences between the blind and the sighted learner. The cognitive and emotional differences have been highlighted, and the special importance of music to the blind noted. The psychological aspects have been corroborated by a specialist from the University of Stellenbosch. The differences between how the blind and sighted learn to read and write were explored.

The value of group-work, creative stimulation and performance has been examined, with particular attention given to the needs of the handicapped.

The literature review includes an appraisal of literary and music notation reading programmes. The appraisal is based on the preliminary literature review and sets out to determine how the blind most successfully learn to read.

The literature on Curriculum 2005, the Revised National Curriculum Statement and Outcomes-Based Education has been examined. The purpose of the review is to evaluate how best to adapt the alternative programme for teaching braille music notation to the blind learner, within the context of the principles of Curriculum 2005, which includes outcomes-based education.

Particular attention has been paid to the following, when designing the alternative programme: where possible, common braille reading errors have been pre-empted by the provision of extra exercises in order to make learners aware of the pitfalls, and to consolidate the recognition of potentially confusing braille characters. Teaching methods are related specifically to blind students, for example, hand position and hand movement in

reading the braille music is taught. The contents of the various levels have been designed so as to take into account the unique characteristics of the braille code, as well as the unique characteristics of the blind children who will use the programme.

Further data were collected on the basis of themes drawn from the literature review.

This information has been reduced into a coded matrix, which the research panel used to assess the lessons observed. Interviewing was also based on this system of coding. Chapter Three provides a detailed report of the data collection and analysis process.

CHAPTER THREE

DATA GENERATION AND ANALYSIS

3.1   INTRODUCTION

The main aim of this study, as mentioned in 1.4, is to develop an alternative approach to those currently being implemented for the teaching of braille music notation to blind learners, based on their special requirements. Since qualitative research has grown to be of the utmost value in educational research, and since a qualitative approach is so fitting for the exploration of a new area, this method has been chosen. Qualitative research comprises description of observation and interviews as the main backbone of data treatment (Miles & Huberman 1994:90). In this chapter the following will be considered: methods of data collection, presentation of data, methods of data reduction, and analysis and conclusions drawn from the results of the above methods, and verification of these methods.

The process has been outlined in Figure 14.

RESEARCH OUTLINE

RESEARCHER

Teaching music to the blind.
Alternative programme.

Tertiary education in music & education

Literary braille & braille music notation education

Problems encountered at Pioneer School
for the blind. Inadequate braille music
notation for unique needs

Literature study

Choice of qualitative research to address problem

DATA GENERATION

Candidates selected for research.

Research location

Observation programme selected

Observation of lessons based on model

Themes from literature study encoded

Adaptation of programme based on feedback

Interviews with pupils & teachers

DATA PROCESSING, INTERPRETATION & REDUCTION

Verification of data & conclusions drawn

Feedback verified

Alternative programme based on results of literature study, observation of lessons and interviews

Figure 14: Graphic representation of research outline

3.1.1 Methods of data collection

In the collection of data for qualitative research, the advantage is that the researcher does not have to abide rigidly by a preconceived conceptual framework based on the literature survey, but is free to synthesise newly discovered concepts, and to alter or discard others (Miles & Huberman 1994: 1). This theory holds particular significance in this study, since the programme developed in just such a way. It was a dynamic process of growth, dependent on the outcome of each lesson, the processed analysis of the descriptions of the researcher, panel observers, interviewees, and the video footage observed and analysed.

Before the observation of lessons began, a provisional programme for teaching braille music notation to beginners had been set up by the researcher. The instrument medium used was the descant recorder. This programme was based on two years of teaching experience of braille music notation at the Pioneer School for the Blind in Worcester (1998 & 1999), a pilot study comprising preliminary informal interviews with blind and sighted teachers of the braille music code, and a preliminary literature study, including a wide spread of braille piano and recorder tutors available internationally.

An outline of the programme is presented in Figure 15.

OUTLINE OF PROGRAMME TO BE OBSERVED

ALTERNATIVE APPROACH

AIM OF LESSON OBSERVATION:
To determine needs of blind learners and how best met

Periodic adaption of programme according to identified needs

Teacher objectives & learner outcomes

Teaching resources & strategies

Learner 3's lessons 1,2,3,4,5 & 6

Evaluation

Teacher objectives & learner outcomes

Teaching resources & strategies

Learner 2's lessons 1,2 & 3

Evaluation

GROUP LESSONS

Teacher objectives & learner outcomes

Teaching resources & strategies

Group lessons 1,2,3,4 & 5

Evaluation

Deductions

Teacher objectives & learner outcomes

Teaching resources & strategies

Learner 1's lessons 1,2,3 & 4

Evaluation

Figure 15: Outline of programme

An observation panel consisting of the researcher and three other members evaluated the provisional programme's efficacy in the teaching of braille music notation to three blind learners in September 2001. Specialists available for this panel at the Pioneer School were chosen on the following basis: they were all musicians in varying capacities; they were all familiar with the principles of braille reading, and they were all involved in teaching. The panel observers, together with the researcher, were:

- Panel Observer 1, who has been the chief braille music notation proofreader at the Pioneer Printing Press; she is currently the Pioneer School music librarian and also trains braille music notation transcribers;
- Panel Observer 2, an occupational therapist at the Pioneer School; and
- Panel Observer 3, who teaches piano, recorder and violin in braille music notation at the Pioneer Junior School. Not all the members were able to be present at every lesson. The programme was adapted according to the evaluation, as the lessons progressed.

Because the classes at the Pioneer School are so small – as few as two learners per class – and since very few of the learners in Grades one to four were learning a musical instrument with braille music notation as medium, and not all of those learners were available for the project due to transport difficulties, the three candidates prepared to be involved were all girls, and two of them were in the same class. They all understood that they were part of a research project and were positive and enthusiastic. The parents have given their written consent.

All lessons to be observed were scheduled for 14:00 and each candidate was to have one individual half hour lesson a week. Due to various practicalities, lessons were not always perfectly regular. The first few lessons were individual and the last few were group lessons, the combination of learners at the latter being randomly determined. The researcher wished to determine the advantages and/or disadvantages of teaching braille music notation in group-context.

Open interviews were held with the target group participants, with two senior school pupils, and with blind and sighted teachers of literary braille, and/or braille music notation.

3.1.2 Methods of data reduction and analysis

The researcher believes that the power of the qualitative approach lies in the success of the data collection, their reduction and analysis. The first source of data was a literature survey, based on how a blind person functions cognitively, emotionally and socially, and how they learn to read and write. A second source of data was collected by the observation of lessons using an observation panel. Video footage was used to confirm the observation of lessons and the data collected. A further source of data was interviews with learners and teachers. These interviews also served to confirm the data collected via the observation of lessons. Once the researcher had done the literature survey and certain themes began emerging, a set of codes was devised on which to base and assess the observation of the lessons by the panel (see Appendix 1 at the end of Chapter 5). Data reduction, or selection, took place throughout, as is characteristic of a qualitative approach. As the process of data collection progressed, data reduction took place in the form of summaries, analysis of themes and divisions. After each lesson, the components for assessment were discussed and annotated in detail. The videos were reviewed in order to confirm the assessments made and to glean further information possibly missed at the lesson observation. As more themes made themselves visible, components for assessment as codes were altered and added for future lessons.

The observation panel and the researcher were to observe certain components on which to assess the workability of the programme. These components were: playing technique, octave location, sitting and playing position, braille reading ability, braille page orientation and emotional reactions to group work, composition, performance and games. At the end of each lesson the above categories were assessed by the panel, using a 5-point sliding scale, where 5 was excellent and 1 was very weak.

The interviews of the pupils and adults were assessed using the same assessment

components. The above method of data analysis formed the basis of the eventual research results described in Chapter 4.

3.2 PANEL OBSERVATION LOCATION

Figure 16 shows the physical layout of the panel observation location.
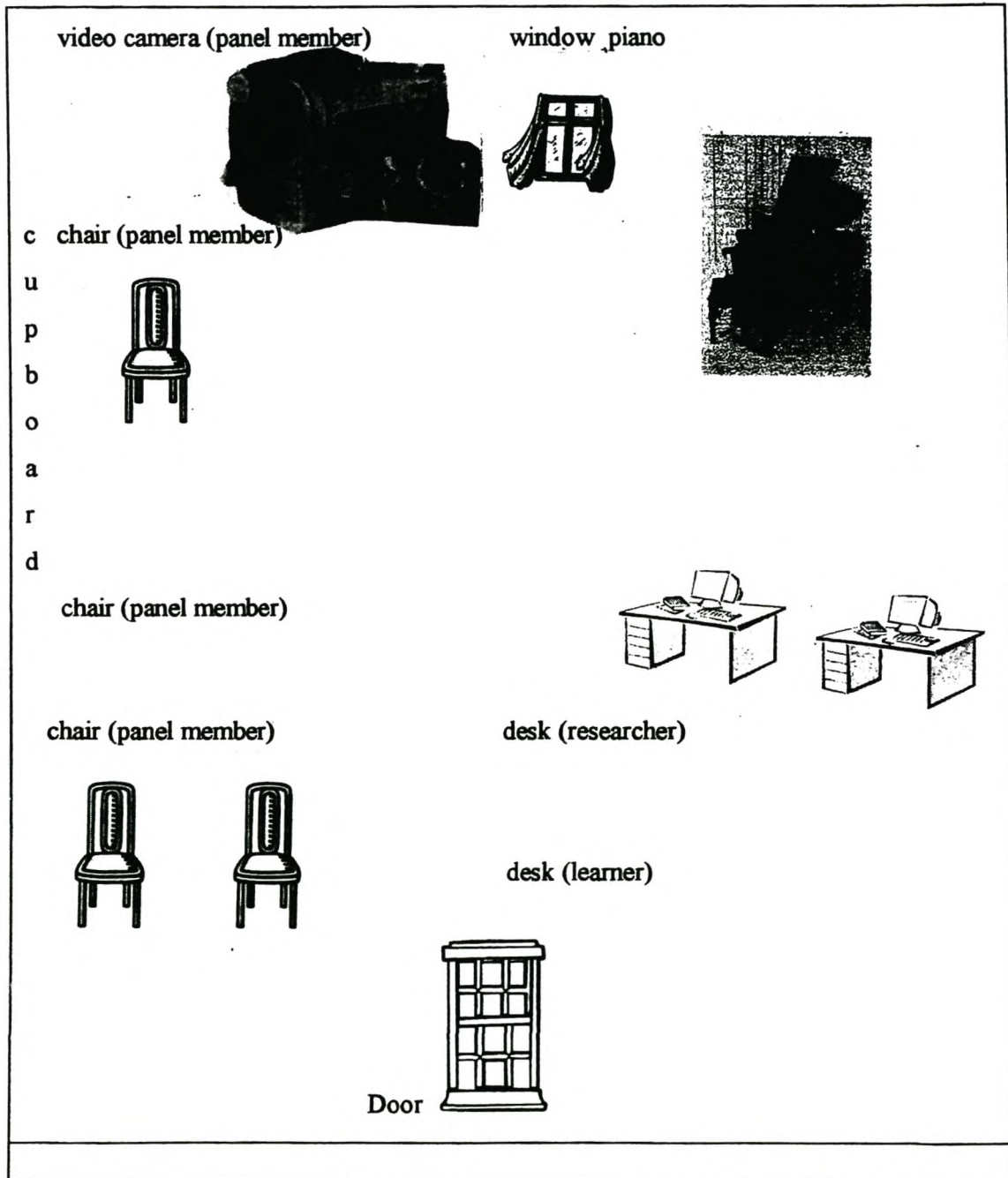
Figure 16: Panel observation location

For the first few lessons, the working of the video camera presented problems. Only after a few changes of machines were the problems rectified. The positioning of the camera and the classroom layout were altered a few times for the best viewing of the candidates, and also so that the light did not distract Learner 1 and Learner 2. These blind learners have light perception, meaning that their eyes are constantly attracted to any light.

Each candidate had a number of individual as well as group lessons. The researcher wished the panel to evaluate to what extent the candidates responded and reacted differently in the group situation. Not all of the learners had the same number of lessons, owing to illness. At some of the group lessons only two of the candidates were present. The group lessons took place towards the end of the research period of approximately three months, which was during the third term of 2001. The individual lessons are evaluated first, so that the gaps which appear in the numbering of the lessons, are filled by group lessons. The lessons were held at the Pioneer School, Worcester, at 2 pm on week days.

3.3   ASSESSMENT COMPONENTS

3.3.1   Five-point scale

A five-point scale ranging from very weak to very good, was used for assessment:

1.	2.	3.	4.	5.
Very weak	Weak	Average	Good	Very good

Very weak: The learner would require much time, help and guidance

Weak: The learner was well below the expected requirement

Average: The learner's performance was satisfactory, but required attention

Good: The learner performed pleasingly and was up to the required standard

Very good: The learner performed above the required standard

3.3.2 Assessment Components and Codes

The following assessment components, with their accompanying codes (see Figure 17), were observed by the panel:

TE LOCATING OCTAVE	BR BRAILLE READING	RE REACTIONS	SB SPECIFIC BENEFITS	MI MISCELLANEOUS
TE1 Locating octave	BR1 Two alphabets	RE1 Pleasure	SB1 Self-esteem	MI1 Page orientation
TE2 Hand size	BR2 Two clefs	RE2 Displeasure	SB2 Socialisation	MI2 Writing technique
TE3 Posture	BR3 Item order	RE3 Musical development	SB3 Creativity	MI3 Writing of composition
TE4 Uncomfortable reading position	BR4 One line of music	RE4 Learning speed		
TE5 Book placing	BR5 Item speed			
TE6 Instrument handling	BR6 Uncontracted braille			
	BR7 Octave rule			
	BR8 Reading maturity			
	BR9 Braille difficulties			

Figure 17: Assessment components

The above table of assessment components is now described in detail, together with the corresponding codes.

3.3.2.1 <u>Technical</u> (TE)

a. **TE 1: Locating octave**

The reason for the choice of this category was that in braille music the learner does not find the correct pitch on the instrument using staves, the way a sighted learner does. The blind learner finds his or her location on the instrument in the following way: octave 1 begins at the first note C at the lowest end of the keyboard; octave 2 begins at the next C up; octave three at the next C up; octave 4 begins at middle C, and octave 5, the C above that, up until octave 7, which is the highest C on the keyboard. In braille music the learner reads which octave a specific note is to be found in and then has to find that octave on the instrument. If the blind learner does not have good orientation skills, the location of the correct octave on a keyboard instrument can be time-consuming and inaccurate.

Since the recorder only uses two Cs, the researcher wished the panel to evaluate whether octave location would be speeded up by using the recorder rather than the piano for learning to read braille music.

b. **TE 2: Hand size**

The researcher wished the panel to observe whether or not a young blind learner whose hands were still growing, would be able to find the notes more easily on a descant recorder, than on a piano. This is significant because of the blind person's hampered orientation, which may affect the speed at which they learn braille music notation. This category proved to be redundant after the first lesson, since the learners' hand size and capacity for stretching were immediately evaluated.

c. **TE 3: Posture**

The observers were to note which sitting position(s) best befitted the young blind child learning to play the recorder and learning to read braille music notation. The observers were to note the learners' level of comfort, stability and physical carriage.

TE 4: Uncomfortable reading position

The panel had to evaluate which reading positions the learners found uncomfortable and which positions caused their reading to slow down. The panel had to assess which reading positions hampered page orientation and which reading positions caused the learner to lose their place on the braille page.

e.   **TE 5: Book placing**

The placing of the book was to be assessed as to whether the pupil read more comfortably with the book placed on a ledge, on a stand, elevated or not elevated, and also which height afforded the best placing

f.   **TE 6: Instrument handling**

Still on a technical level, the observation panel was to evaluate the degree to which the learners handled the instrument successfully. They had to notice how frequently the learners missed notes and how often their fingers were not covering the holes adequately. The assessment included the ease with which the learners were able to produce an acceptable sound on the instrument.

The above components were observed, again because they might affect the speed at which a blind person learns to read braille music notation. The panel was asked to observe which sitting and reading position and book placement position allowed the learner to read the most fluently, without them squirming and constantly having to change position and losing their place. Adaptations were made in the course of the lessons. The panel was also asked to evaluate whether or not they thought the reading position used for recorder playing leant itself to more comfortable and therefore more fluent reading and whether or not they thought a young blind child could handle a descant recorder more easily than the piano.

3.3.2.2 Braille reading (BR)

a.   **BR 1: Two alphabets** (literary braille alphabet and braille music notation alphabet)

In regular literary braille reading, the letters of the alphabet are based on a six-dot cell, with the dots numbered thus: See Figure 18.

Figure 18: Numbering of dots in braille cell

A certain configuration of dots represents each letter of the literary alphabet. See Figure 19.

A   B   C   D   E   F   G   H   I   J   K   L   M   N   O   P

Q   R   S   T   U   V   W   X   Y   Z
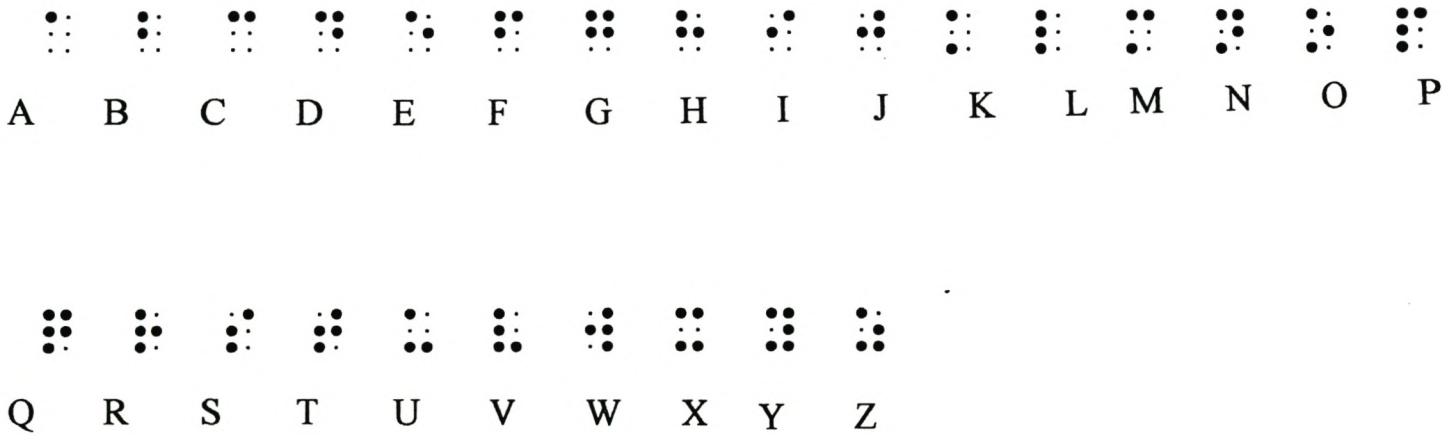
Figure 19: Literary braille alphabet

In music braille notation, however, the note A is not represented by dot 1 of the six-dot cell, but by the regular letter J. See Figure 20.

Figure 20: The note B in braille music notation

The basics of braille music notation, with quavers, crotchets, minims and semibreves, rests, octave markings, fingering (none needed in recorder playing), time signatures, sharps, flats, double bar line, slur and staccato have been presented in Figure 2 in Chapter Two.

It will have been noticed that when someone learns to read braille music notation, they have to learn a second alphabet for the first seven letters. The researcher found that this was potentially confusing. The panel was therefore asked to observe whether or not the learners mixed up the two alphabets.

b. **BR 2: Two clefs**

In piano tutors the treble and bass clefs are often both used from very early on. In recorder playing, however, because it is a monodic instrument no clef sign is required. This means that one fewer new braille character is required to be learned. The panel was therefore asked to evaluate whether or not the use of a recorder as opposed to a piano would be preferable in the initial teaching of braille music notation. This category also became redundant after the first lesson.

c. **BR 3: Item order**

The researcher also found that the order of introduction of the note names and their note values made a difference to the extent of confusion. The panel were required to observe which note names and which note values presented the least confusion.

d. **BR 4: One line of music**

This category referred to the fact that the recorder is a monodic instrument as opposed to

the piano, and should have been combined with the "two clef" category.

e.   **BR 5: Item speed**

The panel were asked to evaluate the learners' reactions to the speed at which new braille characters were introduced in the course of the lessons. This could be observed by noting whether or not the learners muddled up the various note names and note values.

f.   **BR 6: Uncontracted braille**

In literary braille, once the student has learned the basic alphabet (uncontracted braille) and can read a fair amount of vocabulary, contractions are introduced, for example, dots 1, 2, 3, 4 and 6 represent the word "and", while dots 1 and 2 of the six dot cell, which represent the letter B, is now taught to represent the word "but"", etc. In fully contracted braille there are hundreds of contractions, so that much space and paper may be saved. In currently available tutors, contracted braille is used. For example, the word "and" in uncontracted braille would consist of the three letters a, n and d, whereas in contracted braille the word "and" would comprise one braille cell. See Figure 21.

Figure 21: Braille contractions for "and" & "but"

The researcher asked the panel to evaluate whether or not they thought the learners struggled less when confronted with uncontracted braille (without short forms). The answer to this became evident near the beginning of the lessons, so that this category also very soon became redundant.

g.   **BR 7: Octave rule**

The researcher had discovered that a poor understanding of this rule in braille music notation can lead to confusion and inaccurate reading. Braille music notation does not use

the musical stave with its lines and spaces to identify pitch. Braille also does not use clefs to identify pitch. Instead, pitch is identified according to which octave it falls into. The keyboard is divided into seven octaves. Octave one begins on the note C on the left hand side of the keyboard. Octave one extends as far as the note B above it. Octave one is shown in braille as dot four of the braille cell, and the octave marking appears before the note name. Octave two begins at the second C on the keyboard and extends as far as the note B again, and so on.

The rule is that once the correct octave has been located, e.g. 4th octave C, which runs from middle C up to the B above that, if the next note leads by step, say up to D, then one plays the nearest D. Similarly, if the following note to be played after C were a B, one would still play the closest B, even though one were going down into the third octave. The same applies to the interval of a third, that is, one always goes to the note closest in proximity to the previous one, e.g. if one has to play a C to an E, one goes to the E above the C, not the E below. With an interval of a 4th or bigger, however, one must stay in the same octave, unless a new octave sign is provided, e.g. if one has to play 4th octave C to F, one must play the F above middle C, which is in the same octave, not the F below middle C, because that is 3rd octave C, and would require the 3rd octave sign in front of the note.

For a beginner this rule needs to be very carefully introduced and very thoroughly practised. In recorder playing there are only two octave signs to learn as compared with seven on the piano. The panel was consequently asked to comment on three things: to what extent the learners were confused once the octave rule was introduced, which point was the best to introduce it, and whether they thought there would be more, or less, confusion on the recorder than on the piano.

h. **BR 8: Reading maturity**
In this category the panel was simply expected to observe how accurately and fluently the learners read, and to note the progress in reading facility in the course of the lessons, as the programme was amended.

i.   BR 9: Braille difficulties

The observers were to notice the type of errors the learners were making, so that the programme could be modified accordingly, especially regarding the order in which the braille characters were being introduced, how quickly they were being presented, and spacing. The type of common errors to be identified were: character discrimination, where the learner might mistake one braille character for another, or invert characters, or take overly long to identify a character; poor reading technique, for example "rubbing"*, where the learner goes round and round on the character, trying to count the dots instead of identifying the pattern; back-tracking over already-read characters, instead of having a smooth and light flow over the page; losing the place or skipping lines.

3.3.2.3 <u>Reactions</u> (RE)

a.   RE 1: Pleasure

b.   RE 2: Displeasure

It was to be registered to what extent the learners were enjoying the lessons, i.e. were they stressed because the speed was too fast, or frustrated that the speed was too slow; were they frowning or smiling, relaxed or tense, taciturn or communicative, inhibited or spontaneous.

c.   RE 3: Musical development

The panel was to note to what extent the learners were developing musically. The understanding of rhythm, braille music notation and musical creativity was to be assessed. The consistency of the learners' musical development was also to be evaluated.

d.   RE 4: Learning speed

The panel was to appraise how often exercises had to be repeated. They had to gauge the extent that repetition was caused by a certain order of braille character introduction. The success of the speed at which certain braille characters were introduced also had to be

evaluated, so that the programme could be adjusted accordingly.

Specific benefits (SB)

a.   **SB 1: Self-esteem**

A further component that the panel had to assess via observation was the degree to which the lessons promoted self-esteem. The researcher needed the panel to note the confidence of the learners in individual and group lessons in order to judge whether or not to include group work in the braille music programme. The panel was asked to note which items in the programme enhanced self-esteem and which items should be excluded.

b.   **SB 2: Socialisation**

The panel was asked to determine the extent to which group work aided the learning of braille music notation, musical development and socialisation.

c.   **SB 3: Creativity**

The component to be assessed here was whether or not the learning of braille music notation could be facilitated by the inclusion of simple composing, using only the concepts already taught.

3.3.2.4 Miscellaneous (MI)

a.   **MI 1: Page orientation**

Losing one's place is a common braille reading error and finding it again requires good page orientation. The panel was asked to evaluate which spacing of braille characters afforded the least loss of place, or skipping of lines, and which methods of instruction enabled the learners to find a specific place on the page.

b.   **MI 2: Writing technique**

The progress of the learners' braille music notation writing was also to be evaluated, in order to see whether or not too many concepts had been taught too soon.

c.   MI 3: Writing of composition

Part of the programme was the writing down of the learners' own compositions. The panel was to determine whether or not the writing down of one's own composition was beneficial to the learning of braille music notation.

During the observation process, the panel realised that it was not always possible to observe all of the assessment components under section **3.3**, since they were not all applicable in every lesson.

3.4   LESSON STRUCTURE

Each lesson that the panel observed will be described in the following way:

- Intended outcomes for the teacher;
- The teaching strategies planned to fulfil achieve the outcomes;
- Anticipated outcomes for the learner;
- The teaching resources required during the lesson;
- Evaluation on a five-point scale.

The evaluation is based on the following components:

Technical aspects, including the evaluation of octave location, hand size, posture, reading position, book placing and instrument handling.

Braille reading, including the evaluation of the learners' differentiation between the literary braille code and the braille music code, item order, item speed, reaction to uncontracted braille, the learners' response to the octave sign, reading maturity and braille difficulties.

Reactions, including the evaluation of the learners' reactions of pleasure, displeasure, their musical development and learning speed.

Specific benefits, including the evaluation of the learners' self-esteem, social adjustment and creativity.

Miscellaneous, including the evaluation of the learners' page orientation, writing technique and writing of composition.

Now follows an exposition of what transpired in the observation of the learners' individual lessons. A short historical background is provided for each learner.

3.5   LEARNER 1

3.5.1 Background

Learner 1 was in Grade Two and was eight years old when the lesson observations took place. The researcher taught her music while she was in Grade One, when her musical potential was revealed. Initially she was taught to play the recorder by ear, but was introduced to the piano and braille music notation later in the year. She has an outstanding sense of pitch (sings beautifully), but rhythm is sometimes problematic. Learner 1 is also creative, and above average academically. In the year 2001 her tutorship was taken over by Helena Jurgens. Learner 1 is a sensitive, somewhat nervous and highly-strung child, who is competitive, and eager to please. Unlike the other two candidates, she does not live in the school dormitory, but is a day scholar.

3.5.2 First individual lesson

Present: The full panel, that is three observers and the researcher.

Teacher's outcomes: This was an orientation lesson for the candidate and panel to acquaint themselves and to discover how much Learner 1 remembered of the braille music code which she had begun learning previously; for the learner to feel relaxed in front of the

video camera and the panel; for the researcher to know at what level to prepare teaching material in the future; to observe the technical aspects of the learner's braille reading and her reactions; for the learner to have her knowledge of the braille music code refreshed.

Anticipated outcomes

for the learner: The learner will be expected to have become less self-conscious, demonstrated by her relaxed body language in front of the panel; read a short piece of braille music notation fluently.

Teaching resources: Loose sheet of braille exercises prepared by the researcher, including the use of the notes: B,A,G,C,D, as crotchets, quavers, minims, dotted minims and semibreves. Learner's descant recorder, and researcher's descant recorder for demonstration purposes; video recorder; music stand elevated on table.

Teaching strategies: The guiding of the learner in the reading of the braille by encouraging correct responses and correcting errors; the teacher is to put the learner at ease by treating her in a friendly, non-critical way.

Evaluation: The lesson assessment, which relates directly to the accompanying description in the field notes below, accompanies each lesson.

TE1: Octave location

	Weak			

The panel agreed that Learner 1's octave location was weak, so future lessons sought to discover why, and concentrate on finding a solution.

TE2: Hand size

1.	2.	3.	4.	5.
				Very good

Hand size was thought to be very good for this instrument.

TE3: Posture

1.	2.	3.	4.	5.
	Weak			

Posture was another area of weakness. Our occupational therapist pointed out, that because Learner 1 has poor muscle tone (as do many blind children), her sitting position needed support. This required attention.

TE4: Reading position

1.	2.	3.	4.	5.
		Average		

Her reading position (book placing) was also found to be less than desirable, meaning that a smaller table needed to be found.

TE6: Instrument handling

1.	2.	3.	4.	5.
			Good	

Her technical handling of the instrument was good to very good.

BR: Braille reading in general

1.	2.	3.	4.	5.
	Weak			

Observer 1 pointed out that it should have been explained that the braille music notation for the double bar-line consists of two braille characters, that is, two six-dot cells, representing one sign in print music. She also suggested that in order to know whether dots 123, or 456 are being used, the learner can put their finger between the two six-dot cells to feel the space, and thus know which six-dot cell they are closest to, that is, the cell on the left hand, or the right hand side. See Figure 22.

Figure 22: The double bar line in braille music notation

Braille difficulties arose only from the fact that there were just too many signs for a first lesson. The researcher made the error of taking for granted that Learner 1 would remember a lot more about braille music notation than she did. Hence, too many new

concepts were introduced too soon. It was immediately discovered that the clef sign was redundant. There was not sufficient time to explain the time signatures thoroughly, since the time was spent consolidating note names. Time signatures were also probably redundant for the time being. The order of items needed attention. Only one concept should have been dealt with at a time, i.e. a note name or a note value, and only the barest minimum of braille music notation signs.

She did confuse the two alphabets (braille music notation with literary braille), so more time was to be spent on this.

Uncontracted braille should have been used for titles to facilitate reading. Learner 1's reading maturity at this point was weak.

RE: Positiveness of reactions in general

1.	2.	3.	4.	5.
		Average		

Learner 1 was understandably rather stressed and not concentrating very well because of the newness of the situation. As a result she did not gain much pleasure from the lesson and her self-esteem was not nurtured.

MI1: Page orientation

1.	2.	3.	4.	5.
	Weak			

Page orientation was weak. Observer 1 recommended much more leading and guidance. The learner needed to be taught how to find her way, and how to localise. This was to be

given attention. One must make sure the learner understands where the title is to be found, (always centralised at top of page), and where to find the first music sign (below the title and the first line against the margin).

3.5.3 Second individual lesson

Present: Observer 3 and Observer 1. It is to be noted that the researcher was also present at each lesson.

Teacher's outcomes: For the researcher to find a more comfortable reading position for the learner; to improve her posture, octave location and page orientation; to consolidate the reading of the notes B, A, and G; to secure the values of crotchet, quaver and minim; to gain a more positive reaction from the learner and boost her self-esteem.

Anticipated outcomes

for the learner: The learner should be more sure of herself; she should not be confused between the braille characters representing the notes B, A, and G, or between quavers, crotchets or minims, demonstrated by her results in the given exercise; she should sit and read more comfortably, without too much moving around.

Teaching resources: Loose sheet of braille paper containing exercises prepared by the researcher; piano for accompanying; two descant recorders; video recorder; music stand.

Teaching strategies: To provide a smaller table and chair; to introduce new braille characters more gradually; to let the learner first clap the rhythm before adding the note names.

Evaluation:

TE1: Octave location

1.	2.	3.	4.	5.
			Good	

The panel found that octave location improved to number 4 on a 5-point scale, in other words, once the octave signs were found to be unnecessary at this early stage, the learner no longer had to deal with them.

TE4 and TE6: Reading position and instrument handling:

1.	2.	3.	4.	5.
		Average		

The table used was still not ideal. Learner 1 was moving around too much and needed to shift in order to play her instrument. She ended up reading and playing at the same time, which was an improvement.

BR: Braille reading

1.	2.	3.	4.	5.
			Good	

Her braille difficulties were avoided this time, since only three notes were used, and only quavers and crotchets. She succeeded in not confusing the two alphabets. Item order and item speed gained a 4 on the 5-point scale. She still required a lot of reading practice.

RE: Reactions

1.	2.	3.	4.	5.
			Good	

There was clear musical development in the lesson, and her learning speed and reading maturity were satisfactory. She was less stressed and appeared to enjoy her compounded little successes. Her performance increased her self-esteem.

MI1: Page orientation

1.	2.	3.	4.	5.
			Good	

Learner 1's page orientation improved to 4 on the 5-point scale. This was aided, the writer believes, by the fact that extra spacing was left between the items, and the learner knew how to locate the beginning of each exercise.

3.5.4 Third individual lesson

Present: Observer 1 was present.

Teacher's outcomes: To consolidate the note names B, A, and G as crotchets, minims and semibreves; to improve the technical aspects of the learner's braille reading in general and to gain positive feedback from the learner.

Anticipated outcomes

for the learner: It was expected that the learner would have a more comfortable, reading position shown by improved instrument handling and

better page orientation (the learner will not lose her place on the instrument or on the page); the learner was expected not to confuse the braille characters representing the notes B, A, and G, and those representing crotchets, minims and semibreves in the given exercise.

Teaching resources: Loose sheet of braille music notation exercises prepared by the researcher; Prestik to secure this sheet flat on desk; two descant recorders; video recorder.

Teaching strategies: The changing of an elevated reading position to a flat surface; Prestik to better secure music; the octave sign was to be omitted, since the panel agreed that it was redundant at that stage, simply taking up space and time. It would be introduced once the interval of a fourth needed to be played. The time signature was to be simplified from four quarter notes in a bar to four taa notes.

Evaluation:

TE4: Reading position

1.	2.	3.	4.	5.
			Good	

In the first two lessons, a slightly elevated reading position was employed. In this lesson it was exchanged for a flat reading surface, which appeared to be more comfortable. A further change was the use of Prestik to anchor the page. This was clearly appreciated.

BR: Braille reading

1.	2.	3.	4.	5.
			Good	

The braille reading in general improved to 4's and 5's on the scale. The notes B, A and G as crotchets, quavers and minims were consolidated. There was little confusion with the two alphabets. Item order and speed were good. Reading maturity was definitely improving. The change made to the time signature from 4 quarter notes to 4 taa notes seemed to have been successful.

SB: Specific benefits

1.	2.	3.	4.	5.
	Weak			

The attempt at composition did not have the desired effect, since Learner 1 found it stressful in front of people. She was asked to give musical answers to the musical questions provided. Her self-esteem was not enhanced by the exercise.

MI1: Page orientation

1.	2.	3.	4. Good	5.

Learner 1's page orientation was improving from good to very good. This had improved due partially to the fact that exercise numbers were being used and she had learned where to look for them, in other words, how to localise.

3.5.5 Fourth individual lesson

This was Learner 1's last individual lesson. There had been group lessons in between, when the other learners were available.

Present: Observers 1 and 3.

Teacher's outcomes: To introduce the braille characters for the notes C, D and F sharp, as also the signs for octaves 4 and 5.

Anticipated outcomes

for the learner: The learner was expected to understand the octave rule, so as not to be confused between octaves 4 and 5; for the learner to recognise the notes F sharp, C and D when introduced as a braille music notation exercise. See Figure 23.
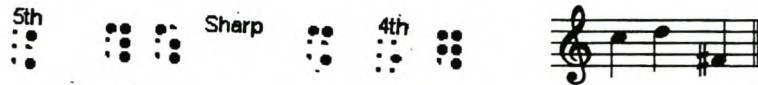
Figure 23: The notes C, D and F sharp

Teaching resources: Loose sheet of braille paper with exercises prepared by the researcher; two descant recorders.

Teaching strategies: To explain the octave rule by noting that it is not just one, but two rules, i.e. always go to the closest note, even if you go into another octave (rule one); if there is an interval of a 4th or bigger, stay in the same octave you were in (rule two).

Evaluation:

TE1: Octave location

1.	2.	3.	4.	5.
			Good	

The octave location was understood, because there are only two octaves involved on the recorder.

BR: Braille reading

1.	2.	3.	4.	5.
			Good	

Learner 1 gained 4's and 5's in most categories of braille reading in this lesson, although mistakes were made in the homework. The learner was made to understand that mistakes are not weaknesses, but are part of the learning process. The notes C and D required special attention because they are so close to each other in the alphabet. See Figure 24.

Figure 24: The notes C and D in braille music notation

RE: Reactions

1.	2.	3.	4.	5.
		Average		

Learner 1 seemed to have gained more pleasure from group tuition than from this individual session. She possibly enjoyed drawing attention to herself in front of the others. She appeared more cheerful, and her self-esteem seemed to benefit in the group situation. By contrast, this individual lesson seemed to hold less charm for her than the group lesson had.

MI1: Page orientation

1.	2.	3.	4.	5.
			Good	

Learner 1's page orientation had stabilised since she was sitting more comfortably using a smaller desk and chair, had the page anchored with Prestik, knew where to find the beginning of each exercise, and lost her place less frequently.

3.5.6 Analysis of panel and video observation of learner 1's individual lessons

It was observed that Learner 1's hand size and stretch was well suited to the descant recorder, which resulted in good instrument handling. The video shows the candidate to be comfortable technically, with hands and fingers relaxed. Posture was average to weak in Learner 1, due to inadequate muscle tone. The video shows the learner to be slouched and unable to sit still in one position, until her position was adapted. It was observed that there was very little confusion with laterality when Learner 1 was asked to do something with the left or right hand. Various positions of book, chair and table were experimented

with. As can be seen on the video, Learner 1 moved around a lot less once she was comfortable.

Regarding braille reading, Learner 1 began confusing the braille music alphabet with the literary braille alphabet as soon as the note C was introduced. This was no doubt because a C in braille music notation resembles a D in the literary braille alphabet.

Learner 1 preferred uncontracted braille (without short forms) for titles, and also preferred the songs not to contain words, since this created confusion. It was observed that the confusion resulted from the fact that learner was not sure of when it was literary braille (i.e. the words of the song), or when it was braille music notation.

With respect to braille page orientation, it was noticed that Learner 1 found that extra spacing between the lines facilitated matters. She also appeared more at ease when she had something to anchor the page. Learner 1 experienced few difficulties locating the correct octave on the recorder, since there are only two octaves on the recorder.

The observation showed Learner 1 to be somewhat nervous about composing. This is attributable to the fact that she is a highly-strung child, who is eager to please. Furthermore, although she is very musical and creative, she struggled with the rhythmic element of composition. She appeared rather stressed and therefore was not able to compose spontaneously. An additional factor which hampered her success at composition was the presence of the panel observers.

Also due to nervousness she experienced when composing, Learner 1 was uncomfortable about performing in front of her peers, and the panel, whereas she had enjoyed the previous group lesson. She thus made unforced errors, and she appeared not to be concentrating. The unnatural circumstances affected her natural performing skills deleteriously.

The panel noticed how much Learner 1 cheered up with the playing of the games. She

became more relaxed and benefited much in the consolidation of note names and rhythms.

3.5.7 Deductions drawn from learner 1's lessons

The general deduction drawn from this learner's lesson observation, is that the blind learner has a whole range of unique needs, regarding the learning and the reading of music. These needs make certain requirements for a tailor-made music programme, essential. The researcher and panel uncovered many problematic areas where the blind learner needs a specialised approach. The alternative programme therefore proposes to address these needs as far as possible.

Specific deductions drawn from Learner 1's lessons are:

The descant recorder matches the hand size of a child learning braille music notation. For this reason, the instrument handling is good. Also, octave markings are to be omitted in the very beginning stages because they are not necessary on the descant recorder to begin with. This is due to the fact that the recorder's melodic range is far smaller than that of the piano.

Learners with weak muscle tone struggle to sit comfortably unless a properly supported sitting position is arranged. Furthermore, the best reading position is flat rather than elevated, with the book anchored. Secure page orientation is essential to good braille reading. Page orientation improves when the music teacher guides the learner in localising. Localising means being aware of where they are on the braille page.

In order for braille music reading to progress steadily, the fewer braille characters dealt with at one time, the more successful. The initial writing of the time signature as two taa notes rather than two quarter notes seemed more understandable to the learner.

The introduction of the notes C and D requires special attention and consolidation, probably because they are so close to the literary braille alphabet. It was found that

uncontracted braille in titles is easier for beginners to manage than contracted braille (with short forms). Also, braille writing appeared to aid in the consolidation of new braille characters.

Composition using known concepts appeared to aid in the reading of braille music notation. Composing must be done in a calm and unthreatening atmosphere in order to maximise creativity and avoid stress in the learner. Similarly, performance can benefit the learner's self-esteem if they are exposed to an emotionally nurturing environment.

The playing of musical games as an aid to the consolidation of braille characters was very successful. This increased self-confidence. Self-confidence can grow as a result of success experienced in every step of a music programme.

3.6 LEARNER 2

3.6.1 Background

Learner 2 was eight years old and in Grade Two at the time of the study. She is above average in intelligence, and is definitely musical. She has a strong sense of rhythm, but pitch is not always sure. She is rather immature physically and emotionally, and has poor muscle tone. This learner had been under the researcher's tutorship for the past year and a half. She began by learning the recorder by ear, due to the lack of an adequate tutor. Later in her first year she was introduced to braille music notation and to the piano. The problems then experienced largely served as the impetus for this research.

Learner 2 and Learner1 were in the same class at school and they were very competitive.

3.6.2 First individual lesson

Present: Observer 1 and Observer 2. The researcher was present at all lessons.

<u>Teacher's outcomes</u>:	The intention was to orientate the learner, that is, acquaintance was to be made with a new environment, the presence of a video camera, and strange people; secondly, it was to be observed where the learner was in the process of learning of braille music notation, by noting which braille music characters were recognised.
<u>Anticipated outcomes for the learner</u>:	The learner would become used to the strange environment and panel members by showing more confidence; the learner was expected to refresh her knowledge of braille music notation, to be demonstrated by not confusing the signs for the notes B,A,G,C,D, as crotchets, minims and semibreves, and the marking for the fourth octave, in the given exercise.
<u>Teaching resources</u>:	Loose sheet of braille paper containing exercises prepared by the researcher; music stand; video recorder; two descant recorders.
<u>Teaching strategies</u>:	To guide the learner in the reading of the following musical concepts: the notes B, A, G, C and D as crotchets, minims and semibreves, and the braille character representing octave four, i.e. dot five of the braille cell. The learner was to read aloud before attempting to play, while the teacher was to encourage appropriate responses and correct errors.

Evaluation:

TE1: Octave location

1.	2.	3.	4.	5.
		Average		

Locating the correct octave was quite successful for a first lesson. Consolidation would be necessary.

TE2: Hand size

1.	2.	3.	4.	5.
				Very good

Hand size was very well adjusted to the instrument, so that her handling of the instrument was good.

TE3: Posture

1.	2.	3.	4.	5.
	Weak			

Posture was weak owing to poor muscle tone, too big a chair, and exacerbated by the fact that she had recently been quite ill in bed. The researcher found that all the moving around slowed down the reading process.

TE4: Reading position

1.	2.	3.	4.	5.
		Average		

Her reading position and book placing made her uncomfortable, so a smaller table and chair would have to be found.

BR1: Two alphabets

1.	2.	3.	4.	5.
	Weak			

She confused the literary braille alphabet with the braille music alphabet somewhat, so that would need remedying.

BR5: Item speed

1.	2.	3.	4.	5.
	Weak			

In the orientation lesson, much was learned by everybody involved. The same lesson material given to Learner 1, was given to Learner 2, and the main problem was again too many braille signs introduced too soon. Her musical development and learning speed were limited during the lesson as a result of too many braille concepts for a first lesson.

BR3: Item order

1.	2.	3.	4.	5.
			Good	

The item order gained a 4 on the 5-point scale, but as mentioned, the item speed was a bit too quick. For a Grade Two learner, Learner 2's reading maturity was fairly good and she did not experience braille difficulties, apart from occasional confusion of the two alphabets.

RE: Reactions

1.	2.	3.	4.	5.
		Average		

Learner 2 did not appear to be her normal cheerful self. Contributing factors were her recent illness and the newness of the situation.

SB: Specific benefits

1.	2.	3.	4.	5.
			Good	

Her self-esteem gained a 4 on the scale, despite her recent illness and lack of cheer.

MI1: Page orientation

1.	2.	3.	4.	5.
			Good	

Her page orientation was good. She did not lose her place much.

3.6.3 Second individual lesson

<u>Present</u>:   Observer 1 and Observer 2.

<u>Teacher's outcomes</u>:   To improve the comfort of the sitting and reading position in order to facilitate fluency in reading, and avoidance of losing the place; to omit unnecessary braille signs, which might slow down reading; to consolidate the reading of the notes B, A and G as crotchets, minims and quavers, in the reading of the supplied exercise.

<u>Anticipated outcomes</u>
<u>for the learner</u>:   The learner was expected to have a more comfortable reading and sitting position and therefore to have improved page orientation and reading; it was anticipated that the learner would not confuse the notes B, A and G as crotchets, minims and quavers, and find benefit from the omitted braille signs, by reading more quickly.

<u>Teaching resources</u>:   Braille paper with exercises prepared by the researcher; braille machine and clean braille paper; video recorder.

<u>Teaching strategies</u>:   To allow the learner first to read the passage and clap the rhythm before playing it on the recorder; to guide the

learner in the composition and writing down of her own tune, based on known concepts. Correct attempts would be encouraged and advice given.

Evaluation:

TE4: Reading position

1.	2.	3.	4.	5.
		Average		

Learner 2's sitting and reading position still appeared uncomfortable, since she did not seem to be able to sit in any one position for longer than a few seconds. The occupational therapist noted that this is perfectly normal for a child with low muscle tone, so they need to be better "anchored". Action would have to be taken.

BR: Braille reading

1.	2.	3.	4.	5.
			Good	

A number of redundant signs were omitted in order to facilitate reading, namely the clef sign, the octave sign, and the double bar line. The lesson concentrated on rhythm using crotchets, minims and quavers, and the notes B, A and G.

The categories under braille reading gained mainly 4's and 5's on the scale which showed that there were few braille difficulties. There was little confusion with the two alphabets; item speed and order were good, as was reading maturity.

RE:

1.	2.	3.	4.	5.
		Average		

Learner 2 did struggle to have the correct number of crotchets and quavers in a bar while composing, which unsettled her somewhat. Rhythm would have to be concentrated on. Her musical development and learning speed were pleasing to the panel.

SB:

1.	2.	3.	4.	5.
	Weak			

Owing to her struggle with rhythm in the composition, the learner lost some confidence in herself. The exercise was clearly too difficult for her.

MI:

1.	2.	3.	4.	5.
				Very good

Because of the new spacing and the omission of redundant braille characters, Learner 2's page orientation was very good.

3.6.4 Third individual lesson

Present: Observer 1 and Observer 2.

| Teacher's outcomes: | The outcome anticipated was that Learner 2's sitting position would be improved by using a smaller chair and table; to introduce notes C and D and the braille signs for octaves 4 and 5. |

Anticipated outcomes
for the learner: That the learner would have an improved sitting and reading position by being better anchored, to result in stability; understand when to play high C and D, and when to play low C and D in the exercises provided.

Teaching resources: Prepared braille exercises by the researcher; smaller chair and table; two descant recorders; video recorder; piano for use in explanation of octave rule.

Teaching strategies: To explain the octave rule with reference to the keyboard and its seven octaves, that is, the lowest C on the keyboard begins octave one, and the next C up begins octave two, up to octave seven right at the top of the keyboard.

Evaluation:

TE:

1.	2.	3.	4.	5.
	Weak			

Learner 2 again could not sit in one position for more than a couple of seconds, despite the improved table and chair size. This was attributable to two factors: firstly her innate poor muscle tone, and secondly her over-boisterous or hyperactive mood.

BR:

BR1: Two alphabets

1.	2.	3.	4.	5.
	Weak			

She displayed much confusion with the two alphabets, with the introduction of the notes C and D.

BR2:

1.	2.	3.	4.	5.
			Good	

Learner 2 had missed a few lessons owing to a visit to her parents upcountry and the continuity had been broken. She was furthermore in a very boisterous mood and was not concentrating. She was over-energetic and over-confident to the extent that she was missing out important signs.

Her octave location was very good and the item speed and order were good, but she did not appear to appreciate being slowed down with the correction of her errors.

RE:

1.	2.	3.	4.	5.
		Average		

She tried to guess what the next exercise would be, and created her own composition on the given melody. She enjoyed this part of the lesson very much. She did, however, clearly dislike being slowed down to correct her errors which were due to hastiness.

SB:

1.	2.	3.	4.	5.
			Good	

The successful attempt at extemporising on the melody she was playing gave her even more confidence than she had already displayed.

MI:

1.	2.	3.	4.	5.
				Very good

Page orientation was excellent, especially with Prestik for anchoring on a flat surface.

3.6.5 Analysis of panel and video observation of learner 2's individual lessons

Handling of the instrument was very good and the video showed there to be no problem with hand size on the descant recorder. Muscle tone was weak in Learner 2, hence posture suffered. Laterality was well developed. The video footage evidenced a quick response of the learner knowing which hand to use. On examining the video, it was noticed that Learner 2 grew less tired, once a comfortable book, chair and table position was found.

Regarding braille music reading, Learner 2's problem was the confusion of the crotchet

and minim note values. This was probably due to the fact that she was mixing up the left and right sides of the braille cell, since the symbol for a crotchet occurs on the right hand side of the braille cell, whereas the symbol for a minim occurs on the left hand side of the braille cell.

It was noted that Learner 2 preferred uncontracted braille (without short forms) for titles, and that words accompanying the music added confusion to the reading of braille music notation. Because this learner was noticeably weak in page orientation, she particularly benefited from extra spacing between the lines, and the anchoring of the braille page.

Learner 2 coped well with the introduction of the octave rules on the recorder. Few errors were made.

An area where self-esteem can be improved, the panel agreed, is in performance. This was clearly demonstrated in this candidate. The learner especially enjoyed performing her own compositions.

The musical games played really delighted Learner 2. They charmed her to such an extent that she did not want the lesson to end.

3.6.6 Deductions drawn from learner 2's lessons

A number of the deductions drawn from Learner 2's lessons are the same as those drawn from Learner 1's lessons. Consequently, only the deductions which are unique to Learner 2's lessons will be noted here.

Learner 2 repeatedly confused the two alphabets, that is, the literary braille alphabet with the braille music alphabet, e.g. she would read the note C as the note D, because in literary braille the braille character for D is the same as for the note C. The deduction therefore drawn is that one should not introduce the notes C and D immediately after one another, without sufficient consolidation. This deduction would apply either to the piano or to the

recorder.

A remarkable improvement was made in Learner 2's braille music reading after the octave marking, clef sign (not necessary in braille music) and double bar line were omitted. The consequent deduction drawn is that certain music punctuation signs should be introduced much later than for a sighted child.

Rhythm was problematic for Learner 2. As a result of Learner 2's rhythmic problem, the compositional process was somewhat stressful for her. It was deduced that exercises in rhythm should be given to such a learner, e.g. in <u>Sing 'n Liedjie</u>, by A. Botha 1971. It was found to be beneficial to this learner to first clap the rhythm before playing it on the recorder.

Learner 2, as with the other two candidates, had initially been taught the recorder by ear. Especially Learner 2 objected to being held back in order to correct music braille-reading errors. Teaching by ear can therefore be counterproductive, particularly for the blind learner with an excellent ear for music.

3.7   LEARNER 3

3.7.1   Background

Learner 3 was in Grade Three at the time of the study and is of average intelligence. Her class teacher revealed that she had a reading problem and was well below average in this domain. She is however possibly the most musical of the three candidates. The researcher taught this learner in the year 2000, and in one term of studying the recorder, she had caught up to learners who had been learning for a whole year. She was also taught the piano by ear. At that stage the attempt was made to teach her braille music notation, but she struggled so much that it was eventually abandoned in frustration. She was in a higher grade than the other two candidates and was very aware of her academic deficiencies. Initially, a very bright and musical Grade Three boy was selected to be the

third candidate, but owing to transport problems in the afternoons, he had to be excluded from the research project. Finally it proved invaluable that the selected learner participated in the programme, since much more was learned by attempting to teach braille music notation to someone who really struggles with reading, than with someone who does not. In 2001 another teacher took over teaching Learner 3 the piano and the recorder, mainly by ear.

3.7.2 First individual lesson

<u>Present</u>:   The full panel was present.

<u>Teacher's outcomes</u>:   To introduce the learner to the panel and the newness of the situation; to establish whether or not Learner 3 could remember any of the music braille she had previously been taught, by reading braille music excercises; to introduce the note B as a crotchet, a quaver and a minim, and the note A as a crotchet and quaver.

<u>Anticipated outcomes</u>
<u>for the learner</u>:   It was anticipated that the learner should become relaxed despite the new circumstances, and be able to read and play the notes B and A rhythmically correctly, in the braille music exercises.

<u>Teaching resources</u>:   Braille exercises prepared by the researcher; two descant recorders; video machine; chair, table and elevated music stand on table; braille machine and fresh braille paper for writing.

<u>Teaching strategies</u>:   To allow Learner 3 to first clap the exercises before attempting to play them on the recorder; to let the learner write down the learned notes with their values, in braille.

Evaluation:

TE1: Octave location, hand size, instrument handling, reading position

No octave marking was used in these exercises, in order to facilitate reading, but Learner 3's hand size was very well suited to the instrument and her technical handling thereof was very good. Learner 3 did not appear to have as poor a muscle tone as the other two. Her reading position and response to the book placing was average.

BR: Braille reading

1.	2.	3.	4.	5.
	Weak			

By the time Learner 3 had her first lesson, Learner 1 and Learner 2 had each had one lesson, so that which was learned from those sessions could be applied to Learner 3's advantage. For example, there was no time signature, no clef sign, no octave marking, no double bar-line, and copious spacing between exercises. Furthermore, the panel decided to let the learner consolidate a note name, using different note values, before learning a second note name. Hence, in Learner 3's lesson, it was the aim to teach her only the note B and the note A, as a crotchet, quaver and minim.

Learner 3 was also required to write music braille notation from the very first lesson as a further means of consolidating the note B and A with various note values, e.g. a whole line of the note B as a quaver, then as a crotchet, then as a minim, then the same with the note A. Despite all the extra precautions taken, Learner 3 still struggled with the item order and the item speed. Remedial attention was to be paid to this problem.

RE: Reactions

1.	2.	3.	4.	5.
	Weak			

Interestingly, Learner 3 confessed to enjoying writing the braille music notation much more than reading it. This is certainly not the case with all learners. This fact could be used to advantage in the consolidation of new concepts for Learner 3.

SB: Specific benefits

1.	2.	3.	4.	5.
	Weak			

Under the categories 'reading maturity', 'braille difficulties', 'musical development' and 'learning speed' Learner 3 only gained 1's and 2's on the 5-point scale. Largely as a result of these difficulties, she did not gain much pleasure from the lesson and therefore her self-esteem, if anything, was damaged. Lessons would have to be designed to provide compounded successes and to concentrate on what she is good at and enjoys, like composing, so as to improve her weak self-esteem.

MI1: Page orientation

1.	2.	3.	4.	5.
Very weak				

Notwithstanding the fact that the sitting and reading position had already been adjusted, based on feedback from the other learners' lessons, this did not appear to assist Learner 3

in her page orientation. Much more guidance in localising was needed.

3.7.3 Second individual lesson

Present: The full panel was again present.

Teacher's outcomes: To consolidate the notes B and A as crotchets, quavers
                                          and minims, and to introduce the note G as a quaver,
                                          crotchet and minim, via braille music exercises; to improve
                                          page orientation; to ensure that Learner 3 had a success
                                          experience with braille music notation, by making sure
                                          each exercise was mastered.

Anticipated outcomes
for the learner: It was expected that by the end of the lesson Learner 3
                                          would be able to distinguish between the notes B, A and G
                                          as quavers, crotchets and minims, and to be able to play
                                          the exercises rhythmically; it was anticipated that the
                                          learner's page orientation would have improved; it was
                                          hoped that Learner 3 would be successful in the above,
                                          because she needed a positive experience in the reading
                                          and playing of braille music notation, in order to improve
                                          her self-esteem.

Teaching resources: Braille music exercises prepared by the researcher; two
                                          descant recorders; braille machine and paper; video
                                          recorder.

Teaching strategies: To guide the learner in the clapping of the exercises and in
                                          saying the note names, before attempting to play them; the
                                          teacher would praise correct clapping, and correct any
                                          errors; to help the learner write down the learned notes

and rhythms, as a means of consolidation.

<u>Evaluation</u>:

TE:

1.	2.	3.	4.	5.
			Good	

Her posture was good, as was her reading position, but the page still kept sliding on the desk. Prestik would have to be used to anchor the single page. Her instrument handling was good, and she put her recorder on a ledge below the table to keep it from falling.

BR:

1.	2.	3.	4.	5.
			Good	

Despite 'item order' and 'item speed' gaining 4's and 5's on the scale, Learner 3 really struggled to read in this lesson. She repeatedly confused the crotchet with the minim. This would require remedial work.

RE:

1.	2.	3.	4.	5.
	Weak			

The whole panel awarded the learner a 2 on the 5-point scale. Even though she tried to

remain positive, she was constantly failing to read correctly. This became a matter of great concern and the researcher began looking for an original way to solve the problem of someone who has such severe reading problems.

SB:

1.	2.	3.	4.	5.
	Weak			

Her learning speed and musical development were being slowed down by the reading. This appeared to frustrate her and further damage her low self-esteem, since she could already play the descant and alto recorders very well by ear.

MI:

1.	2.	3.	4.	5.
			Good	

Page orientation was one item that improved radically since the first lesson. The guidance in localising paid dividends.

3.7.4 Third individual lesson

<u>Present</u>:   Observer 1 was present.

<u>Teacher's outcomes</u>:   The outcome was again expected to consolidate notes B A and G, as crotchets, minims and quavers, with the use of braille music exercises.

Anticipated outcomes

for the learner: It was predicted that the learner would have gained sufficient practice in order not to mistake one note name or note value for another.

Teaching resources: Braille music exercises prepared by the researcher; descant recorders; video recorder.

Teaching strategies: Instead of teaching new material, the same ground would have to be gone over. More exercises to read, clap and play would be given.

Evaluation:

TE:

1.	2.	3.	4.	5.
			Good	

BR:

1.	2.	3.	4.	5.
	Weak			

Learner 3 in fact did worse at reading than in the previous lesson, even though nothing new was added. Both Observer 1 and I gave her mainly 2's for everything connected with reading. The main confusion occurred the moment that a dot 6 or a dot 3 was added to the basic quaver note, which represents the letter name. In the following lesson, the researcher planned to start with quaver notes, until Learner 3 really knew the letter names well enough not to confuse them.

RE:

1.	2.	3.	4.	5.
Very weak				

Learner 3 appeared very tense, as she most probably realised that the other two candidates had left her behind in the reading. This was a most unsuccessful lesson in this regard.

SB:

1.	2.	3.	4.	5.
Very weak				

Unfortunately Learner 3 again gained little enjoyment from the lesson and it was feared that she would become utterly discouraged. With such a slow learning speed and so little musical development taking place, she could not be blamed for her reaction.

MI:

1.	2.	3.	4.	5.
	Weak			

Learner 3 had also retrogressed in this area. Page orientation was weak, which radically affected reading fluency. This would require yet more guidance. Because she was so unsuccessful, even her writing of the braille music notation, which she usually enjoyed, was weak. A new approach would have to be developed in order to remedy the situation.

In order to salvage a disastrous lesson, one could positively say that more was learned

from this lesson than from any of the others: It was decided that one can far more readily identify what can be confusing to someone who struggles with reading than with someone who does not.

3.7.5 Fourth individual lesson

Present: Observer 1 was present.

Teacher's outcomes: The outcome for this lesson was the same as for the three previous lessons, that is, the teaching of the notes B, A and G as quavers, crotchets and minims. The main aim, however, was to restore the learner's faith in herself, after so much failure at reading, by not moving too quickly to the next exercise.

Anticipated outcomes
for the learner: It was envisaged that the learner would have her confidence restored and that less confusion between note names and values would result.

Teaching resources: Braille music exercises prepared by the researcher; two descant recorders; braille machine and paper; a variety of Orff instruments; video machine; small squares of braille paper with the names of the three learned notes and their values, in braille music notation.

Teaching strategies: Games would be introduced in order to provide the learner with enjoyment and a positive learning experience.

Evaluation:

TE:

1.	2.	3.	4.	5.
			Good	

There were no technical problems.

BR:

1.	2.	3.	4.	5.
		Average		

The reading homework given was not managed at all. At this point, when the researcher realised the extent of the learner's confusion, the prepared braille music exercises were abandoned and an even more remedial approach was tried. A decided attempt to let the learner succeed and find some enjoyment again was embarked on. The learner was first introduced to the note values of a crotchet, quaver and minim via Orff instruments, for example the maracas, tambourine, drum, sleigh bells and wood block. This activity was enjoyed since the learner does have a good sense of rhythm. Then Learner 3 wrote down the note B as a quaver, crotchet and minim, and then the same for notes A and G, in braille music notation. She also succeeded in this activity, since she enjoyed the motor action of braille writing. The learner could use the page on which she wrote down the notes with their values to refer to in the future.

Thereafter a fishing game was played: The notes B, A and G were given names of fishes, e.g. "bokkom", "aas" and "goudvis". The braille signs were put onto small squares of braille paper and mixed up in a bag. Learner 3 had to "fish" for a note, and then identify

the note's name and value. This she also enjoyed.

Then a question and answer session was held, whereby the researcher provided a rhythmic question on a descant recorder, and the learner was to give a rhythmic reply on her instrument. This was also a success, as Learner 3 is creative. The learner then wrote down her responses in braille music notation. This activity was a good choice, and consolidated her writing and reading skills.

Observer 1 felt that there was maybe too much variety in the lesson, i.e. the item speed was a bit quick, but at this stage the researcher was searching for anything that would renew Learner 3's faith in herself. The item order was regarded as good.

RE:

1.	2.	3.	4.	5.
		Average		

Learner 3's reaction to this lesson was an improvement on the previous three lessons.

SB:

1.	2.	3.	4.	5.
		Average		

Some semblance of self-esteem had eventually been recovered.

MI:

1.	2.	3.	4.	5.
		Average		

Page orientation was not applicable in this lesson, but Learner 3's music braille writing skills were satisfactory. Lesson 5 was a group lesson. Any individual lessons which appear to be missing, were still had by the candidate, but as group lessons, which are later described.

3.7.6 Fifth individual lesson

Present: The full panel was present.

Teacher's outcomes: The outcome was to consolidate the notes B, A and G as quavers, crotchets and minims, and to introduce the notes upper C and D, with their appropriate octave signs, with the use of braille music exercises.

Anticipated outcomes
for the learner: The expected result was that Learner 3 would learn through association with something known (fish names), and through motor action (Braillette) the two new note names, and not confuse them with B, A and G.

Teaching resources: Braillette board with pins; braille machine and paper; descant recorder.

Teaching strategies: To use the Braillette and the game of "braaing fish" as a means of consolidating letter names and rhythms; to use names of fish when introducing the notes C and D as a medium for association with something well known.

Evaluation: Technical (TE): This category was redundant in this lesson, since the learner was doing activities other than playing on the recorder.

BR (using Braillette):

1.	2.	3.	4.	5.
	Weak			

This was another weak lesson in that Learner 3 struggled severely with reading. She gained mainly 1's and 2's on the scale in the reading category. The panel was beginning to have doubts whether all this effort was in vain for someone with intrinsic reading difficulties, yet who has such an excellent ear. The suggestion was made that her literary braille teacher be consulted about her true abilities.

The lesson began with a verbal recapitulation of notes B, A and G as quavers, crotchets and minims. Since Learner 3's progress was by this time getting really behind the other two candidates, the researcher decided to introduce the notes C and D, using fish names and the Braillette. The Braillette is a little wooden block with holes punched in it, in the pattern of the six dots of the braille cell. The learner places little pins in these holes to represent various braille characters. The researcher attempted to make a game of this, by calling it "braaing fish". This proved to be a bad plan, since Learner 3 struggled terribly with this device, because she could not feel the little holes well enough in order to place the pins correctly. Her orientation on the Braillette was very weak. She would need much more guidance, e.g. the Braillette should be completely clean of all pins before adding more, and the learner should begin at the top lefthand corner, in order to facilitate orientation. The researcher made the error of taking for granted that Learner 3 had had sufficient practice using this method in literary braille. It was recommended by the panel that an empty egg box and beans be used initially in place of the Braillette.

RE:

Because of her difficulty with the Braillette, the learner became severely stressed and made increasingly more basic errors, no longer even being able to identify B's and A's and G's.

1.	2.	3.	4.	5.
	Weak			

SB:

1.	2.	3.	4.	5.
	Weak			

Given that Learner 3 was experiencing increasing difficulty with braille music reading as a result of defective orientation and cognitive deficiency, the researcher was growing most concerned as to how to improve the learner's self confidence.

MI:

Although her orientation was particularly weak, Learner 3 did succeed in her composition. She was asked to compose a short piece using only rhythm, then adding the note C, and writing it down. This was her strongest area.

3.7.7 Sixth individual lesson

Present: The full panel was present for Learner 3's last individual lesson There were group lessons in between. These will be discussed immediately hereafter.

Teacher's outcomes: To introduce the learner to the third voice part of a recorder trio with the view to playing it with the other two candidates. The second goal was to ensure that Learner 3 would have a positive learning experience so that she would not acquire a permanently negative attitude towards braille music notation.

Anticipated outcomes

for the learner: It was anticipated that Learner 3 would gain confidence from successfully doing something for which she has an undoubted talent, that of being able to play or sing a part other than the main melody.

Teaching resources: A tenor recorder; the third voice part of a recorder trio, prepared by the researcher.

Teaching strategies: The approach to this lesson was for the researcher to write a short trio which took into consideration the strengths and weaknesses of each learner, and especially those of Learner 3. Since Learner 3 is very capable of keeping an alto part in singing, and could already work out harmonies on the piano by ear, it was arranged for her to play the lowest part of the trio, on the tenor recorder. The lesson again began with a verbal recapitulation, especially of the upper and lower notes C and D with their appropriate octave signs.

Evaluation:

TE:

1.	2.	3.	4.	5.
			Good	

The tenor instrument brought along for the learner to play on, was made of wood, and was therefore a bit cumbersome for her. A plastic tenor recorder would be preferable in the next lesson. Apart from this small mishap, there were no other technical problems. Location of the octave was good in this lesson, and the book placing was comfortable.

BR:

1.	2.	3.	4.	5.
			Good	

The braille reading improved significantly, since there were fewer concepts to deal with. She gained mainly 3's and 4's on the scale for reading in this lesson, which was an improvement on her recent 1's and 2's. The item order and speed suited her much better. Her reading maturity and musical development showed clear improvement during the lesson. This was likely due to the fact that far fewer concepts were dealt with at one time. This was to be remembered for weak candidates. This was Learner 3's most successful lesson thus far.

RE:

1.	2.	3.	4.	5.
		Average		

Owing to the improved reading, reactions were clearly more positive.

SB:

1.	2.	3.	4.	5.
		Average		

Self-confidence was not improved to the extent anticipated, due to the discomfort of the wooden tenor recorder, which Learner 3 was not accustomed to.

MI:

1.	2.	3.	4.	5.
		Average		

Page orientation would have gained a higher score, had the exercises been numbered. Learner 3 was given the homework of composing a piece using all known concepts, and of writing it down in braille music notation.

3.7.8 Analysis of panel and video observation of learner 3's individual lessons

Learner 3 managed the instrument very well, even though she has small hands. As with the other two learners, muscle tone was noticeably insufficient to support good posture. The video footage clearly shows this in all three cases: much slouching and moving around in order to find a comfortable position took place. In the case of Learner 3, experimentation with book, chair and table placement was also required before stability was established.

Learner 3 was confident in her laterality on this instrument. It was seen that when asked to take the instrument in her left hand, for example, there was no hesitation.

Regarding braille music reading, as with Learner 1, Learner 3 confused the braille music and literary braille alphabets once the note C was added. She clearly preferred uncontracted braille for titles, and for words not to accompany the songs.

Although Learner 3's page orientation was average, she also preferred more space between the braille lines, and the page to be stuck down in order to avoid losing the place.

Learner 3's exposure to the introduction of the octave rules appeared positive, since it only occurred once 5th octave C was learned.

Learner 3, who is a very weak reader, did well in the writing process (motor activity), which made her feel better about herself, and gave another opportunity to deal with the braille music signs. In addition, the concentration required in having to compose, helped bring about the "state of flow" achieved by demanding tasks, and which, according to Elliott (1995:130-133), improves self-esteem. It was noted that Learner 3 could only benefit by performance if she did not feel threatened by her peers.

The playing of games was found to be most useful as a teaching strategy, especially for the weak reader who needed extra consolidation, and who needed to have success experiences in order to improve self-esteem.

The panel noted that Learner 3 was tense throughout, due to the fact that she struggles with reading, and was making a supreme effort to keep pace with the others. The replay of the video confirmed this observation.

3.7.9 Deductions drawn from learner 3's lessons

Significant deductions which can be added to those drawn for Learner 1 and 2's lessons will be noted. The other deductions drawn remain the same. Furthermore, children who have severe reading difficulties, should first be a lot more secure in literary braille before attempting braille music notation. Otherwise extreme confusion and frustration and time

wastage can occur.

Fewer concepts should be dealt with at one time, especially for learners with reading problems. Also, for learners who are dominantly right-brained, visual learners, and therefore learn best by doing, motor activities like braille writing are of singular help in the consolidation of reading. This deduction is of even more significance for the visual learner who is blind.

The use of Orff instruments, where movement is included, is beneficial for weak readers. Games are an aid to learners who struggle with reading. Both of these activities provide fun ways to learn.

The Braillette board with pins, or egg boxes with beans may be used for learners with orientation problems. For the pupil learning to play the tenor recorder, a plastic one, which is lighter, is preferable to a wooden one.

The deduction was again made that the quaver is the best note to start with in a braille music notation programme, since the confusion for this learner resulted not from the note names, but from the values, where a dot 3 or a dot 6 was added.

There does appear to be a case for not teaching very poor readers, who are cognitively weak as well, and who have particularly good ears, to read braille music notation.

3.8 GROUP LESSONS

The researcher wished to determine whether or not group learning would aid the learning of braille music notation, when the recorder was used as musical medium. The combination of learners for the group lessons was dependent on the availability of the candidates.

3.8.1 First group lesson: Learners 1 & 2

Present: Observer 1 and Observer 3 were present. The researcher was present at all the lessons.

Teacher's outcomes: The outcome was to consolidate the notes B, A and G as quavers, crotchets and minims, using Orff instruments.

Outcome anticipated
for the learners: It was anticipated that the learners would have a secure grasp of the braille music signs for the notes B, A, G as quavers, crotchets, and minims, and also a grasp of the different note values in relation to one another.

Teaching resources: A variety of Orff instruments.

Teaching strategies: At the beginning and end of the lesson the written signs were to be recapitulated. While one learner kept the crotchet beat on their instrument, the other improvised with the three note values, using another instrument. Then they swapped around. The researcher also joined in by keeping the crotchet beat on a third rhythmic instrument. The rhythmic improvisation was later transferred to the three known notes.

A further activity intended to improve consolidation of the above concepts, was question and answer rhythms. One learner provided a rhythm on their instrument, which was then answered by the other learner on another rhythmic instrument. This was then also transferred to the learned notes. The main focus of the above teaching strategies was for the learners to learn through having fun.

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Evaluation: It appeared to be a successful lesson since the panel awarded mainly 4's and 5's on the scale for nearly all the categories. Once the learners were shown how to handle the various Orff instruments, they adapted to them very quickly. The panel observed that the learners found the different sounds stimulating. The video shows smiles on the faces, at the introduction of the various instruments. The instrument handling was interesting in that learner 2 scored a higher mark than Learner 1, whereas at the piano Learner 1 was far more comfortable than was Learner 2.

The braille music notation reading categories were not applicable in this lesson, but the writing down of their compositions was successful and provided enjoyment.

Both learners enjoyed the lesson, learned easily and showed clear musical development. Their self-esteem was boosted by the creative activity, and they seemed to benefit from the socialisation. This was reassuring, since the panel agreed that these two learners were generally very competitive.

The panel agreed that the outcome of the lesson was achieved, since a better rhythmic basis was established on which to base the reading of braille music notation.

3.8.2 Second group lesson: Learners 1, 2 & 3

Present: Observer 1 and Observer 3 were present.

Teacher's outcomes: The outcome of this lesson was the same as for the individual lesson Learner 3 had had the previous day, namely to consolidate the rhythmic relationship between quavers, crotchets and minims,

using Orff instruments. A further objective was to set Learner 3 at ease due to her being one step ahead of the others in an area other than braille music reading.

Teaching resources: A variety of Orff instruments.

Teaching strategies: Initially just rhythm was used on the Orff instruments: one learner kept the crotchet beat going, while the others fitted in the quavers and minims on their instruments. They then swapped around. The researcher also joined in.

The braille signs for the notes and rhythms were recapitulated, after which the learners played the 'fishing game' described earlier. The main strategy was therefore to teach by virtue of the learners having fun.

Outcome anticipated
for the learners: It was expected that Learner 3 would consolidate her knowledge of the braille signs for the notes B, A and G, by writing, and that the group would consolidate the rhythmic relationship between crotchets, quavers and minims, with the use of question and answer phrases.

Evaluation: The group work seemed to enhance Learner 3's self-esteem, likely because she was seen to be successful by her peers. Each learner had a chance to play question- or answer phrases on their recorders, and Learner 3 was given the job of writing down the responses. Learner 3 visibly enjoyed this activity, because motor movement is her area of strength. The creativity and group work did appear to improve the self-esteem of all the participants, since these activities were successful and therefore enjoyed. All three learners were creative in the question- and answer phrases,

although Learner 3 was rather stilted and fearful of error, and Learner 1 was more self-conscious than when alone.

The order in which the activities were introduced and also the speed at which they were introduced, suited all three learners. This however, will always be a difficult balance to achieve in group work, since no two learners progress at exactly the same speed. The three learners seemed to inspire each other in this lesson and concentrated better than when they were alone. They made more of an effort to succeed in front of their peers, so that there was a good learning speed and pleasing musical development. Hardly any confusion between the two alphabets was present, even with Learner 3.

3.8.3   Third group lesson: Learners 1 & 3

Present: Observer 1 and Observer 3 were present.

Teacher's outcomes: This lesson's outcome was to consolidate the note C as a quaver, crotchet and minim, and to recapitulate the notes and rhythms learned earlier, using braille music exercises.

Outcome anticipated
for the learners: It was anticipated that the learners would not mistake the letter name C for the other learned letter names, or become confused between the note C as a quaver, crotchet or minim, when reading.

Teaching resources: Descant recorders; piano for accompaniment; braille exercises prepared by the researcher.

Teaching strategies: To first guide the learners in the reading of the note C as quavers, crotchets and minims, by pointing out errors; thereafter to add the

other notes and rhythms learned; to supervise the learners in the composition of a piece based on the note C, by making suggestions regarding rhythm.

Evaluation: It was not a good idea to combine learners 1 and 3, since Learner 3 was tense and nervous and evidently aware of her inadequacies. She felt threatened because she knew that Learner 1 was better at reading. At this point, Learner 3 needed many more reading exercises simply to consolidate the three notes and three rhythms learned. It was evidently becoming a negative issue for her.

The speed at which the activities were introduced was a little slow for Learner 1, to the extent that she appeared bored. The speed was a little fast for Learner 3, and she was making a decided effort to keep pace with the others. It was agreed by the panel that the order in which the activities were presented was successful.

A brief synopsis of the panel's point awarding made very clear the dichotomy between these two learners: whereas Learner 1 gained mainly 4's and 5's, Learner 3 gained mainly 2's and 3's. They did, however, both enjoy the miniature performance they gave, accompanied by the researcher on the piano.

3.8.4 Fourth group lesson: Learners 1, 2 & 3

Present: Observer 1 and Observer 2 were present.

Teacher's outcomes: The objective was to refresh knowledge of the notes B, A, G and C, as quavers, crotchets, minims and semibreves, and to teach 4th and 5th octave D, using braille exercises. A further objective was to introduce the trio composed by the researcher, which was based

on all concepts learned thus far.

<u>Outcome anticipated</u>

<u>for the learners</u>:   It was expected that the learners would correctly identify whether the note was a lower or a higher C or D, and not mistake one note value for another.

<u>Teaching resources</u>:   Descant recorders; braille exercises prepared by the researcher.

<u>Teaching strategies</u>:   To first consolidate 5th octave C with all its note values; then to introduce 5th octave D with all its note values; then to mix these two notes with their note values.

<u>Evaluation</u>:   Locating of octave was not a problem, since the learners were introduced to the new note as either upper or lower D.

Compared to the introduction of the notes B, A and G, there was much more confusion with the introduction of the notes C and D. The item speed was evidently too fast, and therefore learning speed was hampered.

Interestingly, Learner 3 gained the most in self-esteem from this group activity, since the attention was taken away from her to some extent. She clearly benefited from group affirmation.

Unfortunately, the panel noticed an undercurrent of competitiveness in this lesson, which undermined the pleasure gained.

3.8.5   Fifth group lesson: Learners 1, 2 & 3

<u>Present</u>:   Observer 1 and Observer 3 were present.

Teacher's outcomes: The objective was to confirm knowledge of the trio learned and to give a performance thereof.

Outcome anticipated
for the learners: That the learners would not only reach the goal of playing the notes and rhythm accurately, but with musicality, enthusiasm and a sense of achievement.

Teaching resources: Descant recorders; tenor recorder; braille music trio; piano.

Teaching strategies: The attempt to convince each learner that their part of the trio was equally important, even though Learner 3 was playing an easier part; the encouragement of the learners to listen to one another in order to improve the ensemble playing; the endeavour to inspire the learners towards a creditable performance.

Evaluation: This was the last group lesson in the project. A further lesson had been scheduled but unfortunately too many members were absent. As a result, the performance of the trio was rushed. More time should have been spent practising individually, in order to avoid the stress of having to practise in front of their peers.

There was some sense of achievement in the successful performance of the trio, but Learner 1 really struggled playing the harmony, which stressed her visibly. She was used to playing the tune and singing the melody in the choir. Learner 3 gained pleasure from playing the tenor recorder on this day, and achieved some musical development, although she was very quiet. She appeared to feel unaccepted, since she was not in the same school class as Learner 2 and Learner 1, and perhaps she also felt that her part was too easy. Despite these problems, the socialisation did seem to be beneficial. It was pleasing to note that all three

learners were patient while the researcher was helping one or other of them with their part.

The original outcome of the project to teach the notes B, A, G, C and top and lower D, as quavers, crotchets, minims and semibreves was achieved. Although there was some social and musical gain from the group tuition, it would probably not be a good idea to put these three learners into a competitive situation like this too often.

3.8.6 Analysis of panel and video observation of group lessons

The panel and researcher reviewed the video recordings in order to confirm the assessments made at the end of each lesson. Furthermore, the panel examined the video footage in order to notice any subtleties or nuances, which were possibly missed in the observation of the lessons. Feedback of the video assessment was received from each panel member, and incorporated into the conclusions made and deductions drawn.

Since Orff instruments were perceptibly successful, the panel decided that it was preferable to begin braille music notation only after the first year, during which singing and rhythm via Orff instruments should be concentrated on. By then the alphabet will have been established and basic reading techniques taught. This concept contributed towards the development of the pre-programme. Looking back to the video recording, the panel noticed that for the blind child, technical difficulty was virtually non-existent with rhythmic Orff instruments, so that Orff is a good medium for consolidating rhythm. It aids in the establishment of a rhythmic basis, which facilitates the reading of braille music notation.

In the group work, many different Orff instruments were used. The learners were allowed to fully examine the instruments. Observer 1 of the panel suggested that when working with blind children, the words one uses should create a picture for them, e.g. the top of the instrument, or the bottom of the instrument, near your pinkie.

It was seen that Learners 1 and 2 benefited from the group lessons, because they regarded them as fun. Especially the games produced a cheerful atmosphere, and definitely aided in the establishment of known concepts.

On the one hand, Learner 3 appeared to enjoy the group work, since there was less reading of braille music notation involved. She has a good sense of rhythm, so that she apparently enjoyed the Orff experience. On the other hand, being a weak reader while at the same time being very musical, was a cause of frustration and embarrassment to her. By being made to read, her musical development was being inhibited. She appeared stressed at times, since she was very aware that she was struggling more than the others were with the reading. The competitive nature of her friends further exacerbated her distress.

In the composition process, it was seen that not one of the three learners really had a good idea of bars. For the blind child, special care needs to be taken with this concept, since a number of bars cannot be seen at once as with the sighted child. Only one braille character can be seen at a time. The educator will therefore repeatedly have to remind the learner of the time signature as compared with the number of beats in the current bar.

3.8.7 Deductions drawn from group lessons

Group work can contribute to the improvement of self-esteem, since all join in the success of the group. Group playing can boost the confidence of the weaker reader, because they may be able to play just as well or even better, than the good readers. Group playing furthermore increases self-esteem, because the weak learner is seen to be successful in front of their peers. The teacher should therefore ensure that the weak learner is given a part to do that is concomitant with their area of strength. One has to be careful about having one weak learner in the group though, as it may have the reverse effect. In front of the others, they should be given the things to do at which they do well.

The issue of readiness to learn braille music notation, or whether to learn it at all is not

that easily decided. There is a point at which, with certain learners, the reading is keeping them back to such an extent that they will become discouraged and give up.

The deduction is drawn that rhythmic Orff instruments are particularly beneficial to blind learners as an introduction to rhythm and establishing a rhythmic basis for the learning of braille music notation. Since technical difficulty is virtually non-existent on these instruments, it is the ideal medium to be used as an entering wedge.

In the group work, the severe competitiveness amongst the three learners was palpable. It is of interest that all three said they enjoyed the group lessons more than the individual lessons. Learner 3 was "less visible" or less exposed in the group and enjoyed the success of the group, and the other two enjoyed drawing attention to themselves. It was realised that the positive socialisation benefits of group-work can also be counterproductive, if the group dynamic is poor.

The teachers interviewed were in agreement that group work can improve self-esteem, especially of blind children, who are prone to be introverted, and especially if they can associate with sighted peers on an equal footing, which music affords. It was agreed that group **playing** can boost the confidence of the weak **reader**, because they may be able to **play** even better than their friends who read well, once they know the piece. Group playing furthermore increases self-esteem, because the weak learner is seen to be successful in front of their peers. The teacher should therefore ensure that the weak learner is given a part to do that is in line with their area of strength.

Observation proved that one has to be careful about having one weak learner in the group though, as it may have the reverse effect. In front of the others, they should be given the things to do at which they do best.

The video showed the wide span of emotional reactions of the learners to group work, ranging from enjoyment, pride and elation, to withdrawal, stress and competitiveness. The deduction drawn from this is that there are great benefits to be derived from group

work, but also inherent dangers of which the educator needs to be aware. This deduction is particularly applicable to the blind, because social exposure is not as plentiful or as natural as in the sighted, and therefore self-esteem can more easily be either enhanced or damaged.

3.9   ANALYSIS OF INTERVIEWS

3.9.1   Interviews with target group

Technical aspects

Learner 3 found the descant recorder easier to handle than the piano while Learner 2 and Learner 1 said that they found either instrument manageable. The implication of this is that not all blind learners will struggle technically when using the piano as medium for learning braille music notation. However, those who do struggle technically would benefit from using an instrument like the recorder as medium for learning braille music notation. Although this is also applicable to the sighted beginner, it is even more important for the blind beginner not to be hampered by time-consuming technicalities, since learning braille music notation is a slower process than learning music for the sighted. Although no pupil should be coerced into learning an instrument that they do not enjoy, once the all-important beginning stages of braille music notation have been mastered, the pupil can always transfer to their chosen instrument. Furthermore, if a blind pupil really does not want to learn the recorder as a beginning instrument, they may be taught the beginnings of braille music notation away from an instrument, and then later transfer to the chosen instrument.

The researcher recommends the recorder as a starting instrument for the learning of braille music notation, since it is technically the most manageable instrument for many learners.

When asked about book placement at the piano, two out of the three learners said that since the book tends to slide off the lap and close on itself, the piano ledge is preferable

for reading. It has been noticed by the researcher that especially young blind pupils tend to tire when having to hold their arms up in order to read the braille on the piano ledge. This is another reason for the researcher's recommendation of using the recorder to begin with, because the book can be placed flat on the reading surface in front of the learner.

Braille music reading

When interviewed, all three learners acknowledged that the entry of the note C was more confusing than notes B, A and G on the recorder. There are two reasons for the note C not being a good choice: firstly, the note B is easier to play technically, and secondly, the note C in braille music notation looks like a D in literary braille, which creates confusion. This is significant because most of the braille piano tutors examined by the researcher begin with the note middle C. These tutors have largely been transcribed directly from the version for the sighted, and have not taken into account that the note C is a difficult note to find on the keyboard for a blind beginner. The note D would be easier to find, because the black keys serve as a tactual guide.

It is therefore of utmost importance that a programme for teaching braille music notation take into account the ease or difficulty of braille character recognition.

Composition, performance and games

The learners interviewed concurred that the process of writing down one's own composition can help consolidate the learning of braille music notation, as well as improve self-esteem. The justification of including composition in the alternative programme is fourfold: firstly, the learner's creativity is stimulated; secondly, the experience of success in a challenging situation improves self-esteem; thirdly, the writing process brings in motor activity, which uses more of the blind person's senses and therefore aids memory; fourthly, an added exposure to the learned note names and rhythms is provided, which assists in the consolidation of learned concepts.

When asked to what extent they enjoyed the lessons, the learners agreed that the presence of the video camera and the panel was initially stressful, but they all became accustomed to it. Two of the learners were honest in saying that they did not actually look forward to the lessons, but that they enjoyed them, once under way. Although the observation of the lessons and the interviews were new experiences to the learners, their responses to the questions were consistent and logical.

3.9.2   Interview with two secondary school pupils

The secondary school learners were mainly interviewed in order to determine what blind pupils felt about the order and speed of entry of braille characters when learning braille music notation. They were interviewed in detail concerning which note names and rhythms should appear in which order. They agreed that the speed at which new braille characters generally appear is too quick for consolidation to take place, and that the blind person's tactile needs are largely ignored.

The order of notes and rhythms that these learners selected was taken into account in the preparation of the alternative programme. The learners were given the opportunity to read a braillised version of the research findings, including the justification behind the final order that the braille characters will appear in the alternative programme. Their feedback was positive, and they agreed that they had not been misquoted.

The main suggestions that the secondary school learners made regarding the order of notes and rhythms, was that the quaver should be introduced before any other note value, and that the order of notes names should be B, A, G. As with the junior school pupils, the older students agreed that the note C should be given special consolidation, since its entry can cause confusion.

The pupils chose uncontracted braille rather than contracted braille for titles of pieces for beginners. The reasoning behind this choice is that contracted literary braille, using short forms, is only taught to more advanced pupils. Many of the tutors use contracted braille

for titles, taking for granted that the pupil can already read contractions. The researcher therefore implemented this concept in the alternative programme by using uncontracted braille, even for the exercise numbers.

3.9.3   Interviews with blind and sighted teachers

Technical aspects

The six teachers agreed that a descant recorder is technically easier to manage than a piano, especially for a pupil with small hands, poor muscle tone, and weak lateral awareness. There was inconclusiveness in the teachers interviewed, although it was agreed that an elevated braille book position puts strain on the muscles, and is consequently tiring. This is a good reason for the recorder being a better instrument to be used as medium for teaching braille music notation, because the book can be placed flat and at a height suitable for the pupil. The teachers agreed that if the book is placed flat, it could be better anchored, which precludes the book closing on itself, and aids in orientation. Another suggestion made was that orientation on the page could be improved by keeping a marker on the side of the page.

Braille music reading

There was not general consensus concerning pupils confusing the notes C and D, because the braille music and literary braille alphabets are so close together. Two teachers suggested that the pupils should be taught to concentrate on the configuration, rather than on the number of dots in the braille cell. The other teachers had not encountered confusion.

There was also not total agreement as to which note names or rhythms should be introduced first. One of the teachers was very much against the programme beginning with quavers rather than with crotchets. Her main reason was that the first seven letters of the literary braille alphabet are used for the quaver notes, which she believes creates

confusion. She recommended therefore that crotchets be used first, because they cannot be confused with any other letters of the literary alphabet. There will always be a controversy concerning this point, because personal preferences come into play, and people have different ideas about the importance of musical values as compared with ease of braille character recognition and cognitive considerations. Ultimately, all the pros and cons were weighed at all levels of logic, and everyone's suggestions taken into account against the literature survey and the results of the observation. An order of braille characters was chosen which the researcher believes best takes into account the blind learner's musical and reading needs.

Uncontracted braille was selected for titles, and it was mainly agreed that words accompanying music should only be added later on. All the teachers admitted that there are fewer octaves on the recorder to confuse one than on a keyboard instrument.

<u>Composition and performance</u>

The teachers interviewed admitted to not having had experience in helping youngsters to write down their compositions, but agreed that it should assist in the learning of braille music notation, and that creativity would enhance self-esteem.

The teachers were in accord concerning the self-esteem benefits of performance. Zaayman (2001: interview), who is the senior school choir director, was particularly laudatory concerning the positive change that occurs in shy blind learners, when they are involved in performing as a group.

3.10   CONCLUSION

This chapter has covered the data generation and analysis of the study. Since the qualitative research technique was chosen, the three methods of data collection used were a survey of the relevant literature, observation of lessons making use of video recording, and interviews of pupils and teachers. The data has been recorded descriptively, as

opposed to statistically.

Since it was discovered early on in the study that little up-to-date research had been done in the field, the researcher had to depend on journal articles rather than on book sources, which were largely dated. Furthermore, the observation and interviews formed the backbone of the data collection, since the research aimed at breaking new ground.

Each lesson observed was assessed by the panel after each session. The assessment was based on codified themes exposed by the literature survey. For example, the category TE represents technical aspects in general, and TE1 stands for octave location, as a specific technical aspect. Once all the lessons had been analysed, the researcher took an average score for each assessment area. She drew conclusions based on the individual comments of the panel. The assessment was corroborated using the video footage. The areas of assessment were: playing technique, octave location, sitting and playing position, braille reading and writing, braille page orientation, reactions to group work, composition, performance and games.

The questions for the interviews were also based on the codified themes distilled from the literature survey (see Addendum 2). The responses from the interviews have been analysed using the same codified themes. These responses have been reduced to discover general patterns.

Deductions have been drawn from the findings of the data collection and analysis. The alternative programme has been adapted according to these deductions. The findings, and the resultant alternative teaching programme appear in Chapter 4, which follows. This programme is for the teaching of braille music notation to blind learners. The programme is theoretical and has not been tested, apart from under research conditions. It therefore may not be appropriate for all blind learners.

CHAPTER FOUR

FINDINGS, AND A RESULTANT ALTERNATIVE TEACHING PROGRAMME

4.1 BACKGROUND TO THE DEVELOPMENT OF THE ALTERNATIVE PROGRAMME

The researcher encountered the problem that braille music tutors in general appeared inadequate to meet the needs of the blind child. The reason for this inadequacy was that braille music tutors tended to be transcribed directly from the copy for the sighted into braille music notation. This was particularly the case with tutors written for the recorder. The researcher set out to examine the differences between the blind and the sighted worlds. The physical, emotional and cognitive areas were investigated via a literature survey, as well as the differences between how the blind and sighted learn to read. The weaknesses of current braille piano and recorder tutors were investigated against the special needs of the blind. The order of the braille characters in the tutors was examined, as was the speed of introduction of braille characters, spacing of the braille and the use of contracted literary braille in music tutors. The ways in which learners learned braille music notation, with the use of the descant recorder, were examined by observation. The researcher and three panel members observed a series of lessons, which were video recorded. The components of octave location, hand size, laterality, posture, reading position, book placing and instrument handling were considered. The reading of braille music notation with its possible difficulties was examined, for example, the acquaintance with the braille music alphabet, page orientation, memorising two lines of music and learning of the octave rules. The pleasure or discomfort of the candidates, their musical development, reading maturity, learning speed and braille writing technique were appraised during their lessons, as also their self-esteem, socialisation and creativity. Pupils and teachers were interviewed on the basis of the above components. The data gained from the investigation into the world of the blind were analysed in Chapter 3. Firstly, data gathered via video and panel observation of the candidates' lessons was critically examined; secondly, information extracted during interviews with learners was analysed, and finally, information retrieved during interviews with teachers of braille music notation and two secondary school learners of braille music notation was decoded. The data analysis was done against the background of information obtained in the literature review. In this chapter a summary of the results of the data analysis is given. The researcher then sets about showing how these findings are incorporated into the alternative teaching programme. The alternative programme is delineated at the end of the

chapter.

4.2 SUMMARY OF DEDUCTIONS DRAWN FROM ANALYSIS OF LESSON OBSERVATION AND INTERVIEWS

It was deduced from the lesson observation and interviews that small hands (or a small stretch) were initially more suited to the descant recorder than to a keyboard instrument. A descant recorder was initially easier to manage technically than a keyboard instrument. This would suggest that a child, blind or sighted, may benefit from initially learning to read using an instrument which does not provide technical difficulties. This may, however, not be true for **all** learners, since some may in fact struggle technically with the recorder and have particularly good orientation on the piano. It does appear that the blind child may have more reason to struggle with the technicalities of the keyboard than does the sighted child.

Of interest is the fact that the sighted teachers in general agreed that laterality appears to be better developed in sighted youngsters than in blind ones, whereas the blind teachers did not agree with this idea. Botha (Dec. 2001: interview) mentioned that if something cannot be accounted for, sighted people tend to blame it on blindness. However, weak laterality in young blind children might be attributable to the fact that they are taught the concept later than sighted children.

The significance of the above discussion is that better developed laterality is required on the piano than on the recorder. This means that if a blind child struggles with knowing his/her left from his/her right hand, the recorder would initially be a better choice of instrument than a keyboard. Weak laterality in the blind learner would be more noticeable on the piano than on the descant recorder. Because there are fewer octaves on the recorder than on the piano, the octave rules would also be easier to grasp on a monodic instrument. It was noted that blind learners with poor muscle tone would encounter fewer problems with posture in learning the descant recorder as opposed to the piano. Table, chair and book positions were of the utmost importance in the beginning stages of learning braille music notation, especially for those learners with poor muscle tone. For example, an elevated book placement resulted in tiredness, so that much time needed to be spent making the pupil comfortable.

With regard to braille reading, several deductions were drawn from the lesson observation and interviews. The notes B, A and G were more easily learned than the notes C and D. This was

largely due to the confusion of the braille music and literary braille alphabets when the notes C and D were introduced. Children who have severe reading difficulties should first be a lot more secure in literary braille before attempting braille music notation, otherwise extreme confusion, frustration and time wastage can occur. The seven notes in the musical alphabet were more easily learned as quavers than as crotchets or minims or semibreves. There was confusion between the crotchet and the minim note values in braille music notation.

Contracted braille was preferred to uncontracted braille in the titles of pieces. As a result of this preference, songs ought not to be accompanied by words in the early stages of learning to read braille music notation. It was noted that extra spacing between lines of music improved braille page orientation. Botha (2003: interview) pointed out that The Pioneer Printers in Worcester can print 16 braille lines on a page, if one wants to give more space between the braille lines. She recommended that it is better to have lines further apart than just to leave blank lines, since the pupil should not get used to "wrong braille".

Anchoring of the braille page also improved braille page orientation. By trial and error it was found that something to keep one's place on the page, such as a peg, or numbering of the lines, would further improve braille page orientation. Teaching the learners to localise their position on the page and making them aware of top, bottom, left and right would improve braille page orientation. The Braillette board with pins, or even egg boxes with beans may be used for learners with orientation problems.

Interviews with the teachers showed that the speed at which new braille characters appeared in music tutors for the sighted which have been transcribed into braille is definitely too fast. The speed of introducing new characters has little to do with the learning of musical concepts. The speed is concerned with the consolidation of new braille music signs, while musical concepts can be learned by the blind at the same speed as by the sighted. Fewer concepts should be dealt with at one time, especially for learners with reading problems. For learners who are predominantly right-brained, visual learners, and therefore learn best by doing, motor activities like braille writing will be of special help in the consolidation of reading. This finding is of even more significance for the visual learner who is blind. The use of Orff instruments, where movement is included, would therefore be a good idea for learners who are generally weak readers. Games may be of assistance to learners who struggle with reading.

4.3   INCORPORATION OF FINDINGS INTO THE ALTERNATIVE PROGRAMME FOR TEACHING BRAILLE MUSIC NOTATION TO BLIND LEARNERS

The deductions outlined above were drawn from the data analysis done in Chapter 3. Based on these deductions, the following recommendations are proferred for inclusion in an alternative programme for teaching braille music notation to blind learners. Use the descant recorder in the early stages. Careful choice of a chair and table that fit the learner is essential. A small-sized table and chair which fit the learners must be used. This sets their feet on the floor rather round the legs of the chair. The placement of the braille book or single page should minimise fatigue and impaired page orientation. It is recommended that the music should be placed flat on the table and anchored with Prestik to avoid movement. Braille music placed on the lap unfortunately tends to slide off, and the book is inclined to close on itself.

When teaching the recorder, therefore, music teachers might consider finding a desk with a ledge to prevent the book from sliding off and something to keep the book from closing on itself. Botha (2003: interview) noted that the height of the desk is most important, that is, the elbow and wrist should be in line, and the desk should rather be too low than too high. It is suggested that the notes B, A and G are introduced before the notes C and D. They are easier to play technically and there is less confusion between the literary braille and music braille alphabets with the learning of notes B, A and G than with the notes C and D. Smith (1993:12) confirms this notion. The possible reason for this is that the note B in the music braille alphabet is tactually the same as the letter J in the literary braille alphabet, so that they are quite far apart from each other regarding proximity in the alphabet. The same applies for the note A in the music alphabet, which is tactually like the letter I in the literary alphabet. The note C in the music alphabet is tactually like a D in the literary alphabet, so the confusion seems to result from the two letters being in such close proximity one to another. The system expects the learner to be able to say their alphabet backwards. The seven notes of the musical alphabet should be introduced as quavers before their introduction as crotchets, minims or semibreves. Dr Anne Burrows (1997) corroborates this in her modern braille tutor, but Botha (2003: interview) disagrees. Botha believes that more confusion will result from introducing notes first as quavers, since six of the first seven letters of the braille music alphabet contain mirror images. This is yet another debatable point in choosing the best order for the braille music characters to appear. Uncontracted braille should be used for titles and extra spacing between the lines of braille music notation. Initially, words should not be used to accompany the songs in order to avoid confusion between the literary braille and music braille alphabets. Botha

(2003: interview) suggests that the words of songs can be printed separately at the end of a piece, because children benefit rhythmically from the use of words.

Furthermore, even if the words are separate, the words should take up the same number of lines as do the notes, in order to make reading easier. The introduction of the octave rules should be delayed in order to minimise confusion. Kruger (2001: interview) suggests that the black keys on the piano do help with octave location, and Botha (2001: interview) recommends that the learners would have a better idea of octaves if they were shown the principle by using the piano. The introduction of all redundant musical signs usually encountered in tutors for the sighted person should be delayed. This would include phrasing and musical punctuation marks. The order of musical signs should be introduced based on the ease of braille character identification. A much slower speed of introduction of new musical signs than in a programme for a sighted person is required. Specialised exercises and consolidation of braille music notation characters which cause confusion to the average blind learner should be provided, e.g. once the octave rules have been introduced, plenty of exercise should be given in these concepts.

Only once the reading rules for octave location have been explained would it be wise to have pieces containing stepwise movement, rather than leaps. By so doing, it would not be necessary to explain how the octave markings work until the pupil has come to grips with reading notes and rhythms. This naturally does not exist in a tutor for the sighted person. The writing down of the pupils' own compositions in braille music notation may be included as part of the programme, as an aid to consolidating new braille characters.

4.4 CONSIDERATION OF THE ORDER OF BRAILLE CHARACTERS TO BE USED IN THE ALTERNATIVE PROGRAMME

The motivation for a pre-programme for blind learners who are very young or have literary braille reading difficulties is based on the following considerations: There is general consensus among teachers of blind learners that it is necessary to first consolidate the literary braille alphabet, which usually takes about one year, before introducing the music braille code. Because the blind learner takes longer to learn the music braille code than a sighted learner does to learn to read music, this puts the blind learner at an added disadvantage. The panel noticed that blind children generally tend

to have difficulty counting.

This observation was confirmed by a number of contributors to the Hoare & Hoskins compilation of articles (1993).   In the pre-programme they will learn to count and beat time before being encumbered with the braille music code. Since the literature review revealed the importance of movement for the blind child (see Chapter Two), movement forms an important part of the pre-programme. Beginning with the aural teaching of rhythmic concepts will prepare the blind learner for the introduction of braille music notation (Smith 1993:17; Campbell 1993:20). The learners will be aware of the relationship of crotchets, quavers, minims and semibreves one to the other, as well as rests in music, even before braille music notation is presented. The learners will be introduced to Orff instruments in the pre-programme. This musical background will provide them with confidence when the introduction of braille music notation occurs. There was not total agreement among the participants in the research project as to the most effective and most logical order in which the braille characters should appear. This was not surprising, since the researcher concluded that it is impossible that one perfect order exists which will suit the logic of every person's brain. The panel gave suggestions during the entire practical research project, based on the success of each lesson. The panel did come to an agreement about the order of note names and note values, but, as added information revealed itself through the researcher's continued literature study and through interviews, certain conclusions of the panel were discarded. These cases are noted and justification given for discarding the panel's conclusions. The panel decided on the following order of introducing braille characters, with justifications attached: the note B as a quaver, then as a crotchet, then as a minim, and then as a semibreve, so that the letter name may be well established, and that the learner can understand that the top part of the braille cell indicates the letter name, and the lower part of the braille cell indicates the note's value. Then the note A should be introduced in the same way, followed by the note G; then the sign for a time signature, written as 4 "taa" notes - these exercises would provide further opportunity to consolidate B, A and G; F sharp should follow, and then the sign for the key signature of one sharp; the time signature for 2 "taa" notes in a bar; the note E, because it's fingering is similar to the F sharp; the time signature of 3 "taa" notes in a bar, and the dotted minim; the note D (4th octave); the note C (5th octave); the note D (5th octave); only at this point would it be necessary to introduce the octave rule.

The delay of introduction of the octave rule was deliberate, since it is not an easy rule for beginners, as it presupposes the understanding of the concepts of a scale and intervals. Reading

of nearly all the letter names and basic note values would thus be facilitated, without the octave rule. All redundant musical signs would be excluded at first, since they interfere with the all-important consolidation of the letter names and their appropriate values. Thus, pieces of music would be written in which the following braille music signs would not be needed initially: the key-signature, time-signature, treble clef, phrasing and dynamic indications, octave signs and the sign for the double-bar line. Botha (2003: interview) disagrees that the time signature should initially be introduced as taa notes, her explanation being that "wrong" braille is then being taught.

The justifications provided by the panel are sound in that they have particular significance for the blind child. The researcher would, however, like to emphasise her discovery that there is more than one sphere of logic to be taken into account when choosing the best order of introduction of braille music characters: firstly, there is the level of musical logic, in other words, whether the entry of a particular item makes musical sense; secondly, there is the level of technical logic, in other words, if the entry of a particular item is the most logical for technical facility at that point; and thirdly, there is the level of readability logic, in other words, if the entry of a particular item is easier to perceive tactually than another item. The above three areas of logic have deliberately not been presented in order of importance, since for each item's entry a different level of logic would be the most important and sometimes it becomes a "juggling act" to know which area of logic is the most important for the blind child. For example, although it would make sense musically to introduce a crotchet as the first note value in the programme, on the readability level of logic the quaver is the easiest note to read tactually. Even this is debatable. Botha (2003: interview) believes, for example, that the note B as a crotchet should be introduced before the note B as a quaver. Her explanation is that only notes as quavers can be confused with literary braille. Ultimately, the needs of the individual blind learner will take precedence.

The researcher, moreover, became aware of other factors which would have to be weighed up when choosing an order of braille characters for the programme. The cognitive area: in other words, even though a certain note name may for the sighted child be musically the most logical to introduce at a specific point, for the blind child the corresponding braille character may include a greater cognitive requirement, for example, the need for understanding the octave rule. Correct braille: it is at all times necessary to use braille the way the learner will eventually encounter it in braille music notation and not to omit certain braille characters, which will later cause the learner to have to unlearn something. For example, when it becomes necessary to introduce a new octave sign, say from 4th octave G to 5th octave C, even though the learner may only know that C, the

5th octave sign should be used. The reason is that the octave rule requires that if there is an interval of a 4th or bigger, and one moves out of the current octave, a new octave sign should be inserted. This means that if there is no octave mark before a note, go to the nearest note, but if the nearest note is an interval of a 4th or 5th away, stay in the same octave. The writing rule is: for a leap of a 6th or larger, one must write an octave sign before the note, even if one stays in the same octave. For the interval of a 3rd and smaller, an octave sign is not needed, even if one goes out of the octave. For the interval of a 4th and 5th, one should only write an octave mark if one goes out of the octave. Botha (2003: interview) recommends that the octave marking should be introduced right in the very first exercise, since it would not need explanation before a new octave marking were needed.

The order of item entry should avoid clutter as far as possible. This means that only necessary signs should be introduced, because, while a sighted person can at a glance see the whole page, a blind person can only see one character at a time. Bailey (1993:19) supports this idea by recommending that basic techniques such as slurs, staccato, etc. should be taught one at a time in order to avoid clutter.

A further criterion to be considered is that the characters used in the literary braille alphabet are used to represent other letters in the musical alphabet, for example, the letter D in the regular alphabet is used to represent the note C in the musical alphabet. Another principle to bare in mind is that in braille music notation, the upper part of the six-dot cell is used to represent the note name, while the lower part of the cell shows the note value. This affects the order of item entry far more integrally than does the entry of a new note value on a musical stave for the sighted child.

The literature study revealed that the concept formation of the blind, psychology of the blind, perceptual awareness, laterality and motor coordination of the blind all contribute to making a considerable difference in the way a blind person learns to read. So, keeping all the above considerations in view, here follows the resultant order of braille characters distilled from the accumulation of ideas, and conclusions drawn. The exact order of braille characters to appear in the programme, including rests, octave markings, time and key signature, and musical punctuation are furnished. In the alternative programme itself each item appears with sufficient exercises to consolidate the musical concept and the braille character. Once each character has been presented, it appears in combination with previous items, as a means of further consolidation. Justification for, and the reasoning behind each decision taken, follows below.

4.5   ORDER OF ITEMS IN THE ALTERNATIVE PROGRAMME

The note B as a quaver. The note B as a crotchet. The crotchet rest. The note A as a quaver. The note A as a crotchet. The note G as a quaver. The note G as a crotchet. Time signature of 2/4 written as 2 "taa" notes. Double bar line. 6th octave C as a quaver. 6th octave C as a crotchet. 5th octave and 6th octave sign. The note F sharp as a quaver. The note F sharp as a crotchet. The key signature of G major. 6th octave D as a quaver. 6th octave D as a crotchet. The note B as a minim and the minim rest. The note B as a dotted minim, the dotted minim rest, and the 3/4 time signature. 5th octave D, the dotted crotchet, and the dotted crotchet rest. The note A as a minim, and the anacrusis. The note G as a minim. 6th octave C as a minim. The notes F sharp and D as minims. 5th and 6th octave E as a quaver. 5th and 6th octave E as a crotchet. 5th and 6th octave E as a minim. Semibreves, semiquavers and their rests, and 4/4 time. The quaver rest and 5th and 6th octave F. F major scale and B flat. D major scale and C sharp. C major scale and 5th octave C. The slur sign. The staccato sign and 6/8 time. The repeat signs and d minor. The phrasing signs and breath signs. Tied notes and 9/8 time.

4.6   REASONING AND JUSTIFICATION BEHIND THE SELECTION OF ITEM ORDER

The note B was chosen to begin the programme, because most participants interviewed considered it important to start with a technically easy note. Two participants thought that the note G would have provided a better hand position and provide stability, but they concurred that a blind (or sighted) beginner might struggle to close the three holes properly. Pupils could be encouraged to lightly bite the fingers which must cover the appropriate holes, since this might increase sensory awareness. One participant thought that the first note should be lower C, but all the other participants agreed that it would not be a good idea technically. A second reason for the selection was that in the braille music alphabet, the note B is very far away from the letter J, which it represents in the literary alphabet, so that there is less chance of the learner confusing the two alphabets. The A and the G to follow was acceptable to all concerned, because of the musical logic of the stepwise movement, and the technical logic of having to close one more hole each time, thus anchoring the instrument better. In the area of braille reading, the characters for the note B, A and G are not easily confused with the corresponding literary braille characters. It is most important

that a child's first introduction to braille, and especially braille music notation, is not confusing and discouraging. Top C was also a natural choice, because it is logical on the three levels of musicality, technique and braille reading. The F sharp was then selected, because it is technically the next easiest note to play. Some participants chose top D, but the researcher and a couple of the participants have found that many learners find this note uncomfortable to play when the instrument is still very new to them. This is the case even when the ring finger of the right hand is used to support the instrument. The order for the rest of the letter names was chosen mainly for technical reasons, but also for musical ones. After the crucial introduction of the first few letter names, the order of letter names lost importance. Some participants preferred the lower C to come before the lower F, but there is very little technical difference between these two notes, for the sighted as well as for the blind.

Regarding the order of note values, there was less agreement. Some participants chose the quaver with which to begin, others the crotchet, and one chose the semibreve. The semibreve was rejected because it is technically difficult for a beginner to hold a long note and it is also very dense to read (many dots of the braille cell are used). The eventual choice of the quaver by the researcher was because all the five learners interviewed chose the quaver, as did the three panel observers, and it was also the personal choice of the researcher. The reasons given by those interviewed were (a) because it is the easiest value to read tactually, since it only includes upper dots, and (b) because if one starts with the note B as a quaver, one is far enough away from the letter J which it represents, not to become confused. The reasoning against the choice of the quaver with which to begin was that it is musically not that logical, but this was outvoted by the easy readability of the quaver. Controversy still exists about the educational validity of this choice (Salt 1993:6), but the most recent piano method for blind learners, created by Dr Burrows who is blind herself, begins with the quaver (Burrows 1997).

The order of the rest of the note values was not as problematic: the choice of the crotchet followed by the minim was unanimous. Then some participants chose the semibreve, but the dotted minim is less of a new braille character to read than the semibreve, since it is virtually the same as the minim, but with an extra dot three added and it is also less dense to read. The next musical concept which needs justification is the introduction of the crotchet rest immediately after the note B as a quaver and a crotchet. This idea was not widely acceptable among the participants, but was initially considered viable by the researcher and subsequently discovered in a couple of braille piano tutors, and also suggested by Botha in an interview (July 2002). The logic behind this choice

is that it is a very different braille character from note names or note values, and also that with the use of this one symbol, much rhythmic variety may be gained. Additionally, it provides musical phrasing.

The introduction of the 2/4 time signature early on was a general choice, but it was the panel's idea to write it as two "taa" notes first, for cognitive reasons. The French Solfège names tended to aid the concepts of rhythm and bars. This was a good choice, since it was found by the panel that all three learners had a weak sense of bars. The researcher discovered this phenomenon to be the norm in older blind learners too. It can probably be explained by the fact that a blind person can see only one braille character at a time, whereas the sighted person can see at least a whole bar at a time. Once there is a time signature, it becomes necessary to have a double bar line, because by now the learner is becoming aware of musical structure.

At this point the signs for 5th and 6th octaves are introduced, because it will be necessary for the learner to become aware of octaves once 6th octave C is learned. It should be explained that the note written as 5th octave C sounds as 6th octave C. It was recommended by Botha and Kruger in interviews (Dec. 2001) that the principle of octaves is best taught via the keyboard, because, according to Botha, the octave concept can be more "visually" perceived by a blind person on the piano, than on the recorder. Recorder music for sighted persons is written one octave down, because the descant recorder is a transposing instrument. Recorder music that has been transcribed directly from the print music is therefore often written with the note that sounds 5th octave C on the recorder, but written as 4th octave C. This can be confusing for the many blind learners who have perfect pitch, but more importantly, the reason that the music is written down an octave is so that it can be better accommodated on the musical staves. But since the stave concept does not exist for the blind person (they identify pitch by which octave it falls in), it should not be necessary to transpose the music. This is yet a further evidence that available recorder tutors do not take the needs of the blind learner into consideration and are therefore not designed for them.

There was some deliberation as to whether the F sharp should first be introduced as an accidental, or as a key signature. The general consensus was that the accidental should be used first, but Botha (2002: interview) preferred the key signature to appear first to avoid "clutter" amongst the notes. The researcher reconciled this contradiction of opinions by first introducing the F sharp as an accidental and then immediately taking the opportunity to explain the concept of the key signature. Thereafter, the sign for the key signature may appear centralised at the beginning of the piece as

it can be expected to be encountered by the learner in braille music.

Most participants preferred to introduce the minim sooner than the researcher has done, but the reason for its delay is that the main confusion in all the learners' reading is between a crotchet and a minim. They very often confuse the dot three and the dot six. It is therefore better to consolidate the dot six really well, by interspersing other braille characters, which can provide variety. Once the note B as a minim has been learned, it is logical musically to introduce the sign for a minim rest. Also, it provides much rhythmical variety, although it is just one sign, which is far removed from the note names in configuration.

The notes A, G, 6th octave C and F sharp as minims are logical to follow on all three levels of logic discussed. Botha (2002: interview) points out that one of the major differences between how blind learners should be taught, as opposed to sighted ones, is that the blind learner should very often first be taught to play a new concept before reading it, while for the sighted learner it is more often than not the other way round. For example, when teaching the slur, a sighted learner is first shown the sign in the book, then shown how to play it, while it is better to first show the blind learner how to play it before teaching them a new braille character. Similarly, when teaching the C sharp, B flat and 5th octave C, they should preferably be introduced via the playing of major scales, so that the learner will be comfortable technically, before learning to read these three new notes.

Fifth and sixth octave E are introduced as a duo, for technical reasons, as well as for extra consolidation practice of the octave rules. Because semibreves and semiquavers are perceptually the same in braille music notation, as do their rests, they are introduced together, with the 4/4 time signature. The learner can then immediately be shown that in 4/4 time, one can only expect one semibreve in a bar, so that it obviously cannot be mistaken for a semiquaver. The introduction of the quaver rest may seem very late, but up until this time it has not been needed. It really only gains significance once semiquavers are present. The appearance of staccato and repeat signs have been purposefully delayed, since they are lower signs. Lower signs include dots from the lower half of the braille cell and are also delayed in the literary braille syllabus, because they are tactually more difficult to perceive. The phrasing signs also include lower signs and they have been introduced together with the breath sign so that a dual purpose may be achieved, namely awareness of where to breathe on two scores. This means that the phrasing signs include an inbuilt suggestion of where to breathe and the breath signs consolidate the suggestion.

Musical punctuation signs have been left until the end, because they cause clutter and slow down the fluent reading of notes and their values. Salt (1993:9) accedes that music for beginners should be stripped of everything that is not essential, such as expression marks, since these cannot be placed over or below the music; they clutter it up and slow beginners down. The reasoning behind this is that the blind learner can only perceive one braille character at a time. The staccato sign's entry has been combined with 6/8 time, for the sake of variety. The introduction of d minor has been combined with the repeat signs, since the notes C sharp and B flat have by this time, been consolidated. Tied notes come at the end, because blind learners find these most confusing, especially since the braille character for the slur and the tie are so similar, and because the tie takes up the space of two braille characters. This translates into the fact that the tie cannot be "seen" under one finger tip. Also, 9/8 time adds a source of variety at this juncture. The Braillette board, or even egg boxes with beans, can be beneficial to the blind child with weak orientation. The octave rule is an extremely important concept in braille music reading and needs to be very thoroughly taught and practised. This is by far the greatest omission when transcribing music for sighted people into braille music notation. There are no exercises available to teach and consolidate this concept. Therefore this concept will receive much attention in the alternative programme.

In this chapter a summary of deductions drawn from the analysis of individual and group lesson observation has been given. Deductions derived from interviews of learners and teachers have also been provided. Based on these deductions, recommendations have been made regarding their incorporation into an alternative teaching programme for teaching braille music notation to blind learners. The factors affecting the order of braille characters to be used in the alternative programme have been considered, and an order of items has consequently been suggested. The reasoning and justification behind the selection of items and item order was revealed. Then followed the pre-programme and the alternative programme, with the exercises written in musical notation to be read by the sighted teacher.

4.7   INTRODUCTION TO THE PRE-PROGRAMME

Before embarking on teaching the braille music code to blind beginners, it is advisable for them to have consolidated the literary braille alphabet (Grade one braille). This is in order to avoid the confusion which can result when the braille music alphabet is introduced. Consolidating the literary braille alphabet may take a few months, or a year or more. During this time, while sighted children are already learning to read music, the blind child's musical development need not be delayed. The

procedure described below is recommended.

Spend the time developing the learner's natural musicianship through singing, since the blind child depends so much on the sense of hearing and rhythm. Developing their sense of rhythm is especially beneficial, because for the blind child there is a need to emphasise meaningful concrete experiences in order to maximise concepts that have relevance. The blind child learns well by means of movement, so this seems to be the ideal way to teach the basics of rhythm. The blind child learns especially well by feeling and doing (Scholl 1986:74).

The introduction of a melodic instrument to blind children may need to be delayed, since they are often uncoordinated and therefore may not be able to concentrate on the technicalities of the instrument, as well as on learning to read braille music notation (researcher's observation).

Writing exercises have been included, because this research project has shown that rather than causing extra confusion, the use of as many senses as possible helps to compensate for the lost sense of sight. The writing exercises may therefore be used to consolidate the reading of braille music notation.

4.7.1   Pre-programme:

The learner's maturity should determine the amount of time needed to be spent on the pre-programme.

LESSON 1
Introducing the concept of rhythm via non-melodic Orff instruments, singing and movement: the crotchet and the quaver

TEACHER OUTCOMES
To bring about a practical understanding of the rhythmic relationship between crotchets and quavers.

LEARNER OUTCOMES

By the end of the lessons, the learner should understand the rhythmic relationship between the crotchet and the quaver. He/she will demonstrate this by being able to clap quavers against crotchets, or vice versa.

TEACHING RESOURCES

Any non-melodic Orff instrument, e.g. drum or maracas.

TEACHING STRATEGIES AND EXERCISES

Begin by introducing the crotchet beat as a "taa" note, that is, using the solfège. This can initially be demonstrated by clapping taa-notes and singing taa taa taa taa aloud, in time with the clapping. The learner then copies this. Further movement can be added by letting the learner walk around the room in time to the taa-note, possibly with a drum or another non-melodic instrument. Tell the learner that this type of note is also called a "walking note", since one can walk in time to it.

Then introduce the quaver, or "ta-te" note. Let the learner beat out taa-notes, saying the solfège aloud, and once they have the beat well established, the teacher introduces ta-te notes. Then the teacher and learner or learners can swop around, and use different instruments.

Use as many different Orff instruments (non-melodic) as possible so that the child has fun. Allow them to choose which instrument they would like to play, and which note value they would like to beat out. By including handicapped learners in planning part of the lesson activities, they gain independence, and thus develop self-assurance.

The two note values may be combined in various combinations once the learner understands the concepts. Allow them to create their own little patterns with these two note values, by using different instruments, or by singing the solfège names.

If there is more than one learner, have them take turns providing question-and-answer rhythms. This early introduction to spontaneous creativity will improve self-assurance and set them up for composing later on.

ASSESSMENT

Continuous observation as to what extent outcomes are being achieved during the performance of the exercises. This assessment approach is applicable to all 10 lessons in the pre-programme.

LESSON 2

Beating time with two crotchets in a bar

TEACHER OUTCOMES

The idea of bars and number of beats in a bar, and the accentuation of first beats is to be taught.

TEACHING RESOURCES

Piano.

LEARNER OUTCOMES

The learner should have a clear idea of rhythmic structure in music and be able to keep time to two crotchets in a bar, using the appropriate hand and arm movements.

TEACHING STRATEGIES AND EXERCISES

Show the learner how to beat time while you play a march, clearly accenting the first beat of each bar, and counting aloud: **one** two **one** two, etcetera. Then let the learner join in with counting.

Play a number of pieces to the learner, and let him or her decide whether there are two or three beats in each bar.

LESSON 3

The crotchet rest

Consolidation of crotchet and quaver

TEACHER OUTCOMES

To show the learner that the crotchet rest and the crotchet note share the same time value.

LEARNER OUTCOMES

The learner should show that the crotchet rest and the crotchet note share the same time value, by being able to keep in time according to the crotchet beat - whether as a rest or a note.

TEACHING RESOURCES

A melodic instrument, e.g. a recorder or piano, where the note does not carry on sounding. A glockenspiel would be inappropriate.

TEACHING STRATEGIES AND EXERCISES

The teacher should use a non-melodic instrument to beat **taa** saa **taa** saa, while saying the **taa** aloud, but whispering the saa. Explain to the learner that there are two beats in a bar, but that the second beat is silent. Then show the learner how to clap **taa** saa **taa** saa. The learner may then clap and count **one** two **one** two while the teacher makes sure they have the movements correct.

LESSON 4

Introducing the minim using melodic Orff instruments

Consolidation of crotchet and quaver

TEACHER OUTCOMES

To teach the rhythmic relationship between the crotchet, quaver and minim.

TEACHING RESOURCES

Any melodic instrument.

TEACHING STRATEGIES AND EXERCISES

Show the learner how to clap crotchet beats, while saying **taa** taa **taa** taa along with the clapping. Once the learner has the crotchet beat established, the teacher should introduce the minim beat by playing minims on a **melodic** instrument and saying **taa-aa taa-aa**. The blind child will need to be shown how to clap the minim beat by letting them feel the way the teacher's hands hold the second beat.

Use singing of the solfège names and a variety of movements, such as skipping, hopping and jumping. The blind child will particularly benefit from these activities, as they generally move far less than does the sighted child. Use as many different Orff instruments as are available. The teacher should remember to let the learner use a melodic instrument for the minim beat, since the blind child might be confused when a non-melodic instrument does not hold the sound on the second beat of the minim.

If more than one learner is present, make sure that only Orff instruments are used, since they are tuned to the pentatonic scale and dissonance will not result.

Include creativity by recommending that the learner invent little patterns using the crotchet, quaver and minim. Include performance of their little compositions (preferably in a class context), since this will improve their self-worth.

LESSON 5

Introducing the minim rest

Consolidation of previously learned concepts

TEACHER OUTCOMES

To teach the learner that the minim rest and the minim note share the same rhythmic value.

LEARNER OUTCOMES

The learner should show that they understand that the minim rest and the minim note share the same rhythmic value, by holding the minim for two crotchet counts - as a note or a rest.

TEACHING RESOURCES

Melodic Orff instruments.

TEACHING STRATEGIES AND EXERCISES

The teacher can use a melodic instrument to play a minim followed by a minim rest, a few times over. At the same time the teacher should say the taa-aa aloud, and then whisper the saa-aa. The learner should be shown how to clap the saa-aa. Then while the teacher does the same demonstration as above, the learner is asked to clap along, saying the solfège.

In order to consolidate this concept, the learner may create their own patterns, using all known rhythms, and various instruments.

If more than one learner is present, these little compositions may be performed in front of the classmates.

LESSON 6

Beating time with three crotchets in a bar

Consolidation of previously learned concepts

TEACHER OUTCOMES

To teach the learner how to beat time with three crotchets in a bar, using the appropriate hand and arm movements.

LEARNER OUTCOMES

The learner should know how to beat time with three crotchets in a bar, using the appropriate hand and arm movements.

TEACHING RESOURCES

Learner's arms and legs.

TEACHING STRATEGIES AND EXERCISES

The teacher should physically guide the learner to make the correct movements, while counting aloud: **one** two three **one** two three, until the learner can do the movement independently. Once the movements are correct, the learner must count aloud him- or herself. The teacher can then play various pieces in 2/4 and 3/4 time, and the learner can beat time.

On the creativity side, the learner may be encouraged to invent little rhythmical patterns in 2/4 and 3/4 time.

If there is more than one learner, they may be instructed how to make question-and- answer phrases.

LESSON 7

Introducing the semibreve

Consolidation of previously learned concepts

TEACHER OUTCOMES

To teach the learner how to beat time with 3 crotchets in a bar, using appropriate hand arm movements.

LEARNER OUTCOMES

The learner should understand the rhythmic relationship between the crotchet, quaver, minim and the semibreve and how to beat time effectively in a 3/4 time signature.

TEACHING RESOURCES

Learner's arms and legs.

TEACHING STRATEGIES AND EXERCISES

The **taa aa aa aa** time value can be taught using clapping, different movements and various instruments.

Creativity should once again be encouraged and performance of the learner's compositions.

Simple dictation exercises may be given for the learner(s) to tell which values have been used in a certain bar, or musical phrase.

LESSON 8

Introducing the semibreve rest

Consolidation of previously learned concepts

TEACHER OUTCOMES

To show that the semibreve rest and semibreve note share the same rhythmic value.

LEARNER OUTCOMES

The learner should demonstrate their awareness that the semibreve rest and the semibreve note share the same rhythmic value, by counting four crotchets to one semibreve.

TEACHING STRATEGIES AND EXERCISES

The **saa aa aa aa** concept can be taught in the same way as the other rests thus far. Encourage a variety of movement, creativity and performance.

LESSON 9

Beating time with four crotchets in a bar

TEACHER OUTCOMES

To teach the learner to beat time with four crotchets in a bar with the appropriate hand and arm movements.

LEARNER OUTCOMES

The learner should be able to beat time with four crotchets in a bar, with the appropriate hand and arm movements.

TEACHING RESOURCES

Learner's arms and legs.

TEACHING STRATEGIES AND EXERCISES

The same method may be used as for the teaching of beating time for 2/4 and 3/4 metres. Play various pieces in all three metres for the learner(s) to identify and beat time to.

As before, patterns in 4/4 time may be invented, using different instruments, and movements.

LESSON 10 - optional

Singing braille music notation via tonic solfa, with the use of <u>Sing 'n Liedjie</u>, by A. Botha (1971).

TEACHER OUTCOMES

To teach the basics of braille music notation using the voice as an instrument.

LEARNER OUTCOMES

The learner will understand the basics of braille music notation, using the voice as an instrument.

he above-mentioned braille publication is available in three volumes. This may be used until the

learners are technically ready to learn to play an instrument, while at the same time learning the basic note names as doh ray mi soh fa soh la ti doh.

TEACHING RESOURCES

The pupil's voice as an instrument.

TEACHING STRATEGIES AND EXERCISES

Use <u>Sing 'n Liedjie</u> by A. Botha (1971) until the learner is ready to transfer to an instrument.

When the teacher feels that the pupil is technically ready to transfer their basic knowledge of rhythm to an instrument, they may begin with the alternative programme. Each learner should be treated as an individual.

4.8 INTRODUCTION TO THE ALTERNATIVE PROGRAMME FOR TEACHING BRAILLE MUSIC NOTATION TO BEGINNERS

As part of data generation and needs assessment, the researcher and a panel of observers noted the differences between the blind and sighted in the way they learn to read and write music. A provisional programme was used for this purpose and adapted according to the assessment of each lesson. What follows is a theoretical framework and is based on the deductions made from the generated data. It is theoretical in the sense that it has not been tested in a broader field, but is valid for the specific context in which this research was undertaken. A next step would be to implement it on a broader base, but this was not the aim of this study.

Figure 25 provides a graphic portrayal of the entire framework, and Figure 26 shows an outline of the lesson structure.
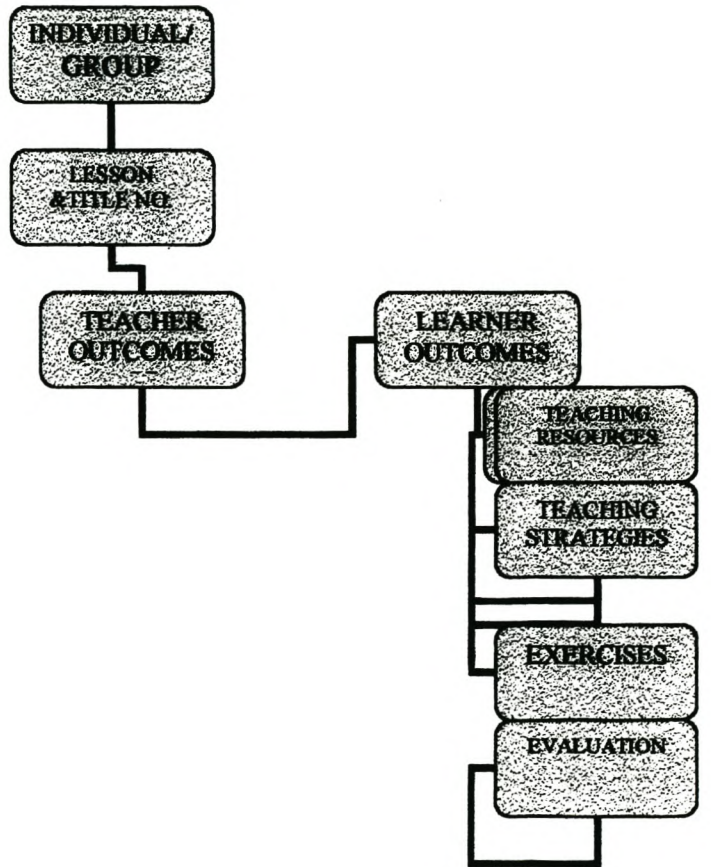
Figure 25: Graphic portrayal of programme

The Individual and Group Lesson Outline follows in Figure 26.
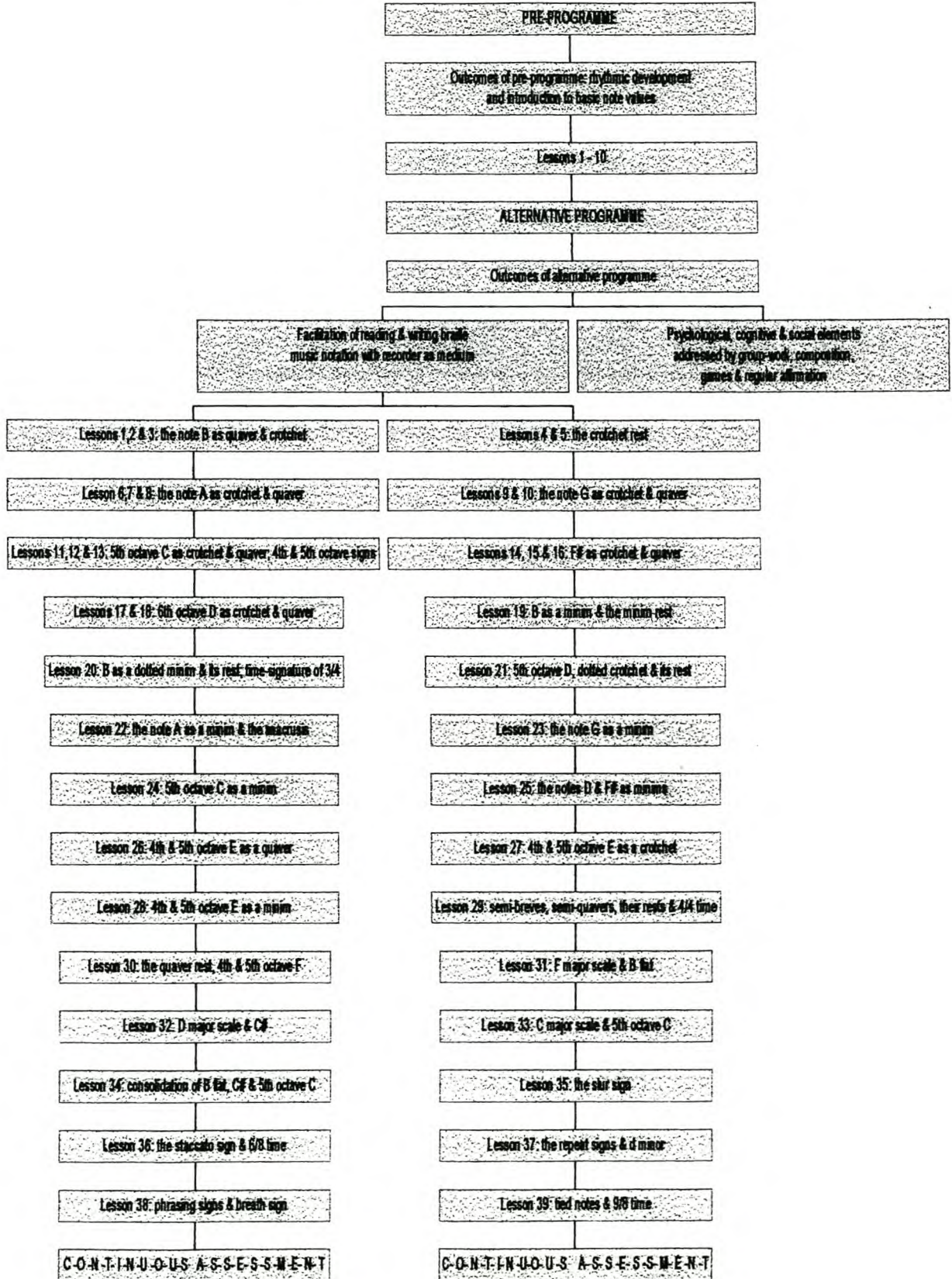
Figure 26: Lesson outline

Once the teacher is sure that the learner has a good grasp of the literary braille alphabet, and depending on the maturity of the learner, the ensuing programme may be embarked on.

4.8.1 The alternative programme

This programme may be used as a supplementary tool for appropriate learners.

LESSON 1
Introducing the recorder as an instrument   **The note B as a crotchet and as a quaver**
TEACHER OUTCOMES   To teach the note B as a crotchet and as a quaver.
LEARNER OUTCOMES   By the end of this lesson the learner should be familiar with the structure of the recorder and be comfortable handling the instrument. He or she should be able to play the note B as a crotchet and as a quaver, and be aware of the concepts taa and ta-te.
TEACHING RESOURCES   Descant recorder and braille music exercises.
TEACHING STRATEGIES   First of all, let the learner have a thorough "look" at the instrument. Point out that the recorder consists of three sections, the head, body and foot. Make them aware that there are eight holes in line with each other; that the last two holes are divided into two smaller 206 holes and that there is a single hole at the back of the instrument. Explain that in recorder playing, the forefinger, rather than the thumb, is regarded as the first finger, and that the fourth finger of the left hand (hereinafter L.H). and the thumb.

of the right hand (hereinafter R.H.) never get to play. Tell the learner how to hold the recorder correctly by **describing** exactly what to do, e.g. say: Take the recorder in your left hand. Cover the back hole with your L.H. thumb and the first hole with the first finger of your L.H. Balance the instrument with your R.H.thumb underneath. This is the note B. The above method is especially valid for blind persons, who in general find it demeaning to have their hands and fingers pushed into the correct positions (Arnold 1938:23).

By the teacher calling out the appropriate fingers to be used for each new note rather than doing it for the students, blind persons can develop independence. Furthermore, the researcher has discovered that blind learners in general do not have a strong awareness of left and right. The method mentioned will help develop this sense.

Check if the learner is able to balance the instrument comfortably with the R.H. thumb underneath, otherwise it might be preferable for them to balance, using the third finger of the R.H. on the second last hole. This appears to be less clumsy than the learner grasping the bottom of the recorder with the whole right hand.

Tell the learner that he/she is now fingering the note B, then demonstrate how to tongue, using "taa taa taa taa". (Du du will be used later for legato tonguing.) Explain that the tongue must not touch the teeth or the instrument, but must sit quite far back against the palate, causing a hollow in the mouth.

Ask them to tongue the note B eight times, while you keep time by saying "taa taa taa taa" aloud.

This is the learner's first performance, so show them how to stand professionally, that is straight, up, with arms slightly away from the body. Possibly fill in a simple piano accompaniment to inspire them.

EXERCISES

Let the learner repeat the above exercise, while the teacher plays quavers.

Then the teacher and learner swop round, with the learner playing the note B as quavers, and the

teacher the note B as crotchets.

Explain that these notes which are double the speed of taa notes, are called ta-te notes, and that two ta-te notes fit into one taa note.

ASSESSMENT

Continuous assessment of all the lessons will take place, as the teacher assesses to what extent the learner reaches the outcomes.

LESSON 2

The reading and writing of the note B as a crotchet and as a quaver

TEACHER OUTCOMES

To teach the note B as a crotchet and a quaver in braille music notation, using the recorder as medium.

LEARNER OUTCOMES

The learner should be able to read and write the note B as a crotchet and as a quaver in braille music notation.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Make sure that the learner is seated using a table and chair which fit them, so that their feet are on the ground. Make the learner place the book on a flat table, and anchor it with another book or Prestik to obviate movement, and keep their place on the page with a paper clip or peg. When the instrument is not in use, it should be placed on a cloth of sorts, on the table, so that it does not roll off. For Exercise 1, explain that this is how the note B as ta-te notes are written in braille music notation. Always let the learner clap the exercise before playing it, while saying the solfège aloud,

saying ta-te ta-te ta-te ta-te. For Exercise 2, show the learner how to write down what they have just played. This simple theory exercise immediately removes the fear of writing braille music notation. For Exercise 3, explain that this is how the note B as taa notes is written in braille music notation. The learner claps and then plays the exercise. Indicate to the learner how to write down what they have just played. Explain that the top half of the braille cell denotes the note name, and that the bottom half of the braille cell denotes the rhythmic value.

EXERCISES

Exercise 1 (only the exercises should appear in the learner's programme)

The print music examples will appear in computer-simulated braille music notation in the teacher's copy.

Exercise 2

Writing exercise.

Exercise 3

Exercise 4

LESSON 3

Consolidation of the note B as a crotchet and as a quaver

TEACHER OUTCOMES

To facilitate the consolidation of the note B as a crotchet and as a quaver.

LEARNER OUTCOMES

By the end of this lesson the learner should not make errors in the reading and writing

of the note B as a crotchet and as a quaver.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher will guide the learner in first clapping the following braille exercise, saying aloud the solfège, and then playing it. The teacher may add a simple accompaniment.

For exercise 6, the learner then writes down what they have just played. The teacher should refresh the learner's memory for the written exercises. This will serve as additional aural development.

EXERCISES

Exercise 5

Exercise 6

Writing exercise.

Exercise 7

Exercise 8

The learner writes the previous exercise.

Exercise 9

The learner creates his/her own pattern and writes it down.

Exercise 10

The learner writes the previous exercise.

LESSON 4:

Time signature of 2/4 and double bar line

TEACHER OUTCOMES

To teach the braille characters for the time signature of 2/4 and the double bar line.

LEARNER OUTCOMES

The learner should understand that a space in braille music notation means the end of a bar. They should know that the first beat of each bar is to be accented, and that they must count **one** two **one** two, etc. They should be able to identify and write the sign for a double bar line.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

To explain the new characters and their meanings.

EXERCISES

Exercise 11

Exercise 12

Idem Ex. 6 (writing practice).

LESSON 5:

The crotchet rest

TEACHER OUTCOMES

To teach the braille character for the crotchet rest and that it has the same value as the crotchet note.

LEARNER OUTCOMES

By the end of this lesson, the learner should not become confused in the reading or writing of the note B as a crotchet or a quaver, or the crotchet rest.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher asks the learner to first clap the Exercise 13, saying the solfège aloud, then to play it. Make sure that **saa** is whispered. In Exercises 14 & 16, the learner writes what they have just played, with guidance from the teacher.

EXERCISES

Exercise 13

Exercise 14

Idem Ex. 6

Exercise 15

Exercise 16

Idem Ex. 6

Exercise 17

Ask the learner to provide an answering phrase to a question phrase supplied by you,

the teacher, using the crotchet and quaver on the note B, and the crotchet rest.

LESSON 6

The note A as a quaver

TEACHER OUTCOMES

To teach the note A on the recorder, and as a quaver in braille music notation.

LEARNER OUTCOMES

The learner should easily be able to produce the notes A and B on the recorder. They

should also recognise the note A as a quaver in braille music notation and be able to

write it correctly.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Recommend to the learner to play with flat fingers rather than on the tips. This is

particularly important for blind learners, since they tend not to close the holes as well

as sighted children do.

EXERCISES

Exercise 18

Exercise 19

Exercise 20

Exercise 21

The learner can be guided in the writing of the above exercise.

Exercise 22

Exercise 23

LESSON 7

The note A as a crotchet

TEACHER OUTCOMES

To teach the braille character for the note A as a crotchet.

LEARNER OUTCOMES

The learner will be able to distinguish between the note A as a quaver and the note A as a crotchet in braille music notation, and comprehend the rhythmic relationship between the two notes.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Point out again that the upper part of the braille cell denotes the note and that the lower part of the braille cell denotes the note value. The learner should either clap or tap the exercise first, singing the solfège.

EXERCISES

Exercise 24

Exercise 25

Exercise 26

Idem Ex. 6.

Exercise 27

Exercise 28

LESSON 8

Consolidation exercises

TEACHER OUTCOMES

To facilitate the consolidation of concepts learned thus far in the programme.

LEARNER OUTCOMES

The learner should be secure in his/her knowledge of the notes B and A as crotchets and

quavers, and of the crotchet rest.

TEACHING RESOURCES

Descant recorder, piano, any rhythmic instrument and braille music exercises.

TEACHING STRATEGIES

To supplement the above exercises, the teacher might invent a simple accompaniment,

or play along on a rhythmic instrument.

EXERCISES

Exercise 29

Exercise 30

Exercise 31

Motivate the learner to invent a pattern, using known concepts.

Exercise 32

Idem Ex.6.

Exercise 33

LESSON 9

The note G as a quaver

TEACHER OUTCOMES

To teach the note G on the descant recorder, and as a quaver in braille music notation.

LEARNER OUTCOMES

The learner should be able to play, read and write the note G as a quaver, in braille music notation.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher may keep the crotchet beat going while the learner plays the quavers. The teacher might also count the 2/4 time signature aloud.

EXERCISES

Exercise 34

Exercise 35

Exercise 36

Exercise 37

Exercise 38

Idem Ex.6.

LESSON 10

The note G as a crotchet

TEACHER OUTCOMES

To teach the braille character for the note G as a crotchet.

LEARNER OUTCOMES

By the end of the lesson the learner should be technically comfortable with the note G on the descant recorder and be able to identify the note G as a quaver in braille music notation. The learner should be able to play, read and write the note G as a crotchet in braille music notation and perceive the rhythmic relationship between the crotchet and the quaver.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher could let the learner first clap the rhythm before playing it, so that he/she gets used to what the note "feels" like in braille music, before he/she adds the technical aspect of an instrument.

EXERCISES

Exercise 39

Exercise 40

Exercise 41

Exercise 42

Exercise 43

Idem Ex.6.

At this point the teacher could give exercises from other tutors for variety and consolidation.

LESSON 11

5th octave sign and 5th octave C as a quaver

TEACHER OUTCOMES

To teach the braille music characters for the 5th octave sign, and 5th octave as a quaver, and to teach 5th octave C on the descant recorder.

LEARNER OUTCOMES

Learners should be able to play the note 5th octave C on the descant recorder, and be able to read and write it in braille music notation.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher should make the learner aware of the fact that there are but two octaves on the recorder, and a low sounding note is in 4th octave, while a high sounding note is in 5th octave.

EXERCISES

Exercise 44

Exercise 45

Exercise 46

Exercise 47

Exercise 48

LESSON 12
5th octave C as a crotchet

TEACHER OUTCOMES

To consolidate the braille character for 5th octave C and also to teach the braille character for 5th octave C as a crotchet.

LEARNER OUTCOMES

The learner should not be confused between the note C as a quaver and as a crotchet, and they should not be in any doubt as to where to find the note on their instrument.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher could explain to the learner that the note they are playing and hearing as 5th octave C is not the same note as the one they see written, which is 6th octave C. This is because the descant recorder is a transposing instrument.

EXERCISES

Exercise 49

Exercise 50

Exercise 51

Exercise 52

The learner can be guided to compose a four-bar pattern in 2/4 time.

Exercise 53

Idem Ex. 6

LESSON 13

4th octave sign and 5th octave sign

TEACHER OUTCOMES

To make the learners aware of when and when not to use an octave marking.

LEARNER OUTCOMES

Learners should understand when to use the octave markings and when not.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Explain the octave rules: if one note moves to another note by the interval of a second or a third, even if they move into another octave, they need not use a new octave marking. If a note moves to another note by the interval of a 4th or a 5th within the same octave, they need not use a new octave marking. But, if a note moves to another note by the interval of a 4th or a 5th and moves out of the current octave, they must use a new octave marking. If a note moves to another note by an interval

of a 6th or bigger, they must always use a new octave marking.

EXERCISES

Exercise 54

Exercise 55

Exercise 56

Exercise 57

Exercise 58

LESSON 14

F sharp as a quaver

TEACHER OUTCOMES

To teach the note F sharp on the descant recorder, the braille music character for the note F as a quaver and the braille character for the sharp sign.

LEARNER OUTCOMES

The learner should be able to read, play and write the new signs.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

To make the learner aware that the note F sharp on the descant recorder consists of two braille characters. They will later be taught the key signature for G major.

EXERCISES

Exercise 59

Exercise 60

Exercise 61

Exercise 62

Guide the learner in the creation of a four-bar melody, consisting of known concepts.

LESSON 15

F sharp as a crotchet

TEACHER OUTCOMES

To teach the braille music characters for the note F sharp.

LEARNER OUTCOMES

By the end of this lesson the learner should not confuse the note F sharp as a quaver with the note F sharp as a crotchet in the braille music notation or rhythmically.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher can keep time for the learner by counting aloud.

EXERCISES

Exercise 64

Exercise 65

Exercise 66

Lead the learner in the creation of a four-bar melody, drawing on known concepts.

LESSON 16

Key signature of F sharp

TEACHER OUTCOMES

To teach the braille characters needed for the key signature of G major.

LEARNER OUTCOMES

The learner should understand the structure of a major scale, the concept of a key signature and its necessity. They should understand that if the sign for F sharp is at the beginning of the piece or next to the appropriate note, they should play F sharp.

TEACHING RESOURCES

Descant recorder, a keyboard and braille music exercises.

TEACHING STRATEGIES

The teacher should make the learner aware that the note written as F must always be played as an F sharp if the key signature of one sharp appears at the beginning of the piece, usually centralised on the braille page. Make use of the keyboard in order to facilitate the explanation and make the concept more tangible for the blind learner.

EXERCISES

Exercise 67

Exercise 68

Exercise 69

Idem Ex. 6.

LESSON 17

5th octave D as a quaver

TEACHER OUTCOMES

To teach the note 5th octave D on the descant recorder and the braille music characters

for 5th octave D as a quaver.

LEARNER OUTCOMES

The learner should be technically comfortable playing 5th octave D on the descant recorder and

to be able to identify the note in braille music notation.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher should be prepared to physically aid the learner in the correct technique for

playing 5th octave D. The thumb should not move too far away from the instrument so

that they cannot find the thumb hole again and the instrument also should stay slightly

angled downwards, rather than angled upwards.

EXERCISES

Exercise 70

Exercise 71

LESSON 18

5th octave **D** as a crotchet

TEACHER OUTCOMES

To teach the note 5th octave D as a crotchet in braille music notation.

LEARNER OUTCOMES

The learner will be able to play, read and write the note in braille music notation and not confuse the crotchet with the quaver.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher should make the learner aware of the rhythmic relationship between the crotchet and the quaver and facilitate the process by keeping time during the playing of the exercises. The teacher may also say the tonic solfège aloud.

EXERCISES

Exercise 72

Exercise 73

Exercise 74

Writing practice - either of above pieces, or of own composition.

LESSON 19

The note B as a minim and the minim rest

TEACHER OUTCOMES

To teach the braille music characters for the note B as a minim and the minim rest.

LEARNER OUTCOMES

The learner should understand the rhythmic relationship between the note B as a minim, crotchet and quaver. They should not confuse these three values.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Introduce the minim by letting the learner clap eight crotchets, while the teacher claps and says aloud "taa-aa taa-aa taa-aa taa-aa. The learner and teacher could then swap parts. The learner will need to be shown how to clap on only every second beat and how to hold the hands together in time to the second beat of the minim. Various instruments and movements should be used to stimulate interest.

EXERCISES

Exercise 75

Exercise 76

Exercise 77

Own composition.

Exercise 78

Idem Ex. 6

LESSON 20

The note B as a dotted minim and its rest, and time signature of 3/4

TEACHER OUTCOMES

To teach the braille music characters for the note B as a dotted minim, its rest and the

time signature of 3/4.

LEARNER OUTCOMES

The learner should understand that the dotted minim and its rest have three counts, and that in

3/4 time one must count **one** two three **one** two three, or whisper saa-aa-aa, etc.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Explain that the dot three following the note is equal to half the value of the note it follows. Introduce

triple time with the following exercises, first clapping and saying the solfège aloud. If there is more

than one learner involved, let one be the leader by reading the exercise aloud while the others follow

his arrangement will help to develop the quality of leadership that Curriculum 2005 advocates.

EXERCISES

Exercise 79a

Exercise 79

Exercise 80

LESSON 21

5TH octave D, dotted crotchet, and its rest

TEACHER OUTCOMES

To teach the braille music characters for 5th octave D as a dotted crotchet and its rest.

LEARNER OUTCOMES

The learner should understand that the dotted crotchet contains three quavers and is counted out as taa-ate.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Let the learner first clap the rhythm with the solfège.

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EXERCISES

Exercise 81

Exercise 82

Exercise 83

Exercise 84

Exercise 85

Exercise 86

Idem Ex. 6.

LESSON 22

The note A as a minim and the anacrusis

TEACHER OUTCOMES

To teach the new braille music characters for the note A as a minim and the anacrusis.

LEARNER OUTCOMES

The learner should not confuse the note A as a crotchet, quaver and minim, and they should understand the rhythmic relationship between these values. They should be aware that when a piece begins on a weak beat, the last bar is shortened accordingly.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher should first count a couple of bars aloud before beginning with each exercise, so that when the last beat of the bar has to be played, they know where they are rhythmically.

EXERCISES

Exercise 87

Exercise 88

Exercise 89

Exercise 90

Exercise 91

Exercise 92

Idem Ex.6.

LESSON 23

The note G as a minim

TEACHER OUTCOMES

To teach the braille music character for the note G as a minim.

LEARNER OUTCOMES

The learner should understand the rhythmic relationship between the note G as a crotchet, quaver and minim.

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TEACHING RESOURCES
Descant recorder and braille music exercises.

TEACHING STRATEGIES
By this stage of the programme the learner will have a good grasp of how braille music notation works. The teacher should just keep making sure that all the braille music characters are consolidated.

EXERCISES

Exercise 93

Exercise 94

Exercise 95

Exercise 96

Guidance in creating a pattern based on known concepts.

Exercise 97

Idem Ex. 6

LESSON 24

5th octave C as a minim

TEACHER OUTCOMES

To teach the new braille music characters.

LEARNER OUTCOMES

The learner should understand the rhythmic relationship between 5th octave C as a crotchet,

quaver and minim.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher should make sure that all braille music characters have been consolidated

up until this point in the programme, so that confusion shall not result.

EXERCISES

Exercise 98

Exercise 99

Exercise 100

Exercise 101

Exercise 102

Idem Ex. 6.

LESSON 25

The notes F sharp and D as minims

TEACHER OUTCOMES

To teach the new braille music characters.

LEARNER OUTCOMES

The learner should not confuse the note F sharp as a crotchet, quaver and minim.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

At this stage the teacher should be very aware of the possible confusion resulting from the use of the minim and the crotchet. The teacher should make very sure, using games, flash cards, composition etc., that the learner knows that a dot three at the bottom of a braille cell denotes a minim, whereas a dot six at the bottom of a braille cell denotes a crotchet.

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EXERCISES

Exercise 103
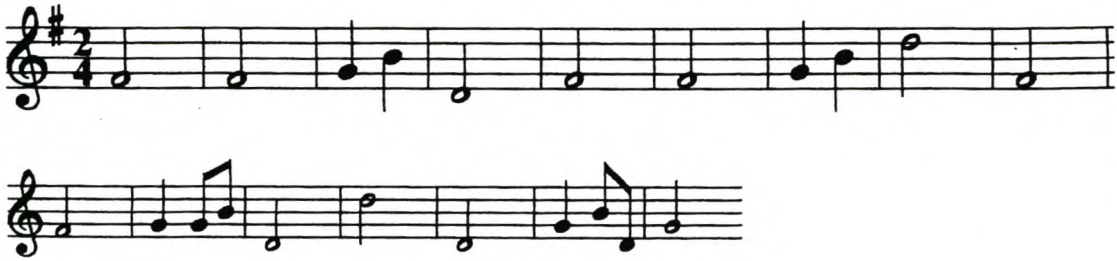
Exercise 104

Exercise 105

Exercise 106

Idem Ex. 6.

LESSON 26

4th and 5th octave E as a quaver

TEACHER OUTCOMES

To teach the new braille music characters.

LEARNER OUTCOMES

The learner is to understand the octave relationship between two notes and be able to pinch the note

by allowing only a very small hole with the thumbnail. A further objective is to gain practice of the octave rules.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher may need to physically help the blind learner in the playing of pinched notes on the recorder. The teacher can first let the learner play up and down from low to high E a few times in order to master the technical side. Then the teaching of the new braille characters.

EXERCISES

Exercise 107

Exercise 108

Exercise 109

Exercise 110

LESSON 27

4th and 5th octave E as a crotchet

TEACHER OUTCOMES

To introduce the new braille music characters.

LEARNER OUTCOMES

The learner should not confuse the upper and lower note E, and be able to play, read and write the note in braille music notation.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher might keep time for the learner and count aloud. It is always beneficial to first allow the learner to clap the rhythm and possibly say the solfège as well.

EXERCISES

Exercise 111

Exercise 112

Exercise 113

LESSON 28

4th and 5th octave E as a minim

TEACHER OUTCOMES

To teach the new braille music characters.

LEARNER OUTCOMES

By the end of the lesson the learner should not confuse the minim with the crotchet. The learner should not confuse the note E as a quaver with a crotchet and a minim.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Again, special care needs to be taken that the intonation is correct when playing a pinched note, and especially when playing from a high to a low note, or vice versa.

EXERCISES

Exercise 114

Exercise 115

LESSON 29

Semibreves, semiquavers and their rests, and 4/4 time

TEACHER OUTCOMES

To teach that semibreves and semiquavers share the same braille music characters, but that the context determines their use.

LEARNER OUTCOMES

The learner is to understand the rhythmic relationship between the learned values, and be able to play, read and write the new values. They should understand how semiquavers can be grouped.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher needs to provide sufficient consolidation at this juncture. Other tutors or pieces may be used. The learner needs to be advised as to the grouping of semiquavers, that is, only the first one in a group of four semiquavers appears as a semiquaver, and the other three as quavers. The rules surrounding this grouping need to be taught, and written down for reference.

EXERCISES

Exercise 116

Exercise 117

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Exercise 118

LESSON 30

The quaver rest, 4th and 5th octave F

TEACHER OUTCOMES

To make sure that the learner understands the octave rules, as well as being able to play the new note technically, and identify the new braille characters.

LEARNER OUTCOMES

To be able to play the new notes with technical correctness, understand the difference between F sharp and F, 4th and 5th octave F, and to know that a quaver rest is equal to two semiquavers.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Supplementary exercises may be added for variety and for consolidation purposes.

EXERCISES

Exercise 119

Exercise 120

Exercise 121

Exercise 121a

Idem Ex. 6.

LESSON 31
F major scale and B flat

TEACHER OUTCOMES

To teach the new braille music character for a flat sign and to show how it fits into F major scale.

LEARNER OUTCOMES

The learner should be comfortable with the new notes and understand the structure of a major scale.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher should be vigilant that the learner closes the last hole correctly on the instrument and that particularly the B flat and top F are in tune.

...

EXERCISES

Exercise 121b

Exercise 121c

LESSON 32

D major scale and C sharp

TEACHER OUTCOMES

To ensure that the learner understands the structure of the major scale and can play it with correct intonation.

LEARNER OUTCOMES

The learner should be aware that D major scale contains an F sharp and a C sharp.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Allow the learner to play both the scales of F major and D major, so that they can hear that they sound the same, although beginning on different notes. By now the learner should have a good grasp of braille music notation and how key signatures work. Supplementary pieces should be freely used.

EXERCISES

Exercise 122a

Exercise 122b

Exercise 122c

Exercise 122d

Exercise 122d

LESSON 33

C major scale and 5th octave C

TEACHER OUTCOMES

To consolidate the structure of the major scale.

LEARNER OUTCOMES

The learner should know that C major scale contains no sharps or flats.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The learner should be encouraged to play all learned major scales one after the other in order to improve technique and intonation.

EXERCISES

Any supplementary exercises may be used to consolidate learned concepts.

LESSON 34

Consolidation of the notes B flat, C sharp and 5th octave C

TEACHER OUTCOMES

To consolidate notes containing accidentals.

LEARNER OUTCOMES

Learners should be able to play notes containing accidentals and read and write them.

EXERCISES

Exercise 123

Exercise 124

Exercise 125

Exercise 126

Idem Ex.6.

LESSON 35

The slur sign

TEACHER OUTCOMES

To teach the learner to play, read and write the slur sign.

LEARNER OUTCOMES

The learner should be able to play slurs technically correctly and be able to read and write the sign in braille music notation.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The learner should be encouraged to give the first note of the slur a slight emphasis.

EXERCISES

Exercise 127

Exercise128

Exercise 129

Exercise 130

LESSON 36
The staccato sign and 6/8 time

TEACHER OUTCOMES
To teach the new braille music characters, as well as the staccato technique.

LEARNER OUTCOMES
The learner should be able to play staccato notes with technical correctness and be able to read and write the sign in braille music notation. They should be able to count 123456, and be aware of the duple rhythm.

TEACHING RESOURCES
Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher would do well to concentrate on the theoretical side of simple and duple time.

EXERCISES

Exercise 131

Exercise 132

Idem Ex. 6.

LESSON 37

The repeat signs and d minor

TEACHER OUTCOMES

To teach the difference between major and minor scales and to teach the braille music characters for the repeat signs.

LEARNER OUTCOMES

The learner should understand the difference between the half- and whole-bar repeat signs, and whole-piece repeat sign, as well as the difference between major and minor.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

Plenty of consolidation will be needed for all these new concepts.

EXERCISES

Exercise 134

Exercise 135

Exercise 136

LESSON 38

Phrasing signs and breath sign

TEACHER OUTCOMES

To teach the new concepts on a technical level, as well as teaching the learner to read and write the new signs.

LEARNER OUTCOMES

The learner should be able to identify the beginning and ends of phrases and breathe

correctly.

TEACHING RESOURCES

Descant recorder and braille music exercises.

TEACHING STRATEGIES

The teacher should allow the learner to work out their own breathing, with guidance.

EXERCISES

Exercise 137

Exercise 138

Exercise 139

Idem Ex.6.

LESSON 39

Tied notes and 9/8 time

TEACHER OUTCOMES

To ensure that the learner understands that the tied note must not be sounded, but that it must still be counted out. To ensure that the learner understands the differences between simple and compound time.

LEARNER OUTCOMES
Not to confuse the braille music signs for the slur, tied notes and phrase markings. To understand that 9/8 is triple time.

TEACHING RESOURCES
Descant recorder and braille music exercises.

TEACHING STRATEGIES
To let the learner count two counts for compound duple and three counts for compound triple. Any supplementary exercises will be valuable at this stage.

EXERCISES

Exercise 140

Exercise 141

MUSICAL PUNCTUATION SIGNS

From here onwards, learners can consolidate their knowledge by using other braille music compilations. Any dynamic markings encountered in the pieces should be taught as they appear. Chapter 4 outlined the alternative programme recommended for teaching braille music notation to blind learners. In Chapter 5, the researcher delineates the conclusions of the research, which led to the final structure of the alternative programme. The chapter ends with recommendations for further study.

CHAPTER FIVE

CONCLUSIONS, STRONG POINTS AND LIMITATIONS OF THE STUDY, RECOMMENDATIONS AND FINAL WORDS

5.1   INTRODUCTION

This chapter collates all the conclusions reached in the foregoing chapters. Thereafter, the researcher emphasises the strong points and limitations of the study. Recommendations for further research in this field are presented. Then follows a complete bibliography, including a list of interviews held and websites consulted. The addenda include questions used in the interviews, transcriptions of interviews and explanation of codes.

5.2   CONCLUSIONS

The initial impetus for this research project was the need encountered by the researcher at the Pioneer School for the Blind. She found that the progress of young blind children learning to read braille music notation with the piano as medium was considerably slower than that of their sighted peers. It appeared that they experienced more technical problems at the keyboard, which was slowing their progress.

The researcher decided to try using the recorder for tuition, since she thought it might be technically easier, and therefore help accelerate the learning of braille music notation.

In the selection of a recorder tutor for the blind beginner, the researcher discovered an area of grave inadequacy: there were no braille recorder tutors written for the blind beginner. The tutors had all been written for the sighted child and transcribed into braille, and were therefore inappropriate for the needs of the blind.

The researcher thus set out to explore the requirements of the blind child learning to read music and how they could best be met.

In a literature survey she examined the psychology of the blind, their emotional, social and cognitive needs, and how they learn to read and write. She also studied braille piano and recorder

tutors to help identify the areas of inadequacy and unsuitability. At this point the researcher uncovered the fact that very little up-to- date research was being done in this field of study. This discovery was a further justification for this research project.

The researcher, together with a panel comprising three braille specialists, observed blind learners being taught braille music notation using the recorder. The observers were to investigate the adoption of a provisional programme designed by the researcher for teaching braille music to beginners. Blind learners and teachers of braille music were interviewed in order to gain further insight into the needs of the blind learning music. The main consideration of the interviews was how best to meet the needs of the blind learner and to adapt the programme accordingly.

The deductions derived from the above investigations are listed below.

(a) The blind child is disadvantaged by having to learn braille music notation from a method designed for the sighted child. This is due to the fact that a blind person learns to read and write in a completely different way from a sighted person, that is via tactile rather than visual perception. A second disadvantage is that sighted music can be perceived vertically and horizontally at the same time, whereas braille is perceived horizontally and only by one braille cell at a time.

(b) When the braille code is the basis on which an author develops a braille music programme, priority is naturally given to how the blind child learns to read braille. Musical items are therefore introduced in a way which is perceptually logical to the blind child, according to the braille music alphabet.

(c) The natural strengths of blind pupils are largely not considered in their education in general, and in their musical education specifically. When the aural and tactile abilities, and phenomenal memories of the blind are taken into consideration, they function as effectively as anyone in the sighted world. Once one of the senses has been lost, the inherent inborn strength takes precedence, be it auditory or tactile.

(d) A monodic instrument, namely the recorder, has proved to be a good means for teaching braille music notation to appropriate beginners. There will be learners, however, who do not

find the recorder to be technically easy. The recorder is generally advantageous due to its portability, its technical facility, and the fact that there is only one line of music to read. Furthermore, certain braille music signs like the clef sign may be omitted. This translates into less clutter and therefore more fluent reading.

(e) The hand size and/or hand stretch of beginners is generally suited to the descant recorder. Although this is also true for the sighted child, it is even more significant for the blind child, because orientation on an instrument is of paramount importance. An instrument with two octaves is easier to orientate on than one with seven octaves.

(f) Posture can be problematic in blind learners with poor muscle tone. It was discovered that it is especially necessary for the blind child to have the correct chair and desk size, since it improves orientation and therefore leads to improved reading.

(g) Blind learners tend to have a weak sense of right and left domains unless this facility has been especially well taught. It was found in general that extra time has to be spent on spatial awareness exercises.

(h) A braille book has the tendency to close on itself and move around. This proves especially onerous when one has to use both hands to play an instrument. It was found that when care was taken to keep the book flat and well anchored, the pupils were less frustrated and their reading was facilitated.

(i) With the introduction of the notes C and D, where confusion with the literary braille alphabet may occur, sufficient consolidation of the new concepts is crucial. This is not an issue with a programme for the sighted, since it is specifically a problem created by the way the braille music code works, for example, the need for octave markings.

(j) Where words accompany a piece of music, confusion may result for the blind child. Again, this is not valid for the sighted child, since the words and notes look completely different. It is a blind-specific issue, because the words and musical notes look the same. Only the formatting tells the reader which are words and which are musical notes. The teacher therefore needs to make sure that the pupil understands the braille formatting, i.e. that the words lie against the margin and that the music notes are indented two spaces. In the early

stages, in order to avoid confusion, it was found best to avoid including words with songs. Later on, however, the words can stimulate interest and facilitate the understanding of the rhythm.

(k) It was found that uncontracted braille (without short forms) is best used for titles in the early stages of a braille music programme. This is due to the fact that beginners have not yet fully consolidated their literary braille contractions. Confusion may therefore result, and reading be deleteriously affected.

(l) It was concluded that when practice was given in localising on the braille page, i.e. knowing where to find the title, first octave marking, time signature, key signature etc., the pupils' orientation was improved.

(m) It was found that unless a pupil is encouraged to compose, or extemporise in a relaxed and unpressurised atmosphere, stress can cause inhibitions. Stress caused by competitiveness or lack of self-esteem blunts creativity.

(n) The panel found that a learner should first be given the opportunity of performing a piece well, in front of the teacher only, before exposing him/her to performance in front of peers or an audience. These early experiences of performing can have far-reaching effects, either of pleasure and increased self-esteem or of fear and anxiety.

(o) The use of games to consolidate note names and rhythms can have very positive results, including relaxing the pupils because they are having fun while learning. These success experiences also aid in the boosting of self-esteem.

(p) Writing of the newly learned braille characters can help in their consolidation, since other senses, like the motoric, are then included.

(q) It was deduced that a braille music notation system for beginners should contain as few musical punctuation signs as possible in the beginning, since they can cause clutter and thereby slow down reading. This drawback does not exist for the sighted person, since musical punctuation signs such as dynamic markings and phrasing are written above or below the notes, not in between them as in braille music notation. Furthermore, a concept such as

phrasing can be taught aurally through singing in a choir, for example.

(r)   The clapping of the piece before playing is particularly beneficial to the blind child, because it gives them the feel of whole bars. This is significant, because when reading, their finger tips can only perceive one note at a time.

(s)   It may be an error to teach an intelligent blind learner with a good ear for music to play by ear, if they are a good candidate for learning braille music notation. The damage could be irreparable in that they may always find reading onerous by comparison.

(t)   The use of Orff instruments in order to learn new rhythms and their consolidation is highly successful with blind learners, because so many more senses come into play. Furthermore, it is another fun way to learn.

(u)   Group learning is generally beneficial for handicapped learners, in that the socialising is stimulating and the affirmation of peers can boost self-esteem. Over-competitiveness or jealousy can, however, mar the atmosphere. It is beneficial to self-esteem for the teacher to bring out the weak pupils' strengths and to minimise their limitations. The social element is of particular importance for the handicapped person, who may feel unliked, unwanted or unacceptable.

(v)   Each learner is to be treated as an individual, and it was found that the programme had to be used accordingly, with the sections which are most valuable to the learner being emphasised, and the inappropriate parts being omitted. The programme may not be appropriate to all blind learners, especially for the slow reader who has an outstanding ear, or for the adventitiously blind learner who has not consolidated literary braille. The programme may therefore be viewed as a complementary tool to be used in whichever way may benefit the learner.

5.3   STRONG POINTS OF THE STUDY

This study was based on an area of need identified by the researcher in her teaching of music to the blind. She discovered that the programme being employed was inappropriate and inadequate for the needs of the blind beginner. Blind pupils were being taught music via programmes

designed for the sighted child. In her research of the unique needs of the blind learner, she collated information on their psychological, emotional and social, concept development, motor skills, tactile ability, creativity and self-expression differences. She also researched the way in which the blind learn to read and write, and their strengths and weaknesses. Based on her provisional research, she set up an alternative programme for the teaching of braille music notation to blind beginners. This programme was then tested and developed using three blind learners. The researcher chose to use a qualitative approach for the following reasons:

Because there was a lack of appropriate literature, and it is a relatively unknown area of research, this gave the researcher the freedom to examine the field in an exploratory way. Qualitative research is also appropriate for the study of unique situations in naturalistic settings.

Concerning Special Needs Education, the Revised National Curriculum Statement (Department of Education 2001:6) suggested that South African educators work together to nurture people with disabilities, so that they also can experience the excitement and joy of learning. Furthermore, the report advised that a supportive and inclusive psycho-social learning environment be provided for all learners. Also, a flexible curriculum should be developed to ensure access to all learners.

Therefore, in compliance with the above recommendations, the researcher has devised a programme, which will be accessible and appropriate to many blind learners with their special needs.

The programme has been corroborated and validated by highly skilled and qualified professionals.

5.4 LIMITATIONS OF THE STUDY

Limited attention has been paid to the various technological advancements in the teaching of braille music notation to the blind. Mention has been made of the computer programme Dancing Dots, for example. Further research is warranted in this area.

It will be noted that keyboard accompaniments have not been included in the programme. This could be a future step in its development.

Since the alternative programme has only been tested under research conditions, full validation and generalisation may only take place as it is applied in different circumstances with other appropriate blind learners.

5.5   RECOMMENDATIONS FOR FURTHER STUDY

The foregoing study has exposed the fact that there has been a paucity of up-to-date research in the various areas relating to the blind and how they learn to read, specifically braille music notation. The researcher therefore recommends that further research is warranted with regard to:

- Laterality and its implications for learning to read braille music notation. As a result of her investigations, the researcher believes that right-left brain dominance may have far-reaching effects in the way a person learns to read.

- The suitability of solfège and tonic solfa in the teaching of the blind child. The researcher has experienced a certain amount of success using these methods and therefore believes that a whole system based on these concepts could possibly be most beneficial to the blind.

- The development of braille music tutors based on the structure of the braille music code. To date, most braille music tutors have been based on those written for the sighted. This research project has endeavoured to reveal the reasons for the inadequacy of music tutors for the blind, based on the way they perceive tactually rather than visually. The researcher is convinced that the blind may benefit greatly in the future by the development of more music tutors based on the system that the blind use for reading.

- A recorder for handicapped people has been developed. It is a one-handed recorder, for people with physical disablements. It might be useful in the teaching of the blind, since they require one hand for reading. Blind persons who are multi-handicapped might also benefit. This issue deserves further research. See www.mollenhauer.com for more information.

The alternative programme designed by the researcher will need evaluation, so that inadequacies may stimulate further research and consequent adjustments. If the teacher discovers at any point

that the programme moves too fast for her pupil, supplementary exercises may be required.

5.6   FINAL WORDS

The blind are often discriminated against in society in that they are expected to fit into a sighted milieu. It is the wish of the researcher that this study will be a small step towards the fulfilment of the special needs of the blind. Blind persons are capable of competing on an equal footing with - and even superseding - their sighted peers in the area of music. The researcher hopes to have made a viable contribution in this arena.

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Blindness in general

www.exactseek.com

www.iimpft.chadwyck.com

www.ixquick.com

www.merb.org

www.squire.com

Braille music notation

www.dancingdots.com

Recorder for the handicapped

www.mollenhauer.com

Libraries for the blind

www.loc.gov/nls

www.acb.org./resources/music.html

www.bibciechi.it

www.cnib.ca/eng/braille

www.nfb.org.bm

www.rnib.org.uk

ADDENDUM 1 – CODES AND CODING

Technical (TE)

TE1   Locating octave
TE2   Hand size
TE3   Posture
TE4   Uncomfortable reading position
TE5   Book placing
TE6   Instrument handling

Braille Reading (BR)

BR1   Two alphabets
BR2   Two clefs
BR3   Item order
BR4   Four lines
BR5   Item speed
BR6   Contracted braille
BR7   Octave rule
BR8   Reading maturity
BR9   Braille difficulties

Reactions (RE)

RE1   Pleasure
RE2   Displeasure
RE3   Musical development
RE4   Learning speed

Specific Benefits (SB)

SB1   Self-esteem
SB2   Socialisation
SB3   Creativity

Miscellaneous (MI)

MI1   Page orientation
MI2   Writing technique
MI3   Writing composition

TE1	1	2	3	4	5
TE2	1	2	3	4	5
TE3	1	2	3	4	5

TE4	1	2	3	4	5
TE5	1	2	3	4	5
TE6	1	2	3	4	5
BR1	1	2	3	4	5
BR2	1	2	3	4	5
BR3	1	2	3	4	5
BR4	1	2	3	4	5
BR5	1	2	3	4	5
BR6	1	2	3	4	5
BR7	1	2	3	4	5
BR8	1	2	3	4	5
BR9	1	2	3	4	5
RE1	1	2	3	4	5
RE2	1	2	3	4	5
RE3	1	2	3	4	5
RE4	1	2	3	4	5
SB1	1	2	3	4	5
SB2	1	2	3	4	5
SB3	1	2	3	4	5
MI1	1	2	3	4	5
MI2	1	2	3	4	5
MI3	1	2	3	4	5

PUPIL   _____

LESSON   _____

DATE   _____

NAME   _____

ADDENDUM 2 – INTERVIEW QUESTIONS

1. On which instrument have you found young blind learners to locate the correct octave more easily - the piano, or the recorder?

2. On which instrument have you found that children with small hands manage more easily - the piano, or the soprano recorder?

3. With which instrument have you found that children with poor posture, due to poor muscle tone, struggle more - the piano or the recorder?

4. Which reading position do you think young blind pupils prefer: the book placed on the piano ledge, on the lap, flat on the table, or slightly elevated on the table?

5. Which instrument do you think a young blind child handles more easily technically - the piano or the soprano recorder?

6. Have you found that young blind learners confuse the note C with the note D?

7. Where have you discovered more confusion: with the note B written as the letter J, or the note C, written as the letter D?

8. Would you expect a beginner music braille learner to have more difficulty reading two clefs (soprano and bass), or one clef (soprano)?

9. Have you discovered that in piano, as well as in recorder tutors, too many new braille signs are introduced too soon?

10. Have you discovered that young music braille learners are slowed down by having the titles of pieces in contracted braille?

11. Would you expect that young braille readers might experience more confusion with the octave rule when playing the piano, or the recorder?

12. Do you think that writing down one's own composition will improve the reading of braille music?

13. Do you think that extra spacing between the lines of music braille will facilitate its reading for beginners?

14. Have you discovered that especially young blind children experience a confusion between right and left hand?

15. Do you find the currently available Braille Recorder Tutors you have used, to be adequate for the needs of the blind child?

16. If not, which weaknesses have you discovered?

17. Other comments.

<u>SECOND ROUND OF QUESTIONS</u>:

Bearing in mind the following:

-        concept development of the blind
-        perceptual awareness of the blind (tactile perception as opposed to visual), and therefore
-        how a blind person learns to read, I would like you to consider the order in which you
         might present the items in a recorder tutor.

There are also three levels of logic of which I would like you to be aware when considering the
order of items:

-        the musical logic of each item's entry
-        the technical logic of each item's entry
-        the readability logic of each item's entry

1.   Which braille character would you introduce first:

         (a) a time signature
         (b) an octave marking
         (c) a note, and if the latter, which note and which value?

2.   In which order would you present the note names, and why?
3.   In which order would you present the note values and why?
4.   At which point would you introduce slurs and staccatos?
5.   At which point would you introduce key signatures?

ADDENDUM 3 – TRANSCRIPTION OF INTERVIEWS

TRANSCRIPTION OF INTERVIEWS

INTERVIEW 1- LORRAINE LOURENS, SEPTEMBER 2001

T: TEACHER

R: RESPONDENT

... A PAUSE, WHERE DOTS SIGNIFY SECONDS

// INTERRUPTION OF ONE SPEAKER

-- -- HESITATION

[ ] OVERLAP OF TALK AT POINT OF OVERLAP

(( )) INDECIPHERABLE

T: Hello Lorraine, hoe gaan dit met jou?

R: Goed juffrou.

T: Dis mooi. OK, sê vir my, die lesse wat jy die kwartaal gehad het... het jy hulle geniet, of het jy hulle stresvol gevind, of het jy gevind hulle was frustrerend, het jy uitgesien daarna of het jy nie uitgesien daarna nie - hoe het jy gevoel oor die lesse?

R: Juffrou, ek het baie van die lesse gehou en ek het baie uitgesien na die lesse //

T: Haai, dis pragtig. Ek is bly om dit te, um, te hoor. Daar was sekere tye wanneer jy gefrustreed was; wanneer jy gevoel het dat die, die werk was te moeilik of die werk was te maklik. Het jy dit gevoel, um, nou ... Nee?

R: Nee, juffrou.

T: O? Ek het so gedink. Lag. Ek het gedink dat jy dit soms te, um, te maklik gekry het. Reg, um, sê vir my, um, wat vind jy makliker: om musiek braille te lees by die klavier, waar jy die boek daar op die rakkie moet hê, of um, soos ons gehad het, op die klein tafeltjie met die klein stoel? Wat het jy gedink//

R: Op die rakkie.

T: Vind jy dit makliker te lees op die rakkie [ ] by die klavier?

R: Is dit so?

T: All right. En sê vir my, um, um, as ek vir jou nou vra om 'n sekere op...oktaaf op die klavier te kry, soos oktaaf vyf of oktaaf vier, vind jy dit makliker of moeiliker as by die blokfluit as ek sê, speel laer C, of speel hoër C? [ ] watter...

R: Ek vind dit makliker by die blokfluit//

T: Is dit? OK, en nou die grootte van jou hande: jy is nog 'n klein ou dogtertjie - vind jy dit makliker om die blokfluit te...te behandel, of, of die, um, um, op, op die klavier te speel?

R: Die blokfluit, juffrou.

T: Is dit? En, um, wat van daai sit-posisie wat jy gehad het by die klein stoel en die klein tafeltjie - was dit gemaklik [ ] vir jou?

R: Ja juffrou.

T: Is dit. Um, sou jy dit verkies het as jy miskien, 'n kleiner klavier gehad het, wat jou presies pas?

R: Ja juffrou. (Altwee lag).

T: Want by, by kinders gebruik hulle mos klein viole. OK. En sê vir my, um, toe jy begin het met, um die noot B op die blokfluit, wat soos die letter J lyk, dis nou heeltemal 'n ander letter - was dit makliker om dit te onthou, of by die klavier waar jy met 'n C begin, wat soos 'n, 'n D lyk, en 'n D, wat soos 'n E lyk? Watter, watter een was meer verwarrend vir jou? Meer verwarrend.

R: Die een, die een op die klavier, wat 'n mens met 'n C begin het.

T: Is die meer verwarrend?

R: Ja juffrou.

T: OK. Goed. En um, die volgorde wat, van die aktiwiteite in jou lesse, um, jy, jy het partymaal 'n bietjie gelees, partymaal 'n bietjie gespeel, partymaal in groepe gewerk, partymaal ander instrumente gespeel - wat, en gekomponeer, het jy gevind dit was 'n goeie volgorde, of het jy miskien, ge, gevind dat ek te lank aangegaan het met een ding of, um, te

min van een ding gedoen het - wat het jy gevoel//

R: Nee, juffrou, ek, ek het gevoel dit was reg so, juffrou.

T: O. OK. Um, reg. By, um, by sommige blokfluit tutors, vind jy dat julle, um, by, by die note, woorde het.

R: Ja juffrou.

T: OK, soos 'n rympie. Dink jy dat die, die, woorde, um, 'n mens sal verwar, of dink jy ek moes by, by gesit het vir jou? Sou dit gehelp het?

R: Ja juffrou.

T: Dink jy so?

R: Ja juffrou.

T: Is dit? OK. En sê vir my, het jy van die groepwerk gehou, wat jy met die ander kinders gedoen het, of het jy, um, beter gevoel as jy alleen met my was?

R: Ek het daarvan gehou as ons in 'n groepe gewerk het, juffrou [ ]

T: Is dit? OK. En het jy gevind dat as jy nou gekomponeer het, en 'n komposisie moet neerskryf, dit vir jou gehelp het om te lees, met die musiek braille?

R: Ja juffrou.

T: Is dit. Dis baie interessant. Was daar enigiets anders wat jy oor die lesse gevoel het wat jy vir my wil sê?

R: Nee, juffrou.

T: Is jy klaar?

R: Ja juffrou [ ]

T: OK, maar luister. Jy het pragtig gedoen. Sal ons bietjie daarna luister?

R: Ja juffrou [ ]

T: OK.

INTERVIEW 2 - LOUZANNE COETZEE, SEPTEMBER, 2001

T: Hello Louzanne, hoe gaan dit met jou vandag?

R: Goed dankie, juffrou.

T: Dit lyk goed. Luister, die lesse wat jy die kwartaal gehad het, oor die algemeen - hoe het jy hulle ervaar, of hoe het jy hulle geniet? Of het jy hulle stresvol gevind, of frustrerend, of het jy uitgesien daarna, of nie uitgesien daarna - hoe het jy gevoel oor hulle?

R: Nie uitgesien daarna [ ]

T: Nie uitgesien daarna (lag).

R: Aa.

T: Waarom? Het hulle jou bang gemaak?

R: Ek weet nie, juffrou (whining voice, as if tired).

T: Het dit jou laat stres?

R: Ja juffrou.

T: Is dit? Het jy gevoel die goed was te maklik vir jou of te moeilik vir jou, of hoe het jy dit gevind?

R: Te maklik, juffrou [ ]

T: Te maklik?

R: Ja juffrou.

T: OK. So waarom het jy dan gestres?

R: Ek weet nie juffrou. (Teacher laughs).

T: Seker omdat dit, um, jy geweet dat jy op video was, of iets, nê?

R: Ja juffrou.

T: Seker maar. OK. Nou luister, jy't 'n bietjie gelees al, by die klavier, toe jy musiek braille geleer het - wat het jy makliker ge, gevind - om, um, met by die blokfluit die musiek braille te lees, of by die klavier?

R: Klavier, juffrou.

T: Makliker?

R: Ja juffrou.

T: Waarom? Was die, um, posisie makliker by die rakkie?

R: Ja juffrou.

T: Is dit so? So jy hou nie daarvan nie as hy so voor jou is, plat nie?

R: Nee juffrou.

T: Hou jy daarvan as jy jou hande so moet opsit by die rakkie?

R: Ja juffrou.

T: OK. Goed, dis interessant. En sê vir my nou: as ons jou vra om 'n noot op die klavier te vind, by oktaaf drie, of vier,

of vyf, of wat ookal, is dit makliker of moeiliker as wanneer ek vir jou vra, speel laer C of speel hoër C?

R: Moeiliker, juffrou, want, C, jy kan hom net speel.

T: Ja. OK, goed. So daar's net twee oktawe op die kla... blokfluit en dit kan net die een of die ander een wees.

R: Ja juffrou.

T: OK. En jy nou is 'n ou klein mensie, nê, met klein hande. Wat vind jy makliker: om op die sopraan blokfluit te speel, of m...op die klavier?

R: Wel, enige een, juffrou.

T: Is dit?

R: Ja juffrou//

T: So dit is nie moeilik vir jou nie, om te, om te strek nie?

R: Nee juffrou.

T: OK. En, um, jou sit-posisie voor die, die klavier, um, jou bene kan mos nie die, die vloer, die vloer bereik nie, nê?

R: Ja juffrou, dit kan.

T: Kan dit?

R: Ja juffrou.

T: OK. Wat dink jy van die idee dat ons miskien 'n kleiner klavier vir jou kry, wat presies vir jou pas?

R: Ja juffrou (teacher laughs).

T: OK, en, het jy dit, um, maklik, en, gemaklik gevind, toe ons vir jou die klein tafeltjie gegee het, met die klein stoel wat vir jou pas?

R: So bietjie, juffrou.

T: Is dit? Reg. En sê vir my. Toe jy nou begin speel het, op die, die blokfluit, het jy mos met die noot B begin, nê?

R: Ja juffrou.

T: En, um, en dit is mos die noot, ag, die letter J, nê?//

R: Ja juffrou.

T: Dis heeltemal 'n ander letter. Maar as jy nou begin op die klavier, gewoonlik begin jy met die C, die noot C, wat soos 'n D lyk, en D lyk soos E, ensovoorts. Watter een is vir jou meer verwarrend.

R: Um, die, die, die//

T: Die een wat um, die feit dat die, die bokkom vis juk - die B lyk soos 'n J, of dat die C soos 'n D lyk en die D soos 'n E lyk, en al daai goed wat [ ]

R: Aa...

T: Watter een?

R: Die D lyk soos 'n C.

T: OK, dankie. En sê vir my, um, die volgorde van die item, items wat ons gehad het - die aktiwiteite. Julle het 'n bietjie gespeel; julle het 'n bietjie in 'n groep gewerk, of julle het 'n bietjie gekomponeer; julle het 'n bietjie geskryf, 'n bietjie gelees. Het jy, wat, hoe het jy gevoel oor die volgorde van die aktiwiteite? Het jy gevoel soms: juffrou gaan nou te lank aan met die ding, of juffrou kon langer daar, daarmee aangehou het? Wat het jy gedink, van die volgorde van die [ ]

R: Dit was net reg, juffrou.

T: Is dit? Dankie. En sê vir my: um, by sommige blokfluit tutors, kry 'n mens woorde by die note. Sou woorde vir jou gehelp het, of dink jy dit sou nog meer verwarrend gelees het?//

R: Dit sou nog meer verwarrend gewees het.

T: OK. En sê vir my: het jy van die groepwerk gehou? Het dit jou laat goed voel, of het jy beter gevoel toe jy alleen by my was?

R: Goed gevoel, juffrou.

T: Is dit? En sê vir my: toe jy jou komposisie moes neerskryf het, um, het jy gevoel dit het vir jou gehelp om musiek braille te lees?

R: Ja juffrou.

T: OK. Is daar enigiets anders wat jy gevoel het of, ge, gedink het oor die lesse, wat jy miskien vir my wil laat sê?

R: Nee juffrou.

T: Is jy nou klaar?

R: Ja juffrou.

T: Sal ons 'n bietjie daarna luister?

R: Ja juffrou.

T: OK.

R: Juffrou, kom ons gaan roep vir Lorraine, juffrou.

INTERVIEW 3 - LORRAINE & LOUZANNE, SEPTEMBER 2001

T: OK. Ek gaan eers by Lorraine begin. Hoe gaan dit met jou Lorraine?//

R: Goed.

T: Gaan dit goed met jou vandag. Ek is bly. En wat van hierdie een, hier? Pla dit nie vir jou nie? (Louzanne lag). Jy't nie nat gekry nie, nê? OK. Nou. Jy sou waargeneem het, Lorraine, dat ek sommer begin het met 'n B as 'n agste noot, wat soos 'n J gelyk het, nê?

R: Ja juffrou.

T: En, um, net later het ek die punt 6 bygesit vir 'n kwartnoot en punt 3 vir 'n halfnoot en punt 36 vir die heelnoot. Dink jy dis makliker om die agste noot te lees, of is dit makliker, dink jy, om 'n kwart of 'n half of 'n heelnoot eers te lees?

R: Vir my is dit, be... beter om 'n agste noot eerste te lees, juffrou.

T: En wat dink jy, Louzanne - hoe gaan dit met jou Louzanne?

R: Goed dankie, juffrou.//

T: OK. Het jy die nag oorleef? Goed.[ ]

R: (( ))

T: (Teacher laughs). Wat dink jy?

R: Vir my ook eintlik makliker om 'n agste noot eerste te lees juffrou, want dan [ ]

T: ...het jy nie punte by nie.

R: Ja juffrou.

T: OK. Goed. Reg. OK, Louzanne. Jy kan eerste keer, die, um, die een probeer antwoord. Jy het ook waargeneem dat ek so spasies tussen die reëls het, nê? Het jy dit, um, makliker gevind om jou plek te kry, as daar spasies tussen in was?//

R: Ja juffrou.

T: En wat het jy gedink, Lo...Lo...Lorraine?

R: Ek het dieselfde gedink juffrou.

T: Het jy daarvan gehou dat dit meer spasieering gehad het?.

R: Ja juffrou.

T: OK. En, nou kan Lorraine eerste antwoord (she laughs). Lorraine, ek het onverkorte braille gebruik. Ek het gedink dit is makiker om dit te lees vir beginners. Stem jy saam?

R: Ja juffrou.

T: En jy, Louzanne?

R: Ja juffrou.

T: OK. Um, ek het ook nie um, Louzanne, 'n tydmaat teken, um bygesit nie. Ek het sommer 'n syfer teken geskryf en vier en taa-note gesit. Dink jy dis 'n goeie idee? Het jy verstaan wat dit beteken het?

R: Ja juffrou.

T: Het jy verstaan wat die vier taa-note beteken het?

R: Ja juffrou.

T: Vier taa-note in 'n maat?

R: Ja juffrou.

T: OK goed. En Lorraine, um, jy sou opgelet het dat ek ook nie 'n toonsoortteken bygesit het nie. Met ander woorde, as jy nou F# wou gehad het, sou ek sommer langs die noot gesit het. Wat het jy gedink van daardie plan?

R: Ek dink dit was 'n goeie een juffrou.

T: Is dit?

R: Ja juffrou//

T: En wat dink jy Louzanne?

R: Ja juffrou.

T: Julle behoort nie elke keer net 'ja' te sê nie, nê? Julle moet nie net sê wat ek dink julle moet sê. Julle moet sê wat julle voel en wat julle dink//

R: Natuurlik juffrou (somewhat indignant).

T: Nee dis goed. Ek maak net seker, want julle antwoord baie, baie mooi vir my vandag. OK. Um Louzanne, ek het ook nie 'n sopraan sleutel voor die stuk gesit nie. Um, want ek het gedink, dit was nie nodig nie. Julle weet mos julle speel die sopraan, um, blokfluit. Wat het jy gedink van daardie plan?

R: Dit was 'n..'n goeie een.

T: Waarom sê jy so?

R: Want juffrou, mens weet mos nou natuurlik jy speel op die sopraanblokfluit.

T: OK.//

R: So wat nog van 'n sopraan teken. Hoekom nog 'n sopraanteken//

T: Want dit mors bietjie tyd dan, nê? //

R: Ja juffrou//

T: As jy dit eerste moet lees. Wat dink jy, Lo...Lorraine?

R: Ek dink dieselfde, juffrou.

T: Is dit? OK. Um, ek gaan terug na Louzanne toe. Louzanne, jy het vir my 'n, um, 'n antwoord gegee, um gister, wat ek nie lekker verstaan het nie. Ek het gevra of jy uitgesien het na die lesse of, um, het jy nie miskien uitgesien daarna nie. En jy het gesê jy het nie uitgesien daarna nie, en jy het gevind dit was stresvol. OK. En, um, ek was nie seker waarom jy gesê het jy het dit stresvol gevind. Wat het, wat het, vir jou gestres? Was dit die video kamera, al die mense, of wat.

R: Al die, nee juffrou, die video kamera.

T: Is dit? OK. Want voorheen toe jy lesse met my gehad, gehad het, was jy nie gestres nie, nê?

R: Nee juffrou.

T: Nou die ander ding wat jy geantwoord het daar, Louzanne: jy het gesê jy het dit te maklik gevind, OK. Het dit vir jou gefrustreer?

R: Nee juffrou.

T: Hoe het dit jou laat voel?

R: Dit het my, um, lekker laat voel, juffrou.

T: O ek sien. So was dit lekker maklik vir jou. Dit was nie te maklik nie.

R: Nee juffrou.

T: O, ek verstaan. Ek het vir jou misverstaan, OK. Lorraine, dink jy dat die lesse die kwartaal wat verby is, vir jou beter musiek braille laat lees het?

R: Ja juffrou.

T: OK. Het dit vinniger gegaan as op die klavier?

R: Ja juffrou.

T: O, regtigwaar? En wat vind jy, Louzanne?

R: Juffrou, dit het vir my baie meer laat verstaan van musiek braille, juffrou.

T: O. Dis goed dat jy so sê. OK. En Louzanne, die laaste vragie is dit: um, watter instrument dink jy is die beter een om mee musiek braille te begin lees? Die blokfluit of die klavier?

R: Blokfluit, juffrou.

T: Waarom sê jy dit?

R: Want juffrou, die klavier, as jy hom begin, dan weet jy nie presies wat aangaan nie. Ek mee (( )) want daar's 'n punt vyf en sulke goed by die klavier nog.

T: OK. En wat dink jy, Lorraine, as jy vir iemand nou musiek braille wil begin leer - op watter instrument sal jy hulle begin: blokfluit of die klavier?

R: Juffrou, ek sou ook die blokfluit gevat het.

T: En waarom sê jy dit?

R: Want, ek, ek sal die blokfluit, ek, um kies die blokfluit omdat um, omdat dit makliker is, dan as, as die kinders groter raak, dan, dan kan ons met klavier begin.

T: OK. Luister, julle het pragtig gedink vandag, hoor. Dankie vir julle insette.

INTERVIEW 4 - SYDNEY BERRINGTON, OCTOBER 2001

T: OK Sydney. How are you today?

R: I'm all right thank you//

T: You're not feeling too tired.

R: No.

T: That's good. OK. You can just talk up nice and loudly, all right?

R: Right.

T: Fine. Um, the lessons that we had last term - how did you find them. How did you experience them? Did you enjoy them, or did you find you were stressed, or maybe frustrated?

R: Oh no, they were fun.

T: Good. Did you, did you look forward to them, or did, didn't you look forward to them?

R: I didn't look forward to them but when I was in the middle of them, I quite enjoyed them.

T: OK, and so why didn't you look forward to them at first, do you think?

R: No, it's because I, I, I, um, I don't know how... it's just, just normal - like I don't look forward to school, but then I get myself into it.

T: O, I understand. That's a good answer. Right. Did you find the lessons were too difficult? Or did you maybe find they were too easy?

R: No, none of them. They were, um, middle

T: That's good. Um, now – you've also done a little bit of piano, um, where you had to read the braille music. I want to know from you, um, which instrument do you find easier to play, more comfortable to play: the recorder or the piano?

R: Recorder.

T: OK. Um, and when you are sitting at the piano, compared to when you were siting at that small table with the small chair, which did you find more comfortable?

R: Well, I'm not quite sure Mrs Wootton, I'm comfortable any way. Actually the floor is my most comfortable.

T: Mm. The?

R: Floor.

T ...floor is most comfortable. All right. So you, you don't think it would maybe be a good idea to have a smaller piano that would fit you exactly and a chair that would fit you exactly? (Both laugh). Because the piano's quite a big instrument. Isn't it?

R: Yes, but how do you have a small piano?

T: In the same way probably they have small violins for beginners (Teacher laughs). OK. And um, ///

R: Keyboard.

T: Ya. And the book position: when you were at the piano, you have to, to put your hand up to stretch to the notes. Did you find that easier or more difficult than when you read on the table for the recorder?

R: Well my hand gets a, a little bit sore when I, um, when I pick it up to read it on the piano, but I actually would actually prefer it.

T: If it were slightly elevated or slightly at an angle?

R: Yes, on the, well, on the piano. I think on the piano holder.

T: OK. So which position did you prefer: um, did you prefer it when I put the, the music flat on the little table in front of you, or when I had it on that little rack.

R: Um, actually, flat, because I'm used to reading flat.

T: OK. Right. And um, ...you will al...also have noticed that I changed certain things. Um, in the piano music, you, you usually have, um, right hand and left hand, and you have, um, contracted braille, and in recorder tutors, you also sometimes have words added. I changed all these things. I want you to tell me whether you think these things that I've changed were better or worse. Let's go, go through them: so instead of having words by, with the notes, I just had the notes. Do you think that was a good idea or would you prefer words as well?

R: Oh well, notes, I think.

T: Just the notes, OK, and um, the fact that I used uncontracted braille: did that make it easier to read?

R: Much better.

T: OK. And um, the item speed. That means do you think that the lessons were going too fast, or do you think they were just right, um, or would you have changed it?

R: No, I, I think it was all right.

T: OK. Right. You don't think I went from one, one concept or one idea to the next too quickly?

R: No. I mean one lesson was one idea.

T: OK. Right. You'll also have noticed that I left spaces between the lines of braille. Would that make it easier to read?

R: Ya.

T: Mm?

R: Yes, much easier//

T: OK, fine. And, something else that I changed you will, um, find that,...that I did, um quite a lot of group-work. Did you, did you enjoy the group-work, or would you have preferred to be alone?

R: Group-work.

T: OK. Um, did you find that you, that you felt more happy and alive in the group, or when you were on your own? .

R: Well, in the group, because, because, well there were, um, lots of people watching, I would rather preferred the group with me. I'm quite a shy child. Well, not really, but I mean, I prefer company, I mean, like, people who can also be shy with me if they can be shy as well //

T: Oh, I understand. OK. We also did some composition. Um, remember you had to make little tunes up for yourself?

R: Yes.

T: Did you find that that helped you to, to read the music braille? Because you had to write it in music braille. Did that, did that help you?

R: Yes, Mrs Wootton.

T: And um,...right...you will have noticed that when I started off teaching you the note B, I put it as a quaver, an eighth notes, eighth note. In some tutors, they start with a crotchet, with a dot six added, or with a, a half note, with dot three added. Or with a whole note with dot three and six added. Do you think it's easier or more difficult to read just as, as a quaver, with the letter name, without the dots added?

R: Easier, easier, as a quaver.

T: Easier as a quaver. OK. Um, you'll also have noticed, that I didn't use, um, um, a proper time signature. Instead of writing 4/4, I just wrote like, four "taa" notes.

R: Ya.

T: Would that make it easier to understand?

R: Yeah.

T: Instead of writing four minims, or four quavers, I just wrote, four "taa" notes,

R: Four "taa".

T: Ya. OK. And then something else that I changed: instead of having, um, a key signature, in other words, instead of writing the sharp sign at the beginning of the piece, if you had to play a sharp, I put it next to the appropriate note. Which do you think is, is easier: if you have the sharp right in front of the k...piece, and you have to remember every time you play an F it's an F#, or if you write the F next to the, um, the sharp next to the F that you have to play .

R: Um. Please would you repeat that one.

T: Ya. Um. Instead of having a sharp sign right at the beginning of the piece, which means every time you play a F you have to remember to play an f sharp. Instead of doing that, when you, when you came across an F in the piece, I put a sharp sign right there. Do you think that helped you, helped you remember to play an F sharp when it was next to the note?

R: When it was next to the note?

T: Ya.

R: Oh, yes, rather, Mrs Wootton, but I'm also not very good at the signs.

T: Oh, you're not very good at the signs yet. OK. Fine. In recorder playing, instead of having a soprano clef and a bass clef, or right hand and left hand, you only have one line of music to read. Do you think that's easier, or more difficult?

R: Yeah. Easier.

T: Easier. OK. If you, you told me just now that when you're playing the piano, you, you like the music to be up on the little ledge. OK? Um, have you ever tried reading music braille on your lap?

R: Well, sometimes, yes, I've tried reading books and all that, on my lap, but they actually slip off.

T: OK. So it's better to have it on, on the table or on a little ledge, isn't it?

R: Yes, or else, um, if I don't have that, I just, like, I put it on the bed and kneel by the bed or something like that, I find, I find, this.

T: Mm. OK. And the Prestik which kept the page still? Did that help you?

R: Yes, quite like, Mrs Wootton, I wouldn't mind, I don't mind if it's loose, but it did quite help.

T: Mm. Do you think that the lessons you had last term helped you to, to read music braille a bit better?

R: Yes, Mrs Wootton.

T: OK. Now if you were a music teacher and, and you had to start teaching a child to read music braille, which instrument would you start them on: would you start them with the recorder or would you start them with the piano?

R: Recorder.

T: Why do you think?

R: Because the recorder is the easiest, I mean, I mean, er, the piano, well, if I had to jump over now, right now when I'm eight years old, then I , I would actually teach them the recorder first, because I know it best and I couldn't do, I can't do the piano very well. I can only do one or two songs.

T: Mm. But you said that the recorder is easier. In which way do you find the recorder easier?

R: Well because, actually it's probably because I know all the notes, very well, like, out of my head, well.

T: OK.

R: You know, almost play anything.

T: And handling the instrument? Don't you find maybe that the, the small descant recorder is easier to handle and play notes on than having to learn to know, play notes on the piano to start with?

R: Yeah.

T: OK. And, um, you will have also noticed that I didn't really use the octave signs. I just said, that's lower C and that's top C. OK. Um. Now on the piano you've got seven octaves. Do you think it would be easier to, to find bottom C on the recorder, or top C on the recorder, or would you find it easier to find fourth octave C or 5th octave C or second octave C on the piano?

R: Well, Mrs Wootton, I, I'm not very good at the octaves.

T: Mm.

R: See, I, um, I'll only know, um a little bit of the, um, music, as in just the music without the octaves and all the signs.

T: Mm. So//

R: So I wouldn't really, um, know too well.

T: So if we just left out the octave sighs to start with would that help?

R: Yes.

T: Or, if we just put in the, the octave sigh for lower C, and top C, that would be easier than having to read seven octaves, isn't it?

R: Yes, Mrs Wootton.

T: You understand that. OK. Fine. Um, I just want to ask you again about the size of your hands. You're not fully-grown yet. Um, for that reason, um, I started people on, on the recorder. I thought that, that it would suit the size of your hands better, because, the piano is actually really for an adult-sized hand. Um, do you think that's a good idea? To start a student on an instrument that fits them better?

R: Yes, although my hands are very long, like skeletons. They can't stretch so far, like that.

T: Mm. OK, fine.

R: I just wish my hands were smaller anyway. (Teacher laughs).

T: Goodness gracious me. OK. Right. Let me just see if I had any other questions here for you. You answered very nicely.

R: Thank you, Mrs Wootton. My hands have actually grown into the alt.

T: I see that. Ya, they will do. Allright. Just one more question here: you will find that when I started teaching you the recorder, we started with the note B, right? Which looks like the letter J. Remember I told you "die bokkom vis juk"? OK.

R: Yes. (Laughs).

T: Now the letter B is quite far from the letter J in the alphabet. Do you think it's easier to remember that, um, the note B looks like the letter J, or do you think its easier to remember that the note C looks like a D, and a D looks like an E? Which do you think is easier?

R: Any of them, um, Mrs Wootton, because I, I nearly know it as well as I can play the recorder.

T: Mm. You didn't, you didn't maybe find it confusing that...

R: Yes. I think the, I think the B as a J and the A is an "I" is the thing that I can mostly do.

T: Ya. Easier than a C is a D, but if you write it down, you must write a D to make the note C.

R: Yeah.

T: Is that, is that confusing.

R: Yes. Very confusing.

T: I see. OK, thank you very, very much, Sydney. That's the end of my interview.

DR KRUGER - INTERVIEWED 4/12/2001

T: Good morning Dr Kruger.

R: Good morning to you.

T: Right. Let's fire away with this one then: On which instrument have you found that young blind pupils locate the correct octave more easily - on the piano, or the recorder? Understand that question?

R: Yes. Er, you're talking about a beginner now?

T: A beginner, a young blind child who has never really played an instrument before.

R: I think the piano is the easiest//

T: To find the location of the octave//

R: According to the location of the black and the white keys.

T: Is that so? OK. And then, um, on which instrument have you found that children with small hands manage more easily - the piano, or the soprano recorder? //

R: Yes, no, that will be the recorder.

T: OK.

R: Ya, the recorder.

T: Um, and with which instrument have you found that children with poor posture, due to poor muscle tone, struggle more - the piano or the recorder?...the sitting position.

R: Um, I think the...er, you're asking on which one they struggle more?

T: Mm.

R: That'll be the piano.

T: OK. Which reading position do you think young blind pupils prefer: what have you found: do they prefer reading with the book placed on the piano ledge, on their lap, flat on the table, or slightly elevated on the table? I'll repeat that question for you. Which reading position do you think young blind pupils prefer: where the book is placed on the piano ledge, on their lap, flat on the table, or slightly elevated on the table?

R: It all depends on what you're reading. What sort of music you're reading, but if it's getting a bit, um, involved, like in piano playing for instance, it would definitely be on the top, on the, the edge of the piano.

T: On the ledge of the piano.

R: Ya.

T: OK. Um//

R: On the lap there's the only one trouble, er, and that is that the book sometimes, er, tends to er, fall down.

T: Mm. You don't find maybe that, that their arms get tired reaching up towards the ledge?

R: Yes, oh yes. Yes.

T: So if they were to read, um//

R: For a, for a reasonable time, then on the lap will be easier.

T: And, um, if they were to be playing the recorder, and the, the music were placed on a table, do you think they would read easier with it flat, or slightly elevated?

R: That's a difficult question. I didn't think of that, um, I don't think it would really make a, a great difference.

T: Mm. All right. Which instrument do you think a young blind child handles more easily technically - the piano or the soprano recorder?

R: Soprano recorder.

T: OK. Have you found that young blind pupils confuse the note C with the note D?

R: Are you talking about the recorder now//

T: On either instrument, when they're reading the braille music.

R: Ya.

T: Do you find that they confuse the note C with the note D?

R: Yes, according to the braille system.

T: Right. And where have you discovered more confusion: with the note B which is written as the letter J, or with the note C, written as the letter D?

R: ...I think the C.

T: OK.

R: Written as the letter D.

T: All right. Um, would you expect a beginner music braille learner to have more difficulty reading two clefs, in other words, the soprano and bass, or one clef, just the soprano? That's a rather obvious question.

R: Yes, no of course, when they're reading only one clef it should be easier.

T: Um, have you discovered that in piano, as well as in recorder tutors, that too many new braille signs are introduced too soon?

R: Yes.

T: OK. Have you discovered that young music braille learners are slowed down by having the titles of pieces in contracted braille? For the really young children who haven't really learned contracted braille.

R: Mm ya, they would be bothered by that//

T: Do you think it would help if//

R: Not knowing what, not knowing what it is, if they don't know contracted braille, but, it's usually dented in, you know, er, um//

T: Yes, but if it were in uncontracted braille would it facilitate their reading, the young?

R: Ya, it will.

T: OK. Um, now you earlier mentioned that you found that children um, ma...manage to locate the, the correct octave more easily on the piano, than the recorder.

R: Yes.

T: Um, on the oc...on the piano there're obviously seven octaves, and on the recorder there are only two octaves.

R: That's right.

T: Have you, um, would you expect that young braille readers might experience more confusion with the octave rule when playing the piano or the recorder?

R: No, with the piano.

T: OK.

R: Because there are more octaves to get confused with.

T: Right. Do you think that writing down one's own composition will improve the reading of braille music?

R: I've never tried it. So I can't give you really an answer for that. I mean, with small ones. For myself, it doesn't matter to me, but, I, I've never tried it with small ones, that they should write their own compositions, because I don't think a really small child can do that because they, they've got to know something about music notation first.

T: Yes. Now say for instance they've learned the notes B, A and G as quavers,

crotchets and minims and //

R: Only using those 3 notes?

T: Yes. Would you think that, um, if they were to compose a simple little piece, just using those notes and rhythms, um,

and they were shown how to write it down, it would con...consolidate the knowledge?

R: Oh yes, it can. No it can.

T: OK. Do you think that extra spacing between the lines of music braille will facilitate reading for beginners?

R: I don't think extra spacing, but, but what I do think, is a, a sort of, um, numeral sign at the beginning of each line.

T: OK.

R: That will be very much easier.

T: That's a very good idea//

R: Because there's, there's the point where they all struggle.

T: They lose their place because their orientation is not developed.//

R: Yes. When they come to the end of the one line to go back and one line down, they go too far down.

T: OK, that's a very good idea. Thank you for that//

R: So if you, if you cannot according to the bars, according to the line of music//

T: Lines//

R: An A and a B and a C at the beginning of each line.

T: Mm.

R: That's very easy.

T: Thank you for that suggestion. Right. Have you discovered that especially young blind children experience a confusion between right and left hands?

R: Do you mean the signs?

T: No, their actual physical using of their, of their hands. If you say: play this with your right hand, they're not quite sure which hand is their right hand or their left hand.

R: Well that's the same with small sighted children.

T: Have you not found there's more confusion//

R: No, I don't think so//

T: For blind children?

R: I don't think so.

T: OK. Um, do you find the currently available Braille Recorder Tutors you have used, adequate for the needs of the blind child?

R: No... I don't think so.

T: In, in which respect?

R: As you asked in one of your questions at the beginning, they, they're using too many signs too quickly. They get confused, and the, the, titles of all the pieces are written in contracted braille and all that sort of stuff. It all comes into account, but the...

T: Right, and what about the order of the items? Um, in the sighted tutors they often start with a semibreve, and the note C, whereas, um in, wouldn't it be a better idea to start with the note B as a quaver, for example? The order of the items, don't you, do you find that adequate?

R: I think so, ya.

T: Mm, um, you don't think it would be maybe a better idea to introduce a quaver before a semibreve?

R: No, but why a quaver before a semibreve?

T: Because then they're just dealing with the letter name rather than//

R: Oh, I see what you mean//

T: Having to add dots//

R: Oh, I see what you mean. Without adding the dots.

T: Mm.

R: Below, ya. Three and six. Um, ya, that could, that could help.

T: Mm. Um, have you discovered any other weaknesses in recorder tutors that have been directly transcribed from the sighted, which don't take into account the needs of the blind child?

R: Yes, as I said, they usually get con...confused when they're reading the stuff. They usually go too far down with their left hand for the following, er, line.

T: Mm. OK.

R: That's the one, and the other one is the contracted titles. That is confusing for them, especially for small ones that, you know, a kid of say, Grade one, two, three, thereabout.

T: And if they, if they, would you find there would be more confusion if they, if they provide the pieces with words? Because that could also use contracted braille. Wouldn't it?

R: Yes.

T: OK. Um, there are certain benefits, obviously of group playing. Do you think that...would you think that group playing would benefit the self-esteem of children?

R: Oh yes. Most definitely.

T: Why do you think so?

R: Well, it's, it's a fact in, in, in everybody's life, I mean, when you're playing, er, with, in ensemble playing you, it develops your musicianship. You must sort of, keep up with the rest of them.

T: So you're enjoying the success of the group//

R: I think so. I think so, yes.

T: Even though you may not be//

R: Ya, even if//

T: The best player.

R: Ya, oh yes.

T: OK.

R: But if you are playing on your own, I mean, you□re the only person that counts at that moment...

T: We were discussing the benefits of group playing. Um, do you think that performance improves self-esteem?

R: Oh yes.

T: In which respect?

R: Well, if you can, everybody will feel a bit, er, better, if he can play something, once he learned something, they, they, they show it to people, to the other, to the other kids or to their teacher or to their parents or to whosoever; they can show that they know this and they can play it.

T: So then they have, a, a sense of achievement.

R: Oh yes.

T: OK, um, what other benefits do you think there are in group playing? Especially maybe for the blind child?

R: Well, it's, the one, er, good playing, now, if that means, if you can already play, er, it will improve his self-esteem; it will make him feel better because he can play even with sighted kids, in ensemble work; he can play with his teacher, he can play on his own, at a concert, or, er, any place.

T: OK, so it will improve his socialisation.

R: Oh yes.

T: Which might not be that good because, um//

R: Oh yes, very much//

T: Blind children might be a bit more introverted?

R: Yes.

T: OK. Do you think that playing one's own composition would, particularly improve self-esteem?

R: I wouldn't say that. Er, maybe, but, I, I, I haven't dealt with that//

T: Aspect.

R: Sort of aspect as yet on my own, but, I, I don't know. I really don't know.

T: OK. You don't think, that that would give somebody a particular sense of self-esteem um, because you've created something//

R: It ought, it ought to//

T: Yourself?

R: Oh yes, it ought, but you see, your, your, er, er your er, the people listening to you doesn't know the work because it's your own composition, so nobody will be able to say if you played wrong (laughs) or you did it very well.

T: I maybe meant in the class context.

R: On, in the class context...um//

T: and the whole creativity thing//

R: In other words playing, in other words playing in front of his own//

T: Mm, something that he's created.

R: Yes. Oh yes, that would.

T: OK. Fine. Do you have any other comments that, anything that's popped into your mind while we were asking the questions? That you'd like to elaborate on?

R: You see if the, the, the way in which small, I'm talking about small, very small ones now. Er, the way in which they are reading music - if that can be improved or enhanced by any device, that will help tremendously for their ... ability to be able to read, because I don't think... a sm...a very small kid will be able to read with the one hand and play with the other hand. I've even seen on the piano, the bigger ones, er, they, they get confused on the book, where they are. But if you do something say, er, keep track with them as they go with the one hand on the book while playing with the other hand, and you, use some or other device, a peg or a paper clip for instance, or something like that, er, moving it as they go, so that they always, c...can go back to that point, then that's their checkpoint where they must be reading, that will be a tremendous help.

T: Mm.

R: For the small ones.

T: When, when the children are learning to play the recorder and the, the book is flat on the, the table, I've quite often found that the, the book slips around//

R: Yes, that's the trouble//

T: So maybe to, to anchor it with Prestik or something like that would also save time.

R: It would, it would, ya//

T: Any//

R: It should//

T: Other ideas?

R: Ya, it, it, you see it all comes to their way of, of reading, the, the way in which they read, whether it's, er, literature or whether it's music. You... if a blind person is reading, and he's reading correctly, he shouldn't move the book about.

T: Mm.

R: He should be able to, er, to exert much less pressure when reading, so that you don't//

T: Mm.

R: Press on the book and move the book about while your'e reading. You, it, it's a very, it's a very light exercise with your fingers and your hand. You mustn't exert all your power on the book because then the whole thing will move.

T: But I think sometimes these books want to close on themselves when you, when you//

R: That, that//

T: Lift both hands.

R: That of course is another problem: the books that, um tends to close, that's a different, but you can always put something on the//

T: An elastic band or something//

R: On the other side. Yes.

T: OK.

R: Yes, or put something heavy on the side which they're not using.

T: So it doesn't damage the braille.

R: Ya.

T: OK. Any other ideas you've thought of?

R: No, I can't say.

T: All right. You've done very well. Thank you so much for your//

R: No, thank you//

T: Input.

R: My pleasure. No problem.

KAREN ZAAYMAN - INTERVIEWED 6/12/2001

T: Good morning Mrs Zaayman.

R: Good morning Mrs Wootton.

T: Right, let's kick off with this one: On which instrument have you found young blind pupils to locate the correct octave more easily: the piano, or the recorder?

R: The recorder.

T: Why do you say that?

R: Um, the blind, the small blind pupil is usually, um, arms and hands is not so long as to, you know, he has to lean over, and stretch and find the first octave on the piano, and usually, um, or, yes, sometimes he loses his place, and then he... I think so.

T: All right.

R: Ya.

T: Um, on which instrument have you found that children with small hands manage more easily: the piano, or the soprano recorder?

R: The recorder.

T: Right, um, with which instrument have you found that children with poor posture, due to poor muscle tone, struggle more: the piano or the recorder?

R: The piano.

T: Right. Which reading position do you think young blind pupils prefer: the book placed on the piano ledge, or on the lap, that is now if they're playing the piano//

R: Mm.

T: Or flat on the table, or slightly elevated on the table, if they're playing the recorder?

R: Mm.

T: Would you like me to repeat the question?

R: No, that's all right, um, I find that, that...m..., I found that most of mine preferred the lap.

T: Mm. Do you find that the stretching tired their arms?

R: Yes.

T: Is that the main reason//

R: Yes, ya, I think so.

T: OK, um, when you taught th...them recorder, er, where did you have the book placed: flat on the table, or at an angle, or on the music stand or...

R: On a table.

T: On, flat on a table//

R: Ya, ya.

T: OK, right. Which instrument do you think a young blind child handles more easily technically: the piano or the soprano recorder?

R: The soprano recorder.

T: Right. Have you found that young blind pupils confuse the note C with the note D, remembering that the note C is litten, written as the letter D.

R: Mm.

T: Did you find confusion //there?

R: Yes.

T: Where have you discovered more confusion: with the note B written as the letter J, or the note C, written as the letter D? Which confused them more?

R: I think the J and the B.

T: The J and the B?

R: Mm.

T: Mm. Um, would you expect a beginner music braille learner to have more difficulty reading two clefs (soprano and bass), or one clef?

R: Two clefs.

T: OK. Have you discovered that in piano, as well as in recorder tutors, too many new braille signs are introduced too soon?

R: ...Not with the recorder I think. Perhaps with the, with the piano.

T: OK.

R: Mm.

T: Have you discovered that young music braille learners are slowed down by having the titles of pieces in contracted braille? I could maybe add to that that sometimes in the recorder tutors um, the, the tunes have words underneath//

R: Oh yes//

T: And they're in contracted braille//

R: Ya, yes//

T: So your sub A and B child, do you find that//

R: Yes//

T: confuses them?

R: Yes, that does, ya.

T: OK. Would you expect that young braille readers might experience more confusion with the octave rule when playing the piano, or the recorder?

R: ...

T: Um, shall I just refresh on that?

T: Mm.

T: It's a while since you taught the music braille.

R: Yes.

T: Um.

R: The piano I, I remember fairly well.

T: OK.

R: One, two, three, four, five//

T: In other words, if it's an interval of a, a fourth or bigger/

R: Ya.

T: Then they have to stay in the same octave, otherwise a new octave sign//

R: That's right.

T: Is put there. Now on the piano of course you have seven octaves to deal with//

R: Mm.

T: And on the recorder you only have two octaves//

R: That's, of course yes. Oh, that's what you mean.

T: So would you expect that young braille readers might experience more confusion with the octave rule//

R: Yes//

T: When playing the piano, or the recorder?

R: Piano. Definitely.

T: All right. Do you think that writing down one's own composition will improve the reading of braille music?

R: Yes.

T: OK. Do you think that extra spacing between the lines of music braille will facilitate its reading for beginners?

R: Yes, yes.

T: OK. Have you discovered that especially young blind children as opposed to sighted children, experience a confusion between right and left hand? In other words if you say: play that with your right hand, they're not quite sure which//

R: Yes, yes//

T: Blind pupils than with sighted?

R: Definitely.

T: OK. Do you find the currently available Braille Recorder Tutors, like the Goodyear, and er, Priestly and Fowler - have you discovered that these braille tutors are adequate for the needs of the blind child?

R: No.

T: OK. They've been directly transcribed from the sighted.

R: Mm.

T: Have you maybe found that um, I've asked you this question before, but, but I'd like to just, um...

R: Mm.

T: Elaborate a little bit that, that the signs come too fast, um, there're too many signs too soon//

R: Yes, yes, too soon, with that, with that specific ones yes. That's more for the sighted child.

T: OK.

R: Ya, ya.

T: That's maybe what I meant in the earlier question, um... now the order of the items in these tutors...

R: Mm.

T: You often find, um, in a piano tutor that they start with the note middle C.

R: Yes.

T: As a semibreve.

R: Mm.

T: Um, now, um, I'm looking at the order of the items for the bl...braille child. Um, would you say that, um, the note C, as, as a semibreve would be more difficult for them to read, or the note C as a quaver? Remember the note C as a quaver is just written as, as a D, but as, as a semibreve//

R: That, that's right, the dot 3 and the dot 6.

T: Which would you think would be more difficult for them to read to start with: the straightforward letter name, or having dots added?

R: Um, I think the straight, the straightforward letter name.

T: As a quaver.

R: Yes, yes.

T: OK. Right, um, have you discovered any other weaknesses in, in, in the recorder tutors, um, that you'd like to mention?

Be...bearing in mind that they were actually written for sighted children.

R: Yes.

T: And then just transcribed directly into braille.

R: Mm. Mm.

T: Did you find that there were any weaknesses you can think of?

R: I, I just think that, that, um, some of them has, has the words of the song written underneath the notes, and that, that, for a beginner in the first place is//

T: Mm.

R: Is difficult to, to read, um, changing from the, from the notes to//

T: To the literary braille//

R: To the literary braille, yes.

T: Mm. Do you find that there was enough exercise in each item?

R: No! No. Thinking back, that, yes that is//

T: OK. So you feel there should be additional exercises.

R: Definitely.

T: To consolidate certain//

R: Ya, yes, notes.

T: Items, and braille signs.

R: Ya.

T: OK.

R: That would be, that would be good.

T: All right.

R: I, um, concoct a, a little, you know, recorder book for my partially sighted//

T: Mm//

R: Pupils, because of that same reason.

T: Mm.

R: Because it came too fast. But I never got to//

T: Publishing it//

R: Pub...no, no, Brailling it.

T: Brailling it.

R: You know, ya.

T: Oh, I see.

R: Yes.

T: OK.

R: I can perhaps just show you, you know.

T: That would be very useful.

R: Ya.

T: Thank you very much. Any other comments there in comparing, um, teaching braille music via the medium of the piano as opposed to the recorder?

R: Mm.

T: That you've discovered?

R: Well I just found that, that you can start a pupil much earlier, teaching him recorder, and the same pupil won't, you know, be able to do piano.

T: Mm. Because of the technical difficulties//

R: Of the technical difficulties, and the smallness of the hand.

T: And the braille reading.

R: Ya, the braille reading, and he can actually get the same knowledge from recorder in the early stage and then//

T: Transfer it to piano.

R: And transfer it to piano. Ya.

T: That's interesting. Any other comments before we end?

R: No, thank you very much.

T: (Laughs). Thanks so much//

R: For asking me.

T: For your input.

ANTOINETTE BOTHA - INTERVIEWED 12/12/2001

T: Good afternoon Antoinette.

R: Good afternoon.

T: Right, let's start with this one: On which instrument have you found young blind pupils to locate the correct octave more easily: the piano, or the recorder?

R: I always think that if the child only plays the recorder, and doesn't know what the piano keyboard looks like, he may very well not know how, what it looks like, er, then I think it's difficult to understand the idea of, of seven octaves, because just, I mean, the recorder hasn't got that range. So, I don't, I don't say you should start playing the piano to, to understand octaves, but if you start with recorder playing, which is easier, I think there should be some reference to the piano keyboard just to understand the, the, the concept.

T: Thank you, that's a very intelligent answer.

R: Thank you.

T: Right, and um, on which instrument have you found that children with small hands manage more easily: the piano, or

the soprano recorder?

R: Um, interesting that you said the soprano recorder, we usually call it the descant recorder.

T: Mm.

R: Um, well of course, um, it's a bit of a difficult question. It, it depends on if you, if you play the piano, what you let them play on the piano, um, because, um, for a very simple hand position, first hand position on the piano, the, the size of the hands is not that important, and for, um, you know when you have to play the lowest note on the recorder, a small hand can be quite difficult, but on the whole, I should say that the recorder is better for smaller hands.

T: To begin with//

R: To begin with, maybe//

T: OK. And with which instrument have you found that children with poor posture, due to poor muscle tone, struggle more: the piano or the recorder?

R: There is much more to do with your muscles, playing the piano than with the recorder. There...the recorder is more restricted in your movements, so it's easier, I suppose to um, not I suppose, I believe, it's easier to, to teach them the correct posture for recorder playing, the natural posture for recorder playing, than for the piano, just because of the, of the, um, variety of things you have to do on the piano.

T: All right, and which reading position do you think young, blind pupils prefer - this is now when they're playing the piano: where the book is placed on the piano ledge, or on the lap?

R: On the lap, definitely. It's a more natural way of, of, of reading braille//

T: Do, do their arms maybe get tired from stretching up to the piano ledge?

R: Not only that, that too, but your, your, it's a more natural//

T: It's a more natural//

R: It's a more natural position. It's very difficult to, to read with your hand up//

T: Up. I understand. And when they're playing the recorder//

R: There's much more stress in the, in the muscles, when you read upright.

T: I understand. And when you are playing the recorder, do you, which reading position do you think young blind pupils would prefer: with the book flat on the table, or slightly elevated on the table, or on a music stand?

R: Not a music stand - you never need elevated braille. If you mean, by elevated if you mean, tilting, sort of//

T: Yes//

R: As in, ya, no, I, at, at a slant, //

T: Flat//

R: No, that's not, no, actually, it's easier to read braille if it's, if it's tilted downwards.

T: If it's the other way.

R: Yes, that's it//

T: Thank you very much, that's a very valid answer. And which instrument do you think a young blind per...child handles more easily technically: the piano or the soprano recorder?

R: Well again, there's much more to do, um, um. It depends on what you, what you really mean by technique: it's more difficult to, to do the things your muscles have to do on the piano than it is to do on the recorder, but on the other hand, it's much easier to get good sound on the piano than on the recorder (laughs).

T: OK, thank you very much for that. I meant probably the physical technique.

R: Ya.

T: Right. Have you found that young blind pupils confuse the note C with the note D?

R: Well, that depends on, on how you teach them. Um, I try to, um, I don't tell them that the note C looks like the note D. I tell them this: this is the, the, braille symbol for the note c, um, and if they say, but it looks like a D, I would say, yes, it just happens to do, to, to, look like a D, because you haven't got so many symbols in braille, but...if you, if you, if you think of recorder playing, it's even easier, because you needn't, um, teach them many notes at a time, and you can start with notes that are not so near, to, to one another as a C to a D, so adjacent, and, if you don't use them as quaver notes, in the beginning, er, then you haven't got that problem.

T: That comparison.

R: For instance, if you should start your recorder playing with the notes, um, B, A, and G, for instance, and you do it with crotchets, then there's no comparison with, with letter names whatsoever. I mean, with, with the symbols of the letter names in braille.

T: OK. Thank you very much for the information//

R: But, but, what is very important, of course, you know that, is that, in the end, even if you start with crotchets or whatever, in the end, you must definitely always give that idea that, that the top part of the note, which happens to be adjacent to the letter name, in braille, er, is the symbol for the note, and the bottom notes are the, are the, er, the value, the value dots. So even if you start with crotchets, the moment you come to quavers then you have the crotchet note in the mind already and it's, just, you know dropping the dot 6, in the same symbol at the top, and it's not so, so um,

difficult to get the, um, the distinction between the letter names and the notes, on the alphabet and the music notes.

T: OK. And would you expect a beginner music braille learner to have more difficulty reading two clefs (soprano and bass), or one clef (soprano)?

R: But that is, that's not a problem, do you mean, do you mean, um, um, um, do you mean, er, do you mean, er two-part music?

T: Yes.

R: Or you, oh I see. Well, you can only read one at a time. If even you read one with right hand and one with the left hand, you, you can still only concentrate on one at a time. You can't, like, with your eyesight you can take in a whole picture as, as, a whole. In braille you can just feel one symbol under your finger at one time. And you can just concentrate on either your right hand or your left hand, so it's not really a question of simultaneous reading - really a question of, of reading them separately and combining it in your mind.

T: OK. So maybe I should rephrase that question. Maybe it's easier for a, a, young child to only memorise one line of music at the beginning//

R: Ya//

T: Rather than soprano and bass, and then remember them both. OK?

R: If you, if you have to put them in together anyway, so you have to read them separately first.

T: Yes.

R: But not long, I mean, as soon as possible I would combine them.

T: Mm.

R: Say phrase by phrase, or so.

T: Yes. Um, thank you. Right. Have you discovered that in piano, as well as in recorder tutors, too many new braille signs are introduced too soon?...Or//

R: Um//

T: Would you like to distinguish between piano and recorder tutors?

R: I think recorder tutors have less, um, um, it's also difficult to say. Again, it depends on the, on the author of the book, I suppose, but I think piano music are inclined to have more, um, what's the word I'm looking for, nuance symbols, you know, staccatos and phrasings and, and um, (click of tongue), volume indications and so on//

T: Um//

R: And recorder music very often, you see recorder music with very little symbols except the notes, which is of course easier to read.

T: OK. I'd like to make a comparison between ...books that have been written specifically for the blind child, tutors that have been created for the blind child, and those that have been transcribed directly from the sighted.

R: I think the problem is that for a, for a chi...a sighted child to learn music notation, is a far cry from learn, er, having to learn braille music notation. The two notation systems differ so widely. And the books, the tutors, are written for the sighted child. For the, for the system that he has to learn. Not for the blind child for the system that he has to learn. For a blind child you'll have exercises in: how do you jump from octave to octave, or how do you stay in your same octave; what, what are the rules. The sighted child doesn't need that sort of instruction. On the other hand the blind child, er, don't need, um, know, how do you, how do you read music on different clefs, and that sort of thing.

T: Super. You gave me a lovely answer. That, that's what I've been thinking all along. OK. Right. Would you expect that young braille readers might experience more confusion with the octave rule when playing the piano, or the recorder?

R: ...No, I don't know, I, I'm, I'm so conscious as a... As a teacher, I was so conscious of the fact that, that you...that you should understand the rule, and know the rule, that um... Actually you have a, a reading rule, or a, writing rule for octaves//

T: Yes (laughs)//

R: But, they're different. The reading rule is, octave, or, or rather you, you go to the nearest note, un...unless the nearest note is a fourth, then you see, see that you stay in your octave. Or a 5th, rather it's a 5th, then you stay in your octave, and that's that. But, on the recorder, your range of notes to play, are not so many. I think you will, you will//

T: Ya, there're only two octaves//

R: You will, you don't need so many octave signs, and you will, you will understand from the melody much more easily whether you're going wrong or not.

T: OK.

R: I mean recorder music is much, much more like vocal music usually.

T: Yes. Right.

R: While piano music, you, you can jump all over the place. (Laughs).

T: OK. Thank you.

R: You know, when I was a student at Stellenbosch University, after I've done my, well, I was, I was, I think I've done

my final exam already, my Grade eight examination for UNISA, I was playing a Bach fugue. No, not a fugue, some other B...some other contrapuntal Bach piece, and, I happened to land in the s...in the wrong octave.

T: Mm.

R: When I, when I was memorising it, because nobody taught me the octave rule as a child very well.

T: Mm.

R: And that is why I am so very conscious about the fact, and I was sort of, I mean my teacher, my sighted teacher scolded me more or less for doing this thing now, which I've never done before, and I've learned it that way, so I've always done that before. She didn't listen. (Laughs).

T: Brilliant. (Laughs). Right.

R: I wouldn't suddenly go into the, the wrong octave when I'm playing, would I?

T: No. (Laughs). Right. Do you think that extra spacing between the lines of music braille will facilitate its reading for beginners?

R: It depends on, on whether they read um, um, the, the, normal braille in school, how their books are written. It, it is definitely easier for a young beginner to have a little bit more space between lines, um//

T: Till they get used //

R: Until they get used to it//

T: Orientation//

R: But, but usually I think, I think round, for the first at least the first year, perhaps two years, I'm not sure, when they start reading, I can't remember now actually. I know when we teach them, um, when we teach older beginners braille, just braille, um, reading, that in the, the five-part manual that we're using, I think in the fourth part, we start with, with the lines more closely.

T: Mm. OK. Thank you.

R: They get lost sometimes. When, when they track back they get lost and go into the wrong line.

T: Mm. Have you discovered that especially young blind children experience a confusion between right and left hand? So that when you say: play this with your right hand, they're not sure which is their right hand?

R: Ag, all children do it.

T: You haven't found that more with blind children?

R: No, I don't think so.

T: OK. It's funny that all the blind people I've interviewed said "no", but all the sighted people, people I've interviewed said "yes", so I just wondered if maybe blind teachers don't always notice so much the confusion they have between their, their hands...

R: It's just possible, but on the other hand sighted people are apt to blame everything on blindness.

T: (Laughs). That's also very valid//

R: They have, they may have a sighted pupil not knowing what is, what is left and right and, and they haven't got anything else to blame it on, so they just accept it.

T: Ya. We, we probably would blame it on, on spatial orientation.

R: Ya, but, but spatial orientatio... I don't, I really don't know. I, I, don't think so.

T: OK.

R: But again, um...it's just, just perhaps possible that the blind, yes, you know you may be right in that way, that it's just perhaps possible that a blind child learned the difference in, in, on the words left and right, um later than the sighted pupil did.

T: OK, because they don't write with their right hand.

R: Ya.

T: OK. That's a possibility.

R: I can, I can actually remember when I learned that. I, I never knew what people said when they said left and right. Not, not because I got confused, because I didn't know the term//

T: Because you didn't know what it was. It wasn't valid//

R: And I remember that, that someone said, while we were little children: I was, I was in school already, and um, and we were playing something. Ag you know, walking round the table, table. Somebody said that I must go, um towards the left, you know. The circle, and I said: oh, now, now, if, if, if I stand with my, with my right leg against the table...that is now my right leg, I, I suppose somebody said: this is your right leg, the one that's, here at, next to the table, and I said: all right, and when I turn round, with my, you know, er, 180 degrees round so that my other leg is against the table, is that then my right leg? I didn't know//

T: Nobody had actually pointed it out//

R: I, I thought it, I thought it was something like, like south and, and north or west and east.

T: OK.

R: That is, that is, you know, I didn't know that...

T: Ya, I think you've got a valid point there, that maybe//

R: Ya//

T: The terms are introduced//

R: Ya//

T: Later. Ya. OK. Fine.

R: You should see, you should see, Janet, er Janet Neethling, with the pre...preschool children. Pre... pre-grade ones. She's very good at teaching them//

T: Mm//

R: Left and right concepts.

T: OK.

R: Now we sit with our right leg on the mat and our left leg on the floor. Now touch your, your, your right knee with your left hand. That sort of thing.

T: OK. (Laughs). Right. So this question now is not, not applicable any more because you've already answered it: do you find the currently available Braille Recorder Tutors you have used, adequate for the needs of the blind child? And we basically said no because all the braille recorder tutors that we know//

R: Mm//

T: Have been transcribed from the printed music//

R: Ya.

T: OK. And we've said which weaknesses there are. Are there any other comments before we end?

R...Oh, well...

T: I think you've been very comprehensive in your answering//

R: Laughs. Thank you. (Laughs).

DR KRUGER - INTERVIEWED APRIL 2002

T: Right. Would you like to tell me then, on those three levels: the musical level, the braille code level and the technical level, which note would you start with in your tutor?

R: Do you mean the note value?

T: The note name, and the note value.

R: The note C, in braille music.

T: Is this now for the piano?

R: This is for the piano or for any instrument – doesn't matter - I would start on the C.

T: And for the recorder?

R: I would also start on the C, because that's most logical; when we come to the musical side we can discuss that.

T: OK.

R: But for the braille, er, er, sign, er, for the reading of the child, the C would be the best, and putting it in the semibreve gives him the idea of the, the, the shape of the note c, and deleting the one dot below, the 3 or the 6, gives you either a crotchet or a minim, and deleting both, gives you the quaver. So, once you start with the semibreve, you got the basis of how the note C looks like, with the two other dots at the bottom, that's added. That's your first, so I would start with the semibreves.

T: OK, and why wouldn't you start with a quaver?

R: Because that's not the first note values he's going to encounter when playing music. Surely he's going to start off with a couple of longer notes. A quaver comes in next. I would start with semibreves. Then it□s very easy to go to minims and to crotchets, from that, and even to quavers later on.

T: Right. Then he could also understand the subdividing.

R: Yes.

T: Of the semibreve.

R: Yes.

T: OK.

R: Then he's got the whole range. Like the semibreve, minim, crotchet, quaver. It's the same for semiquaver, er, demisemiquaver and hemidemisemiquaver - the whole lot of them.

T: Right. Now we've discussed the note that you would prefer to start with and the values. Would you teach that note with all its values first of all, the note C as a semibreve and then a minim and a crotchet and a quaver, before you went on to a new note?

R: I think so. Yes, I think so.

T: Good.

R: I think so. That would, that would give him the idea of C looks like this: the three dots at the top: dots 1, 4 and 5.

That gives you the note C - whether it's a quaver, only the three dots, or a minim, with one dot below, with a dot 3 added, or a crotchet with dot 6 added or a semibreve, 3 and 6 added to the top ones.

T: OK. Once you've taught the note C with all its values, would you then go on to another letter name, note name, or would you introduce a rest for, um...

R: I would go on to the next note.

T: The next note, and, and what//

R: I think that would be more sen... be more sensible, to teach him the notes, notes first of all: from C, to G, then show him, show him after the G how the A and the B works. I'm, I',m, I'm going to start on C because if you start a scale on C, you can build a little melody on that. You got a melody of C major. If you start on A, you can⎗t actually build a melody, except in a minor key.

T: Mm.

R: Then you've got to work with the G sharp, which is now far too involved for him.

T: Mm. So now are, are you again referring to the piano? If you were to...

R: Any, any, any instrument. It doesn't matter//

T: You don't think that a beginner would struggle, learning, technically, to finger the note C and the note G so young? I found that they//

R: No I don't think so. Except if their hands are very small//

T: Mm

R: Then the G could be a problem.

T: Mm

R: But then again, I mean, how do you, isn't the child then too small to start, in that case?

T: Mm.

R: Because you can't even, you can't ...if you start on C, you can't reach the G. It means you can play doh, but you can't play soh. You can't build melodies on that.

T: Mm. And what do you think about the fact that you're immediately going to be, um, using, um, two different octave signs? Um, if you were for example to start on, on the note B and then go to A and to G, um, they wouldn't even have to be aware of an octave sign, but if you started on the C and you immediately (this is 5th octave C) and you immediately play a G, they would immediately have to know 5th octave sign and a 4th octave sign.

R: Not necessarily. If you start on 5th octave C, you're talking of the recorder now?

T: Yes.

R: If you start on C, and you use the note B, just below C, you needn't put an octave sign below.

T: Ya.

R: And the same for A.

T: Mm

R: And er...

T: But you said you should start with C and then//

R: Yes, go up to G. To the soh//

T: Top G?

R: Yes. From C to the top G.

T: Isn't it technically awkward to play pinched notes before they know, before they know the normal notes//

R: Well if you, no, no, but it⎗s not a pinched note - G, you hold the one hand on the, on the recorder//

T: Top?

R: Are you, are you talking about the treble recorder now? Or the bigger one?

T: Descant.

R: Descant? Well, you're starting on C. You use all the fingers of your one hand, up to the G//

T: Oh, you would start on middle C, do you mean?

R: No - starting on 5th octave C, where, you see, er, the lowest note of the treble recorder is 5th octave C – there's no use//

T: The descant?

R: Ya - the descant recorder. There's no use teaching the blind child, especially the beginner, that the sighted notes, er, C, would be written on middle C: he's got nothing to do with that. He plays C, the lowest note on the recorder - available on the recorder, and that's 5th octave C.

T: Mm.

R: That's all he wants to know.

T: OK.

R: Later on, you can, er, you can teach him, er, it's a transposable [transposing] instrument, and the er, notes are written one octave down. But it's not at the beginning - I don't think it's of any value.

T: OK. Now um, you said that you would first teach them all the notes - basic note values on one note, then you'd teach them the second note//

R: Yes.

T: You'd teach first the C, then the G.

R: Yes. No, no, not first the C, then the G.

T: First the C then the D//

R: I'd go on, on the scale//

T: OK.

R: Like the scale goes//

T: All right. And then the...

R: Up to the G, I meant//

T: E, F and G.

R: G, yes.

T: OK. I understand that. And then, er, at which point would you introduce rests?

R: After he knows the value of the notes, the counting, of the first, say the first five notes: CDEFG.

T: Mm.

R: He can already, he can already play a exercise or a little melody, on that, especially if you go to the semibreve, the minim, the crotchet and the quaver - you can mix it up. He can also play, quite a, er, mobile piece on that 5 notes. Then I'll start using the rests; because then the rests will come very easy; the rests are equivalent to the same notes.

T: Thank you. And, um, the punctuation marks? Um...

R: You talking about, er, dynamic signs?

T: Dynamic markings.

R: I wouldn't bother with that at the beginning.

T: And staccatos and slurs?

R: I won't, I won't bother with that at the very beginning, because I think the first thing is to know the notes and to read the notes. To play the correct note, and then, if he knows that, when you start with the rests, same time more or less, you can start with staccato, something like that.

T: OK.

R: That's something quite different.

T: OK. Now in recorder playing, one of the, the first things introduced, introduced in a, in a sighted child's tutor, are slurs: one of the main articulations you use on a recorder.

R: Mm.

T: Er, would you introduce that first?

R: You talking about dots one and four?

T: Four. Dots one and four.

R: Oh yes. Surely when you, when he, I think when he knows the notes from say, from C to G, you can go on to slurs.

T: OK.

R: That wouldn't confuse him, because it's not similar to any of the other signs.

T: OK. Now, er, you said that we want to start with 5th octave//

R: Sounding 5th octave C//

T: C D E F G.

R: Yes.

T: That wouldn't really involve any more than one octave sign.

R: Yes, //

T: The, the//

R: That's why//

T: The, the 5th octave sign.

R: Yes.

T: So we don't even have to use that sign at the very beginning//

R: No! No you needn't//

T: Because you start learning to play - the octave rule can only//

R: No, you needn't. Ya. He plays. No, you needn't even teach him an octave at that stage.

T: Mm.

R: Because the lowest note on the recorder is 5th octave C.

T: Mm. So when you introduce the A, for the first time//

R: You talking about the A at the top, or the A below?

T: The A six notes above//

R: Ya//

T: 5th octave.

R: Ya. Six notes above, well//

T: Then he has to//

R: No, they needn't, because it's still on the same//

T: OK. So it's the only A he knows.

R: Ya. It's the only A he knows, and he can't reach the bottom A anyway//

T: Mm. Yes. OK. I understand that. All right. Would you, um... so if he starts on C he also doesn't have to know about a key signature. What about a time signature? When would you introduce that?

R: No, that I would use very soon. Er//

T: Would you start with two, or three or four//

R: Let him, let him get, let him get a sort of a idea of rhythm. But he, but he must first of all know the notes from say C to G. He must know the semibreves, the minims, the crotchets, and the quavers, and then you can start with, with some time. I would start with 2/4, 2/4 time. That, that is the lesser notes in your bar and he can subdivide very easily. And then you can go to 3, 3/4, triple time, and then to quadruple time after that.

T: OK. Is there anything else you'd like to, to say about the order of the items introduced for a, a braille child, based on spatial perception, or on, concept development?

R: No, I think that, that//

T: Perception, tactile perception? //

R: No, I think once they know the notes from C to G as I said, above the C, above the G, and he knows the semibreves, the minim, the, er, crotchet and the quaver signs, and you showed him the, the slurs, you've showed him the rests, no I think, and the staccatos, I mean, that I think is the, is the main, er, er, basis of the whole tutor.

T: Thank you very much.

R: Then you can add your, after that I think you can start adding your dynamics.

T: Mm.

R: Because that employs quite different signs.

T: Mm. OK. Thank you very much.

M.NELL - INTERVIEWED JUNE 2002

T: Goeie môre, Michelle.

R: Hello.

T: Hoe gaan dit met jou?

R: Goed dankie.

T: Praat lekker hardop, h...hoor? Miskien kan jy net 'n bietjie...daarsy. Goed. Jy moet eintlik na daardie ding toe mik. Die "speaker". Goed. As jy nou vir die eerste keer 'n braille leerder musiek braille gaan leer, vir 'n klein kind wat miskien ses jaar oud is, met watter noot sal jy begin, as jy nou vir hulle op die sopraan blokfluit gaan leer?

R: Wel, ek dink ek sal met B begin, want, omdat dit op 'n blokfluit vir 'n klein kindjie te speel sal baie maklik wees, want daar's minder vingers nodig.

T: Dis 'n mooi antwoord. Goed. Um, en as jy klaar is met die noot B, sal jy nou aangaan na die noot A, of sal jy vir hulle 'n ander nootwaarde leer. Met watter nootwaarde sal jy begin, um sal jy dit eers, um, sal jy eers die nootwaardes vir hulle leer, of sal jy eers nog 'n noot leer?

R: Wel die probleem is, dat sê nou 'n mens begin met 'n heelnoot, dit sal nie moontlik wees vir 'n vyf-jarige kind om die heelnoot te speel nie. So ek dink ek sal eers aangaan tot ek nou vir hulle G, A en B geleer het, en dan sal ek nootwaardes insit - sê nou maar begin by 'n kwartnoot of 'n agste.

T: OK. So die eerste nootwaarde wat jy vir hulle gaan leer, met die noot B - sal dit nou 'n kwartnoot wees?

R: Ek dink so, ja.

T: Waarom? Het jy 'n rede daarvoor?

R: Dit is, um, wel eerstens, soos ek gesê het, die heelnoot is te lank om te speel//

T: Mm//

R: En 'n kwartnoot, hulle sal onmiddellik weet as ek sê nou maar aangaan na 'n halwenoot//

T: Mm//

R: 'n Halfnoot, dan sal hulle weet dat 'n kwart, ag, 'n halfnoot is gelyk aan twee kwarte, en 'n heelnoot is gelyk aan vier kwarte, en 'n agste is die helfte van 'n er, er, kwartnoot.

T: OK. So in watter volgorde gaan jy nou werk; jy gee hulle 'n, er, jy begin met die noot B - dis, heeltemal aanvaarbaar - en jy sê jy sal, gaan eers met 'n kwartnoot begin - die noot B leer as 'n kwartnoot. Gaan jy nou onmiddellik na 'n A toe as kwartnoot, of gaan jy vir hulle die noot B as 'n halwenoot eers leer. Dink jy dis, dis belangriker om die letternaam,

die nootname vir hulle, um, te be...te bevestig, of um, of die waardes? //

R: Ek, er, ek dink dit is altwee ewe belangrik, so, ek sal... ek het ook gedink as 'n mens met die agste begin, um, kyk hoe leesbaar dit dan sal wees, er, dit is redelik klein vir die kind, um, daar's geen punt 3 or punt 6se aan nie, en dan dink ek 'n mens kan later aangaan met 'n kwartnoot, en dan vir hom leer dat soos in, 'n punt 6 beteken dis 'n kwartnoot, en punt 3 beteken dis 'n halfnoot, en punt 3 6 beteken dis 'n heelnoot. Ek dink daar's twee kante aan hierdie saak. 'n Mens moet kyk na die kind se vermoens.

T: OK. Daar's nog 'n kant hier. Ek wil vir jou vra - jy praat nou van leesbaarheid: as jy nou vir die kind die agstenoot leer - OK, dis goed en wel - hulle weet dis nou die noot B - jy hoef nie eers vir hulle te sê dis 'n agste nie - maar as jy nou 'n punt 6 bysit, dan moet hulle tweekeer daai noot lees. Hy moet sê: OK, dit is die noot B, maar hy's nou 'n kwart. Hulle moet voel - tweekeer - dis nie net een patroon nie. Weet jy wat ek bedoel? Hy moet tweekeer dink. Maar wat ek, um, vir jou wil vra is dit nie miskien, um, meer belankrik dat hulle die, die karakter se patroon leer, vir die eerste keer. Sê nou maar jy, jy leer die kind kwartnote - jy hoef nie te sê dis 'n kwartnoot - dit is net die noot, die noot B en dis 'n taa noot. En so lyk dit onder jou vinger. Hulle voel dit net eenkeer. Dis nie 'n agste met 'n punt ses by nie, want dan moet hulle dit kognitief eers uitwerk, en dan gaan hulle begin: OK, dis 'n B, en watter punt is nou by? En dan voel hulle, voel hulle, voel hulle. Sien jy wat ek bedoel? //

R: Sien dis die, dis die probleem wanneer jy met 'n agste begin, want 'n kwartnoot, um//

T: Het sy eie patroon né?

R: Ja, en ek dink er, die kind gaan weet - all right, daar is 'n punt onderaan, en as jy na... aangaan na die halfnoot, dan gaan hy net kyk waar die punt sit, en gaan hy dink, um, dit is 'n halfnoot, en so, en dan later, as jy aangaan na die agste, dan weet hy onmiddellik, o, dis 'n agste.

T: OK. Um, so ek wil net 'n bietjie teruggaan na, na die vraag wat ek gevra het: sal jy nou eers die, die noot B as 'n kwartnoot leer, en dan as 'n heel en dan as 'n agste, of jy, gaan jy eers die noot B as 'n kwart, en dan die noot A as 'n kwart, of wat gaan jy doen?

R: Ek sal die noot B en A en G as 'n kwartnoot leer, en dan dink er, ek 'n wysie soos byvoorbeeld er, "Mary had a little lamb", dan sal ek daarin vir hom nootwaardes leer, dan dink ek hy sal dit makliker kan verstaan ook, omdat dit in 'n wysie is.

T: Mm. Maar kan jy 'n wysie maak met net kwartnote, want "Mary had little lamb" het nou klaar halfnote en heelnote in.

R: Ja, maar sien, dis wat ek sê, um, ek vat nou 'n voorbeeld, van, soos//

T: Mm//

R: Er, "Mary had a little lamb" of iets//

T: Mm//

R: Om, kyk, mens begin natuurlik met eenvoudiger wysies//

T: Mm//

R: Maar ek dink ek sal vir die kind eers, er, die note wys en dan die nootwaardes, want dit sal nie so vervelig wees nie, en, hy sal dit ook makliker kan verstaan, wanneer dit in 'n wysie is.

T: OK. Baie dankie. Goed. So. Hoeveel note sal jy vir hulle eers aanleer: net die B A en G as kwarte, en nou gaan jy teruggaan, um, na die B as 'n halwe, of hoe gaan jy te werk gaan?

R: Ek dink ek sal, um, B A en G as kwarte leer, dan sal ek net 'n tipe wysie daaroor maak.

T: Mm.

R: En dan sal ek, sê nou maar, um, agstes of halfnote, of 'n ander noot bysit, en dan sal ek//

T: Ja, maar, maar watter een - dis presies wat ek wil weet, um, watter noot//

R: Ek dink C. Ek dink C en D sal volgende wees.

T: As kwarte?

R: Ek dink soos, um, soos, um, dit nou aangaan, um, dink ek, dat...(pouse, en lag)...Goed, ek sal dan onmiddellik aangaan na B A en G as kwartnote, sal ek vir die kind C en D as kwartnote leer, en dan sal ek aangaan met, um, sê nou maar halfnoot, en dan kwart, en dan wanneer jy aan//

T: Half en dan? Agste?//

R: Halfnoot en heelnoot, jammer//

T: Half dan heel, dankie//

R: En, um, dan wanneer die kind vertroud is//

T: En dan agste?

R: Ja.

T: Goed. Is dit nou reg: kwart, half, heel, en dan agste. Is dit jou volgorde?

R: Ek sal dan eers teruggaan na die kwart, en dan weer 'n agste, net so dat die kind kan seker wees.

T: Ja, ja, ja. Goed. Um, teen watter stadium sal jy nou vir hulle, um, bindboë en staccatos aanleer?

R: Wel, ek dink as hulle al die note magtig is, um, insluitend die gepunteerde halfnoot, en ander gepunteerde note, dan,

um, hang af van die kind se vermoens, maar, as die kind redelik vinnig vorder, dink ek, ek sal, um, wanneer hulle vertroud is met al daai note, kan jy blindboë insit.

T: Dink jy dat, dat bindboe moeilik is om te speel, of moeilik is om te lees, of moeilik is om te verstaan? Waarom sal jy dit so lank, um, los? Waarom nie, sommer nadat jy B A en G geleer het? Sal dit nie minder vervelig wees nie?

R: Kyk, dit sal definitief nie vervelig wees nie, maar, ek dink dat as jy vir 'n vyf- of ses-jarige kindjie wil verduidelik, dan, dan gaan hy miskien dalk later 'n kwartnoot verwar as twee agstes wat gebind is, of iets soos dit. Want dit het dieselfde waarde. Ek dink dit sal hom deurmekaar maak.

T: OK. Dankie. Um, laat ons nou net kyk. Wanneer sal jy rustekens bysit? Jy't nou gesê jy gaan daai vyf note eers as kwarte, halwes, heel en agstes leer, en dan, um, gaan jy miskien, um, aangaan met ander note soos die gepunteerde half, of, um, wanneer gaan jy rustekens insit?

R: Ek dink wanneer ons, um, heeltemal klaar is met die, um, kwart, halfnoot, heelnoot en agste, dan sal ek, terwyl ek vir die kind nuwe note leer, en, gepunteerde note en so, sal ek, er, in 'n maklike stuk, sê nou maar, 'n kwart rusnoot, um//

T: Mm//

R: Net toevallig bysit, en dan sal ek vir hom sê, dit is gelyk aan 'n kwartnoot of 'n taa noot.

T: Mm.

R: En dan ek dink in die stukke sal ek voortgaan met dit.

T: Mm. Goed. Nou jy't gesê jy gaan daai vyf note vir hom leer. Um, wat sal die volgende noot wees, dink jy?

R: Um, F.

T: F of F kruis?

R: Um, F kruis sal ek sê, want dit, er, gebruik minder vingers//

T: En, ja, en, dit is ook miskien musikaal meer logies, né? Want jy's in G.

R: Ja.

T: G A B C D. OK. En sal jy dit as 'n toe...toevallige teken gebruik, of sal jy dit, um, as 'n toonsoorteken gebruik?

R: Nee, ek sal dit eers as 'n toevallige teken gebruik.

T: OK. Goed. Wanneer sal jy 'n tydmaatteken insit? Heel in die begin? Hoe gaan jy werk met jou mate? Gaan daar mate wees? Gaan daar nie mate wees nie? In watter stadium sal jy die tydmaatteken inbring?

R: Ek dink, um, van die begin af, moet die stuk in maat...in mate wees//

T: Twee, drie of vier eerste?

R: Um, ek sal sê, um//

T: Watter sal maklik vir hulle wees?   .

R: Ek sal sê twee.

T: Goed. En dan...

R: En dan drie en dan vier, of dan twee en vier en drie.

T: Ja, want anders het jy 't gepunteerde noot te, te gou, né?

R: Ja.

T: Laat ons net gou dink - dis min of meer al. Teen watter stadium sal jy oktaaftekens vir hulle begin leer? Onthou nou, as jy met die noot B begin en dan die noot A en dan die noot G, jy hoef nie eers 'n oktaafteken daar te sit nie - dis nie nodig nie, né?

R: Ja.

T: Um, en dan die noot C - sê nou maar jy gaan van, van, van G tot C, dan sal jy mos 'n nuwe oktaafteken nodig kry, né?

R: Ja.

T: Goed. So dan moet 'n, moet 'n mens seker dan dit al klaar invul. OK. Um. Is daar nog iets wat jy wil sê oor die volgorder of die logika of die leesbaarheid, um, of die tegniese moeilikheid van, van sekere note sê?

R: Ja, ek dink net 'n mens moet in ag neem dat, um, wanneer vir 'n klein kindjie begin leer, dat sy vingertjies is nog klein, so jy, um, moet kyk, jy moet seker maak die heelnoot analiseer, en, um, dat jy definitief met 'n kwartnoot moet begin, want dit is nie tegnies vir 'n vierjarige moontlik om die heelnoot te kan speel nie.

T: Mm. Baie dankie, Michelle.

T. WATSON - INTERVIEWED JUNE 2002

T: Good morning Tamaryn.

R: Morning ma'am.

T: How are you?

R: Fine thank you ma'am.

T: Now you're just going to have to speak up a little bit//

R: OK ma'am.

T: You see where the, um, the speaker is, that is where you should be aiming your voice at.

R: Sorry ma'am.

T: OK. The first question I would like to ask you: if you were teaching a beginner braille music reader, who is learning to play the descant recorder, which note would you start teaching him, um, and also which note value?

R: Well, there's no speci... no specific note which I'd teach them first, because there isn't a easier note. There isn't really a easier note you read in the beginning, but the easi...the easiest note value is a quaver, because they're much smaller, than the other notes, and there is no extra dots added which will make it more difficult to distinguish the different notes.

R: OK. That's quite an interesting theory. What do you think of this: if you start teaching the quaver, and then the next one you add, say for example, is, is a crotchet, and you say that is a dot 6, 6 added now, or a minim as a dot 3 or whatever, doesn't the child have to think twice? In other words, um, say for instance you're teaching them the quaver, and then you say: this has a dot 6 added - so they have to first feel twice - has it got a dot 6 added, or has it got a dot 3 added or has it got a dot 3 6 added. Do you know what I'm say... saying?

R: Sort of.

T: I want...I want to know from you, um, if you teach them the note, er, say for instance B, ('cause you say the note isn't so important), as a, as a crotchet straight away, then they learn that pattern under their fingers. They just feel once, and that's it. They know that's a crotchet. They don't first have to work out: er, has it got a dot 3 6 added, or has it got 3 added, and feel around and around and slow down their reading. What do you think of that angle?

R: By teaching them crotchets first or...

T: Or, or whole notes or half notes or whatever.

R: I don't know. Maybe you should first teach them all the different quavers and stuff, so they can be, um, so they know the difference between the different notes first, before you teach them one note and all the different note values of that specific note. It could become quite confusing if you say for instance, teach them G as a whole note and a quaver and a crotchet, and then all of a sudden you change to A, or whatever the next note is.

T: OK, so you would, so which er, I see what you're saying: you first teach them the letter names as one thing, and then you teach them the letter names as another thing.

R: Ya, I think you should first get them to know the different notes and be able to read them well before you start changing the values//

T: Change the values. OK. It's logical to me. Um. OK, now let's look at the order of the notes. You say, it doesn't really make any difference. Let's look at the technical level. Don't you think for example, playing bottom C, that's now 5th octave C, would be more difficult than G or B. Don't you think it's any more difficult for a small child?

R: I think it would be, so I think maybe you should teach them G then, because it's an easy note to play. I don't know. I think that could about be...ya, and it's not that difficult to read either, so I think I'd start with G.

T: And then?

R: And then I'd say A, and B, because they sort of go in a sequence by removing your fingers.

T: OK. So do you think it's technically easier to play G A B, or B A G?

R: I think you could say B A G, because then you could teach them that they're adding a finger every time. And then go down, because then with the E you'd be adding more fingers, and the F and C.

T: OK, fine. And then, how many notes would you teach them first before you, um, went on to changing your note value?

R: I think it depends from child...from child to child, to see how quick they'll//

T: Ya, but don't forget we're setting up a tutor now.

R: Yes ma'am.

T: So, um, obviously it must be "aanpasbaar" to every child.

R: Are you referring to how many notes you would teach them in a lesson or...

T: No. In the, in the tutor - before we, um, add a new note value. Er, once you've taught them the B and the A and the G, um, how many more notes would you teach them? Would you still teach them a C and a D and an E and an F before you went on to a er, um, a quaver or a half note?

R: I think so, because, if they can play them as quavers, then it's much easier to change the values because then they just hold the notes longer.

T: Oh. So you teach them all the notes first.

R: Yes. And how to play them.

T: OK. Right. So you wouldn't have, really, er, er, a melody without anything else than quavers to start with?

R: Yes ma'am.

T: OK. Um, and which would be the order of those notes: you said B A G. What would you introduce next? Which letter name?

R: Then, I'd say F E D and then lower C, according to the way you played them.

T: OK. So B A G - you wouldn't teach them F sharp before you taught them F?

R: No. No, because I think you should first let them know the notes before you introduce the flats and sharps and stuff.

T: OK.

R: Because that would also confuse them.

T: OK. And tech... on a technical level, isn't it easier to play F# than F?

R: Yes it is.

T: OK. And B A G are part of G major scale. So wouldn't you then need an F# to make a tune?

R: Yes. You could do that if...you could show them F#, but then I suppose you should also just teach them the normal F as well, and not confuse them with other sharps and flats.

T: Mm. Mm. OK. So let's see: OK. Then you wouldn't need an octave sign, if you taught them B A G F E D and lower C. Then you wouldn't need an octave sign, because it's only when you play 6th octave C that you're going to need an octave sign, hey? OK.

R: Yes ma'am.

T: That makes sense. Fine. At which point would you introduce slurs and staccatos? Would you first teach them all your letter names and all the different note values, or don't you think it would add a bit of variety somewhere near the beginning, to have some slurs and staccatos? //

R: I, I think if you teach them some staccatos maybe, because slurs are sometimes difficult, um//

T: To read or to play or to understand?

R: But, well they might not understand it if they read it because it might confuse them//

T: Oh//

R: But sometimes it's also difficult to play, so maybe if you introduced one or two it won't be too difficult - to give them variety in a piece of music, but I don't think that you should introduce too many different signs like octaves - all the different octave signs and division signs and all things like that.

T: Mm.

R: Because it could confuse them.

T: Mm. OK. And at which point would you introduce the time signature? How would you start: would you start with your notes all just clumped together or would you put them in bars, or how many would you put in a bar?

R: Well I think if you, if you had to introduce the time signature, I think I'd start with an easy one like 2/4 time.

T: Mm.

R: To, to teach them that maybe, but I start, you'd start that immediately, like when you start your, um, notes.

T: Mm. OK.

R: Because I think that'd be too much for the child to handle all at once//

T: Yes! (Laughs). OK. Fine. Um, let's see what else there is: I think that's, that's basically it. We've, we've looked at the letter names. So in which order would you introduce the note values: you said first the crotchet, and then?

R: Then I think...

T: Oh, first you said the quaver.

R: The quaver.

T: Yes, and then the//

R: The crotchet.

T: Ya.

R: Then a minim and then a half, so that you're gradually changing into a whole note.

T: Mm. OK. Right, so we've looked... At which point then would you introduce a key signature?

R: Well, once//

T: Or would you first add it as an accidental - that F#?

R: Um. Well, when you like, when you first start teaching them that tune with the B, of, of G major, //

T: Mm.

R: Then you can have it as a accidental, but I think//

T: First?

R: First.

T: OK.

R: But I think once they start to know the... the notes, and they know that well, then you'd start teaching them to play scales. Then I think you could start teaching them key signatures - how to work out key signatures//

T: Mm. OK. So that would only come later. OK. I think we... so, would you suggest that the staccato would come before the slur? Or the other way round?

R: I think the slur. The slur before the staccato//

T: Would you think...

R: Because it's not really um, then you don't have to concentrate on how quick the note - just, um, attaching the notes to each other.

T: Mm. Would you say that if you play a staccato it might interfere with their understanding of the length of the note?

Or what.

R: No, no, no - the signs are diff....the signs are different.

T: Mm?

R: I'd, w...the length of the note? In what sense?

T: Ya. When you have to play a staccato you have to play the note shorter.

R: Yes.

T: So, won't that confuse them maybe with how long you should hold the note on?

R: The staccato?

T: Like whether it's a quaver or a, a crotchet, or whatever.

R: In staccato, or...

T: Mm.

R: It could confuse them, but I suppose if you explain it to the...

T: Mm.

R: Maybe when they're a bit, I'd say, nine, or something//

T: Mm.

R: Maybe they'd understand it.

T: Mm. So you don't think we should introduce staccatos too early in our tutor?

R: No.

T: (Laughs). OK. Fine. Is there anything else you would like to say, about, um, the order of the items in, in, in the tutor, um, on those three levels: on the technical level, on the musical (the logical level) and on the readability level?

R: As in which one maybe should go first?

T: Yes, yes, or in general.

R: I think maybe, before you start teaching them to play something, because I know children are always very eager to say they can play something before they, um, do anything else...

T: Mm.

R: So what I thought is: when you teach them the first three notes- the B A G, to read them, to play them, as quavers, maybe you could teach them, like, a song, or something to make it more interesting for them as well.

T: A song that they know already, you mean, like "Mary had a little lamb", or something?

R: Ya. Something like that.

T: Mm.

R: Which... they... you know, because... I suppose children might become discouraged if they can only play B A G and do nothing with it.

T: Yes. OK. Thank you. Anything else you'd like to add there?

R: No, nothing else, Ma'am.

T: OK.

ANTOINETTE BOTHA - INTERVIEWED JULY 2002

T: Good afternoon Antoinette.

R: Good afternoon Joan.

T: OK. I'm just going to give you, um, a background idea here, in the form of a couple of sentences, and then we'll fire away. Bearing in mind the following:

conceptual development of the blind, perceptual awareness (in other words tactile perception as opposed to visual), and therefore how a blind person learns to read. I would like you to con...consider in which order you might present the items in your recorder tutor. And there're also three levels of logic which I'd like you to be aware of when you're considering the order of the items:

the musical logic of each item's entry; the technical logic, and the readability logic of each item's entry. OK. First question then: which braille character would you introduce first in a tutor when you were teaching descant recorder to a beginner: a time signature, an octave marking or a note? And if so, which note and which value?

R: Well to begin with, in a recorder tutor, oc...octave marking - if you haven't got many notes to work with right from the beginning, is, is of no use, because you will teach him to play a 4th octave B and you will teach him to play a 5th octave C without telling him that they're in different octaves, so therefore the octave would, would not come first.

T: Good.

R: Um. Time signature: I don't think has much value for that child at that moment. He wants to play, er, he wants to play the recorder. He wants to play notes. So I think I should start with notes.

T: Good.

R: I can tell him about the time. Er, and the signature can come later when he has to find out for himself.

T: Good. So would you group the notes to start with, with, with spaces in between? Would you group it as 2/4 or...

R: Yes, yes, yes I would group them.

T: As?

R: As, as, as they would be grouped in, in bars, with, with, er...

T: How many would you start with?

R: Er...well actually, in er, in er, in a tutor, I would start with one note. I, I think it's much more important, or, it is very important for a child to learn that music reading is rhythmic reading.

T: Yes.

R: There's no use in saying B...and then a G... and that's not music reading.

T: Yes.

[Off the record: much more explanation necessary ahead of time for blind child, before letting them read a new concept; words help with rhythm].

R: You want to read rhythmically. In other words I would teach him one note to start with, and that note I will do, I will write in, say in a 2/4 time, without time signature, with spaces at the end of each bar//

T: Good.

R: So it will have...And I would most probably make him read them as, as in French time n...names, like ta te ta te. I will tell him to make a, a to put a little bit of a stress on the first af...after every space. I would tell him that.

T: Super.

R: Ya. But er, but only one note at a time, until he can um, grasp the rhythmic reading idea.

T: So...

R: And I will let him play them, to, to be sure, because it would be rather, er, er, boring to just play by note - you know, ta ta ta ta taa taa, or something like that.

T: OK. Now would you introduce//

R: (()) (indecipherable on tape)

T: Would you introduce the various values with that one letter name, or would you introduce various letter names on that one note value?

R: That is a question one can think about, but I think music reading without, without note values, um, is not music//

T: Um.

R: I mean no music, no music at all consists of one note value only.

T: Mm.

R: But you can have a quite interesting rhythmic passage on one note.

T: Mm.

R: So I would do, er, say a quaver and a crotchet of the same note, and do that rhythmic reading on that as my very first reading exercises.

T: OK, so you//

R: And, and, and then very simple short bars, and, and only two values to start with. Crotchets and quavers.

T: Super. Have you now chosen which note value//

R: I would//

T: You would start with?

R: Um, I think, um, now that□s rather difficult. So...//

T: So many things to weigh up, aren't there?

R: Yah. Er, the trouble is the no...note, the note has two things: it□s got a, it's got a er, it's got a rhythmic name – it's got rhythm, and it's got pitch. Um. Er, it's got a letter name, and it's got, and it's got a note value. Now the letter names of quavers are so near to the, to the letters of the alphabet, in, in shape, that er, that that could be difficult for a child. So perhaps it would not be a bad idea to start with crotchets.

T: OK.

R: But I'm not very, er, on, on the other hand I think- yah, perhaps that's a good idea.

T: Because then they get the main taa beat.

R: Yah.

T: OK.

R: In other words I would start with, with (laughs)... My little booklet that I did with//

T: Mm.

R: Children, I, I think I'd started with ta tes, but I think taas is - no I don't know – can't remember - but I think if I do it now, I would do, say four bars of taa notes only, and make them read that and see if they can do it rhythmically, and stop at the right place, and so on, and then he'd do ta tes, but in the first exercises I'd have a whole bar of taas and a whole bar of ta tes.

T: Mm.

R: Not mix, then mix them later.

T: Mm. You said something very interesting now that I seem to have noticed, about children who learn the quavers first (laughs).

R: Mm.

T: It's too close, as you say, to the regular letter name, and when you start introducing a dot 6 or a dot 3 they seem to have to read the note twice. They first have to read the character as the note B, say for instance a J//

R: Mm.

T: Then they have to look - has it got a dot 6 or a dot 3 added. So in other words they're feeling around, um, on the//

R: Yah, I, I think//

T: Rubbing, instead of//

R: Mm//

T: Feeling it as a character straight away.

R: Yah. No. One must always be very careful to let them always read, sort of in a straight line, not, not backtrack, as they say.

T: Yes.

R: Um, yes I don't really think that, I don't really think a child feels the note in two steps. Um, in your mind you have to, you have to understand the, the top part is the, is the letter name and the bottom part is the value, but I don't think you really perceive the, the symbol as if it is two things.

T: You don't think that, that it would encourage rubbing, um, going round and round, and, and, and feeling which lower dots were added - if you first learned them all as quavers, for example?

R: Um, I don't really think so because you won't, you won't, you won't introduce dot sixes and dot threes at the same time.

T: OK.

R: And, and, and I think, I think the symbol of say a, say a, er, er, er, B quaver, er, a B crotchet or a G crotchet is, is still one symbol, um//

T: OK//

R: I mean, after all, that child is, er, knows braille and he, he, he//

T: Mm.

R: He learns only 10 of the letters of the alphabet have only upper dots.

T: Mm.

R: All the others have dots: either dot 3 or dot 6 or both added. So he's used to a braille symbol consisting of, of the six dots - the matrix, you know.

T: What I'm maybe//

R: But, but I, but I think it's, er, a good idea to, with the er, with the B to the taa notes, with the crotchets, er, because they're not so near, cognitively to the//

T: Mm.

R: The, the letter name, and, and then it's not so bad to sort of, er, er think: right, just, just remove the, the, the dot 6//

T: Mm.

R: Then you have the quaver.

T: Mm. Yes. But I, I think what I'm trying to get at is that it's important for the child to learn the pattern or the configuration//

R: Mm//

T: Of the character immediately//

R: That's right.

T: For example, the, the note B as, as a taa note//

R: Mm.

T: Rather than think: this is the note B and now it has a dot 6 added//

R: Mm.

T: If you know what I'm saying.

R: Mm.

T: Because I'd strongly considered starting with quavers, but//

R: But on the other hand when, whichever one you start with//

T: Mm.

R: You'll, you... Either start with quavers, and then say: now you add dot 6 for a crotchet//

T: oh yes//

R: Or you have to start with a crotchet and say: now you remove the dot 6 for a quaver.

T: Mm.

A: So it goes both ways. But, but I'll definitely start with a crotchet.

T: OK. Fine. Um//

R: It will, it will, musically it will make more sense. I mean you can get lots of little tunes and rhythms that have crotchets only, perhaps.

T: Right. So you like the idea of the crotchet first and then the quaver, and then which note value would you a..., add after that?

R: You can go very far on crotchets and quavers.

T: Mm. So how many of the note, the note names which you introduce just on crotchets and quavers, and in which order?

R: Well...I think I'll...mm...that's rather difficult to say. Er, you want, you want quite a few notes so that you can make little tunes//

T: Mm.

R: With crotchets and quavers. And on the recorder I suppose you'll do, er BAG or GAB whatever you start with. We can talk about that//

T: And technically, and technically which, which order would you say would be the easiest? The BAG or the GAB.

R: Well, I like to. I like to do... I did it both ways. If you start with B, you, you, the possibility is there that the child can sort of not have his fingers right over, over the holes. He can sort of move his hand a bit, you know?

T: Mm.

R: If you start with G//

T: It gives you a better hand position//

R: You've got a better hand position.

T: OK. Interesting. I've, I've heard that before in one of the interviews. [Tape change over].

T: Testing. OK.

R: I think it's quite er, um, something to think about: whether you would start with G or whether you would start with, with B. G, as I said, your fingers are more across the holes, which gives you a better hand position. On the other hand, if the child has difficulty with the G, er, it, it might just sort of give'him a stimulus, if you start with B, which is easier to do. Er, but, but as a default, I would start with G.

T: Mm. OK. So then...

R: Then, what I would do is, is um, having done crotchets and quavers, quavers, I would I would introduce something like a crotchet rest, before I do minims. Then you could have something like: taa taa/ tate taa/ taa taa/ taa rest/, or something.

T: For more interest's sake//

R: You can make, yah, for, for rhythmic interest.

T: And then they can consolidate the letter names in the mean time, because the rest looks totally different//

R: Yah. Yah.

T: OK. Fine. Um... I'm very interested in the order of the notes.

R: Mm.

T: Um. Because of when one should introduce the first octave sign. Um, if you were for example to do the following: BAGF or F#EDC, the very first time you'd, you'd really have to introduce an, an octave sign would be when you introduced 6th octave C. In other words you could have that whole run of notes without really having to use an octave sign. Or//

R: As long, as long as you don't have, um, leaps in between.

T: But you see, they've only learnt those notes, so there wouldn't be the possibility of playing any other note to start with.

R: Oh. But if you, if you, if you play a, if you play a, a, um, a C, and then A
G after that//

T: Mm.

R: You need an octave sign//

T: What I'm saying is: if, if you introduce, um 6th octave C, you're going to have, to have, to introduce your octave sign very soon, but what Dr Kruger suggested was, that you start with 5th, 5th octave C, in other words, like middle C, with all your fingers down. CDEFGAB, and then the first time you need your octave sign is really when you introduce 6th octave C//

R: I see - you do it in the sound that you hear//

T: Yes.

A; But, but recorder music is recorded as if that//

T: A transposing instrument/

R: Yah, a transposing octave//

T: That's right. And another pupil suggested that you go: BAG and F#, because you're in the scale of G. Um, E, D, bottom C, or um, 5th octave C, and then you only start with 6th octave C and D. And introduce the octave sign. Now I'd like to//

R: No, but I would, I would never ever allow that a s...s...s...a...right. Say the moment you, we... depending on what, on what order you s...say for the moment, I'm sure you won't do: um, BAGF or F#ED with, with, without C! (laughs). I don't think so - without the, the higher C.

T: OK.

R: Um. Because the higher C is very easy to play. Much easier than the bottom D.

T: OK. Right.

R: Much easier. You could perhaps introduce an F#, you know, er, just for interest's sake - you can play doh te doh things//

T: Mm.

R: But er, I'm sure at least the C can come very soon, because it's the most easiest, one of the easiest notes to play.

T: OK. So would you for example//

R: So I would do: BAG.

T: Mm.

R: And then I would do a C.

T: And then you'd have to have your, um, octave sign. Straight away. Because if you played G to C//

R: If you, if you have a leap from G to C?

T: Yes. OK. That's fine. But by then they've already got the gist//

R: But, but, but, but the octave sign is not that, um//

T: You only need two in recorder playing//

R: Yah, I could, I could actually, um, ag, at some time you could you can, perhaps quite soon, you can introduce an octave sign just for the first... I suppose you're thinking of writing your own tutor now, so you, you, you//

T: Mm.

R: You can introduce the music as you wish.

T: Mm.

R: Um. I think when, even when I start with little, if, if, I do the little rhythmic things at the beginning//

T: Mm.

R: I won't have octave signs with them, but as soon as I have more than one note: as soon as it becomes a tune//

T: Mm.

R: I will, er, place the octave sign right at the beginning, and must tell them, show them on the piano, er, or with your recorder, where you can play more than one G, tell them that there are more G's, or, or more B's, and this is the one we'll play, and that little, little sign tells me that this is the one we're using.

T: Mm.

R: Um. And, and then, you can go quite a long way without having to use octave signs in the middle of a piece. So you needn't use, you needn't know octave rules.

T: Mm.

R: You can, you can play, er little five-note things with GABCD, you know, in the five-finger position.

T: Mm.

R: Um, and you could play 5th octave D's and C's. I, I'm talking about them in their writing position, not the listening one//

T: Yes. OK fine. I prefer to think of it that way myself.

R: You do? So, so you can, so long as you don't do GD or AD, GC//

T: Yes.

R: You can play, play anything in that five-note con...er compass.

T: Mm. OK. That's, that's logical to me. Um. So actually//

R: The trouble with the D, the trouble with the D is that, is that your thumb's not there anymore//

T: Yes.

R: And, and for that reason I use that, that German s...what do they call it: steunvingertegniek.

T: Alternative fingering?

R: No, no, no, no, no, the one where you, your, your er//

T: Supporting with this finger (shows third finger right hand)//

R: Yah, this finger always supports the - unless that finger can't be there.

T: Yah. (Laughs).

R: Like with an E.

T: Mm. Mm. OK, that's , that's very logical//

R: And, and if you do that way, then the upper D's not, but, but that lower C especially is one of the most difficult notes to play.

T: Mm.

R: I wouldn't bother with that too soon.

T: I would agree. OK. Er//

R: Even the D for small hands is not so easy.

T: Yes. Yes. I'd agree with that. Right, I like your idea of having the octave sign there and, and explaining... using maybe a keyboard instrument, and then when, when it changes octave, then they have a better idea of what's going on.

R: Mm.

T: Um, because of the background. Fine. We've gotten quite a long way here. Now um//

R: As you say, in the recorder you could perhaps have done without octave signs even in leaps because there is only one A and one B to play.

T: Mm.

R: But I wouldn't do that. I would never ever allow//

T: Yes.

R: Wrong braille.

T: Yes. I understand that as well. Yes. I only realised that now, actually, while I was, I was talking to you. Thanks for mentioning it. (Both laugh). OK. We have discussed the order so far: you said BAG, then you'd do um, C above that, and then would you do, er, the D above that - the top D?

R: Ag, when//

T: So that you could have those five little notes in a tune//

R: Quite, quite soon, I think, yah.

T: OK. Fine. I like your idea of, of the in... introduction of, of rests so soon.

R: I think so. Rather than bother them with minims too soon.

T: Mm.

R: You can have the same musical idea.

T: Mm.

R: I think the same phrasing, let's say...

T: Yes. OK. After those five notes, would you introduce F or F# first?

R: I think F#, since you're in the G, the G scale. You would very easily have//

T: Without key signature? In other words next to the appropriate note? Or with key signature//

R: I think at that time I would introduce the key signature.

T: Mm.

R: I would show them again on the piano where they can see the notes. You know, I always had problems in the theory class//

T: Yah.

R: With pupils who didn't take piano lessons//

T: Keyboard. Oh yes.

R: And the, and the recorder teachers didn't show the children the piano keyboard.

T: Mm.

R: And, and, I think it's much easier to have another visual, er, I say visual because I think of it visually//

T: Yes, I understand what you mean.

R: Even if I play F# on the recorder - not while I'm playing on the recorder, but when I think in the key//

T: Mm.

R: I think, I think on a piano rather than on the recorder//

T: Yah. It's in a very abstract dimension - the recorder.

R: Yah.

T: Yah. I've found that myself. Fine, um, so you wouldn't introduce the note F# with a "toevallige" whatever, as an, as an accidental next to the note//

R: No, rather, rather, with key signature//

T: First as a key signature.

R: Yah.

T: For what reason?

R: Because for one thing, it's, it's the, um, um, it's how music will look in the end//

T: OK.

R: And, and further, it's, it's, there is not that obstruction of a sharp to learn to read//

T: Thank you. That's a good idea. I like your answers. (Both laugh). OK. And then, logically, the E below that, and

the D and the C. Fine. At which point would you introduce minims?

R: No, that can come...er it's rather difficult to say. I wish I could write the book while I have pupils, that I can see...I think you're ready for it now!

T: Laughs.

R: Yah, I think that could be quite soon, say about just after the first five notes or something like that perhaps.

T: That's a rather predictable answer. Everyone's been saying that//

R: Is that so?

T: Good. (Both laugh).

R: Have they?

T: Yes.

R: Um, the, the only reason why I didn't do it right at the beginning was, well, why that extra concept if you can have the same musical idea with less signs?

T: Yes.

R: Because the crotchet rest gives you a, a sort of a phrasing break, and, and, you need, you need only learn that one rest, while if you have a minim, every note has to have it's minim, it's minim, um, representation.

T: Yes. I suppose you wouldn't introduce the quaver rest quite so soon, because that is then becoming a little bit difficult to understand technically//

R: Um, yah.

T: Um, not technically, logically//

R: I don't think, I don't think you need it so soon in your pieces//

T: Mm. Mm. You only really need it when you have dotted crotchet, or something like that.

R: Yah.

T: OK. Um. We've just about finished. Let me see what else we have here. OK. And then probably your semibreve and then only your dotted crotchet. [Off the record: minim rest, dotted minim and rest, semibreve and rest].

R: Oh yes. I wanted to say that, that about the kinds of, of, of note values: the, the quaver looks the easiest//

T: Mm.

R: But, but, but mentally it's not the easiest. The, the semibreve, or the semiquaver, is the most dense to read.

T: Yes.

R: If you have more, if you, all right. The semibreve is, you will usually only have one in a bar, fortunately. But you have, but when you get to semiquavers, they're very dense to read.

T: Yes.

R: You can't read them fast.

T: Yes.

R: And, they have to be read faster than the rest of the notes, because they're semiquavers (both laugh).

T: Interesting. I hadn't thought of that. Yah. And on top of it, when there're four in a group, they quite often write the semiquaver, and then quaver, quaver, quaver, and then you're not always quite sure (laughs). As a lower sign//

R: Yah. If you read rhythmically, you can actually be sure, but that comes quite later//

T: I think maybe to a sighted person...

R: You, you shouldn't think of them as quavers.

T: Mm.

R: You should think of them as, as semiquavers. "Hy het nie voete nie."

T: Laughs. OK.

R: "Die res van die groep het nie voete nie. Net die eerste een." (Laughs).

T: Yah. You know, we're on our last question.

R: But they're not quavers. You know, I had a, one pupil once.

T: Mm.

R: He was about Std. Five and he er, learnt his first piano piece - it just happened to be a study or a thing, which had semiquavers for, endlessly for two or three bars.

T: Mm.

R: And then, perhaps in the 4th bar, it stopped.

T: Mm.

R: You know. And this bad teacher of his didn't introduced him to the, to the, er grouping of semiquavers.

T: Yes.

R: And he really memorised that piece as if they were quavers.

T: Oops.

R: And you had: tum taam taam taam/ tum taam taam taam

T: Glory.

R: And he did it absolutely correctly, if they were semiquavers plus quavers///

T: Yes. Laughs. Religiously//

R: It must have been a rhythmical acrobatic, shoo, feat for him. (Both laugh).

T: How interesting. Last question, Antoinette.

R: Mm.

T: At which point would you introduce slurs and staccatos? Or the other way round: staccatos and slurs? Which would be technically, musically logical or most readable first?

R: Readability at that stage, I think, depends very much on how they're presented by the teacher.

T: OK. Um.

R: If he needs them in his pieces, um, you can of course play them before you have to read them, I mean, you can...er much of, of what you do of course, reading music never comes first. You must have all the concepts before you start reading//˙

T: Sure.

R: Of course. And er, um, if you have to sight-read, they're a bit of an obstacle//

T: Mm.

R: But if you learn them in a new piece, they're not so bad//

T: Mm. Which would you say is technically easier to play: a staccato or a slur?

R: To play?

T: Yah.

R: Mm. I like to teach them slurs because I like to, to...mmm...I don't know.

T: Adds bit of variety?

R: Yah.

T: OK. And er, those lower hs are sometimes a little bit...especially nowadays that you have to add a dot 3 6 before them. (Laughs). Some new rule.

R: Yah. Of course, in recorder music it can't happen, but in piano they could be, um, chords.

T: Mm.

A: Yah. Perhaps slurs would then be best to do first.

R: OK. Fine. Fine. I've had some agreement on that as well. Um//

R: And, and whenever, you introduce them, don't make too much, not too many at one time, in one piece.

T: Yes.

R: Do them when they're really musically um...wanted. (Laughs).

T: Yes. Is there anything else that you'd like to say in general?//

R: And then of course, yah, of course about staccatos, and slurs: make sure that the slurs are not longer than, er, er preferably only two-note slurs to start with.

T: Mm.

R: And then three's and four's, and then quite a long time before you do five//

T: Yah//

R: Because that's another braille concept//

T: Mm.

R: And with staccatos, not more than three to start with//

T: Otherwise you have the doubling sign. Fine. Anything else in general about the order or about the logic before we end?

R: No. I hadn't really thought about these things so much lately. You know, it's 13 years. No, no, it's much more. It's nearly 20 years that I haven't been teaching, remember.

T: Laughs. Well, you're doing very well. (Both laugh). Thank you very much for your input.

R: A pleasure.