

## Chapter Five

### Methodology

This chapter outlines the qualitative methodology used in the study. It begins with discussion of the Preliminary Study and its impact on the shape of the main study. The rationale for the methodology adopted in the main study is described and participants in the study are identified. Research instruments designed to gather data through teacher profiles and associated student productions are described - the open-ended questionnaires and *The Pulse Music Kit*. From the literature reviews of Chapters Two, Three and Four, key factors and key concepts are identified and the chapter ends with a summary of how the information in the study was analysed and reported.

#### Introduction

The initial investigative aim of this study focused on the activities through which teachers chose to engage their students with minimal music, students' responses to these activities and the resulting outcomes. Each teacher who took part in the study was to receive a booklet of projects based on different compositional techniques used by established minimalist composers thus providing a common resource on which all teachers drew.

#### 5.1 The Preliminary Study

The Preliminary Study was undertaken to determine what aspects of minimal music were suitable as a classroom teaching resource. This album of minimalist projects was to be the common resource through which teachers in the main study directed their teaching. The Preliminary Study was also undertaken with the aim of discovering what students were able to achieve with minimalism through different music activities and a student Music Questionnaire sought information about the music preferences, experiences and opinions of the students before and after the 'minimalist' teaching period, and sought differences in attitude and preference. I was the teacher-researcher in the classroom, a precedent set by Tillman (Swanwick and Tillman 1986), Davies (1986) and adopted after my initial study by Burnard in 1995.

### 5.1.1 The school environment and the participants

The English-speaking, co-educational English-system preparatory school chosen for the Preliminary Study was situated in Kuala Lumpur, Malaysia. Students were aged from 5 to 13 years and average class size was 20 students of mixed-ability from a wide range of nationalities and races. There was one specialist music teacher in the school and I undertook his teaching role in one of the classes.

I chose a class of nine year old students for the Preliminary Study for both developmental and practical reasons. Developmentally, nine year olds undertaking a regular music programme have the potential, and hopefully the ability, to read music notation. They are able to engage with the musical characteristics of minimalism which are familiar to students of this age. On a practical level, classes of nine-year old students in an English-curriculum preparatory school in Malaysia tend to have reasonably stable populations unlike the classes of older students.

Junior 2/1, a mixed ability class of nine year olds, was made up of 20 children aged nine to ten years, 12 girls and eight boys, of twelve nationalities and thirteen races. There were also Junior 2/2 and 2/3 classes of children of the same age range. The age grading given to the three Junior 2 classes was not strictly applied when new pupils joined the class mid-term, as frequently happens in an expatriate school.

While I was working with Junior 2/1 on a largely minimalist programme, the music teacher taught Junior 2/2 and Junior 2/3. This music programme was traditional in content. It included regular descant recorder playing and instruction using *Play Time*, Stage 2 (Fagan 1973); hymn singing practice for school assembly; songs from *Apusskidu*, *Songs for Children* (Harrop, Blakely and Gadsby 1975); clapping and writing rhythms using minims and crotchets with time signatures; discussion and drawing of instruments of the orchestra; and preparation of material for performance at an end-of-term school musical evening. The teacher was an experienced keyboard player and choral director with a special interest in music of the Baroque and no formal music teaching training. He

was well liked by the students and because of his lack of teacher training, followed a syllabus designed by the previous music teacher plus his own additions. This syllabus aimed “to foster a love of music...”, to “be enthusiastic about making music” as well as “encouraging confidence and satisfaction in musical ability through performance” (first page). Many of the objectives were skills based, emphasising listening, performing (singing and recorder), theoretical and movement activities. Under the heading “creativity and notation”, students at this level were to make up “simple 2-4 bar phrases using pentatonic only and then singing and playing these from their own notation” (sixth page) (see relevant pages of the Music Syllabus Appendix 5A.i).

Teaching music in a classroom to nine year olds was a new experience for me. I had, however, previously taught nine year old children music in a private capacity, had many years teaching experience at tertiary level and was teaching music at kindergarten (5-6 year old) level in the same preparatory school at the time. I videoed three lessons for my own observation, recorded all of the lessons on cassette for review and kept a ‘descriptive journal’ (Cohen and Manion 1994:197) in which my opinions of my teaching, both from the videos and cassettes and from memory, were recorded.

I asked a music lecturer (primary music teaching) from a teachers’ college in Kuala Lumpur to attend as many classes as possible and act as observer for the Preliminary Study. She took notes about student responses to the material being used which helped determine the content of *The Pulse Music Album*, suggested improvements to my teaching and helped with group performance when the need arose.

### **5.1.2 The student Music Questionnaire**

A student Music Questionnaire (Appendix 5A.ii) was administered to Junior 2/1, the class I was teaching, and Junior 2/2, a control class (both equivalent to Year 4 in Australia) at the beginning and end of the six month teaching period. Question design varied in approach. Some questions were factual seeking information about musical activities during and outside normal school hours while others were more exploratory

seeking information about musical activities in which the student would like to succeed. One question asked students to respond to a list of statements about music and another sought information about family encouragement of music activities. Questions 1, 4, 5, 6,7 and 8 (part 2) used a Likert scale of three choices. Questions 1,2,6 and 7 were modeled on questions in the Pupil Questionnaire of *The Pilot Music Program in Three Brisbane State Primary Schools* Report 2 (Hewton, Byrne et al 1985:46-50).

The student Music Questionnaire sought information about:

- music activities with which students were currently engaged in and out of the classroom;
- the attitude of students to music activities in and out of the classroom;
- music activities students would like to achieve in;
- students' descriptive and aural responses to five excerpts of music including minimal music;
- how students ranked the five excerpts of music;
- the role of the family in the students' musical activities.

The areas of enquiry addressed in Questions 1,2, 6 and 7 included composition/creativity, performance, movement and dance, listening and music education (Appendix 5A.iii Areas of enquiry, Questions 1,2,6 and 7, in the Music Questionnaire).

Question 3,4 and 5 sought information about the musical interests of family members – whether they played instruments, sang, attended concerts, listened to music at home and encouraged the students in their musical endeavours.

Questions 8 and 9 focused students on five excerpts of music, one an excerpt of minimal music, and sought their descriptions and preferences. The excerpt of minimal music was included because of the focus of the thesis and because no studies on student preferences for, or descriptions of, musical styles have included references to minimalism. Shehan's (1986) paper on children's responses to music of non-Western cultures summarised a number of studies concerning tolerance and taste published between 1981 and 1984. It

also described the most common techniques used to assess musical attitudes – open-ended questions, paired comparisons, multiple choice scales and pictographic scales. She noted that fast instrumental examples were more likely to receive a positive listener response in non-rock musical genres. A preference for ethnic music styles with greater ‘rhythmic dynamism’ (African and Japanese instrumental) over less pulsive and less syncopated styles (Indonesian and Japanese vocal) was observed in students. Students gave low ranking for non-repetitive, progressive ethnic styles (Indian and Japanese music) in middle school students and a high ranking for repetitive styles (African and Hispanic pieces) (160). This discussion on aspects of tempo and repetition seemed more relevant when predicting student responses to minimalism than studies focused on ‘modern’ music, often music from the first half of the twentieth century (for example, Copland, Antheil, Stravinsky in Archibeque 1966; Hindemith, Schoenberg, Stravinsky in Taylor 1969:189).

Archibeque’s (1966) study of contemporary music preferences required subjects to rank five musical excerpts. Studying the musical preferences of Australian students at secondary school level, Stowasser (1983) used musical style labels across four broad music categories - top 40 music, symphonic rock music, classical music, all types of music - rather than musical excerpts (95). The student Music Questionnaire of this thesis combined a number of these approaches and required participants to describe, respond to and rank five excerpts of music within two questions. In Question 8 students were asked to respond to the five excerpts by deciding if they liked the music very much, felt it was OK, or disliked the music and they were asked to describe each excerpt. Question 9 asked students to rank the five excerpts after a second hearing – 1 the most liked, 5 the least liked.

The five excerpts of music on the cassette (see Table 5.1; CD for Appendix 5 Track 1) were chosen to represent five different styles of music, two drawn from contemporary art music of the second half of the twentieth century, one rock, one art music of the nineteenth century and one non-Western music. None had a text, although the second excerpt by contemporary Dutch art music composer, David Porcelijn, featured a speaking

chorus chanting the mnemonic syllables used by a drummer when learning to play the Indian tabla.

**Table 5.1: Music Questionnaire - five music excerpts by title, composer, style and description.**

1. Mazurka (opening) from *Coppelia Ballet Suite* by Delibes (orchestral – classical 19thC ballet music). Philadelphia Orchestra, Eugene Ormandy;
2. *Sound Poem in Shikara Tala* (opening) by David Porcelijn (unaccompanied speaking chorus piece – 1973 – avant-garde) Netherlands Chamber Choir and Netherlands Vocal Ensemble conducted by Huub Kerstens;
3. *The Desert Music* (opening of the first section) by Steve Reich (minimalism, late 20thC) Steve Reich and Musicians with chorus and members of the Brooklyn Philharmonic – conductor Michael Tilson Thomas;
4. Heaven can wait (instrumental opening) from *Somewhere in Time* by Iron Maiden (rock);
5. *Gender wayang* (middle of an overture) recorded in Pliatan in July 1971 (Balinese gamelan, non-Western) Bali musique et theatre.

The student Music Questionnaire was designed to be administered to the class as a whole in the classroom by the teacher and to take students about thirty minutes to complete. Instructions were written on the paper. In the questionnaire students were asked how long they had been attending their school and were reminded that I wanted to know how *they*, as individuals, felt about music and that there were no right or wrong answers. There was a demonstration of how to complete the answer boxes and the teacher was to verbally paraphrase the instructions. The tape of musical excerpts was to be played twice.

### **5.1.3 Planning and teaching in the Preliminary Study**

#### **Planning the music programme for Junior 2/1, the class of the Preliminary Study**

I planned to teach the class of Junior 2/1 over a six month period, using a number of different pieces by minimalist composers as models on which teaching material was based. My observation of tertiary music students in Hong Kong writing accelerando phase minimalist works in a twentieth century composition techniques course, described in Chapter One, had revealed that performing these pieces posed difficulties for inexperienced pianists. While this was taken as an indication that accelerando techniques might be unsuitable for performance by nine year old students, I knew that many other minimalist compositional techniques offered opportunities for this age group.

My teaching programme was to combine projects modeled on compositions of minimalist composers with exercises using characteristics of minimal music and other non-minimalist material. Objectives were to engage students with minimalist material through composing, performing and listening activities with specific theoretical skills being targeted for each lesson. The programme was designed to encourage students to learn theoretical knowledge and skills - reading, writing, playing and listening to different note and rest values, dynamic levels, melody and rhythm writing, triads, major and minor, the pentatonic scale, mallet holding for keyed percussion, other music symbols (repeat signs, pause, for example), processes such as canon and ostinato - through composing and performing minimal music. The resulting student outcomes were to be short compositions incorporating minimalist characteristics written on large stave manuscript paper. My long-term objective was to strengthen and increase the students' knowledge and understanding of these musical elements and skills by giving them opportunities to use them in their own compositions. These compositions were to be performed with small concerts in the classroom planned. There was also an opportunity to prepare a minimalist piece written by the class for the end-of-term school musical evening which would place the student works into the broader school society. Within the music programme I was to include some non-minimalist recorder playing and practise hymn singing.

### **Content of lessons devised for my teaching of Junior 2/1**

I taught twenty-three music lessons of forty minutes duration once a week over a six month period. Over the teaching period the students received a substantial diet of minimal music through composition, performance and listening activities. The main focus of each lesson is outlined in Table 5.2.

**Table 5.2: Main focus of the teaching programme of the Preliminary Study – Junior 2/1**

Lesson	Objectives	Material (minimalist material in bold type)
1 Term 2	Pulse; Crotchet value (revision); Accents; Metre – duple, triple, quadruple.	Tony Chestnut (song with movement) by ear; Layers of note heads (bullet holes) which became crotchets, with accents on 2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> beats – layers of different metres - played on percussion. Names of students in the class chanted, the rhythm written and chanted in layers of different metres.
2	Minim (revision); Pitch reading; Moving and clapping crotchets, minims; Improvisation game.	Tony Chestnut – notation; The Snake – passing rhythms invented by the students, round a circle of students, resulting in layers of rhythms.
3	Crotchet and minim rests (revision); Triad.	Mini-March (chanted multi-layer rhythmic piece) containing rests;
4	Forte, piano; Intervals – 3 <sup>rd</sup> , 5 <sup>th</sup> .	Singing triads in groups of three students – dynamic differences; Playing melodies written by the students (recorder) using c e g a pitch set as ostinati to Mini-March – layers of ostinati and of changing rhythms.
5	Forte, piano; Repeat signs; Phase shifting.	<b>Phase shifting a cell of crotchet notes and rests modeled on Reich's phase shifting process.</b>
6	Quavers; Mallet holding.	<b>Using keyed percussion, students played layers of different rhythms (one layer crotchets, one minims, one quavers) to the notes of a triad modeled on the construction of the first section of Reich's <i>The Desert Music</i>;</b>
7	Crescendo, diminuendo; Shaping a piece; Pause.	<b><i>The Desert Music</i> model continued. Keyed percussion, layers of different rhythms, two triads, with dynamic shaping.</b> Students suggesting names for the piece – 'The Wind', 'Up & Down', 'Nice & Smooth', 'Air'. Cassette recording and students discussed their performance.
8	Round; Ostinato; Composition.	A classroom concert: short student melodies combined and shaped into rounds. Rounds performed by students with the teacher playing an ostinato, or vamp.
9	Dotted minim; Triple metre; Building a composition.	<b>Short rhythms in triple metre written by students. Shaped into a piece modeled on Riley's <i>In C</i> with students moving on to the next rhythm in their own time, but retaining the pulse.</b> Discussion of using same material for a round, or using a ternary shape.
10	Tie.	<b><i>In C</i> concept continued: adding words to the rhythms which incorporate ties and pitches of a triad.</b>
11	Music Quiz	Metre, triads, rhythmic transcription, dynamic recognition, pitch naming, composition exercise.
12 Term 3	Review Quiz results	Experienced students tutoring students whose understanding of some aspects of the quiz was weak.
13	Pentatonic scale	Singing and playing on recorder two songs written by class students using pentatonic scale – Echo by John, Rain by Jee.
14	Ostinato; Dotted minims (revision); Pentatonic.	Ostinato played on keyed percussion with Echo by John (student composition). Song recorded on cassette and listened to.

15	Performing; Improvisational component.	<b>Class divided into two groups - keyed percussion, piano playing a seven cell piece modeled on Riley's <i>In C</i>. Cells written by students using pentatonic scale.</b>
16	Semiquavers; Composition exercise; Changing metres of additive construction.	<b>Students writing cells incorporating semiquavers, forming a piece with additive and subtractive process of Glass's <i>I+I</i>.</b>
17	Major & minor triads; Additive construction.	<b>Piece using additive construction and major and minor triads, played on keyed percussion and recorders. Modeled on Glass's <i>I+I</i>.</b>
18	Performance	<b>Simplified notation of Glass's <i>I+I</i> – students attempted performances of the piece (difficult to improvise in additive construction).</b>
19	Melodic phase process (isorhythmic overlap); Canon.	<b>A class concert: two student pentatonic melodies of different lengths combined into a melodic phase process piece and played. This is modeled on the isorhythmic overlap of Shrapnel's <i>Lullaby</i>. Other student pentatonic melodies played in canon on recorders or keyed percussion.</b>
20	Gamelan; Ensemble playing.	<i>Lagu Perang</i> , a piece from the repertoire of the Trengganu gamelan (Malaysia) performed on keyed percussion and drums.
21	Rhythmic layers modeled on music of West Africa; Compound metre; Ensemble playing; Moving to music.	Building up the performance of layers of rhythm with different metres on drums and percussion, with the same pulse, with solo and chorus chanting - in the style of West African music. Adding some movement.
22	Continuing objectives of last week and adding improvisation.	Using student texts to chant over the rhythmic layers, and inviting students to improvise, one by one, over the rhythmic texture when the voices are silent.
23	Score reading; Chords; Rhythmic layers (modeled on gamelan belungan structure).	<b>Play a piece in four-part harmony, each layer a different (simple) rhythmic value to create a structure modeled on that of the gamelan and Glass's and Reich's tonal, repeated harmonies.</b>

A number of different minimalist compositions were used as models with Junior 2/1 in the Preliminary Study:

- a) phase shifting (for example, *Clapping Music* (1972) by Reich (Reich 1980);
- b) repeated triadic chord patterns (for example, *Modern Love Waltz* (1977) by Glass - (Glass in Helps and Moran 1978) and *The Desert Music* (1984) by Reich (Reich 1985);
- c) the pulsed, improvisatory structure of *In C* (1964) by Riley – 1964 (1968);

- d) additive and subtractive rhythmic construction (for example *I+I* – 1968 (Nyman 1974:127) and *Einstein on the Beach – Knee Play* (1975-76) by Glass (Glass 1987:60-61);
- e) isorhythmic overlap (for example *Lullaby* (1970) by Hugh Shrapnel (Nyman 1974:137);
- f) plus two projects based on non-western musics influential to minimalist composers –
  - i) West African (based on the structure of music of the Ewe tribe of Ghana)
  - ii) gamelan (Trengannu gamelan of northern Malaysia).

### **West African percussion layers**

The stratified construction at the heart of many minimalist processes was the basis for a number of teaching ideas. In the first lesson I introduced layers of bullet holes, the sounds of which, when ‘verbally’ fired evenly, were written up on the board. They became beats then crotchets, and the board eventually had a number of layers, written one above the other, each layer with the accent falling in a different grouping. Bar lines and numbers indicating the metric groupings were added and the layers were played. This exercise was a simple version of the many layered, multi-metred structure of West African drumming, revisited, in a more complex form in lessons 21 and 22. Building up layers of metres with different ostinati patterns to the same pulse in triple metre, students chanted a call and response text written by me *Fishing* (Appendix 5B.i; CD for Appendix 5 Track 3), then texts of their own (Appendix 5A.iv; CD for Appendix 5 Track 4), added movement and finally improvised using percussion.

In *The Snake*, an improvised game in which students invented a rhythm and passed it around a circle of students, with a number of rhythmic layers occurring at one time to the same pulse, the students and I explored another approach to rhythmic layers in the second lesson.

### **Phase Shifting**

I wrote *Mini-March*, a multi-layer piece with a sung text, to revise the concept of rests and prepare students for work with layered rhythms incorporating sound and silence. In lesson 3 students marched as they sang the song, thus working with two layers of music (Appendix 5A.v; CD for Appendix 5 Track 5) and in lesson 4 four short melodies written by students using a four note pitch set were played simultaneously and repeated over and over while the teacher played *Mini-March* on a xylophone (Appendix 5A.vi; CD for Appendix 5 Track 6).

In lesson 5, Reich's phase shifting process was introduced in a review of the students' knowledge and use of crotchets and crotchet rests both notated and sounded. Students first played a phase shifting piece recycling the rhythm pattern of the opening two bars of *Mini-March* (Appendix 5A.vii; CD for Appendix 5 Track 7) then were encouraged to write a one bar rhythmic cell on the board and play with chopsticks beaten on the back of chairs. Working from symbol to sound ensured simple rhythms incorporating the note values under review. The cells were then constructed into two-layered phase shifting pieces and performed with chopsticks, clapped, or chanted with words. I noted that the students played the phase pieces at a faster tempo more accurately than at a slower tempo and that the abrupt endings of the pieces were generally ragged.

### **Repeated tonal harmonies of Glass and Reich.**

In lessons 6 and 7, the rhythmic layers were simplified to layers of minims, of crotchets and of quavers to the notes of two triads. The two triads were built into a piece for keyed percussion (Appendix 5A.viii; CD for Appendix 5 Track 8), with a clearly defined crescendo and diminuendo for each triad, using the dynamic shapings in the opening of Reich's *The Desert Music* as a model. At the end of the piece, a diminuendo, the students stopped striking the keys and hummed the pitch they had been playing. This structure was further developed in lesson 23 in a piece written by me and played by the students. It extended stratified concepts introduced in lessons 6 and 7 and combined them with aspects of the heterophonic 'belungan' vertical structure of the Malaysian Trengannu gamelan introduced in lesson 20. The four layers of the piece, each utilizing different rhythmic values, employed a ten-chord tonal harmonic pattern with layers of minims to

semiquavers, lower to upper layers respectively, played on keyed percussion. The dynamics were shaped by the teacher during performance and the chord pattern could be repeated (Appendix 5A.ix; CD for Appendix 5 Track 9).

### **Riley's *In C* as a model.**

In lesson 9 rhythms in triple metre were written by students and combined into a piece called *Cobra Skin*. The rhythms were passed around from student to student in a circle by clapping to a pulse in a given order with a structure similar to that of *The Snake* in lesson two (Appendix 5A.x; CD for Appendix 5 Track 10) – a musical version of ‘follow the leader’. Dynamic shaping was dictated by the leader. The overlapping rhythms reflected the structure of Riley's *In C*. In lesson 10 words were added to the rhythms for a chanted version and notes of the triad for a sung version.

Pentatonic melodic cells written as a homework task were combined and shaped into a seven cell piece modeled on Riley's *In C* in lesson 15 (Appendix 5A.xi; CD for Appendix 5 Track 11). The improvisational aspect of this process gave slow readers an opportunity to take their time before changing to another cell and was a valuable lesson in ensemble playing.

### **Structuring short student pentatonic melodies into larger works**

Short student compositions based on a pentatonic scale were combined into rounds for an informal class concert in lesson 8 (Appendix 5A.xii, 5A.xiii; CD for Appendix 5 Track 12), in lesson 13 and 14 performed with an ostinato accompaniment (Appendix 5A.xiv; CD for Appendix 5 Track 13) and in lesson 19 played in canon on recorders (Appendix 5A.xv). In lessons 13 and 14 students took turns improvising on a pentatonic scale over ostinati previously used with the students' compositions (CD for Appendix 5 Track 14).

### **Isorhythmic overlap found in works by Shrapnel and Glass**

In lesson 19 two pentatonic melodies of different lengths written by two students were performed together as isorhythmic overlap (melodic phase process) constructed pieces on two recorders and on keyed percussion *Lullaby* (Appendix 5A.xvi; CD for Appendix 5

Track 15). Another piece consisted of a melody written by a student which was repeated and served as an ostinato to a through-composed melody written by me *Clowns* (Appendix 5A.xvii; CD for Appendix 5 Track 16).

### **The additive construction of Glass's *I+I*.**

In lesson 16 the concept of additive construction was introduced, and additive rhythms written on the board were performed with repetition to give students an opportunity to experience the resulting changing metres (Appendix 5A.xviii). In lesson 17 I constructed a piece using additive construction with notes of a triad played on keyed percussion and recorders (Appendix 5A.xix; CD for Appendix 5 Track 17) and also experimented with hocket. A simplified version of Glass's *I+I* was tried by a number of students. While improvising with an exact additive construction of the rhythmic figures was too difficult for the students, playing as soloist, with a steady pulse as the rhythmic figures changed, provided sufficient challenge.

### **Gamelan**

In lesson 20 the students performed a piece from the Trengannu gamelan repertoire, *Lagu Perang* (see Appendix 5B.i), on keyed percussion and drums and the heterophonic 'belungan' vertical structure of the gamelan was discussed. I had played in this gamelan while living in Malaysia and found its structure easy to understand. The structure of a piece written by me, played by the students in lesson 23 and discussed above, extended stratified concepts introduced in lessons 6 and 7 and combined them with aspects of the Malaysian Trengannu gamelan vertical structure (Appendix 5A.ix; CD for Appendix 5 Track 9). Although time prevented further expansion of the gamelan structure with this class it had potential as a compositional structure for the students incorporating minimalist characteristics of repetition and a small pitch set.

#### **5.1.4 Results of the student Music Questionnaire, interpreting my teaching and analysing the associated compositions**

##### **Results of the student Music Questionnaire**

The student numbers of the Preliminary Study pilot class Junior 2/1 were small, 20. Some students left the school before the student Music Questionnaire was administered for the second time and others joined the class after the Music Questionnaire was administered for the first time. The results, therefore, reflected the responses of 17 students who completed the questionnaire both times. 20 students undertook the before and after sittings of the Music Questionnaire in the control class Junior 2/2. The results of the Music Questionnaire are situated in Appendix 5A.xx – Tables 5.1-5.9.

Responses to Question 1 (Appendix 5A.xx Table 5.1) indicated that the 9 year old students in both classes ‘often’ listened to music on cassette or radio and sang or hummed to themselves. They ‘sometimes’ watched musical shows on TV or video, attended musical concert performances, played the recorder at home, sang in a group, danced or moved to music, played musical games and made up their own music. Few wrote down their own music, more students played an instrument other than a recorder and a higher proportion of students responded that they heard music in their head. In the second administering of the Music Questionnaire, after my teaching was finished, there was an increase in the number of students who ‘sometimes’ hear music in their head and make up their own music in the pilot class and, from both classes, who ‘often’ or ‘sometimes’ write down their own music. However, there was still a high proportion of students in the pilot class who ‘never’ wrote down their own music despite having been engaged in classroom composing activities intensively for six months. This could be because the classroom composition activities were viewed as a requirement of school music not ‘their own’ music-making. At the same time the responses to ‘hearing music in one’s head’ and ‘making up music’ indicated an increased awareness, by the pilot class, of taking part in the composing process.

Rather than seeking differences between the two classes about music at home and instrument learning over the six-month teaching period, the responses to questions 2,3,4

and 5 (Appendix 5A.xx Table 5.2) were examined to form a profile of the age group at this school. The high proportion of students learning an instrument was reflected in a similarly high proportion of responses indicating student awareness of family interest and encouragement in their music activities and of family engagement in music activities. The highest proportion of students learnt classical instruments, especially the piano.

Question 6 sought the expectations of students with regard to music activities in which they would like to achieve (Appendix 5A.xx Table 5.6). Both classes were keen to play instruments. While both noted an increase in responses wishing to make up their own music and write music, the response was a little higher in the pilot class after the six-month teaching period.

In Question 7 the students' attitudes to music activities in and out of the classroom (Appendix 5A.xx Table 5.7) were sought. The pilot class registered a substantial increase in positive attitude to reading, writing and composing music after the six-month teaching period while the control group increased in confidence in music as a subject which was easy to learn.

Similar types of descriptive comments about the five excerpts of music were made by the pilot class in response to Question 8 Part 1 (Appendix 5A.xx Table 5.8 Part 1) both before and after the teaching period while the control class made more use of technical musical terms to describe the classical and non-Western excerpts on the second hearing. More students in the control class than in the pilot class classified the fourth excerpt as rock, a style of music familiar to them, yet the nineteenth century classical excerpt elicited a high proportion of emotional and evaluative responses from both classes despite being a musical style with which they would have been familiar. Students in both classes gave the two twentieth century classical excerpts a high degree of emotional and evaluative responses. This was to be expected as the music was unfamiliar and, despite working with minimalist composition techniques over the six months period, the pilot class was not familiar with the term minimalism.

Music preference responses to the five excerpts of music in Questions 8 and 9 changed very little between the two applications of the Music Questionnaire (Appendix 5A.xx Table 5.8/2) in both classes. The nineteenth century classical and rock excerpts were most highly favoured and the two twentieth century classical excerpts least favoured. Overall, response to the excerpts remained fairly constant with only the avant-garde excerpt increasing in negative response. Interest in the minimalist excerpt and non-Western excerpt was largest for the 'OK' response, remaining constant over the six month teaching period for the pilot class and rising a little for the control class.

For both classes the rock and classical excerpts were consistently ranked highly and the ranking of both of the twentieth century classical music excerpts moved down after the six-month teaching period in Question 9 (Appendix 5A.xx Table 5.9). However, the rise in ranking of the non-western and minimalist excerpts to fourth rank by the pilot class indicated some recognition of minimal music characteristics after the six-month teaching period.

In conclusion, despite the small class numbers a rise in awareness and knowledge of the composing process was noted in the pilot class's responses after the six-month teaching block but not in the responses of the control class who had not undertaken composing activities. Similarly, but to a lesser degree, the pilot class responses noted a rise in familiarity of the characteristics of minimal music after the teaching period.

### **Interpreting my teaching role and approach to introducing students to minimal music (drawing on the literature reviews of Chapters Two, Three and Four)**

On reflection, my teaching approach in the Preliminary Study was predominantly composition based reflecting my experience as a composer and drawing on works by American minimalist composers as 'models' (Russo 1983; Paynter 1992; Paynter 1982; Chadwick 1997; Campbell 1990) plus one work by English composer Hugh Shrapnel. My aims were largely musically intrinsic (Temmerman 1991), focused around minimal music, with an underlying research intent of exploring aspects of this music for the resource booklet required in the main study. Student compositions, short minimalist

works written by me for the students plus Glass's *I+I*, were performed. Excerpts of recorded minimalist works were played for student listening. Therefore through listening, composing and performing students were enriched through expressive form (Hogg 1994).

In my plan for each lesson objectives were outlined which included a warm-up exercise, often vocal, involving a song or singing game the students already knew. A new concept was introduced and combined with previous knowledge which provided common ground between the known and unknown (Owens 1986; Hogg 1994; Addo 1997; Loane 1984). This was then incorporated into a piece of music involving composition or performance. A template (Hickey 1997) composition task design with minimalist pitch or rhythmic characteristics was often chosen to introduce students to new concepts. Students were given manuscript paper with large staves on which to write short composition tasks based around notes they could play on the descant recorder, and rhythm values they could clap. The sheets were collected and I would comment and advise them of inaccuracies with regard to time signature or notation details. Composing activities were generally symbol to sound with the order of performance and composition interchangeable. Theoretical concepts were introduced or reinforced within the composing environment (Jones 1986; Salaman 1988; Major 1996; Paynter 1992), and the products of these activities, composed and performed, were an important outcome of the music programme.

The students wrote short composition exercises within given pitch sets or rhythmic parameters and these were played as separate pieces or joined together into rounds, canons, with an ostinato accompaniment, with a simple piano accompaniment or shaped into compositions using the minimalist structures discussed above. At times, material from one piece would be recycled into another thus providing common ground between two works and, at the same time, giving students the opportunity to understand how the composing process can generate two pieces from a common idea. The students and I both engaged in 'instant composition' (MacGill 1988) writing ideas which were immediately played and accepted or discarded or altered. We often combined these short minimalist compositions into one work, played the piece, recorded it and listened back.

Students then responded to their work suggesting improvements (Strauss 1988; Bunting 1988). At times I set homework usually short composition exercises to be ready for the next class.

Instrumentation included recorders, metallophones, xylophones, untuned percussion, clapping and marching and occasionally the piano was used. By including lessons focused around two non-Western musical models, I encouraged student acceptance of other musical cultures, and, at the same time presented opportunities to reinforce familiar musical concepts within styles which were new but related to minimalist composition techniques (Mills 1993). Performances were generally accurate but often lacked vigour and precision.

I provided a model for the students by composing for and with them (Maidlow 1998; Owens 1986) and the students were empowered through seeing themselves as composers (Owens 1986). Students composed as individuals (Moore 1990; Hogg 1994), in groups (Paynter 1976; Wiggins 1989; Moore 1990; Marsh 1995; Hogg 1994) and as a class (Kratus 1994; Harris and Hawksley 1989; Wiggins 1989). Through class concerts students brought their music into the school society. They were able to demonstrate their compositional and performance skills, to receive and give peer-evaluation and experience the satisfaction of performing to a school assembly audience (Reimer 1989). As a composer working as a teacher in the Preliminary Study, I found that the students and I worked with each other's ideas and that the learning and teaching environment was a two-way process (Nomura 1996).

The observer noted when aspects of my teaching practice needed attention. For example, I tried to fit too much material into the first few lessons but by lesson 5 was achieving a successful balance. She kept me informed of the students' responses to the minimalist teaching material, felt I should have played Riley's *In C* before the students worked with the compositional techniques and, at times, gave practical help to students.

### **Analysing the student and teacher minimalist compositions**

I sorted the compositions written by the students and by me into three groups. The first contained pieces which involved characteristics associated with minimal music – repetition, small pitch set, ostinati – but not a process. *Mini-March*, John's *Echo* and *Clowns* all combined a through-composed melody using a small pitch set with repetition through ostinati. This placed the repeated material in a traditional accompanying role yet engaged students with compositional devices characteristic of minimal music.

The second group contained pastiche pieces which adopted a minimalist process drawn from a minimalist composition by an established composer which served as a model. The largest number of compositions were pastiches modeled on existing works. *Phase Shifting*, Pastiche of 'In C', Emma's *Round*, Jee Yun's *Canon*, *Lullaby*, the two additive pieces and, to some degree, African layers were all simplified versions of existing pieces or processes. However, because of this they were also the pieces which achieved the strongest performances by small and large groups with satisfying aural outcomes and provided an incentive for further exploration.

Pieces in the third group moved beyond pastiche writing and, while not always aurally successful, illustrated ways of expanding minimalist composition techniques in new directions. Several pieces combined and therefore expanded ideas presented in other compositions. *Mini-March* 'with repeated four layer accompaniment' combined repetition with a through-composed melody and expanded the concept of a single ostinato or double ostinati texture by incorporating four short student compositions played together as a thickly-textured pattern. By utilizing improvisation, *Cobra Skin* provided a bridge between echo clapping games and the structure of Riley's *In C*. The two pieces built on repeated harmonic patterns combined and simplified aspects of two compositional constructions, one minimalist, the other drawn from the Trengannu gamelan and in doing so moved beyond one model. Finally, Tanya's *Improvisation* 'over a recycled ostinato' combined a simple repetitive process with improvisation and thereby expanded the structure of the other student works.

## 5.2 A significant change in the major study as a result of the Preliminary Study

Working with a teaching programme drawn largely from minimalist composition techniques confirmed the research focus of my study on minimal music as a teaching resource. I knew that it was my own interest in minimal music which had been the impetus for the study in the first place and because of personal experience as a composer I was inclined, as a teacher, to work with composing activities. Also, despite my inexperience as a teacher with this age group the students were interested in the composing activities undertaken with me. My attention was drawn to the value of investigating the relationship between the musical preferences and experiences of teachers and the teaching processes adopted when introducing minimalist material to students, focusing on composing activities. Throughout the Preliminary Study I kept thinking about how other teachers would use this material and noted that these relationships were crucial to an investigation of the student outcomes.

Beyond my own experience others had worked with minimal music in an educational context. In relation to performance attention has been drawn, in Chapters Three and Four, to adapting minimalist ideas for younger students but also potential difficulties for younger students when performing minimal music. Others felt that secondary level students could perform selected minimalist repertoire. Chapter Four outlined a number of approaches to introducing students to minimalist composing activities and in Chapter Three aural exercises involving minimal music were discussed.

In my main study, therefore, teachers chose the music activity through which they would introduce students to the minimalist project material, although my main investigative focus would be on composing activities. I realised that both the students' and associated teachers' responses to working with this material would offer interesting, complementary and relevant information about teaching activities, the teachers' responses through open-ended questionnaires and the students' responses through their outcomes.

The role of the student Music Questionnaire became less certain in the major study. It had yielded valuable information in the Preliminary Study, especially in regard to student

opinions and descriptions of the five excerpts of music and I made the decision to include it with the material offered to teachers who took part in the main study. A number of teachers took time to give students the Music Questionnaire but did not use project material from *The Pulse Music Album*. As information from teachers working with minimalist project material was received I realised that this was the core of the major study and that the findings of the Music Questionnaire were largely a separate issue. For this reason I have not included data from the student Music Questionnaire in the thesis.

### **5.3 Methodology for the main study**

The study aimed to investigate the relationship between how teachers engaged their students with minimal music, why they chose the approaches and strategies they adopted and associated student outcomes. A methodology was sought which could gather information from teachers in a number of countries, working with students of different age levels. A number of studies undertaken before, during and after the timing of this study, which included some focus on the role of the teacher in facilitating student composing, had employed interview and observation techniques, often with the researcher as composition teacher/facilitator (Burnard 1995a) or “participant observer” (Barrett 1996a:155). I sought a methodology which would accommodate the fact that I was not an on-site observer and interviewer of the teachers in the study. Yet I needed to draw insights and reflections from participating teachers on how and why they introduced minimal music to their students and the approaches and strategies they adopted. A resource of minimal music on which all teachers could draw was required.

#### **5.3.1 Data gathering through *The Pulse Music Kit* and *The Pulse Music Album* – a package of minimalist resource materials**

The first data-gathering procedure was a package of resource materials. Teachers were invited to take part in the study and those who accepted the invitation were sent *The Pulse Music Kit*. By offering all teacher participants one resource booklet of minimalist projects, designed from my own teaching experience with minimal music in the Preliminary Study, I was requiring everyone to work with the same material and thereby offered opportunities for comparison. This package of resource materials contained *The*

*Pulse Music Album* a booklet of eight projects with an explanatory introduction (Appendix 5B.i). The kit also included an introductory letter (Appendix 5B.ii), a cassette containing five excerpts of music for the student Music Questionnaire (Table 5.1 Music Questionnaire - five music excerpts by title, composer, style and description, CD of Appendix 5 Track 1) and nine excerpts of minimal music for teachers to use as they wished (Table 5.3 Excerpts from the minimalist repertoire plus excerpts of African and Balinese gamelan music on cassette, CD for Appendix 5 Track 2). A follow-up letter was sent around one month after the kit had been delivered (Appendix 5B.iii). The introductory and follow-up letters addressed ethical considerations of the study by reminding teachers of their choice whether to engage, or not to engage, with the resource material and therefore with the study.

Reflecting teaching undertaken as part of the Preliminary Study, eight projects were designed. Five of these projects were based on minimalist processes drawn from the works of Reich, Glass, Riley and Shrapnel – Phase Shifting (Reich), Phase Shifting Melodies (Glass, Shrapnel), Add and Subtract (Glass), Harmonic Prisms (Glass) and Music Weaving (Riley). One project focused on canon used with multi-repetition by Reich in a number of his compositions.

Two projects were based on non-Western music. The seventh project, African Rhythms, drew on the layered, multi-metric structure of the music of the Ewe tribe of Ghana which influenced Reich's compositional procedures. The last project was a piece from the literature of the Malay Trennganu gamelan. The music of this Asian ensemble of metallophones and other instruments has a simpler structure than the Balinese and Indonesian gamelans. However, it is built on similar musical characteristics of repetition of rhythmic figures, repetition of a small pitch set, heterophony, 'belungan' and colotomic structure. The gamelan influenced several American and Australian minimalist composers and Steve Reich (1974) predicted that "non-Western music in general, and African, Indonesian and Indian music in particular, will serve as new structural models for Western musicians. Not as new models of sound" (28). These two

projects were included for their structural potential as well as for connections with minimal music.

Minimal music has been given many stylistic names during the past thirty years, among them repetitive music, pulse music and trance music. I chose 'pulse music' for the title of the project album, *The Pulse Music Album*, because the meaning is more immediately understood and because the minimalist styles on which most of the album projects were based embodied pulse.

The presentation of the projects needed to fulfil two important criteria: that the text and musical examples be presented so teachers could decide on the music activities and teaching approach they would adopt when incorporating minimalist material into their teaching programmes; that the musical scores in the album be presented to an attractive and 'user friendly' way to interest teachers working with students ranging in age from 9 to 18 years. Because of the range of age groups being targeted the music exercises and pieces in the album offered for performance or as composition models did not suit all age groups. Teachers had to be prepared to adapt and develop the project material, had to be prepared to write their own 'models', to simplify or 'extend' the music exercises and pieces or expand the material from the album exercises and pieces through their own or the students' compositions. The project material focused on structural processes with musical exercises and short pieces given descriptive titles, as models. In relation to Johnson's definitions of minimalism presented in Chapter One I aimed to present minimalism largely as an aesthetic with the descriptive titles of the pieces making them more accessible in a music classroom.

A project/module/unit mode of presentation was chosen for presenting minimalist ideas in *The Pulse Music Album*. The students of Bunting's 1988 composition study were offered a booklet of projects in which each project focused on a specific technique from which pupils could choose (Bunting 1988:270). This provided a research study precedent for this format. Teachers using material from *The Pulse Music Album* were similarly invited to 'pick and choose' from the projects. The projects in the album were not

designed as a sequential programme although teachers were asked in the last questionnaire whether they felt the projects could be used in a sequential manner.

*The Pulse Music Album* included a cassette of excerpts (see Table 5.3 Excerpts from the minimalist repertoire plus excerpts of African and Balinese gamelan music on cassette and CD for Appendix 5 Track 2) and an introduction with suggestions on how to realise the potential of the project material.

**Table 5.3: Excerpts from the minimalist repertoire plus excerpts of African and Balinese gamelan music on cassette (CD for Appendix 5 Track 2)**

1	Excerpt from <i>Six Pianos</i> (1973) by Steve Reich
2	Excerpt from <i>Music in Twelve Parts</i> (1974) by Philip Glass
3	Excerpt from <i>Hocketus</i> (1976-77) by Louis Andriessen
4	Excerpt from <i>The Desert Music</i> (1984) by Steve Reich
5	Excerpt from 'Open the Kingdom' from <i>Songs from Liquid Days</i> (1985) by Philip Glass
6	Excerpt from <i>In C</i> (1964) by Terry Riley
7	Excerpt from <i>Tehillim</i> (1981) by Steve Reich
8	Excerpt from <i>Skulumaye</i> by Amampondo
9	Excerpt from Balinese gamelan

### **5.3.2 Data gathering through open-ended questionnaires sent to participating teachers in different locations**

The second procedure was a set of four open-ended questionnaires compiled for participating teachers to complete (Appendix 5B.iv-vii). Teachers in a number of countries, and working with students of different age levels, were invited to take part in the study. Because of the breadth of the study in terms of both teacher locations and investigative aims I drew on a number of research approaches. The study required the style of open-ended questioning and resulting information gathered through a multiple case study approach. This needed to be combined with the efficiency and flexibility (in

terms of location) of written surveys and the detail and depth of information possible from ethnographic research methods.

For Yin (1994), the case study method “investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (13). The boundaries between the ‘contemporary phenomena’ I was investigating, that is minimal music through the teachers and their students, and the context, that is the teaching environment, were ‘not clearly evident’. Yin warned against the limitations of surveys to investigate phenomenon and context. He found that the case study inquiry comprises an all-encompassing method with a logic of design incorporating specific approaches to data collection and to data analysis. Three technical characteristics help define case study inquiry. It:

- ◆ copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
- ◆ relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- ◆ benefits from the prior development of theoretical propositions to guide data collection and analysis (13).

This study responded to a number of these technical characteristics. Because of the breadth of the subject area of the study – minimal music, composing activities, teachers’ approaches and student outcomes – many variables of interest were expected as topics of discussion. There was a need to take into account aspects of the teachers’ contexts, in particular, to investigate through music preferences and experiences, why teachers chose to engage their students with minimalist techniques through the music activities they chose and in particular, those who chose to do so through composition. This interest in context came from my own reflective observations during the Preliminary Study of why and how I was introducing minimalism to the Junior 2/1 students largely through composing activities. For Dey (1993), investigation of contexts is a recurrent theme in qualitative analysis as contexts are important as “a means of situating action and of grasping wider social and historical import” (32).

Because of the distance between the locations of participants in the study, and the resulting adoption of a minimalist project resource booklet plus open-ended questionnaires I placed the teachers in a teacher-researcher or listening teacher type of role. Once they had decided to join the study, they were to consider the resource material, choose their teaching strategy and put it into action. Along the way the questionnaires would first ask about prior experiences and the school environment, then ask them to reflect on what they had done with the minimalist resource material. Because of the varied locations of participants I included some triangulation of response in the participants' processes in order to reinforce observations being made, thereby ensuring the quality of the research process.

Through open-ended questionnaires and documentation from the teachers, plus the student outcomes, triangulation was included in the study in four ways:

- ◆ questions which required teachers to record their responses and the responses of their students to engagement with the minimalist project material resulted in 'investigator' triangulation (Patton 1987 cited in Yin 1994:92) although with an acknowledged potential for bias as the teachers 'spoke' for their students;
- ◆ a number of teachers submitted school curriculum documentation to support their responses to questions on this topic. Similarly, student compositions were often sent back notated and recorded, giving an opportunity to compare the two media. This is 'data' triangulation (Patton 1987 cited in Yin 1994:92);
- ◆ having my transcriptions of non-notated but recorded student compositional outcomes checked by an independent music educator was undertaken to test "...the plausibility of the document against other known 'facts'" (Lincoln and Guba 1985:279), the facts being the recording. This is considered a kind of triangulation (279);
- ◆ asking teachers to respond to the same or similar questions in different questionnaires which were to be completed at different times during the

teaching process allowed a comparison between question responses to be made. This potential convergence of data is triangulation over time (Ely et al 1991:97).

The relationship between teachers' experiences and preferences and the subsequent roles and approaches they took in relation to the minimalist project material, plus the associated student outcomes, guided the approach to data collection and analysis within the study.

When I began the major study for the thesis I was living in Malaysia where English was not used by many teachers, let alone many music teachers. My educational connections were largely in Hong Kong where I had lived for six years, Sydney, Australia where I had lived for ten years and New Zealand where I was born and educated. Written questionnaires were essential in order to accommodate data-gathering from students and teachers working in diverse locations. They also allowed teachers to take as much time as was needed with the minimalist project material and ensured that the same questions were asked of all teacher participants.

Through four open-ended questionnaires I sought information about each music teacher's musical preferences and experiences, their approach to music teaching in general terms, how they engaged their students with the minimalist project material and their responses, plus those of their students, to the material. Open-ended written questionnaires have a particular role to play. They are more efficient in use of time than observation and interview but are less immediate and personal (Gay 1990:195); are best suited for particular groups of people who are spaced geographically and who may be expected to have an interest in the topic under survey (Mann 1985:170), as was the case in my study.

Swanwick (1984) has warned of the risk when asking people to describe their own attitudes and possible actions. "In so doing we run the risk of losing or distorting evidence, since people tend to give answers that reinforce their self-image and will generally claim to be more liberal, to be more positive, to care more and to work harder

than is often the case” (200). This warning was taken into consideration when designing questions for the teachers’ open-ended questionnaires.

Yin has described a type of interview which entails structured questions along the lines of a formal survey (Yin 1994:85). The open-ended questionnaires in my study, by their very nature, posed the same structured questions to each participant but sought the flexibility of a person to person interview format in written form. They were designed to allow responses to be reflective, to involve triangulation of response and to pose open-ended questions which would “...unearth valuable information that tight questions do not allow” (Ely et al 1991:66). In doing so, I know, in retrospect, that the questionnaires posed too many questions. However, the participants in this study were very patient and endeavoured to answer everything. While posing too many questions can invite a negative response, in this study I noted that it allowed participants to choose where to focus their responses, to write “in more or less detail with more or less interpretive content” (Clandinin and Connelly 1994:422) about issues of particular interest or concern. It therefore introduced into the in-built rigidity of written questionnaires, a flexibility of discussion direction usually only available to researchers through personal interview or observation.

The questions that participants were required to respond to varied in design. Some were exploratory (‘how’ ‘why’) dealing with “operational links needing to be traced over time” (Yin 1994:6), while others sought prevalence (‘what’, ‘who’, ‘how many’) (5). There were a number of questions requiring a yes/no response, factual information (education details, for example) and questions asking participants to rank or choose from a list of given possibilities. The ordering of the questions in the questionnaires reflected my investigative intent (LeCompte and Preissle 1993:175) and moved from factual information about the topic (that is, themselves, or their class of students) to questions requiring more reflective responses.

Through the questionnaires participating teachers responded to areas found to impact on how teachers make educational decisions, discussed earlier in Chapter Four:

- 1) Education, preferences and experience:
  - a) music qualifications/education
  - b) music activity preferences, musical style preferences
  - c) years of music teaching experience, years of experience teaching the age group of the study
  - d) experience teaching twentieth century art music styles, experience teaching music of other cultures;
  
- 2) Teaching environment:
  - a) school context, parental background
  - b) school's 'attitude' to music, music equipment and resources curriculum
  - c) class context, prior musical knowledge of the class of this study;
  
- 3) Personal beliefs in, and teaching perspectives of, music education:
  - a) philosophy;
  - b) objectives and aims for this age group and this teaching module;
  - c) methods - music activity priorities and evaluation/assessment.
  
- 4) Strategies and approaches teachers adopt to facilitate composition teaching:
  - a) predicted use of the project material prior to teaching;
  - b) actual approaches and strategies adopted to facilitate composing activities;
  
- 5) Effect:
  - a) student compositions;
  - b) teachers' and students' responses to working with minimalist project material.

The first questionnaire, the General Information questionnaire (Appendix 5B.iv), was designed for completion before teachers commenced working with the minimalist

projects. This timing, however, was not crucial to the study. The questions were largely factual in design seeking information about the school, music resources and the music class with whom the project material was to be used. It also enquired about the teachers' experience, qualifications, teaching philosophy and method and asked for a preliminary opinion on, and plans for, the material in *The Pulse Music Album*.

Teachers were to complete the second questionnaire, Questions for Each Project (Appendix 5B.v), in response to each project from the resource booklet with which they worked. Participating teachers engaging students of different levels with a number of projects submitted copies of this questionnaire for each project but often combined responses from different age levels on one questionnaire. Questions were largely exploratory in style and designed so that from the responses, the roles, approaches and strategies adopted by teachers could be discussed. They sought details of how teachers engaged their students with each project from the minimalist project album.

The third questionnaire, The Final Analysis (Appendix 5B.vi), sought a holistic response from the teachers after working with material from the album which interested them. Because it sought an overall response to the minimalist project material and reposed questions offered in earlier questionnaires, The Final Analysis gave the participating teachers another opportunity to reflect on their work and, in doing so, resulted in a triangulation of responses over time. Questions sought information about future use of the minimalist projects, using the material sequentially, which projects were most suited to primary/secondary level and whether teachers had been able to incorporate the material into their music programme or made a special space. Teachers were asked to say whether they and their students enjoyed working with the project material.

The fourth questionnaire, The Teacher's Musical Preferences (Appendix 5B.vii), was to be completed at any time. Many questions were exploratory, while others required participants to make ranking decisions. The questionnaire sought information on music preferences and experiences and questioned them about their teaching environment - the curriculum, teaching philosophies, teaching approaches and evaluation/assessment methods.

## 5.4 Analysis

The following data sources provided information in the study. The participants included classroom music teachers at primary, intermediate, secondary and tertiary level, correspondence school, a home study music teacher, teachers working with voice and piano students, composers in the classroom and a private after-school music programme teacher. A number of these engaged themselves and their students with the minimalist resource material and completed the open-ended questionnaires. Through the teachers, the responses of associated students aged 6 to 18 years of age were gathered. Artifacts included student compositions both notated and recorded, compositions written by teachers, recordings of student performances of pieces and exercises from the minimalist project material, curriculum literature sent in by individual teachers and concert programmes. Different strategies were adopted for the data analysis.

### 5.4.1 Analysing student minimalist compositions

The student (and some teacher) minimalist compositions associated with the teacher participants in the study were analysed. This analytic process also drew on analyses of minimalist scores, the impact and effect of minimalist recordings and performances referred to in Chapter Three and the focuses and findings of studies on student compositional processes and products reviewed in Chapter Two.

The student minimalist compositions were analysed and examined for evidence of pastiche development of, and expansion beyond, musical parameters presented in the relevant minimalist project from *The Pulse Music Album*. While most compositions not submitted in score were also transcribed, analysis and examination was also undertaken aurally as “the ‘music’ is what we hear [and] we should ask ourselves, ‘What can I say about this *as music*?’” (Paynter 2000:8). Development of, and expansion beyond, the musical parameters presented in the project compositions occurred for a number of reasons:

- ◆ adaptation of material, both simplification and ‘complication’, to suit the student age group;

- ◆ a mistaken misreading and distortion of a minimalist concept resulting, at times, in a serendipitous new idea and direction; and
- ◆ explorative expansion beyond the material introduced in the projects of *The Pulse Music Album*.

Differences between the material presented in models from the relevant projects and a student's composition could be small or large. When the student work remained largely an aural and analytical pastiche of the model, smaller changes to ideas presented in the project compositions have been referred to as 'developments'. 'Expansion' of the project material referred to changes in relation to the models which moved the student composition analytically and/or aurally beyond that of pastiche work.

The study noted that some teachers brought their students to a stage where pastiche compositions were produced while others were able to facilitate compositional expansion of the material presented in the album projects by their students, and sought reasons why. All of these stages of student composition are educationally positive and beneficial and represent, at the least, an opportunity for the reinforcement of known musical concepts. They also represent different levels of compositional sophistication, indicating both student facility with the material and different levels of engagement with the contemporary arts and contemporary society as student composers through minimalist composition techniques. This engagement is at the heart of the study.

A decision was made to transcribe recorded student compositions employing minimalist techniques, especially discrete processes, phase shifting and isorhythmic overlap, for example, based on the 'rules' of the process, that is, what the students were intending to play and often achieving. This was instead of transcribing playing inaccuracies resulting from the challenge, especially for younger students, of playing two (or more)-part, contrapuntal, constantly changing, linear music. One reason for the decision was because of the precise, mechanical nature of a process such as phase shifting process represented in and modeled on Reich's *Clapping Music*, which can be written down as a one bar repeated cell. A second reason was the precedent set by scores sent in by teachers and

students as part of the data from their work. These presented works involving minimalist processes in accurate form despite performance inaccuracies on the cassette. The third reason was because some cassettes included multiple takes of the same piece which would have required multiple transcriptions. Lastly, this thesis, while acknowledging the performance of the compositions as an integral part of the composing process, was not focused on aspects of performance but on the *intentions* of the student composers.

Several compositions were not transcribed because of their length and constantly shifting sound textures or because of the difficulty of discerning two interlocking rhythm patterns performed on similar instruments. An experienced music educator, independent of the study, checked the accuracy of transcribed student compositions.

#### **5.4.2 Analysing the ethnographic details of network-selected teachers**

The ethnographic details of the teachers in the study were analysed. I chose to examine teachers of students aged from 6 to 18 years of age, covering early primary school, to late secondary school and into early tertiary level. The age of the nine year old students of the Preliminary Study was retained plus four other age groups each three years apart - six, nine, twelve, fifteen and eighteen year olds. In a classroom, there is always a mix of ages and in this study classes of children were categorised according to one of these five ages given above. In the literature review on student composing activities in Chapter Two several studies focused on students of primary level in and out of the classroom, on students at secondary level, often female students and a small number investigated tertiary students. My study took a broad focus and included male and female students at three institutional levels.

The study originally set a target of four teachers for each student age group within a two-year time span. This spread and time span were not achieved, with six year olds proving to be the most difficult age group to involve (see Appendix 5B.viii Teachers who accepted an invitation to view *The Pulse Music Kit*). I targeted teacher participants who were considered likely to be interested in the minimalist project material. Studies reviewed in Chapter Four revealed a small number of teachers working with

contemporary art music and composing activities and highlighted hesitation, lack of confidence and knowledge amongst teachers at primary and secondary level in relation to teaching both composing activities and contemporary art music. In my study almost all of the teachers approached expressed interest in the material, although a smaller number actually engaged themselves and their students with it.

The process of inviting teachers to view the material was not random as the kit material was expensive and the work involved for teachers, time-consuming. My study sought teachers who showed a glimmer of interest. I frequently employed a strategy of network selection in which each successive participant was named by a preceding individual (LeCompte and Preissle 1993:73). This strategy is considered useful in situations where the individuals being investigated are scattered throughout populations and form no naturally bounded common groups (74). Beginning with the small circle of teachers known to me, I found that a chain of recommendations identified others as being 'the sort of teacher who would be interested in contemporary 20<sup>th</sup> century music', 'the sort of teacher who likes trying new material', 'an Orff teacher, she'll be interested' and 'the sort of teacher who is interested in creative classroom activities'. Other interested teachers were sent the 'kit' after a number of workshops were given on minimalist material and a few responded to a small advertisement placed in a local music education bulletin. As I moved my country of residence from Hong Kong, to Malaysia, to Australia, with many visits to New Zealand, this chain of invitation continued. In Australia and New Zealand education department staff recommended teachers they considered likely to be interested or offered to pass a kit along to such a teacher. As each teacher was approached they were given a study number and these numbers have been used to identify each teacher discussed in the thesis.

Over the five-year period 1989 to 1993, 155 teachers were invited to view the minimalist resource material, *The Pulse Music Kit*. These teachers taught in primary, intermediate, secondary and tertiary institutions, in correspondence schools, after-school programmes, private piano studios, as home-school teachers/mothers, composers in schools, directed a children's choir and worked in education centers in seven countries. Ten teachers

declined the offer (see Appendix 5B.viii Teachers who accepted an invitation to view *The Pulse Music Kit*).

After stages of acceptance, response, interest and use of the material, 31 teachers engaged their students with material from *The Pulse Music Album* and submitted either questionnaires or student outcomes, or both (see Appendix 5B.ix Teachers who submitted material to the study). Reasons for this extraordinary discrepancy between those who expressed interest in, and those who finally engaged their students with, the material, were personal (divorce, death, maternity leave, university study, changing school), practical (material lost in the mail) and educational. Educational reasons included lack of interest in the material (“Philip Glass isn’t suitable for our school”), unsuitability of the material (“the material has little application in a school course focused on skills, understandings and responses”, the material increased in difficulty too rapidly for students) and some teachers at primary level felt that they, or their students, didn’t have the skills to work with the material. Fifteen teachers stated that their school programme was too busy and didn’t allow time for including the project material (preparation for school concerts and the school musical, extra administration, tertiary institution amalgamation, trainee teachers on ‘prac’ teaching blocks, for example). Of the eight teachers who expressed an interest in the material but cited difficulties in integrating, or making room for, extra material in the school music programme, five taught in private institutions. Only one teacher engaged students in the 6 year age group with the project material and as this was through performance with no compositional activities, the study focused on the four older age groups – 9 years, 12 years, 15 years and 18 years.

The study investigated the nineteen teachers who engaged their students through improvising and composing activities and responded to the study through the questionnaires and submitted compositional outcomes. The responses of these participating teachers, working with students in the four age groups, are at the heart of this study (See Table 5.4).

**Table 5.4: Interest in, and participation of, the 155 network-selected teachers invited to review *The Pulse Music Kit***

155 teachers **invited** to take part (Australia 110 - 105 New South Wales, 3 Queensland, 1 Western Australia, 1 Victoria), 23 New Zealand, 7 Hong Kong, 3 Malaysia, 1 Indonesia, 1 England, 1 California, United States. 102 female, 43 male) – 10 declined;

145 **accepted** an invitation to view *The Pulse Music Kit* and study material – 44 primary/intermediate level, 79 secondary level, 12 tertiary level, 10 miscellaneous – 42 did not respond to follow-up letter;

103 **responded** to receipt of the material and/or follow-up letter – 32 primary/intermediate level, 56 secondary level, 9 tertiary level, 1 composer in the classroom intermediate and secondary, 1 home school mother/teacher, 4 other – (8 of these were negative);

95 **interested** in the material – 59 unable to proceed;

36 **used** material. Of these 31 **submitted responses** and/or student outcomes focused on their work with *The Pulse Music Album* (see Appendix 5B.ix Teachers who submitted material to the study) – 24 through improvising and composing activities, 5 through performing activities (one teacher working with students in the 6 year age group), 2 disliked the material;

19 of the 24 **participating** teachers undertook improvising and composing activities submitted questionnaire responses **and** compositional outcomes – 4 x 9 year age group (1 x 9 and 12 year age groups), 5 x 12 year age group (4 x 12 and 15 year age groups), 6 x 15 year old age group (2 x 15 and 18 year age groups), and 3 x 18 year old age group – 13 female, 6 male.

### 5.4.3 An investigative interpretation of data from the open-ended questionnaires

Information gathered from the open-ended questionnaires resulted in extensive individual teacher profiles being established (Appendices 6,7,8 and 9). An interpretative approach was chosen in Chapters Six, Seven, Eight and Nine, to investigate the information within these teacher profiles, seeking evidence of the approaches and strategies adopted by each teacher when facilitating student composing activities through the minimalist project material and reasons why these were taken. This evidence was sought first, in relation to findings from the literature reviews of Chapters Two, Three and Four, and second, from data submitted by participants in this study. Ensuring the quality of the research process was sought through this interpretative approach based on the teachers' submissions and

through the transparency which resulted from placement of these submissions in profiles in the appendices of the thesis.

When interpreting the teachers' roles and approaches and examining contextual factors which impact on these roles and approaches through interconnected processes, I used analytical insight into the teacher in his/her "society as an organism". This metaphor from the nineteenth century was used by sociologist Becker (1998) to describe aspects of social life in which "...the pieces of the system in question are connected in such a way that the output of each of the sub-processes that make it up provides one of the inputs for some other processes, which in turn take results from many other places and produce results that are inputs for still other processes, and so on" (41-42). For Becker, the word 'process' implies a different way of working from 'causes'. A process looks for how steps are connected to teach other, how one step created the conditions for the next step to occur – for the "description in conceptual terms of the processes by which events take place" (61). In the study of this thesis, I sought to understand the nature of the information in front of me - information from the teachers' profiles with the associated student compositions and vice versa - through investigation of the process of each teacher.

#### **5.4.4 Identifying key factors and key concepts as an analytical tool**

The investigation of these processes looked for what Tesch (1990) has referred to as commonalities and uniquenesses (67). Uniquenesses or "unusual events" keep the researchers' eyes open, and demand investigation into what obstacles prevent them from happening all the time (Becker 1998:87). Because teaching is seen to be connected to the teacher's personal background and experience, a number of common factors drawn from the literature reviews of Chapters Two and Four in relation to education/qualifications, experience, and music preference, served to identify commonalities and uniquenesses in the responses of the study's participants:

Education/qualifications, experience:

- i) the relationship between depth of musical (and compositional) knowledge and interest in, and ability to

- teach, notated contemporary art music styles rather than only non-notated, improvisatory activities;
- ii) trainee teachers introduced to sound exploration in order to be able to lead their students into similar activities;
- iii) composition teacher as a creative individual.

Preference:

- i) teachers bring their beliefs and values about music to the classroom;
- ii) teacher must value the 'modern work' being taught;
- iii) disparity between music preferences of students and teachers;

A number of common factors related to the teaching environment:

- i) relationship between music resources and successful creative work;
- ii) relationship between teaching conditions and successful creative work;
- iii) relationship between teaching conditions and the teacher's energy;
- iv) curriculum requirements.

Similarly, key concepts drawn from discussion in Chapters Two, Three and Four of music education philosophies and aims, plus approaches to, and strategies for, teaching composing activities served to identify commonalities and uniquenesses between the experiences and findings from the literature reviews and those of the participating teachers:

Teaching perspectives:

1. Reasons for teaching music:
  - i) Intrinsic: music for its own sake;
  - ii) Extrinsic: justifying music in education for its non-musical outcomes, including emotional, social, moral, spiritual, therapeutic, intellectual, physical and cultural grounds;
  - iii) Music as knowledge – transmission of cultural heritage;
  - iv) Music as accomplishment – teaching directed primarily towards a realisation of a repertoire requirement;
  - v) Music as an empowering agent -
    - Aesthetic learning;
    - Expression of feelings through sound;
    - Self-esteem through personal satisfaction with one's own music-making;
    - Students see themselves as musicians;

Self-esteem through public approval of music-making.

2. Reasons for engaging students in composition:
  - i) empowering students;
    - a) a way of developing self-expression through sound;
    - b) aesthetic learning from composing activities;
    - c) self-esteem through personal satisfaction with one's own compositions;
    - d) students see themselves as composers;
    - e) self-esteem through public approval of compositions;
    - f) encouraging artistic expression – developing the creative spark;
  - ii) intrinsically musical reasons;
    - a) enabling students "...to understand music better; to obtain that pleasure which is inherent in the art" (Schoenberg 1950 in Owens 1968);
    - b) influencing students in developing or maintaining a positive attitude towards the study of music;
    - c) developing a musical vocabulary (music as knowledge);
    - d) facilitating the learning and reinforcement of basic concepts and theoretical skills of music;
    - e) allowing students to successfully engage "in the art that is *most* relevant to us...that of our own time" (Paynter 1970);
  - iii) extrinsic reasons;
    - a) for psychological reasons, engaging students in different ways of musical thinking and problem-solving;
    - b) developing students' critical powers and perceptions;
    - c) assisting student in negotiating a safe emotional passage through adolescence;

Approaches, roles and models teachers have adopted when facilitating student composing activities:

- 1 Teacher-centred:
  - i) the teacher as instructor and decision-maker;
  - ii) the student as appreciator.
- 2 Behavioural model - tightly sequenced steps of learning and the use of reinforcement to elicit observable behaviours.
- 3 Cognitive Developmental Model - learning tasks selected according to the students' developmental level, and students' reasoning sought in relation to these tasks.

- 4 Interaction Model - emphasizing personal interaction and the learning which occurs as a result of the student's interaction with other people. It is predominantly a group process model.
- 5 Student-centred –
  - i) the student as an unfolding personality;
  - ii) the teacher as 'enabler', creating a context within which students can compose – Transaction Model;
    - a) the student as creative participant and decision-maker;
    - b) the students learn from each other;
    - c) students lead the pace and direction of classroom composing activities;
    - d) the teacher trusts the students' creative decision-making;
    - e) the teacher relies on feedback from the students to determine their needs, interests, strengths and deficiencies and address them;
    - f) the student discovers techniques by accident during sound exploration, which are accepted and adopted.
- 6 The teacher as researcher –
  - raises and answers questions during student composing process.
- 7 The teacher as composer –
  - i) explores the creative material first, in order to gain an idea of what the students will be working with;
  - ii) adapts material to, or writes material for the age and skills level of the student(s);
  - iii) music teacher is a highly creative individual.
- 8 Two-way learning model:
  - a) the composer learns from the students;
  - b) teacher and students compose and learn from each other. This can result in:
    - i) an equal relationship between teacher and students –
      - a) learning to trust one another;
      - b) discussion and sharing of musical ideas between students and the teacher;
    - ii) the composing teacher as a model for students;
  - c) the composer in the classroom inspires and suggests approaches to teachers for facilitating student composing activities.

## Strategies for teaching composition:

### A General strategies for teaching composition:

#### 1 Creative source:

individual composition – may be associated with an ability to audiate sounds;

small group composition – cooperative learning and collaborative interaction;

class composition

i) training a class of students in some simple skill or technique;

ii) ‘composition by committee’ or ‘leading out’ – building a composition by recognising and drawing on the original ideas of the students and the teacher.

#### 2 Psychological strategies concerned with:

i) ways of thinking about music in the composing environment;

ii) theoretical and musical skills, craftsmanship and theory learning from the act of creation;

iii) composing as problem solving.

#### 3 Integrated approach:

- understanding the concepts of music through a study of a broad range of music in-depth;
- with other school subject areas.

#### 4 Historical approach:

- through great works.

#### 5 Cultural context:

- the studying of music within culture;
- teaching what is regarded as important by the culture;
- acknowledging continuity and change in musical cultures.

#### 6 Drawing on the composition techniques of music outside Western art and Western popular music traditions.

#### 7 Collaboration: with other arts

i) a potential for fusion;

ii) appreciation of other arts;

- special occasion music: situating students’ compositions outside the classroom – empowerment through public approval of compositions;

- 8 Time to compose:
- recognition that the generation of new musical ideas and expression can take weeks, if not months.
- 9 The compositional product:
- recognition that polished musical products are difficult to guarantee.
- B Sequential strategies involving a number of stages from non-notated explorative improvisation to composition (notated, or recorded, or ‘empirical composition’) –
- 1 a sequence of steps from improvisational exploration to composition with notation (sometimes involving movement);
  - 2 a cycle of steps from improvisational exploration to performance – exploration, experimentation, regularisation, selection, rehearsal;
  - 3 a model from exploration to evaluation –  
Natural learning model - immersion, demonstration, engagement, expectations, responsibility, approximation, use and response;
  - 4 a number of music activities (for example, composing, performing, listening, musicology) integrated around one topic
  - 5 a number of steps with no fixed order - doodling, inspiration, vocalising, manipulation, revision.
- C Individual strategies –
1. Repeated improvisation –
    - empirical composition
    - improvising until students require notation to ‘fix’ their creative sound ideas;
  2. Instant composition: fast, simple composition easily altered or expanded;
  3. Cooperative strategies: students writing specifically for class performers and their particular instruments; writing challenging pieces for advanced performers; asking staff members to perform compositions.
  4. Timbral strategies:
    - drawing on the sounds of instruments outside Western art and Western popular music traditions;
    - working with electronic sound sources;
    - rediscovering the sound potential of familiar instruments such as voices and the acoustic piano.

5. Task design: the compositional context set by the musical requirements.

These range from prescription tasks with a high degree of control governing decision-making, to freedom tasks which provide independence in decision-making because of their open-ended nature:

- i) prescription tasks
  - a) practice tasks – regeneration of knowledge;
  - b) formative teacher-directed instructional tasks – new learning:
    - template: a composing task in which most of the musical parameters are given – introducing new concepts;
    - model: a composition by an established composer used as the stylistic model;
    - frame: a musical element or procedure to be incorporated within a student work;
    - common ground: working from some aspect of what students know when introducing new material;
    - adaptation: students are more likely to adapt previously known material in their compositions if they are not presented with an alternative model through being taught composing.
- ii) freedom tasks:
  - stimulus: a trigger to set off composing activity (such as a title, topic, story);
  - title: found to focus students' minds on composing.

6. Self-appraisal, evaluation:

- a) students and teacher reflect on values and work practices;
- b) record student improvisations and compositions to develop their discriminatory powers and sense of self-evaluation;
- c) review progress regularly;
- d) if the composition is unmusical, question the process rather than criticise the creator.

These common factors and key concepts formed the basis for interpreting and discussing the profiles of the 19 teachers of the study who chose to teach composing activities drawn from the project material in *The Pulse Music Album*.

Although many of the concepts overlap from one area to another, they provided a way of identifying and leading discussion on commonalities between the experiences of the

teachers in the study and those in the literature. New factors and concepts which emerged from the interpretative discussion drew attention to uniquenesses.

### **5.5 Teacher profiles and the associated student and teacher compositions**

Data from the open-ended questionnaires completed by participants, plus the associated student and teacher compositions have been placed in teacher profiles in Appendices 6,7,8 and 9 in the words submitted by the teachers. Each profile begins with an identification section and the student compositions have been placed at the end of each profile. In the profiles data from the teacher's questionnaire responses have been arranged according to the areas of enquiry described in Chapter Five: education, preferences and experience; the teaching environment; personal beliefs in, and teaching perspectives of, music education; and approaches and strategies adopted to facilitate composition teaching.

The minimalist student compositions associated with each teacher are placed at the end of each teacher profile in Appendices 6, 7, 8 and 9. Some of these compositions were hand-written by students, others by teachers and I have transcribed a number from recordings. At times a score in the hand of a student or teacher is shown plus a transcription. This information is noted next to each composition. Each composition has an information list attached to it giving details about the composer, the score writer, aspects of the analysis and performance details. Compact discs of the student compositions written, performed, recorded and submitted to the study are included as CDs for Appendices 6-9.

### **5.6 Reporting**

Chapters Six, Seven, Eight and Nine contain interpretative reports drawn from each teacher's profile plus analyses of the associated student minimalist compositions. Each chapter is focused on one age group. The interpretative reports are written in narrative form (Clandinin and Connelly 1994:425; Ely et al 1991:169) blending the 'voice' of the teacher, the 'field text', with my narrative, the 'research text'. For Clandinin and Connelly (1994) field texts "are close to experience, tend to be descriptive, and are

shaped around particular events, [whereas] research texts are at a distance from field texts and grow out of the repeated asking of questions concerning meaning and significance” (423). They note that “field notes may be written by researchers or by participants” (422) and I have retained the ‘voice’ of the participating teacher in the reports as his or her enthusiasms, frustrations, interests, disinterests, about the projects and about their teaching environment are relevant to interpretation of the information.

Discussion in each report, within each student age group, begins with educational, preferential and experiential information about each teacher. Aspects of the teaching environment and teaching perspectives are addressed and this is followed by analyses of the minimalist student compositions associated with the teacher. The approaches and strategies of this teacher when facilitating the composing activities are then described. This discussion order was adopted because of the need to first describe the teacher’s background and music education value system before analysing the student compositions, and then examining the approaches and strategies adopted to realise these compositions.

Common factors and key concepts drawn from the literature reviews of Chapters Two, Three and Four, and listed earlier in Chapter Five, lead interpretation in the investigative reports. They serve to identify factors which impact on the educational decision-making of teachers, and on the approaches and strategies they adopted when facilitating composing activities with students, and in doing so indicate commonalities and uniquenesses. At the end of the discussion of each age group these uniquenesses and commonalities, and any expansion of musical concepts found in the student compositions are summarised in point form.

In Chapters Six, Seven, Eight and Nine interpretative reports drawn from the teachers’ profiles and the associated student compositions of teachers working with students in the nine, twelve, fifteen and eighteen year age groups of the study, respectively, are discussed.