

Chapter Seven

Interpretative reports drawn from the teachers' profiles and associated compositions

12 year age group

This chapter contains interpretative reports of the participating teachers who engaged students in the 12 year age group with the minimalist project material through composing activities and the associated student minimalist compositions. Where teachers also engaged students in the younger age group, readers are referred to Chapter Six and Appendix 6.

7.1 Teacher No. 33 – female music teacher in a Sydney selective public high school (see profile and associated compositions in Appendix 7 and CD for Appendix 7)

Education, experience, preference; teaching environment; teaching perspective

Education: music education diploma plus three education/educational administration tertiary qualifications;

Experience: experienced teacher who had previously worked with twentieth century art music styles mainly through the works of Australian composers – Edwards, Meale, Sculthorpe, Brophy – plus a “retrospective twentieth century view” of impressionism, minimalism, serialism and aleatoric music, all as “just another branch of repertoire for students to experiment with”. Similarly with music of Greece, Indonesia, Africa, the Balkans and Japan, “elements [were] examined and compositional devices become new tools/vocab. for students”;

Preference: music preferences embraced Western classical and popular music, plus music of other cultures. Music activities included writing and arranging music, writing material for music teaching kits and music administration in a professional association;

Teaching environment: a selective high school in the N.S.W. public school system, in which requires students are required to pass an academic entry test for acceptance into the school. The teacher designed her own music programme “based on the curriculum guidelines established by state education authorities”. She did not believe that the curriculum ranked or emphasised music activities but encouraged “integration – performance/composition/musicology/aural”. However, she did rank the activities listed in the questionnaire placing improvisation, composition first, followed by aural then singing and playing, and stated that her personal ranking of activities was the same.

Parents of the students drawn from professionals, academics, media personalities, politicians, inner city dwellers, and those with non-English speaking background. School’s interest in music was strong, and a music room with a wonderful view was provided, however instruments were few and often in poor condition. Students in the 12 year old age group were first year secondary school level taking compulsory music. Teacher No. 33 did not specify which age group was discussed in her questionnaire responses. However, the student compositions for the two age groups indicated that a similar approach was adopted for both.

Teaching perspective: introduced students to a broad range of different musical styles from which they could glean compositional devices and then experiment with them through an “integrated approach” to music teaching. This combined “performance, composition, musicology and aural across [an] eclectic range of repertoire, using a variety of methodologies – Orff, Kodaly, Dalcroze”. Harmony was undertaken “through exploration of other composers’ work” and the teacher noted that, for her, “development of aural perception [was] paramount”. Students’ work assessed by a “variety of means

according to [the] task/skill being assessed”, through tests, compositions, essays, seminars and performances. The label on the submitted cassette of student pulse music pieces, “pulse music exams”, reflected this summative approach to assessment.

7.1.1 Analyses of seven associated student compositions in response to the Phase Shifting project (see Appendix 7 and CD for Appendix 7 Tracks 1 - 7)

Structure: Three of the seven compositions, 33.1, 33.2 and 33.5 built up a structure related to *Chitter Chat*, Option A of the project in that all phase shifted permutations were sounded at once (or nearly all), yet they were not mirror images of this model. Composition 33.1 employed an inverted triangular additive then subtractive structure with three of the possible phase shifts working from the upper register instruments down to lower pitched instruments and back up again. Compositions 33.2 and 33.5 added all or most of the phase shifts of an original cell one by one then finished with the original cell being repeated by the upper line alone. Both of these additive layered structures were an expansion of the structures used in the project pieces.

Composition 33.6 *Gamelan sounds* phase shifted the pitch set once but not the rhythm of the cell. This simplification of the process was an expansion of the concept of phase shifting. Composition 33.7 also simplified the process but to the point where no phase shifting was audible.

Pulse: Compositions 33.2, 33.3 and 33.4 designated an instrument to a crotchet pulse, a development of the quaver pulse line included in Option B’s *I think it’s going to rain*.

Rhythm: Compositions 33.3, 33.4 and 33.5 incorporated semiquaver values, a development of the crotchet and quaver values in the project pieces.

Instrumentation: While the pitch sets employed remained within the shapes offered in the project, consideration had been given to instrumentation. This ranged from metallophones only capturing “gamelan sounds” (33.6), use of a bass drum pulse (33.4),

to the combination of one tuned instrument (piano) phase shifting with an untuned cymbal (33.4). These combinations developed instrumentation beyond those suggested in the project.

7.1.2 The approach and strategies adopted by teacher No. 33 to facilitate composing activities with the Phase Shifting project material

Teacher No. 33 engaged students in the 12 and 15 year age groups with the Phase Shifting project over four lessons. With the 12 year age group she worked with the project material over four forty minute lessons. She noted that the material was familiar and because it presented “students with raw materials [which] enables them to experiment” with resulting “open-ended” outcomes, offered common ground because of her integrated approach with all musical material.

Through her “integrated approach”, she introduced students to compositions of established composers for “recognition of this technique in work of others (aural and written recognition), [followed by] experiment[ation] with this device in [their] own composition”. Because of her knowledge of minimalism she was aware that, at the time, “Steve Reich was in town!”.

Over two lessons, “one to work through structured activities then one to apply the steps”, students “most definitely worked from sound to symbol, although more experienced students preferred to play around with the figures on paper first”, composing short pieces. Although all of the project options were attempted, the teacher noted that the “students actually came to these themselves through experiment”. This experimentation led many of the students to expand the structure and develop the instrumentation of the project models.

The seven works submitted in short score and recorded on cassette by students in the 12 year age group range have no titles. “They are in the habit of cataloguing their works with opus numbers – nothing so imaginative as a name”. The pieces ranged from those

which expanded the structures outlined in the project and were given accurate performances (33.2, 33.5), those which expanded the project structures but received performances either somewhat inaccurate (33.3) or with a different pulse for each layer (33.1, 33.4), to those which simplified the process. Of the latter, 33.7 embodied multi-repetition but with no audible phasing. Composition 33.6 simplified the process by phase shifting the pitch only (not the rhythms), an expansion of the process concept which created an effective “gamelan sounds” work. Three of the works included a sounded pulse (33.2, 33.3, 33.4) which did not always result in one single unified pulse. Only the two simpler pieces, 33.6 and 33.7, attempted a degree of multi-repetition.

The seven compositions reflected the range of compositional understanding (in relation to phase shifting) and the different performance abilities of the students in the first year high school class, yet involved them all with the project material. Even the simplest pieces, 33.6 and 33.7, which did not adopt phase shifting as a process, engaged the students with multi-repetition. The students’ compositions were different in structure (although all in quadruple metre) from one another and from the project models because the teacher had introduced the students to *all* of the project pieces and therefore to a variety of phase shifting models, rather than adopting a single model task design.

Playing by “various methods”, with a “phrase used initially from notation but as [a] group work[ing] by ear/memory”, students recorded their compositions. The teacher indicated that improvisation was a part of the composing/playing process and a pulse was sometimes used, remarking that “initially it was difficult but gradually they got the ‘hang’ of it”.

Teacher No. 33 noted that “the students enjoyed working on the project enormously”, and that she was “always looking for new ways into new repertoire”. She wrote that there was “certainly a place for [the minimalist projects]” in a music program, that they provided “valuable stepping stones” and would use the phase shifting project again in the

future. She felt that some of the instructional language could be simplified for primary teachers and for this age group, noted Phase Shifting (rhythm), Music Weaving, Add and Subtract and Canon as most suited. For secondary level, Phase Shifting (rhythm and melody), Harmonic Prisms, Add and Subtract, Music Weaving, African and Gamelan were named. A further suggestion was made for “activities [to be] related to specific discography/scores used as follow-up” which reflected her own teaching approach through a series of steps leading students from the familiar to composing activities.

Teacher No. 33 selected tasks according to the students’ developmental level, adopting a multi-model, rather than single model, composition task design which suited the abilities of students in a selective high school. Within the series of steps she adopted in her integrated teaching approach, introducing students to works of established composers, identifying devices and elements, before leading them to composing and performing activities and tasks with some improvisation, recording and assessment, the teacher was also an ‘enabler’. She sought the students’ reasoning in relation to these tasks and in doing so ‘enabled’ the students to experiment as creative participants and decision-makers through her student-centred approach, resulting in the structural variety of the seven student compositions which reflected their creative decision-making.

7.2 Teacher No. 91 – female music teacher, private boys’ primary school in NSW (see profile in Appendices 6 and 7, associated compositions in Appendix 7 and CD for Appendix 7)

Education; experience; preference; teaching environment; teaching perspective

See Chapter Six.

7.2.1 Analyses of nine associated student composition written in response to the Phase Shifting project (Appendix 7 and CD for Appendix 7 Tracks 8 and 9)

Construction: Compositions 91.6, 91.7, 91.8 and 91.10 were pastiche works based on the project model. However, they employed a two-bar or three-bar cell for the rotating phase shifting process, a development beyond the one bar cell of the model.

Time: Compositions 91.5 to 91.10 were all performed on untuned percussion. While 91.5, and 91.9 were pastiches of *In Step – Out of Step* from the project and adopted the 4/4 of these model pieces, 91.6 and 91.10 were written in 3/4, and 91.8 in 2/4, metres which represented a development beyond the time signature of the model project pieces.

Compositions 91.11 and 91.12 adopted the quadruple compound time signature of the model, *Wind Chimes*, while 91.13, *Dreaming*, developed the metric aspect by using a triple compound time signature.

Pitch: Composition 91.12, *Raindrops*, employed a five-note pitch set, f,a,c,d,e, triadic with consecutive notes, a development beyond the tertian four-note pitch set of the model, *Wind Chimes*. Composition 91.13, *Dreaming*, moved further beyond the tertian four-note pitch set of the model, employing two intervals of a second in a four-note pitch set d,e,g,a which created dissonance, a development of the consonant, tertian aural environment of the model.

Instrumentation: Composition 91.11, *Take Your Time*, written for recorders, and 91.13, *Dreaming*, for piano, xylophones and recorders moved beyond the tuned metal percussion sonorities of the model, *Wind Chimes*.

7.2.2 The approach and strategy of teacher No. 91 in facilitating student composing activities with the Phase Shifting project

Teacher No. 91 worked on material from the Phase Shifting project with two classes of male students in 12 year old age groups. She chose to write up her experiences with this and the 9 year age groups on the same questionnaire for this study, and few separate comments were designated for her work with the 12 year old age group.

I attended one lesson for each age group, however, and noted that while her teaching approach to engaging students with phase shifting through composing activities was very

similar for both, the compositions of students in the 12 year old age group submitted for the study were more sophisticated than those of the younger students. This development would have taken place for two reasons over subsequent lessons. The older students had more advanced musical knowledge and performance skills and were able to understand and use the phase shifting technique more swiftly; the teacher recognised this developmental difference and was able to move the older students on to pitched phase shifting.

Teacher No. 91's objectives, teaching approach and composing activities for her work with the Phase Shifting project with students in the 12 year old age group were the same as those discussed for her work with students in the 9 year age group (see Chapter Six).

The compositions, 91.5, 91.6, 91.7, 91.8, 91.9, and 91.10, all untitled, were written to be performed on untuned percussion, clapping or chopsticks played on desk tops. Several, but not all, of these pieces were played from notation. They were all largely pastiches of the first phase shifting exercise in the project, *In Step - Out of Step*, but each composition moved away from the model in at least one distinctive way through development of metre and rhythmic cell construction. One student in each class suggested adding dynamics to their pieces after they had heard the performance of other students' compositions and this represented a development of the single dynamic marking given to the model composition of the project. The compositions were not recorded but I transcribed them in the classroom.

Wind Chimes from the Phase Shifting project was performed and recorded and became the model for phase shifting composition within defined pitch sets. The three student compositions submitted for the study, *Take Your Time* 91.11, *Raindrops* 91.12 and *Dreaming* 91.13 developed aspects of metre, pitch and instrumentation introduced in the model. The descriptive titles of the three pitched phase shifting compositions, and their

slow tempi, reflected the mood of the project model. Composition 91.13 *Dreaming*, was written in the teacher's hand and I transcribed two for the study.

Performances of two of the works were submitted for the study. Composition 91.11, *Take Your Time*, received an accurate performance with an abrupt phase shifting ending. Adopting the same tempo, composition 91.12, *Raindrops*, began accurately then went out of synchronization, an attractive result similar to that expected by U.S. composer Frederic Rzewski during performances of his work, *Les Moutons de Panurge* (1969) through the following instruction –

Stay together as long as you can, but if you get lost, stay lost. Do not try to find your way back to the fold. Continue to follow the rules strictly (Rzewski 1969).

Teacher No. 91's role was discussed in Chapter Six. Within her 'instructor' teaching approach she enabled students to lead, and therefore develop, their compositional understanding in two areas *after* they had played through and therefore heard their pastiche phase shifting compositions. The older students' work with pitched phase shifting was reflected in their choice of meditative composition titles, very different from the energetic imagery and humour of titles chosen by boys in the younger age group. She encouraged students to add dynamics to their pieces and in 91.13, to write for a mixed consort rather than instruments of the same family. These additions, while not compositionally sophisticated, personalised the pieces for the students, thereby empowering them through ownership of their composing process. She also drew on her own piano playing experience and encouraged use of the piano as a linear instrument, rather than as an accompanying, chordal sound source, for the 12 year old age group. This developed the timbral role of piano beyond its usual one.

7.3 Teacher No. 98 – a male music teacher in a selective secondary boys’ school in Sydney, Australia (see profile and associated compositions in Appendix 7 and CD for Appendix 7)

Education, experience, preference; teaching environment; teaching perspective

Education: music education degree and a performing diploma;

Experience: experienced teacher. Personal engagement as a listener was reflected in his musicological focus when working with Western avant-garde music, and music of the Philippines, Japan and India. His ranking of singing first, with musicology and music in the community second and finally aural, improvisation and composition, illustrated a lack of experience with composing activities personally and with students in the classroom;

Preference: listening preferences for musical styles ranged from Western classical music up to the present day to popular musical genre – pop/rock, jazz, musicals. He engaged personally in passive music activities – listening to music and attending concerts, rather than physically active musical activities such as composing, improvising or performing;

Teaching environment: selective boys’ secondary school situated in Sydney, Australia. School’s interest in music was strong, with a number of ensembles and public performances offered for the students. Music venue and equipment considered most satisfactory with an emphasis placed on electronic technology including CD players, record player, tape machine, plus some acoustic instruments. Students were drawn from “mostly middle to upper middle class” parents. Students were a general Year 8 music class of 25 at second year level and therefore many students were older than 12 years of age. Students were of “mixed musical ability [with] academic [ability] above average”. The teacher noted that “most have had primary school [music] basis and a lot have learnt recorder and an instrument some time”. The teacher had worked on project material with two Year 8 non-elective classes but as the second class “was much slower in working through...I deleted them” for the material submitted for the study.

Teaching perspective: His high ranking of musicological activities, after singing, reflected his background experience. The high musical ability of many of the students allowed him to refer to specific pitch and rhythmic systems – Kodaly, sol-fa, French time names – only “when [the] class has particular trouble”. Evaluation was generally summative through assignments, tests, performance, and concert attendance.

7.3.1 Analyses of five associated student compositions in response to the Harmonic Prisms project (see Appendix 7)

Structure: Composition 98.1, *Jack the Fairy Godmother*, was through-composed with repetition written out in the score. The piece had two distinct sections with rhythmic repetition but seldom pitch repetition, and no chordal repetition in the second half. The first section has a strong rhythmic and chordal cadence marking its end. The structure of the work represented an expansion of the structures presented in the project models.

Pitch: Composition 98.1 comprised four layers involving repetition but not ostinati. The three upper layers combined into a series of semibreve triads played on three xylophones and the lower fourth layer was a piano part with a moving three note pattern in the first half of the piece. While this is similar to the harmonic texture of *The Prism*, the second half of the piece introduced increasingly dissonant chords, the dissonance coming from the bitonality of the piano chords in relation to the xylophone triads. The final chord has around ten different pitches. This expanded the consonant three and four part chords of the model into dissonance and resulted in an increase in tension as the piece draws to a close.

Composition 98.4, *The African Pygmy Mushroom Growers*, was built on a series of seven chords, repeated once, with a ‘g’ and ‘a’ crotchet pulse creating consonance and at times dissonance with the chords. Most of the chords in composition 98.5, *The Snods*, were built on fourths, a development from the tertian harmonies of the project compositions.

Again, these represented a development of the consonant harmonies of the project model compositions.

Time: The syncopated rhythm in the lower line of composition 98.3, *The Woes of School*, represented a development from the unsyncopated rhythms of the project pieces.

Text: Two of the stories extended the fantasy theme of *The Prism*. The story of 98.1 introduced blood, guts and the effects of marihuana. The story of 98.2, *Piggy*, introduced animals including a pig, a magic wishing muck rake, the macabre humour of such events as a monkey being skinned for magical thermal underwear, and the accidental killing of Buddha. Compositions 98.3 and 98.5 told of aspects of school life, and 98.4, *The African Pygmy Mushroom Growers*, combined a wrathful god with pumpkin and mushroom-growing pygmies. All stories developed beyond the text of *The Prism* through the introduction of humour, the macabre, school life and the unexpected.

7.3.2 The approach and strategies adopted by Teacher No. 98 to facilitate composing activities with the Harmonic Prism project material

Teacher No. 98 worked with students in two of the study's age groups, 12 years and 15 years on project material from *The Pulse Music Album*. He was aware of the generally high level of musical ability of many of the students in the selective high school, and predicted that "the projects will fit quite comfortably into the music programming owing, not only to the way I teach, but also because of the nature of the beast who attends the school".

For the second year secondary school non-elective students the material was "certainly not familiar" and the teacher's objective for using the material was "to compose in the style, a new experience for them". By introducing minimalism through composing activities, Teacher No. 98 had chosen to introduce his students and himself to a new contemporary music through activities which were also new to them, a double challenge.

The teacher engaged students in the 12 year old age group with Phase Shifting and material from the Phase Shifting Melodies projects over eight lessons through performing activities, and Harmonic Prisms over what seemed “like an eternity because of interruptions and the size of the classes” through composing and performing activities. He addressed the study questionnaire under the heading of the Phase Shifting project although he used the Melodic Phase Shifting project also. For him there was obviously a link between the two projects and they could be discussed under one general heading. While he noted that the material was unfamiliar to the students, his objectives focused around revision at the beginning of a school year, “to ascertain whether anything had sunk in from Year 7”. This immediately offered the common ground of the previous year’s knowledge as a basis for introducing a contemporary art music new both to himself and the students.

The students recorded performances of compositions from the Phase Shifting and Phase Shifting Melodies projects. From the Phase Shifting project an incomplete performance of *In Step Out of Step*, and a complete and accurately played performance of *Wind Chimes* were recorded. From the Phase Shifting Melodies project, a performance of *Lazy Lazy Boat* was recorded in which the two lines were played at different pulses, yet both finished together at the end of the piece. A fast, ‘ragged’ performance of *Argument* was recorded. The teacher noted that “it was interesting [the students] had difficulty reading the rhythms accurately and in fact keeping a constant tempo”, and discovered that around 25% of the students used a combination of notation reading, by ear and by memory to perform the pieces, that 30% worked by ear and notation, and the rest “actually read ... the music, for better or worse”.

The students played *The Prism* from the project, a strong performance with metallophones, electronic keyboard and spoken voice. Five student composition scores but no recordings were handed in for this study. Each was modeled on *The Prism*, and displayed a palette of chords, a harmonic template, on which the piece was based, a

procedure taken from the project. However, within the largely pastiche format of the compositions, several revealed development and expansion of structural, rhythmic, harmonic and textual aspects of the model.

Within a 'model' task design, the students, with the teacher's encouragement, introduced highly individual compositional and text inclusions into their minimalist works. The composing activities, undertaken over, on average, "probably two periods", were considered valuable by the teacher because of the students' discovery of the "correlation between notation and how to use it...putting theory into practice". Observing the students composing in groups, the teacher noticed some students composing initially from sound to symbol, others symbol to sound, "thence gradual[ly the] combining of both as if 'dawn broke'" as the relationship between the symbols and the resulting sound became more clearly understood. Some of the students' compositions were recorded, but not all because of the large number of students and the time required to record compositions of over one minute in length.

Teacher No. 98 enjoyed working with the project material very much, noting "this was fun!" and felt he would "certainly use them in the future – invaluable". An overall weakness of the project material was that "what is expected at times is a little unrealistic", even for students in a selective high school. "Strengths obviously are the opportunity to compose and read and perform music with a group [and] often the amount of control demanded e.g. tempo". The teacher "left the compositions until the last unit [*Harmonic Prisms*, as he] felt that [the students] weren't capable or entrenched in the style" sufficiently to engage in composing activities. However, he stated that in retrospect, that "this was probably wrong of me". Student responses to the project were mixed – "different", "you're joking" - however the teacher saw that they enjoyed doing the tasks.

The teacher's high ranking of the voice and singing was reflected in his choice of the Harmonic Prisms project which included a spoken text. His interest in the minimalist projects led him to engage his students with a contemporary music and composing activities, new challenges both for himself and his students and in the process adopted a student-centred model of teaching. He felt that putting music theory knowledge into practice through composition gave composing activities an incentive to the students' music learning and he let the students interact with, and learn from, each other, allowing them to lead the pace and direction. The students were empowered through their work as composers, engaging with a contemporary music through composing activities, developing and expanding compositional aspects of the project models and adopting stories drawn from their own society. This empowerment was reflected in their positive response to the project material, a response more positive than their work with the previous projects through performing activities only. At the same time, the teacher was also empowered by the success of a project very new to his experience.

7.4 Teacher No. 100 – female music teacher, country New South Wales, Australia, public secondary school (see profile and associated compositions in Appendix 7 and CD for Appendix 7)

Education, experience, preference; teaching environment; teaching perspective

Education: music education qualifications and performing diploma;

Experience: experienced teacher who included “lots of ‘aural’ work” through the contemporary art music of Reich, Glass, and Crumb, “cover[ing] a lot of areas but not in great detail”. Music of Australian contemporary composers, Sculthorpe, Meale, Sitsky and Butterley, part of the state music syllabus, was taught in more detail. This was likely to have been especially relevant to students in the 15 and 18 year old age groups. No mention was made of engaging students with contemporary art music through composing activities;

Preference: wide-ranging list of personal music activities including writing and arranging music, evidence of the creative individual. Music preferences embraced several different classical and popular styles plus music outside the Western art and popular music traditions;

Teaching environment: school population of secondary school situated in country New South Wales was drawn from parents who were farm workers and professionals commuting to work in town from the country and many of the students were from “split families”. School’s interest in music gauged to be “medium to strong and gaining [with] much more activity in the last two years”. Support came from administration, but less so from “certain departments who may find it an interruption to their lessons (e.g. science)”. Resources for music considered reasonable, with a small room converted into an appropriately and conveniently equipped music room and a range of music instruments and recording equipment.

The attitude amongst the students was often negative - “not much peer support. Students don’t compliment each other much, particularly the non-musicians. Choir members dread the thought of performing for their peers which is a shame”. The teacher saw this attitude as a challenge and expressed an interest in widening the students’ music style preferences - “[they] are only just being exposed to lots of other styles of music [and are] often very narrow in their appreciation of music, but hopefully we are going to remedy that”.

Teaching perspective: focused largely on fostering the love of music in students. Emotionally descriptive words combined with practical music education objectives - “to allow any student the opportunity to experience any kind of music in a learning situation and help them to know the pleasures of musical appreciation from basic to more complex understanding”. “Enjoyment is the essence of my classroom work. I try to make the

atmosphere pleasant in the hope that the students will get as much out of music as possible”, join in school music activities and take music throughout school years. She aimed “to widen the narrow listening skills of students ...through practical experiences both in individual and group situations”, and commented that “amazingly, some students do not ever listen to music and have no opinion on music of any kind”. Her reference to levels of understanding, and creating an encouraging music-making environment indicated a keen understanding of different student developmental levels and needs.

Music performing activities, which require less time and expertise on the part of the students, highest thereby offering students the opportunity for empowerment through achievement of a satisfying musical result, were ranked highest. These activities – singing, movement and instrument playing - were followed by composition, improvisation, and arranging which require more time and expertise in order to achieve the same type of outcome. This was a different ranking of musical activities from the listening and aural training emphasis she felt was placed in the state and school curriculae. Practical activities through workshops, individual and group activities with composition and performance, were aimed at empowering the students by building their confidence. “Each aspect of the syllabus can lead from practical work” and a chart linked composition, movement, improvisation, music history and music in society, singing/playing and aural/listening to practical work, including “notation [which] is found to be a necessary evil”. This tactic of leading students to an understanding of the need for notation was demonstrated in her work with students in the 12 year age group moving from graphic work “then into basic rhythm – rote pitch learning or using letters and rhythm – listening to what music is ‘about’”, with singing and accompaniments. Different pitch and time terminologies and systems were combined depending on the age group of the students being taught. Evaluation was continuous through “practical and written exercises and marking [and] lots of group work”.

7.4.1 Analyses of three associated student compositions in response to the Phase Shifting project (Appendix 7 and CD for Appendix 7 Tracks 10, 11 and 12)

Structure and timbre: Compositions 100.1 and 100.3 had a phase shifting construction and were modeled closely on *In Step – Out of Step* in the album project. However, they varied structurally from the model as each cell was repeated only twice. In Composition 100.1 a low-pitched drum was added as a pulse on the first and third crotchet beats of the bar, a similar but slower pulse to that given in another piece, *I think it's going to rain*, in the project. These represent a structural development of the material presented in the pieces in the album project.

Composition 100.2 recycled the same rhythmic cell and phase shifting process of 100.1 and retained the untuned percussion instrumentation. However, a 'call and response' structure' is incorporated into the phase shifting repetition during which two student instrumental groups playing different instruments, alternate playing each cell twice. With one group playing predominantly wooden percussion, the other drums, a timbral contrast results. With this combination of two structural devices (phase shifting and call and response or 'echoing') and the resulting timbral contrast, composition 100.2, represents an imaginative and successful expansion of the structural and timbral ideas presented in the project material.

Construction/time: Composition 100.1 and 100.2 have the same symmetrical rhythmic cell, an accidental development in time values and rhythmic shape in relation to those of the project compositions which was recognised by the students.

7.4.2 The approach and strategies of teacher No.100 in facilitating student composing activities with the Phase Shifting project

Teacher No. 100 engaged students in three of the study age groups with project material from *The Pulse Music Album*. For the purposes of this study the levels were grouped into the three study age groups: Year 7 (Australian system) in the 12 year age group; Year 8

in the 15 year age group; and Years 9-12 who workshopped project ideas together, and Year 11 have been placed in the 18 year age group. She commented that she liked all of the ideas in *The Pulse Music Album* projects, and would enjoy “‘checking them out’ to see how my classes like them”.

Teacher No. 100 chose the Phase Shifting project to introduce minimalism to two Year 7 classes and although drawing on the same phase shifting strategies for both, noted that the second class “found this much more difficult” than the first. She felt there was no common ground between the project material and the students’ previous knowledge as they had been working with graphic scores. She noted that as the students “had not begun traditional rhythm notation” her objectives were for the Phase Shifting project to be a bridge between work with graphic scores and work with traditional notation, “reinforc[ing] the ideas of rhythm before going onto notation”.

The students performed *In Step - Out of Step* (the teacher mistakenly refers to the piece as *Chitter Chat*) and in the recording the first take was accurately played at a steady pace, while the second take was faster but less accurate. To achieve her objectives Teacher No. 100 employed graphic notation in the form of a grid as an intermediate stage leading to traditional notation thereby enabling the students to understand, compose and play their phase shifting works. This created a notation ‘common ground’ between their previous composing activities and phase shifting.

Employing rhythm games and echo games, a reflection of her high ranking of performing activities, students worked from sound to symbol as individuals and as a class, using ‘empirical composition’ to confirm a clapped rhythm pattern, “put it into a grid for themselves then on the board to phase shift”. *In Step – Out of Step* was the model for composition. Students “took only a short while to learn and phase shift”, engaging in instant composition and composition 100.1, a pastiche of *In Step – Out of Step* from the project, was played with “shaking instruments” on layer 1, and “hitting instruments” on

layer 2 with a drum ostinato as a pulse. The piece was recorded. The symmetry of this rhythmic cell was discovered and explored, and “they realised when performing this backward that it was the same as forwards, so tried a new rhythm to see if this was always the case (not so)”. By adopting a student-centred teaching approach the teacher enabled the students to discover compositional techniques by accident during sound exploration which were accepted and adopted. Discussion focused on organisational concepts of ostinato and call and response, “rather than form”.

Recycling the symmetrical rhythmic cell of composition 100.1, the teacher and students created composition 100.2 which combined the organisational concept of ‘call and response’ with phase shifting. Two groups of student performers playing different untuned percussion instruments ‘echoed’ two repetitions each within a four repetition process resulting in a longer piece with timbral interest plus the addition of an ostinato pulse for low drum. They played from graphic notation, some working from memory. By recycling and building on material from one piece to another by addition of another musical parameter, the teacher facilitated the learning and reinforcement of basic concepts and theoretical skills. She also showed students how to think about music in the composing environment, in this case through repetition and transformation of material from one piece to another at the same time adapting the project material to the students’ level of composition.

A second class of Year 7 students used a similar strategy sequence to that adopted with the first class. The students invented a rhythmic grid but placed the dots in the grid vertically instead of horizontally. After discussion, these were placed horizontally and after a period of class experimentation and exercises, a rhythmic cell was composed. Composition 100.3 was a pastiche of *In Step – Out of Step* written with the same crotchet and quaver time values of composition 100.1’s rhythmic cell but with the addition of a rest destroying the symmetry of the original cell. The playing and recording of this

phase-shifted cell was not very successful despite two takes, and the teacher found the class restless.

Teacher No. 100 enabled the students to compose by creating a context for this activity to occur. Despite stating that there was no common ground with the students' earlier graphic notation work, she made a strong bridge by adopting grid notation for the class composition of a phase shifted cell. She used a strategy sequence to lead students into composing activities through the project and was very aware of the different developmental needs of different students within the same age group, slowing down the pace at which phase shifting concepts were introduced to the second class. The teacher noted that "the students always enjoy doing 'their own thing' – they like to play any instruments and particularly like to record and listen to themselves", hearing where they were out of time. She had identified this student interest in practical work as the focus of her own teaching approach and had provided plenty of opportunities and timbral variety. Compositional stimulation was provided through expansion of the structural concepts and timbral possibilities presented in the album.

Despite her student-centred approach and strategies, the teacher found that the students "seemed to enjoy[ed the material] for a while, but needed lots of 'rearranging' i.e. swapping instruments etc. to keep them going". She had "played the Steve Reich piece and part of Glass – they tried to hear what was happening but were restless". However, she had noted the negative attitude of students in the school to music and through her approach and strategies with phase shifting, succeeded in challenging the students by exposing them to a new style of music through music activities which interested them, thus moving towards extending their narrow appreciation of music. She noted that her work with phase shifting was undertaken over four lessons but it is unclear whether this consisted of two or four lessons with each class of students in the 12 year old age group. The teacher enjoyed "some parts" of the project and wrote that "the idea is good and easy to get across [but] sometimes difficult to play". Despite having to "make space" for the

project material, she intended using the project material again in the future and noted that because Phase Shifting was “not as straightforward to read and understand as one might think”, a teacher not musically trained might have trouble “understanding parts of it”.

7.5 Teacher No. 104 – female music teacher in a Sydney public secondary school, Australia (see profile in Appendix 7 and CD for Appendix 7)

Education, experience, preference; teaching environment; teaching perspective

Education: teaching diploma and art degree with no indication given as to whether the degree embraced music subjects;

Experience: experienced teacher who had previously engaged students with “various composers and styles” including modern Australian composers such as Sculthorpe within twentieth century art music through musical concepts, an ‘integrated approach’ – “depends whether we’re discussing whole tone scale, instrumental timbres or vocal techniques such as sprechstimme [leading from] listening to discussion to analysing techniques”. She had previously introduced students beyond first year high school to African music leading into jazz and rock. No mention was made of engaging students with composition techniques of contemporary music through composing activities or music of other cultures.

Preference: personal music activities, listed with provisos, included playing an instrument “for fun” and improvising “for fun, at home”, singing in a choir “but not [for the] last couple of years” and writing and arranging music “occasionally”. Music preferences focused on Western classical music, some written in the twentieth century “depends on style, composer etc”, plus Dixie jazz and folk.

Teaching environment: population of the large public school described as “middle-class”. Because a high proportion of the parents were from working class background but now

“upwardly mobile” and “very money-conscious”, with some experiencing financial difficulties, “many do not allow their children to take [music] in senior years as they feel that only maths, physics and chemistry will get them marks and music won’t”. “Many students want to take music as an elective subject” but were often not allowed by their parents to take the subject beyond year 10.

School principal’s support for music was strong “but in return [music students were] expected to “perform” each year i.e. a musical, a showcase of talent, plus several HSC and general concerts”. These comments indicated a negation of the potential for student empowerment through ‘special occasion music’ because music was viewed as good for the school image rather than intrinsically valued for the students. A rather “laissez-faire attitude” about music was noted on the part of many students with “a relatively small percentage of students participat[ing]. Often the same students are members of 2,3, or 4 music groups, whereas others equally talented participate in nothing”.

The school was well equipped with venues, recording equipment and instruments. Several ensembles were offered including a gamelan orchestra, and one or two concerts were undertaken each term. The teacher, therefore, taught in a school with several constraints working against the subject of music which created a difficult teaching environment.

Teaching perspective: performing activities were ranked above composition, improvisation and arranging, the same ranking as the school curriculum. The teacher evaluated summatively through tests and exams and employed a variety of pitch and rhythm terminologies. Because of the varied, or non-existent music programmes in primary schools in the area, students in the 12 year old age group came to the high school with mixed musical backgrounds, some having taken part in “a very good recorder programme” at a feeder school while others had “not the slightest knowledge”. Many were resistant to singing suggesting “that not much singing was done in some of the

primary schools” and she was interested “to know why they are so resistant to singing!”. She enthusiastically described the gradual improvement in vocal production on the part of many students after entering secondary school.

7.5.1 Analyses of one composition written by the teacher in response to the Phase Shifting Melodies project and two student compositions written in response to the Add and Subtract project (see Appendix 7 and CD for Appendix 7 Tracks 13 and 14)

Construction: Composition 104.2 displayed the additive and subtractive process of *Drum Talk* but with a shorter, almost symmetrical shape. Composition 104.3 was a simpler, shorter piece that did not adhere to the logic of the additive and subtractive process.

Both pieces employed the same two rhythmic values (crotchets and quavers) as the project model but within different rhythmic cells.

Pitch: Composition 104.1, written by the teacher, was a pastiche of *Lazy, Lazy Boat* from the Phase Shifting Melodies project employing the same phrase lengths and metre. Use of a C major scale was a development of the bi-tonal pitch set introduced in the model.

The performance of composition 104.2 repeated each cell four times and was clapped by the class as one group (therefore working with one pitch only) at a fast tempo.

Timbre: The inaccurate performance of composition 104.3 employed two instrumental groups, untuned metal percussion and maracas modeled on the hocket version of *Drum Talk*.

These pastiche compositions represented short adaptations of the project model and therefore developments of the additive/subtractive concept. At the same time they were simplifications undertaken to accommodate student level and shortage of teaching time.

7.5.2 The approach and strategies adopted by teacher No. 104 to facilitate composing activities with the Phase Shifting Melodies and Add and Subtract project

Teacher No. 104 introduced two different classes of students to the first three projects from *The Pulse Music Album*, Phase Shifting, Phase Shifting Melodies and Add and Subtract, “allocating a block of time for the project material ... although we will be doing our routine topics as well”. She engaged the students with performance activities and despite her lack of experience with composing, engaged the students, and herself, in some composing activities.

The teacher noted common ground between the Phase Shifting project and previous work with “ostinato pieces in the Orff style” and structural aspects of “motif” and “ostinato”. Aiming for a “perfect performance”, the students performed and recorded *I think it’s going to rain* and *Wind Chimes* from the project and encountered performance problems with multi-repetition, synchronization, keeping a steady tempo and rhythmic inaccuracies. “Clapping improvisations over *In Step – Out of Step* pattern [was] very successful with some students” and this imaginative intermediary step between performing and composing activities saw material being recycled, transformed and developed. It also presented an empowering opportunity for the students to succeed with the project material. The teacher wrote of students working through empirical composition and notation but no compositions were submitted for the study.

Common ground between Phase Shifting Melodies and Phase Shifting was recognized by teacher and students and as with the first project, objectives were focused around theoretical and ensemble listening skills. *Lazy, Lazy Boat* was performed and served as a model for the teacher’s phase shifting melodic composition, 104.1, written before she commenced work with the students. She “jotted” the piece quickly “just to see for myself if it would be easy enough for the students to do” thereby exploring the material first in order to experience possibilities and difficulties. In doing so she engaged in instant

composition, an empowering experience for her. Instrumental colour and textual issues were discussed with the students but no pieces were recorded.

Work with the Add and Subtract project “was rather rushed” as Teacher No. 104 was about to go overseas and, over around three lessons, gave the students insufficient time with the material. She noted no common ground and objectives were focused on performance skills.

The students played *Drum Talk* and *Picket Fences* and only *Drum Talk* was recorded. The teacher made no mention of composing activities yet the recording revealed two compositions modeled on, but different from, *Drum Talk*. The teacher did not refer to this adaptation as a composition separate from *Drum Talk* and stated that they performed “basically from notation”. She appeared not to have been aware of the ease with which she had engaged herself and her students in instant composing/improvising activities, thereby adapting the process and changing the structural length of the project model. In the recording submitted, the first version of *Drum Talk*, 104.2, is clapped by one group, while the two takes of *Drum Talk*, 104.3, are played on two groups of contrasting untuned percussion instruments.

Teacher No. 104 was keenly aware of drawing on common ground between the minimalist processes in two of the projects and students’ prior musical knowledge. She wrote of minimalism as being “just another new idea from which elements may be taken and used and blended with pre-existing ideas to form the next stage in the musical chain of development”. Her understanding of the importance of multi-repetition in the minimalist aesthetic of pulse music, however, seemed uncertain, and suggested that other musical elements such as timbre and dynamics would create interest “and avoid monotony. And perhaps the number of repetitions of each section could be modified by mutual agreement according to the mood etc. that is desired”. At the same time she recognised the timelessness or vertical time resulting from multi-repetition – “the

apparent ‘sameness’ that results, leav[ing] a ‘going nowhere’ feeling”- and recommended balancing minimalism with tension-resolution type music in classroom teaching.

Student responses to recorded minimal music excerpts were generally negative. “Many felt very strongly that if it wasn’t rock, it wasn’t music!...On the other hand those that called them “Yuk” (!) tended to be the noisy loud-mouths who are always the most outspoken”. Teacher No. 104 chose to work through material from three projects despite this negative student response, a generally negative outlook to music on the part of many of the school students and their parents, coupled with the principal’s view of music as a school image-maker, a role not conducive to exploration of contemporary art music and lack of composition experience. She noted “one of the strengths of pulse music is that even lower ability students and students without formal training on an instrument can participate on almost the same level as the more advanced students. At the same time the more advanced students can also be extended”. By engaging her students through performance, improvisation and composition the teacher offered them all, including “the boys who were terrible” at improvising, different activities within which they could explore minimalism. She found that both Phase Shifting and Phase Shifting Melodies “...could be made as simple or as sophisticated as necessary”, thereby recognising the adaptability of the material. This was demonstrated by recycling material from a model, and development of the add and subtract model in compositions 104.2 and 104.3. Her strategy of adopting a varied range of music activities and her willingness to adapt the project material all encouraged student empowerment and gave them an opportunity, despite a negative school environment, to engage with a contemporary music, minimalism. She enjoyed working with the projects, felt “on the whole” that the students enjoyed it, and noted that they all “enjoyed the Phase Shifting Melodies best”.

Teacher No. 104 introduced her students to the project material by selecting and adapting learning tasks according to students’ developmental levels and drew on their reasoning as each step in her approach was introduced. However, her aims focused on ensemble

performance skills, meant too much time, by her own admission, was spent trying to achieve a ‘perfect’ performance of the project pieces, time which could have been spent on student compositions and performing them.

With Phase Shifting Melodies, however, she adopted the role of teacher as composer but lacked time to move beyond performance of her composition to student composing activities. Her lack of personal and teaching experience with composing was reflected in the pastiche nature of her own composition and those of her students. This, however, did not stop her from moving beyond performance through improvisation, with which she expressed experience and interest, into composing activities with the Phase Shifting and Add and Subtract projects, at times doing so without acknowledging this move.

The teacher noted the value of minimalism’s differences in composing activities and observed that “the more creative students can write/perform pieces with quite complex textural qualities long before they have mastered traditional harmony or counterpoint”. The teacher’s positive plans for future use of material from the album projects included placing “more emphasis on students’ own compositions...” and this indicated personal empowerment from her own experiences through composing activities with the material.

7.6 Teacher No. 116 – female composer-in-schools at two New Zealand schools, intermediate, secondary school (see profile and associated compositions in Appendix 7 and CD for Appendix 7)

Education, experience, preference; teaching environment; teaching perspective

Education: tertiary music qualifications;

Experience: professional composer who had previously included the work of a number of twentieth century composers as models for student composing activities during her two years of teaching experience. “I use Stravinsky for discussion of rhythm and also “5 finger” pieces which I sometimes use as an exercise for secondary students. I also get

them to write a 12 tone piece, for which we play Schoenberg, Berg, Webern, and various other composers from overseas (John Cage for aleatoric, others for free-atonal), and New Zealand come up”. Her emphasis, however, was on the students’ own compositional ideas – “but I do generally spend music time on practical things the students are doing themselves”. Her interest in music of other cultures was reflected in the introduction to students of gamelan, African drumming, theatre music from Asian countries, and other musics, “to listen to and compose in that style”.

Preference: personal musical activities were wide-ranging, and music preferences included Western classical music up to the present day including “some minimal music”, three popular musics - “some pop/rock”, jazz, “some musicals”- plus music of other cultures.

Teaching environment: composer-in-schools teaching in two New Zealand schools, one at intermediate level, the other at secondary level. Parents of students at the public intermediate school were generally in the high socio-economic group. The school had a strong interest in music evidenced by the fact that Teacher No. 116 taught there one day a week, sufficient resources and there were a number of school music ensembles. She designed the school curriculum and this gave her “freedom to work over and above the syllabus” such as introducing material from *The Pulse Music Album*. She ranked improvisation, composition and arranging, then instrument playing and aural training highest, “although these three are altogether really”. This ranking reflected a music syllabus structure found by Hogg (1994) to facilitate enrichment of students’ lives.

Teaching perspective: encouraged “creative music-making at all ages, whether or not the pupil will take up music as a career, or be a performer or a composer”. Her teaching method was entirely focused on composing and improvising activities through different task designs –

- “1. Soundscapes, graphic scores, collage, found objects;
2. vocal pieces, spoken, chanted, sung;

3. group/individually composed pieces arranged for class performance. Generated by a particular scale, rhythm, mode, harmonic sequence;
4. improvisation, often using ostinati;
5. arrangements”.

Composing helped students “get inside the techniques they need for performance, aid[ed] confidence in performance, and help[ed] development of memory”. This approach combined the learning of theoretical skills and techniques for a better understanding in performance, which in turn empowered students by building confidence while developing students’ aural memory. She employed the pitch and rhythmic terminology used in theory and notation learning, letter names, scales, modes, triads, 12 bar blues, counting with English rhythm value names and formal evaluation was not undertaken with this age group.

7.6.1 Analysis of one composition by students associated with teacher No. 116 written in response to the Canon project (see Appendix 7 and CD for Appendix 7 Track 3)

Structure: A drone introduction and a repeated end section were combined with, and expanded, the structural concept of canon presented in the project.

Pitch: A canon *Facets of Light*, 116.1, moved harmonically from a ‘d minor 7th’ to an ‘a minor 7th’ chord, returning to the tonality of ‘d’ at the end. While these harmonies were tertian, like those of *Bees Bizz* from the Canon project, the dorian modality of the harmonies captured a mood different from the pieces in the album. This represented a modal development in relation to the harmonies of the project pieces.

Time: Unlike the two canons in the album project, *Facets of Light* had no separate pulse line driving the rhythm. Instead a drone held the two canonic melodic lines together. This represented an expansion in the use of texture through aspects of rhythm and time.

Instrumentation: The inclusion of an electronic keyboard for the drone and doubling one of the melody lines, punctuated by autoharp sweeps, introduced a timbral quality very different from, and expanding those of, the project pieces.

Dynamics: The one moderate dynamic level set by the electronic drone expanded the terraced dynamics introduced in the models.

7.6.2 The approach and strategies of composer-in-schools teacher No. 116 in facilitating student composing activities with the Canon project

Teacher No. 116 was an experienced composer. Because of this interest in, and facility with, the composing process, she was able to work with the project material through improvisation and empirical composition in the short period of time available due to the interruptions of musicals and other school musical events, planning her lessons “one week to the next”. The small mixed group of intermediate level students, who had chosen to work with her, had one concentrated 40 minute lesson focused largely on the project Canon. They had very different musical backgrounds, some learning instruments, others with no prior formal training. The teacher said that the concept and process of canon had arisen quite often during past lessons “either by design or accident”, and this project therefore provided common ground on which she and the students could build. Objectives focused on a prescriptive composition task design, the process of canon, to achieve “a definite mood” built around a programmatic object, a crystal – “to use a melody in canon to illustrate facets of light in a revolving crystal held up to the sun”. This programmatic image was recycled from the Harmonic Prisms project, *The Prism*, and transformed through the canonic process into a very different compositional outcome.

The students enjoyed playing through *Picket Fences* from the Add and Subtract project, then together with the teacher, they shaped a work in which everybody took a compositional and performative role. After ten minutes of discussion of techniques,

“use of canon, and ‘modulating’ melody”, the teacher guided the students to adapt, combine, manipulate and transform the material from the project without using the pieces in the album as models through performance. The teacher recognised the value of playing recordings of the work of professional minimalist composers and commended the recording and playing back of performances of student compositions.

Through empirical composition as a class, working by ear and from memory, without notation, the students composed from sound to symbol (“always at this level”), except for rhythms which were often conceived from symbol to sound. She felt “that it’s important at [this] age to have free expression, rather than a lot of counting and concentration, unless the performance is played back for them to listen to”. Compositional techniques not introduced in the Canon project, including drone, motivic repetition and an instrument in a punctuating role were used to heighten the aural mood and effect of the piece. She was also able to engage the students in reshaping the structure of the project pieces into a new structure through addition of an introduction and a repeated ending. Using a concrete programmatic object, a prism with sunlight, as a stimulus for canonic composition was an unusual and imaginative combination of two types of task design.

The recording revealed a short, richly textured and coloured composition, *Facets of Light* (116.1) for metallophones, glockenspiels, autoharp, electronic keyboard and cello. An introductory unmetred and unpulsed drone section moves into a pulsed, simple quadruple canon played first by metallophones, doubled by an electronic keyboard, then at the unison, one bar later, by glockenspiel. The canon itself was seven bars long, but was framed by the introduction and repeated end section making the piece twice as long. Autoharp sweeps punctuated and coloured the piece and the dynamic level is constant.

Figure 7.1 **Composition 116.1 *Facets of Light***



The 12 year old students’ response to the project material was positive, “especially as they actually had the crystal there and could watch the lights before writing the piece”. The teacher responded positively to the project material.

Because of the projects’ potential for “rhythmic work, group performance, pitch, [with] harmony ...more implied than worked with”, plus development of “sensitive listening, both to your part and others, particularly good for children who tend to play too loudly”, the teacher expressed an interest in using the material again without time constraints in her teaching. She felt that each project could easily be extended to a term’s work and that for students of this age group Canon, Phase Shifting and Music Weaving were the most suitable projects. However, she also recognised that the projects “don’t allow for creativity of development of musical thought, of ‘ideas’” as they involve a “system” of composition which can be too prescriptive and would not use the projects all the time.

Teacher No. 116’s experience as a professional composer enabled her to bring to her teaching a depth of knowledge beyond that of compositional techniques. She had

engaged students with the composition techniques of other twentieth century composers, both local and overseas; however, she placed a greater emphasis on the work of the students themselves. This potentially empowering approach viewed the students' creative activities as the most important part of the music lesson with input from established composers as stimuli and for didactic reasons. She took a student-centred approach with herself as enabler creating a context within which students could compose and thereby empower themselves by regarding themselves as composers. She was able to adapt the task to the level of the students' composing skills yet achieve a satisfying result. The piece, *Facets of Light*, was included in a "composition concert" and this provided further opportunity for empowerment through peer approval of compositions.

She also raised issues infrequently encountered in music education discussion. The first acknowledged benefits to recording and playing back student performances, preparing children "for not-so-good quality" thereby recognising that polished musical products are difficult to guarantee and discussion of "the difference between 'live' and 'recorded' events". The second acknowledged the great deal of concentration required to play minimal music and how "the total effect can't be appreciated until it's played back". She commented that "perhaps this is why the music doesn't have the same instant *appeal* as some other techniques for group performance, i.e. ostinato improvisation, jazz, chord sequences. However, just as rewarding in the long run".

7.7 The experiences of Teachers No. 29, 46, 112 and 13 engaging students in the 12 year old group with minimalist composing activities

Four teachers engaged their students with material from the minimalist projects and developed aspects of the material largely through improvisation rather than composition. The interests and experiences of Teachers No. 112, 46 and 29 (see Appendix 5.xxvi Teachers who submitted material to the study) led them to explore Phase Shifting and other projects through improvising activities. These four teachers touched on the creative possibilities of the project material they chose but for different reasons were

unable to develop their ideas. One left insufficient time to follow her own, and the students', natural inclination to expand and develop the material. Two were unable to create a bridge between their experiences with improvisational activities based on a descriptive topic to composing activities with minimalist material, especially phase shifting, and the fourth teacher lacked teaching experience to move far beyond keeping the class interested in music.

7.8 Summary of 12 year age group

The compositions submitted by Teachers No. 33, 98, 100 (secondary level) and 116 (intermediate level) expanded and developed material presented in the projects and commonalities and differences were noted (Appendix Table 7.1 Commonalities and differences between the four expanders). Those submitted by Teachers No. 91 (primary level) and 104 (secondary level) developed but did not expand material presented in the projects and commonalities and differences were noted (Appendix Table 7.2 Commonalities and differences between the two developers). Between the two groups of teachers commonalities were noted (Table 7.1 Commonalities between the four expanders and the two developers) and differences were noted (Table 7.2 Differences between the four expanders and the two developers).

Table 7.1 Commonalities between the four expanders and the two developers

Education, preferences and experience:
• all were musically qualified; • all but one expander were experienced teachers; • all but one expander were specialist music teachers; • all but one developer listed eclectic music preferences; • all noted a preference for twentieth century art music; • three expanders and both developers listed composing and arranging as personal activities; • all had previously introduced students to twentieth century music; • all had previously introduced students to music of non-Western cultures, three of the developers engaging with countries with a keyed percussion (gamelan) ensemble.
Teaching environment:
• all expanders and one developer worked in public schools; • three expanders and both developers worked with students who had not elected to study music; • three expanders and both developers worked in schools which they considered to have sufficient resources.
Teaching perspective:
• two expanders focused on empowerment, one expander and one developer on practical considerations (for example, integrated approach) in their music philosophies, and one expander and one developer did not address the question; • two expanders ranked improvisation and composition highest while two expanders and both developers ranked performance and singing highest.
Approaches and strategies:
• all predicted the project material would fit into their current music programme; • all, except for the composer-in-schools, engaged their students with the Phase Shifting project; • all focused their aims on skills, concepts learning, revision, improvisation or performance skills rather than on composition; • all drew on common ground either acknowledged or unacknowledged; • three expanders (not the composer in school) and both developers engaged the students in a strategy sequence which included performing one of the project compositions as model, composition based on a model and performance; • all adopted a prescriptive task design – model or multi-model; • three expanders and one developer spent a short time with the project material while one from each group spent a long period of time;

• three expanders and both developers noted that the students took around two lessons to compose; • all encouraged students at some stage, to compose as individuals; • two expanders and one developer encouraged students to adopt titles for their compositions; • all expanders and one developer noted that students at this level composed, mainly, from sound to symbol; • three expanders and one developer improvised; • all teachers offered students keyed percussion for performance and compositions; • three expanders for one developer valued recording student performances; • all teachers were student-centred in their approaches.
Outcomes:
• all submitted compositions which developed aspects of the project models; • all expanders and one developer listed criticisms about <i>The Pulse Music Album</i>; • all teachers were positive about their engagement with some aspects of the project material; • all expanders and one developer expressed interest in using the material in the future.

Table 7.2 Differences between the four expanders and the two developers

Education, preferences experience:
• the expanders named specific styles and composers of the twentieth century to which they had previously introduced their students while the developers responded generally about introducing students to concepts of twentieth century art music;
Teaching environment:
• the expanders worked in schools whose student populations drew largely from medium to high socio-economic groups while the developers worked with those drawn largely from middle to low socio-economic groups; • the expanders worked in schools with a strong interest in music while the developers considered their schools supported music to some extent; • two expanders worked with students in selective high schools who were mainly musically experienced with one developer working with students who had chosen to study music. The developers worked with students of mixed musical ability.
Approaches and strategies:
• three expanders played prerecorded excerpts of minimal music while the developers did not play excerpts; • three of the expanders contextualised composing activities by making them relevant to contemporary society while the developers did not;

- the expanders encouraged their students to compose as individuals, in groups and as a class while the developers encouraged their students to compose as individuals only;
- the expanders discussed structure while the developers did not;
- one expander recycled material and no developer did so;
- two expanders built a pulse line into student compositions while compositions submitted by the developers did not;
- all expanders noted that students played from memory combined with ear or notation while the developers noted that students played from notation with one teacher mentioning use of memory as well;
- three of the expanders submitted recordings of accurate performances of all compositions submitted to the study while the developers submitted recordings of performances of two works each;
- two expanders selected and adopted project material to the students' different levels and the students' reasoning was sought within these tasks while the developers adopted the role of instructor;
- while all teachers were student-centred, the expanders were enablers who allowed and encouraged students to explore as composers while the developers adopted the role of instructor, not actively encouraging them to explore the project material;
- one expander adopted the role of teacher as student, a role not adopted overtly by either developer;
- one expander was a professional composer in a teaching role while one developer was a teacher who engaged as a composer.

Outcomes:

- all expanders submitted compositions which expanded several musical parameters presented in the project models while the developers submitted compositions which developed but did not expand several musical parameters;
- two expanders empowered students through a concert, the enthusiasm of the teacher, student humour, being a professional composer, events and attitudes not overtly engaged by the developers;
- two expanders overcame initial student rejection of minimal music excerpts and worked through to a positive student response but no developers noted this pathway;
- both groups of teachers were positive about the material however the developers expressed concerns about aspects of their approach with the projects;
- the students of three expanders were positive about some of the project material while students of the developers gave mixed responses.

Individual histories, different paths:

The composer in school, due to her long and deep experience as a contemporary composer, was able to lead her students, over a very short period time, to a class composition in which many aspects of the project were expanded and combined with other compositional devices drawn from the students', and her own, previous knowledge. Experience and confidence with composing saw her introduce students to the project material at a stage more experienced teachers reached over a longer period time. The recording of the one composition undertaken by the students was of an evocative performance given at a concert of student works. She reversed the more usual practice of working from improvisation to composition and moved students from notated composition on to improvisation. At the same time she introduced students to issues of contemporary performance and composition with which she was familiar as a professional composer, thereby making the student composing process relevant to the societal context of the contemporary arts.

In Chapter Eight interpretative reports drawn from the teachers' profiles and the associated student compositions of teachers working with students in the fifteen year age group of the study are discussed.