

Chapter Nine

Interpretative reports drawn from the teachers' profiles and associated compositions

18 year age group

Chapter Nine contains interpretative reports of the five participating teachers who engaged their students in the oldest age group of the study, 18 years. These reports were drawn from teacher profiles and analyses of the student compositions (see Appendix 9). Where teachers also engaged students in younger age groups, readers are referred to Chapters Six, Seven and Eight and Appendices 6, 7 and 8.

9.1 Teacher No. 45 – a male lecturer in a university primary teacher training programme in Sydney, with the researcher as teacher (Appendix 9)

Education, experience, preference; teaching environment; teaching perspective

Education: music education and post-graduate music qualifications;

Experience: experienced lecturer who had previously introduced students to twentieth century art music styles focused around serialism and pitch set composition. Music of Indonesia and Nigeria were introduced through percussion work, music of Armenia and Israel through movement and music of Australia was given a broader ethnomusicological approach. No specific mention was made of composing activities.

Preference: undertook several music activities within and outside the university environment including composing, arranging and improvising. His musical style preferences were wide but did not include popular music;

Teaching environment: university teacher training programme in Sydney which was well-resourced and the curriculum devised by the music department itself. Teacher No. 45 wrote that the curriculum placed no emphasis or hierarchy on particular music activities. Students in the Tuesday and Wednesday music classes, males and females aged 18 years and older, were the last intake for an education diploma, soon too to be replaced by a Bachelor of Education degree. Of mixed ability, the students “had chosen music as an extra seminar subject” and undertook one special, and one general, two hour music class per week.

Teaching perspective: focused predominantly on values which were intrinsically musical - “to be more musical; to reach a high level in the world of music; doesn’t matter if students (in schools) are musical or unmusical”. He named one broad philosophically based objective “[to] lift [the] level of consciousness of [the] human being” and wrote that his hierarchy of music activities would vary according to different student needs. He questioned my wording of “music of other cultures” indicating an interest in the concept of all musics belonging to the culture of the society within which they were conceived.

Aims were focused entirely around composition, on the techniques of composition, improvisation and performance and performance of composition. Objectives for the subject Percussion and Movement II, within which the project material was embedded, reflected his desire for the students to compose complete pieces of music, not exercises. He required them to listen deeply into, and understand details of, the composition process and product and to move beyond surface knowledge of the compositional techniques alone. Students were directed to issues of “unity and balance, sustaining mood, intensity, motifs, sets, levels..., overlaying of ostinati, use of space, programme devices, character - quality, events – sequence, colours – quality, changing patterns – sequence, notation [both] graphic and traditional, [and] instruments [in] metal, wood, stone, membrane, solid, hollow [and] tuning”. His eclectic teaching method included ideas of Kodaly and Orff and he wrote that one must “be as thorough as possible with whatever information is

in front of you”. Sol- fa with hand signs and French and Dutch time names were used and he noted that it was “good to have a kinesthetic sense”.

Assessment, by choice and required by the university, were via three modes. The first was of process through “observation when students are working”, the second of the meso-process “progressive assessment tests in some areas” and the product was assessed with a “final written test in some areas”. He embedded concepts from three projects chosen from *The Pulse Music Album* into his subject outline and assessment and content sheet.

9.1.1 Analyses of 19 compositions by students and teachers associated with Teacher No. 45 written in response to Add and Subtract, Music Weaving and Phase Shifting projects from *The Pulse Music Album* (see Appendix 9 and CD for Appendix 9 Tracks 1-14)

Construction: Composition 45.2, *Full Moon*, composed by the researcher, combined the vertical layered, changing chord structure presented in pieces of the Harmonic Prisms project and with additive and subtractive rhythmic values of Add and Subtract and the continuous rhythmic pulse of Music Weaving. This expanded the construction of the project models. *Full Moon* served as a model for many student pieces. Three employed an additive construction with chordal harmony – 45.3, 45.6, 45.9. 45.6 *Death of a Fly* and *The Train*, 45.13 combined additive construction within the Music Weaving process. *The Train* married melodic cells in different metres and incorporated the rising fifth figure from the phase shifted *Twinkle, twinkle little star* accompaniment (45.12). This welding together of textures and processes from different projects represented an expansion beyond the construction of *Full Moon*, 45.2 and of the compositions in the album.

Composition 45.5 and *Carl’s Mixolydian*, 45.15 employed the Music Weaving process. 45.14, 45.16 and 45.19 gave no precise repetition instructions and retained the potential

for performance of the additive construction within a Music Weaving process, reflecting the ambiguity of the model *Full Moon*.

Time: Composition 45.4, *Cicadas*, composed by the researcher with the students, introduced rhythmic triplets into a piece modeled closely on *Night Crickets* from the Music Weaving project. This represented a development of the binary rhythmic subdivisions of the model and was reflected in two student compositions, 45.11 and 45.14.

An accelerando and ritardando written into the score of 45.13, *The Train*, reflected the title and represented an expansion of the tempi of the models. During the second recorded take, these temporal changes were observed marginally.

Effect: Composition 45.10, *Minimally Aeolian*, composed by a male student, employed, for a number of cells, only one rhythmic value, quavers, within a Music Weaving construction and structure. This minimalist simplification of the varied rhythmic values found in the project models created a distinctive minimalist effect and represented an expansion of the concept of time.

The Train, 45.13 used accelerando and ritardando markings to shape a Music Weaving/additive construction process reflecting the title, an expansion of the steady pulse of the models.

Pitch: Composition 45.10, *Minimally Aeolian*, introduced a pitch set of consecutive notes based on the aeolian mode which, combined with the single rhythmic value of quavers, resulted in a continuous 'tolling' of ascending and descending lines which created soft dissonances, a development beyond the consonant triadic pitch sets of the composition models in Music Weaving.

Figure 9.1 **Composition 45.10 *Minimally Aeolian***



Dynamics: Composition 45.1, *Drum Talk*, written by the researcher with the students, and 45.2 *Full Moon*, both employed strongly contrasting and effective dynamics, a development of the more gradual dynamic changes employed in the projects' models.

Instrumentation: The two versions of *Caroline's Adagio*, 45.11(i) and 45.11(ii), performed and recorded with drum and body percussion, and clapping with voices chanting nonsense syllables and sounds, respectively, introduced an instrumentation different from that suggested in the Music Weaving models and engaged the students with small body movements. Composition 45.14, written by the student composer who wrote 45.13 *The Train*, employed body percussion within a Music Weaving process. These were both developments of the timbral and movement aspect presented in the models.

Compositions 45.7 and 45.19 introduced body percussion into works with additive construction, a timbral development of those presented in the models.

9.1.2 The approach and strategies of Teacher No. 45 (with the researcher) in facilitating student composing activities in response to Add and Subtract, Music Weaving and Phase Shifting projects

Teacher No. 45 invited me to join him in working with two classes of teachers in training, most of whom would teach at primary level. Over five weeks, two hours a week, we

introduced the students to ideas from three projects, Additive Rhythms, Music Weaving and Phase Shifting.

Objectives specifically for work with the three projects focused on the students creating a “complete piece, mood, balance – colour [and] to play the pieces expressively” through movement and instrument playing. The material was “not really” familiar to the students but the teacher had “tried doing minimal music a few years ago” through improvisation but it had not been very successful.

The teacher’s experience as a composer/arranger and performer/conductor and his compositional aims for the students were filtered through a teaching philosophy focused on high levels of musical and personal achievement. He brought his beliefs and values to the classroom and these manifested themselves in an holistic approach to composition which embraced skills knowledge and facility but moved beyond to an understanding of a composed piece of music as a complete entity with its own “mood” brought to life through expressive playing. I found myself in the short time period, as composer as teacher and researcher as teacher, trying to move beyond just introducing students to the minimalist processes. Through more attention to dynamics, colour and timbre, I strove to encourage students to write and perform compositions which reflected these concerns.

While the students were introduced to material from the projects, a number of the pieces were written by myself or written on the board with the students. This approach saw the students and teacher engaging in instant composition through ‘composition by committee’ and offered them as a model, the composing teacher. In the final lesson, students were introduced to a way of recycling pre-existing material by combining a known song and phase shifting accompaniment. These pieces written for, and by, the class, proved to be the most influential works with regard to the students’ own compositions. In some student works concepts introduced through these newly written pieces were expanded and even where ideas were developed or replicated through

pastiche, students were empowered, seeing themselves as composers and allowing them to engage successfully in a contemporary art music, minimalism, an art of our own time.

The teacher's approach showed a keen awareness of the students' ability to understand material quickly, illustrated by his selection of tasks and the opportunities for student reasoning and discussion. Together the music lecturer and researcher adopted a student-centred approach working as enablers within the role of teacher as composer. His holistic compositional aims could not hope to be achieved in four or five lessons, especially with students inexperienced in composition and the manipulation of sound. However, by placing them in a role where they see themselves as composers, albeit at an early stage, he enabled them to understand music better and obtain that pleasure which is inherent in the art, at the same time introducing them to a recognition that polished musical products are difficult to guarantee and take time and experience to achieve. The teacher and I encouraged students to play their pieces several times exploring different instrumentation and different minimalist processes, thereby facilitating exploration and flexibility with the composing process. The teacher developed self-esteem in the student teachers through personal satisfaction with their own compositions. He encouraged artistic expression, developing the creative spark which some took into the primary classroom, engaging their young students with minimalist composing ideas during a 'prac' period.

Students were encouraged to try minimalist processes with primary school students during their practical sessions in schools. One student sent in a positive report to my study outlining her work over one lesson with a composite first/second class. Adopting a skills-based objective of "learning about long and short sounds", she introduced students to the phase shifting process using "long and short dashes" written on the board. These were then grouped with bar lines, each cell repeated "about six times [and] instruments were then introduced to add interest". She noted that adding a title to the piece "motivated the children" but that "this technique could become monotonous or boring if

the teacher was not continually alert”. She also expressed regret at not being able to undertake a “follow-up lesson which would have been very useful”.

The music lecturer was positive about the project material and wrote that the students’ “final assignments (written and performed) indicate[d] all aspects were understood and enjoyed [because the] work is within [their] musical control and ranged from simple to complex”. He noted that the students were “pleased to hear their compositions although some were very unfinished and not properly thought through [with] many parameters missing”.

9.2 Teacher No. 53 – a female music lecturer in a university primary teacher training programme in country Victoria, Australia (Appendix 9)

Education, experience, preference; teaching environment; teaching perspective

Education: qualifications included diplomas in music and speech and drama, graduate diplomas in visual and performing arts and media studies.

Experience: experienced teacher and had taught at tertiary level for two years. Despite an expressed interest in Western classical twentieth century music, she had not engaged her students with music from this period but had introduced them to Aboriginal, Japanese, Balinese and African music through “style, tone colour, mood etc”, with no specific reference to composing activities.

Preference: musical style preferences wide-ranging including music from a number of different contexts and with writing and arranging music as two of her music activities.

Teaching environment: public university in country Victoria. Socio-economic background of the students described as “middle-class Anglo-Saxon, [a] mixture of rural (majority) and urban students”. The university emphasised business studies and commerce, “areas that will attract fee-paying students” and music was not highly valued

by the institution. The venue and resources for music teaching were reasonable. Because of the location of the institution and the interests of the lecturer, the curriculae drawn upon included those of New South Wales, Victoria, plus ideas from Orff and Kodaly. She described the music timetable as inflexible, being “set in concrete”.

The third year primary teaching students of mixed ability, and mixed ages with an average of around 20 years, had “completed prior semesters of creative arts subjects”. Through the primary teaching course all students had undertaken some recorder or guitar tuition, music workshops and tutorials once a week for two hours. The third year student students also met once a week for two hours of music.

Teaching perspective: a course outline for the subject included the Phase Shifting project. Aims of the subject combined developing practical music skills and teaching skills, with an “understanding and sensitivity to music through practical experiences which include listening, moving, singing, playing instruments and presenting seminars”. The seven objectives in the course outline provided a holistic balance. Some focused on “knowledge about, an understanding of, and a sensitivity to a range of musical experiences” and the development of an understanding of “the significance of music to themselves and to children, through a wide range of approaches”. Psychological objectives focused on “problem-solving ability and self-evaluation techniques” through working with sound, development of a “positive self-image as a creative person” and developmental considerations were addressed through integrating areas of music-making “in activities which will later form the basis of sequential learning experience for children” and developing an awareness of “music learning experiences commensurate with the child’s level of development”. The community were considered a resource “including personnel and materials” and students were to be aware of “cultural and environmental” settings in relation to the child’s level of development.

Teacher No. 53 adopted ideas from Orff and Kodaly in her teaching method through “workshop, studio, tutorial classes and associated school-based activities”, combining solfa with American rhythm value names. Assessment was summative through compositions and lesson planning.

9.2.1 Analyses of thirty compositions by students associated with Teacher No. 53 written in response to the Phase Shifting project (see Appendix 9 and CD for Appendix 9 Tracks 14 - 41)

Construction: Within two prescriptive composition task designs based on *Chitter Chat* Option A (see *The Pulse Music Album*) and *I think it's going to rain* Option B from the Phase Shifting project, small changes from, and developments beyond, the project material were included. Five compositions modeled on Option B, 53.1, did not include a separate continuous pulse line, a feature of *I think it's going to rain* from the project.

Modeled on *Chitter Chat* from Option B of the Phase Shifting project, 13 pieces engaged with an additive phase shifting construction. Of these, compositions 53.14 and 53.16 adopted a partial additive phase shifting construction with changed rhythms and pitches in the pieces.

These were simplifications, changes and misunderstandings rather than developments of the models' constructions.

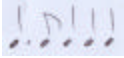
Time: Compositions 53.3 and 53.4 were written in simple triple metre, a development beyond the 4/4 metre of the models.

Pitch: Eleven compositions (53.2, 53.6, 53.10, 53.12, 53.16, 53.18, 53.20, 53.22, 53.24, 53.28, 53.30) modeled on Option B adopted a smaller pitch set than that of *I think it's going to rain*.

Titles: Only four of the thirty compositions were given a descriptive title by the student composers some of which, like the titles of the project models, reflected the sound of the work – 53.18 *Settling Snow Flakes*. Lack of playing skills and time stalled the programmatic intentions of 53.11 *Pump It Up Baby*, 53.12 *We've Got the Pulse* and 53.17 *Mumbo Jumbo*.

Time: 53.12 and 53.16 split the pulse line into a two-pitch ostinato, a development beyond the one note pulse of the model

Instrumentation: While pieces modeled on Option A, *Chitter Chat*, employed the untuned percussion instrumentation of the model, all of the 15 compositions modeled on Option B, *I think it's going to rain*, employed Orff tuned percussion instruments. This represented a development beyond the recorder instrumentation of the model.

Performance: The performances of the phase shifting compositions, compared to the scores, revealed a number of changes, misunderstandings and inaccuracies which developed ideas introduced in the models. The performance of composition 53.22's rhythmic crotchet and quaver pulse figure as  resulted in a 'tango in 5', a change from, and development of, the pervasive duple subdivision of the beat. In compositions 53.3, 53.16 and 53.20 players introduced layers one by one rather than all at the same time as indicated in the score. In 53.20 rhythmic layers were played at longer values than written using the pulse line as a guide and resulting in an aural structure similar to the proportional rhythmic values of a gamelan's 'belungan'. In composition 53.8 the rotation of the phase shifting did not occur resulting in multi-repetition of the first cell, thereby capturing the minimalist aesthetic. Register changes of one pitch due to inaccurate scoring of instrumental ranges resulted in an angular melody, an echo of the angular melody of the Option B model. The two pitch quaver pulse of 53.12 provided an ostinato over which the other melodic/rhythmic layers could be placed inaccurately but with an attractive aural result.

9.2.2 The approach and strategies of Teacher No. 53 in facilitating student composing activities in response to the Phase Shifting project.

For Teacher No. 53, material from *The Pulse Music Album* was new and timely and would become part of her “attempt...to have the students experience various twentieth century composition styles e.g. graphic notation, pulse music, music and technology (computers) etc.”.

The music lecturer introduced the students to several projects “sequentially, in the order given in your album and found it to be quite successful”. For the study she responded to her work with the Phase Shifting project over two non-consecutive lessons. Objectives focused on notation skills, making students “aware of the techniques used by composers of minimal or pulse music” and using these techniques. She noted that the material was unfamiliar.

She adopted a strategy sequence which included listening, discussion, composing, performing and recording/evaluation. Two excerpts from *The Pulse Music Kit's* cassette were played - Steve Reich's *Six Pianos* which students generally disliked and *Music in Twelve Parts* by Philip Glass which was “appreciated more...because it is closer to what they consider to be mainstream music”. The teacher was not deterred by this mixed reaction to the minimalist excerpts. Structure was discussed “as a contrast to other compositional forms” including Orff style rondo compositions, graphic notation, free form compositions, reading from notation and improvisation.

Students composed in groups of two to five, working from symbol to sound discussing instrumentation and occasionally giving titles to their works although “the title rarely had anything to do with the sound of the piece”. The ‘double’ task design was modeled on Option A (*Chitter Chat*) and Option B (*I think it's going to rain*) from *The Pulse Music Album* which required students to recycle rhythmic material from one piece to another.

Students adopted and adapted instrumentation previously experienced improvising with ideas of Carl Orff. While not actively engaging in the composing process herself, the teacher demonstrated a flexible enabling and acceptance of the students' processes and discoveries through composition and performance because of her interest in other contemporary art forms. She learnt about minimal music through the project and the students manipulation of the composition techniques and their playing, adopting the role of enabler, but also of teacher as student.

The students were able to grasp the minimalist concepts quickly and accurately but needed time to be able to play them fluently and expand the ideas. Their approach to composition was similar to that undertaken by 9 year olds, but although they grasped the concepts accurately and quickly, needed a longer time to develop and expand ideas and overcome performance problems encountered by students in younger age groups – maintaining a steady pulse in two or more contrapuntal lines, maintaining a steady pulse, rotating one rhythmic cell and keeping track of the number of repetitions designated for each cell. Through listening to recordings of performances of their compositions, students were able to achieve an holistic evaluation of the effect of their work. Deliberate changes to, and inaccurate playing in, the performance of some scores often had serendipitously attractive results.

Teacher No. 53 valued the 'modern work', minimalism, thereby introducing her beliefs and values about music and contemporary art forms into the classroom. Lack of prior experience with twentieth century compositional techniques plus an inflexible timetable resulted in insufficient time for the teacher to make a deliberate and discussed move into a more sophisticated level of composition and encourage successful playing of minimal music's inherent performance problems.

She noted that most of the students "were quite keen to try the techniques with children they will be teaching, the majority of these will be primary children" and had therefore

empowered the students to see the creative potential of the material for themselves. The students “disliked the project at first, but become quite involved with the music when they wrote and performed their own [compositions]”. Their comments indicated a sense of achievement and a gradual appreciation of minimalist phase shifting techniques. The lecturer enjoyed working with the project as its unfamiliarity ‘stretched’ students’ ears and involved them “in ‘real’ twentieth century composition techniques” because of its accessibility. This indicated an awareness of engaging students, who would be teaching future student generations, with music relevant to contemporary society. The projects were considered suited to primary and secondary level depending on musical experience and “knowledge of pulse as a compositional technique”. In the future, she would continue to use as many of the projects as possible “along with the other [compositional] devices”.

9.3 Teacher No. 73 – a male music teacher in a ‘disadvantaged’ secondary school in coastal, New South Wales (Appendices 8 and 9)

Education, experience, preference, teaching environment, teaching perspective:
see Chapter Eight.

9.3.1 Analyses of two compositions by students associated with Teacher No. 73 written in response to projects from *The Pulse Music Album* (see Appendix 9 and CD for Appendix 9 Tracks 42 and 43)

Structure: Both compositions moved beyond, and therefore expanded, the structures presented in the album projects. *Influence Me Bali*, composition 73.7, adopted a three-part structure commencing with an introduction, a main section and finally a coda. Clearly articulated cadence bars were placed at the end of the percussive introduction and marking the end of the central vocal section. *Minimal Rhythms*, 73.8, moved from an untuned percussive first section, to a largely, tuned percussion second section which was repeated with seven bars of untuned percussion leading into it.

Construction: The construction of *Influence Me Bali* combined constantly changing numbers of ostinati and, in the main section, the ‘belungan’ construction of the gamelan with semibreve, minim, crotchet, quaver and semiquaver values in different interlocking layers. *Minimal Rhythms* also utilised interlocking rhythm patterns, at times combined with layers of pitched patterns, but chose shorter repeated phrases often two bars in length rather than ostinati. This composition employed two identifiable minimalist processes for short sections - a three-part canonic or phase shifted phrase (bars 9 – 12) and two short episodes of the additive/subtractive process. Bars 21-25 were similar to bars 9 – 12, but subtractive of two sounded beats, and bars 29-32 added a beat to the rhythmic figure of bars 2 and 4. By utilising a number of processes within one unifying larger structure, the two compositions expanded any of the composition models outlined in the projects.

Context: *Influence Me Bali* employed chanted ‘nonsense’ syllables reminiscent of the Balinese *ketjak*. This resulted in a composition which, while not stylistically Balinese, suited its title. It expanded the context of a project such as Gamelan where a traditional Trengganu melody was presented in as ‘authentic’ an instrumental context as possible, by producing a more realistic mood based on the influence of an indigenous music on a foreign tourist. In doing so the composition became more relevant to the student’s society through engagement with contemporary music.

9.3.2 The approach and strategies of Teacher No. 73 in facilitating student composing activities in response to album projects

The compositions of these two students in the 18 year age group were important to investigation of this age group for several reasons. Firstly, the teacher deliberately submitted them to me as part of his work for the study and secondly, he wrote of his previous interest in, and work with, minimalism combined with ideas from *The Pulse Music Album*. Finally, the two pieces, themselves, reflected this diversity of input and influence.

Observations made about Teacher No. 73 in relation to his work with students in the 15 year age group were largely applicable to his work with the 18 year age group. As well, the two student compositions 73.7 and 73.8 embodied his original aim to “reduce the techniques of the kit to one work using a combination of the shorter examples and then make an attempt to relate those techniques encountered to a specific work or works in the repertoire”. This aim was not achieved with the younger age group. However, compositions 73.7 and 73.8 reflected his use of ideas from many of the album projects plus his prior knowledge of minimalism and of the music of Indonesia, especially Bali, his wide-ranging and eclectic music preferences and his experience with, and interest in, composing and arranging.

9.4 Teacher No. 100 – female music teacher in a country NSW public secondary school (see Profile in Appendices 7, 8 and 9)

Education; experience; preference:

see Chapters Seven and Eight.

Teaching environment: Group one - small mixed group of students from Years 9, 10 and 12 who had chosen to study music, described by the teacher as “only average or below average in performance standard with [the] exception of perhaps two”.

Group two - Year 11 students, “the most highly-strung group I have taught (tho’ I’ve only had three Year 11 classes) ...not a very mature group, particularly the boys”. They were “very nice kids and love to do practical work and avoid written work”, an approach she favoured in her teaching. She noted that towards the end of the term they had “settled down a great deal”.

Students in both groups had been previously introduced to music of Indonesia/Bali, Africa, Latin America, folk music of England, America and Greece, Aboriginal music as preparation for one of the NSW Higher School Certificate courses. There were also practical reasons - “these are the topics available to us ‘resource wise’” – and workshop activity was her preferred approach to working with these age groups. She commented that “music is just a constantly busy subject and being only one teacher in a school means all the administration as well”.

Teaching perspective: “we cover the elements of music in more detail – mostly in a practical or aural way. In all areas of elective music and in the topic choices there are practical workshops/composition activities, [with] listening available for classroom activities”.

9.4.1 Analysis of student composition associated with teacher No. 100 written in response to the Gamelan and African Rhythms projects (see Appendix 9 and CD for Appendix 9 Track 44)

Structure: Composition 100.7 was an extended improvisation which developed after playing *Fishing* from African Rhythms. Retaining the layered construction and instrumentation of *Fishing*, it introduced a call and response structure with the call being played by all students and the response by a soloist, an expansion of the model’s structure.

Texture: The call and response structure resulted in changing textures, a development beyond the uniform texture of the project model.

9.4.2 The approach and strategies of teacher No. 100 in facilitating student composing activities with the Gamelan and African Rhythms projects

Teacher No. 100 noted that “some of the projects will fit into the overall plan e.g. Gamelan, African Rhythms, but others will be used in a ‘space’ between other activities...I think the ‘pulse’ music would be good for senior electives in particular who are studying 20th century composition and styles...[but there had] not [been] enough time to correctly organise this into [the] program”.

As class sizes in the senior music classes at the school were small Teacher No. 100 often combined them for workshops. Over two double lessons, eleven students from three different years, including three girls from Year 12, worked with the Gamelan project and African Rhythms. She used a similar workshop format to that adopted previously for ideas on Balinese music drawn from a thesis by Doug Myers on this subject. Objectives were focused around HSC requirements and choices and Gamelan was specially chosen for the year 12 students who had “been studying Australian contemporary music and the influences of Indonesia on composers such as Sculthorpe”. Similarly, African Rhythms had been chosen for a student studying African music as an HSC topic.

Most of the students thought the prerecorded excerpts were “just a ‘mass of noise’”, with the 18 year age group more favourable “as they have had more exposure”. Discussion focused on aspects of construction - “the use of ostinato in both types of music [and] the way a simple melody can be changed into a full composition with simple harmonies”. Playing from notation and then memory the students performed pieces from the projects and recorded two fast, vigorous takes of *Lagu Perang* from the Gamelan project. An improvised trill/roll was added at the end of the second take. In the second take with more time available, details of the score - xylophone parts playing quavers - were played accurately.

With the African Rhythms project discussion focused on “the way to notate rhythm and voice”. Singing/shouting while playing “took lots of concentration by the students”. Improvisation played a role throughout the teacher’s workshop. She wrote that “students were able to add ‘bits and pieces’ when we were learning to see how [the project pieces] sounded”. The class improvised on “African style ostinatos” and for the study, it was an improvisation, 100.7, which, through the incorporation of call and response, expanded structural aspects of *Fishing*, the project model. Composition 100.7, like 107.1 (in Appendix 6), a gamelan improvisation by students in the 9 year age group, emerged directly and overtly from work with one of the album projects. The layered buildup of *Fishing* moving to the extended improvisation of 100.7 was a form of recycling material. The teacher conducted and also built the conducting role into the music itself by using a tambour to keep the pulse and encourage performance vigour. While the vigorous playing of *Fishing*’s rhythmic layers was not entirely faithful to the score, one heard occasional successful, but unsustained attempts at cross-rhythms, thereby rising to a performance challenge. Students played their own part as group member and, through the call and response structure, improvised as soloist in a manner reflecting aspects of the Baroque concerto grosso.

The teacher was positive about the projects partly because of the workshop format in which “students can see what to do, can work independently and then combined for a finished product”, an approach reflecting her own high ranking of practical creative music activities. Recording and the resulting evaluation were an integral part of the teaching strategy sequence. The students “enjoyed listening to themselves”, an empowering response. Despite sometimes running out of time to finish a recording she noted and valued the self-evaluative role of the recording process as they retaped pieces to “hear their mistakes etc”. The teacher commented on a need in music departments for opportunities to “combine all of the learning skills” which students can enjoy. Despite students being “fairly inhibited” with some finding it “embarrassing to call out” in front of their peers, she engaged them in performing and vocal activities with the African

Rhythms project, in part to overcome these feelings. She noted that the African Rhythms and Gamelan projects fitted into the music programme in workshop format well.

9.4.3 Analysis of four student compositions associated with teacher No. 100 written in response to the Phase Shifting project (see Appendix 9 and CD for Appendix 9 Tracks 45 - 49)

Metre: While two of the compositions retained the same compound quadruple metre as *Wind Chimes*, 100.8 and 100.11 adopted simple time signatures, a metric development of the model.

Rhythm: The triplets figure of 100.9 developed the binary rhythmic division of the project models.

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

Year 11 class worked for three lessons with the Phase Shifting project, the teacher noting the relevance of the material to a class studying twentieth century music. She identified common ground with pentatonic work, ostinato and improvisation. Her objectives focused around composition structure built up from motifs - “to show students the way a simple motif could be used as the basic structure for a full piece”.

The class listened to prerecorded excerpts of music by Reich and Glass and discussion focused on minimalist music. After the first part, the students responded negatively to the lack of variety in the Reich excerpt. Because of the interests of some students, discussion and examples of minimalist art were integrated into the lesson.

Wind Chimes from the project was played from notation on keyed percussion, students finding the technique of crossing xylophone sticks “difficult in itself”. Even in the first lesson the class were “quite happy to play the various layers” with, at times, conducting

“to help various layers keep their place”. This growing confidence and facility is reflected in the two taped performances submitted for the study with the second take faster than the first.

The composition process, using *Wind Chimes* as a model, included “improvisation on one bar melodies based on pentatonic scale... each one playing one melody then the next taking on an improvisation without losing the beat”. The teacher was careful to point out that the four compositions submitted for the study were written by students with “time signatures agreed upon, notes to be used etc. and dynamics done on board for class”. Two of the compositions developed aspects of the models. Titles were not included and the teacher noted that they “didn’t think of it”. During performance of student compositions, a slower pulse was used when absolutely necessary as the students “found this less obtrusive than a faster beat”.

The students were positive about their work with the project, “enjoying hearing the work and talked about their use of instruments etc. and the balance of parts”, thereby engaging in self- and peer-evaluation. They were surprised and fascinated that “one simple motif could be used for such a long time” a characteristic of most minimal music. The teacher was positive, commenting on her enjoyment of class work “as the students love to compose and/or play at anytime”. She noted that she had had to make “a space” for the project material.

She commented that the Gamelan and African Rhythms projects were “set out well”. Overall the projects “could work as a sequential programme as long as it wasn’t too drawn out [because] the attention span in the classroom at all levels needs to be focused on an activity which takes a lot of thought and concentration” otherwise students lose interest. To the question of which projects were most suited to different age groups, she wrote that most of the first projects would be of interest to younger students “but not

every day [as] I feel they may lose interest if it is done continually”. Teacher No. 100 expressed an interest in using the projects again in a workshop format.

As noted with her work with the 12 and 15 year age groups, her engagement with the 18 year age group was student-centred for two reasons. She let the students’ choice of topic (the link between Australian composers and Indonesian music, African music) guide the choice of album projects and responded to the students’ preferences for composing and performing activities, especially improvisation. Like her work with the younger age groups, she adopted a strategy sequence, constantly adapted and reworked material to cater for different student levels and used a workshop format. An enabler, she encouraged expansion of structural aspects of the project model through improvisation.

9.5 Teacher No. 152 - a female music teacher in a public secondary school in the Newcastle district, New South Wales (Appendix 9)

Education; experience; preference; teaching perspective:

not addressed by the teacher¹. Teacher No. 152 chose to write up her approach as a lesson-by-lesson diary.

Teaching environment: in a public secondary school in the Newcastle district, New South Wales, the teacher worked with a class of 22 Year 11 music elective students. She the class as “a mixed group” ranging from extremely talented and musical to hard working with ‘limited musical knowledge’ however, “all have a love of music and a desire to attempt new things”.

¹ Teachers of music in the NSW secondary public school system are expected to have tertiary music/education qualifications

9.5.1 Analyses of nine compositions by students associated with Teacher No. 152 written in response to the Phase Shifting and Phase Shifting Melodies projects (see Appendix 9 and CD for Appendix 9 Tracks 50-51)

Metre: Compositions 152.6, 152.7 and 152.8 employed a simple quadruple metre, a development of the simple triple of the model, *Lazy, Lazy Boat*. Composition 152.2 employed a similar metre, a development of the compound metre of *Wind Chimes*, the model from Phase Shifting project.

Rhythm: Composition 152.7 employed minim movement exclusively in the left hand with faster rhythmic values in the right hand, a simplification and therefore development of the two rhythmic values in the left hand of the model.

Composition 152.4 employed the rhythmic and melodic material of *Lazy, Lazy Boat*, the project model composition, but each bar was used in retrograde. This recycled the material, and represented a development of, the model.

Pitch: Compositions 152.3, 152.5, 152.6, 152.7, 152.8 and 152.9 all employed a pitch set and mode different from that of the model. 152.3 and 152.8 adopted an Aeolian mode while 152.5 and 152.7 were based on an E Phrygian mode. Composition 152.6 used chromaticism in both hands within a G Lydian mode and 152.9 was based on C. These all represented a development beyond the bi-modality of the model, *Lazy, Lazy Boat*, in which the left hand worked within C mixolydian and the right hand in C major.

Instrumentation: Employing untuned percussion and metallophones, composition 152.1 developed instrumentation beyond that of the project model.

9.5.2 The approach and strategies of Teacher No. 152 in facilitating student composing activities in response to the Phase Shifting Melodies project.

Students were engaged with material from the Phase Shifting and Phase Shifting Melodies projects over three lessons. The first lesson commenced with students listening to, and undertaking an aural analysis of, Reich's *Six Pianos* observing "repetitive rhythms, constant pulse, dynamic change, shifting dominance, repetitive melodic motif that gradually and simply changed". Following discussion of pulse music, minimalism in music and in art and an explanation of the phase shifting process, students formed groups and using *I think it's going to rain* as a model, composed their own music. Compositions 152.1 and 152.2 were two recorded examples submitted for the study. The teacher wrote that "some are OK [and] some are really bad!!".

In the second lesson students were introduced to Phase Shifting Melodies and in the third lesson, composed their own pieces modeled on *Lazy, Lazy Boat*. The teacher wrote that "the students thought they [w]ould sound bad and approached the task as a purely mathematical one". The seven compositions submitted for the study reflected this approach yet also developed and recycled aspects of metre, mode and rhythmic values, one recycling each bar of the project model in retrograde form. Five of the pieces were completed or written out in the teacher's hand, with two, 152.4 and 152.9, being entirely in the students' manuscript. None of the compositions attempted to end by breaking the process. The pieces were not recorded for the study.

The students enjoyed composing but did not take the minimalist work very seriously perhaps because it was introduced to them so late in the year. Teacher No. 152 enclosed eleven slips of paper from students commenting on their work with the two minimalist projects. These spoke positively of gaining an understanding of aspects of structure and construction, of the ease of composing with phase shifting yet resulting in a complex result and of developing performance skills. Several acknowledged problems encountered performing their pieces accurately, one student remarking on how "I became

confused as the phase shifted melody was being played on the same instrument” and another noting that “phase shifting was a lot harder than it looked on paper”. Negative comments were made about the sound of the pieces, “pretty disgusting”, “rather boring”, “irritating” and the lack of melody was commented on. Several students expressed an interest in learning of this new “kind of music” as a new listening aesthetic and also as techniques for their future compositions. These comments reflected an engagement with contemporary art and therefore contemporary society and indicated empowerment through adopting minimalist techniques, a contemporary ‘voice’, in their future work.

Teacher No. 152 engaged the students with the minimalist projects through aural analysis, discussion and a composing task design which used project compositions as models. Adopting the role of instructor, she introduced project material over only three lessons and at a time of year when students were distracted and unfocused on school work. The student compositional outcomes were very similar to the project model, identifiably so in the work with the Phase Shifting Melodies project, yet showed development of some concepts. Despite these disadvantages, the teacher gained a sense of what the project material had to offer by trying it out with the students and she expressed interest in their written comments and their compositions. She noted that she would evaluate these outcomes and try again the following year, teacher as researcher. Her interest in the material, her decision to introduce the new material at a bad time of year, plus comments about future use of the material and other projects from the album indicated a teacher-centred, teacher as student, approach rather than a student-centred approach in this preliminary work with Year 11 students.

9.6 The experiences of Teachers No. 123 and 149 engaging students in the 18 year old group with the Gamelan project

Teachers No. 123 and 149, both female music teachers with tertiary qualifications², working in public secondary schools in Sydney, engaged students in the 18 year age group with the Gamelan project. They both submitted student compositions, some notes on their work, but no questionnaire responses and therefore no discussion of their approaches and strategies was possible.

Teacher No. 123, teaching at a school located in Sydney's outer west, submitted three student compositions composed by Year 11 students (123.1, 123.2, 123.3). She initially planned to introduce students in the 15 and 18 year age groups to material from the projects beginning with the playing of *I think it's going to rain* and "the Additive Rhythms". The teacher commented that she was unsure about "how the composing exercises will go, I will have to try some of them out", indicating a willingness to explore the creative material first in order to gain an idea of what the students will be working with.

Focusing on the NSW HSC topic 'Music of Other Cultures', the teacher introduced students in the 18 year age group to the gamelan examples on the cassette of *The Pulse Music Kit*, engaged them with "the exercises for gamelan" from the project and led them into composing activities for "Balinese Gamelan...played on classroom percussion".

Compositions 123.1, 123.2 and 123.3 were all modeled closely on *Lagu Perang* from the Gamelan project, with an introductory one or two bar phrase, a repeated two bar central section and two bar ending. Within these pastiche compositions were small developments of the model. Composition 123.3 employed a pentatonic pitch set centred

² Neither teacher specified their qualifications but in the N.S.W. secondary public school system, tertiary music qualifications are required for music teachers.

on F major tonality while composition 123.1 simplified the interlocking drum pattern of the model into a single-line ostinato (Compositions situated at the end of Appendix 9).

Teacher No. 149, teaching at a school located in inner Sydney, submitted two student compositions, plus the task design from which the compositions resulted. This task design was a formative teacher-directed instructional task outlining structural, pitch, rhythmic, instrumental and notational features within the following template:

Score a piece of music, 8 bars long, 4/4 time in [the] style of Gamelan music. Use at least five different instruments. Score should have following features:

1. melody played by mid-range instrument using fairly slow rhythm;
2. pentatonic scale C,D,E,G,A;
3. a lower range instrument using a very slow rhythm;
4. an inter-locking melody or variation played by higher-pitched instruments;
5. appropriate clef and time signature for each staff;
6. an indication of which instrument is playing which line;
7. bar lines and notes vertically aligned.

Part of the assessment for this will be to take part in the performance of a score (not necessarily your own).

The two compositions, 149.1 and 149.2, (see compositions situated at the end of Appendix 9), employed the instruments of the classroom, including a synthesizer on the lowest part. Composition 149.2, written for five instruments, utilised rests in the three upper parts and by placing E as an unstable tonic facilitated the multi-repetition of the model. Composition 149.1, written for six instruments, utilised two rests in the lowest part which resulted in a gentle syncopation. Both pieces developed *Lagu Perang*, the project model, and while not pastiche compositions for Trengganu gamelan, reflected stylistic characteristics and aspects of the 'belungan' construction. Composition 149.1 adopted an eight-bar antecedent/consequent phrasing, with repeats, with no introduction or ending which represented an expansion of the model, *Lagu Perang* and 149.2 lacked introduction and ending, a development of the model.

9.7 Summary of 18 year age group

The compositions submitted by Teachers No. 45, 73 and 100 expanded and developed material presented in the projects and commonalities and differences were noted (Appendix 9.1 Commonalities and differences between the three expanders). Those submitted by Teachers No. 53 and 152 developed but did not expand material presented in the projects and commonalities and differences were noted (Appendix 9.2 Commonalities and differences between the two developers). Between the two groups of teachers commonalities were noted (Table 9.1 Commonalities between the three expanders and the two developers) and differences were noted (Table 9.2 Differences between the three expanders and the two developers). One teacher within each of these two groups taught primary teachers in training at tertiary level and at least one teacher within each group taught students at final year secondary school level.

Table 9.1 Commonalities between the three expanders and the two developers

Education, preferences and experience:
<ul style="list-style-type: none"> • all noted composing and arranging as preferred music activities; • all but one (one developer submitted no such information) were experienced teachers; • all but one developer, who did not address the question, listed eclectic music preferences.
Teaching environment:
<ul style="list-style-type: none"> • all taught in public institutions; • all expanders and one developer worked with students who had chosen to learn music; • four considered their music resources reasonable to strong (one developer submitted no such information);
Teaching perspective:
<ul style="list-style-type: none"> • two expanders and one developer outlined an empowering and holistic music philosophy;
Approaches and strategies:
<ul style="list-style-type: none"> • two expanders and both developers introduced their students to the first project in the album, Phase Shifting;

<ul style="list-style-type: none"> • all expanders and one developer focused their aims on organizing sound through composing and performing activities; • all adopted a strategy sequence which included performing one of the project compositions as model, discussion, composition based on a model, performance, recording; • two expanders and both developers played prerecorded minimalist excerpts; • all contextualised composing activities by making them relevant to contemporary society; • all discussed aspects of structure; • two expanders and both developers recycled material from one composition to another; • all expanders and one developer improvised; • all offered their students keyed percussion, for example, metallophones for performance and composition; • two expanders and one developer valued recording student compositions for self-evaluation and an holistic view; • all adopted a student-centred approach;
<p>Outcomes:</p> <ul style="list-style-type: none"> • all submitted compositions which developed several aspects of the project models; • two expanders and both developers were able to empower their students to see the creative potential of the minimalist projects and take their work with the projects outside the classroom society into the wider community; • two expanders and one developer were positive about <i>The Pulse Music Album</i> while one expander noted criticisms; • all teachers were positive about their engagement with the projects; • all expressed an interest in using the material in the future.

Table 9.2 Differences between the three expanders and the two developers

<p>Education, preferences and experience;</p> <ul style="list-style-type: none"> • the expanders were already familiar with minimal music while the developers were not;
<p>Teaching environment:</p> <ul style="list-style-type: none"> • the expanders worked with students with a musical background which was medium to strong while the developers worked with students of mixed musical ability whose previous experience ranged from limited to reasonable; • the developers worked with students of mixed ability, some of whom had elected music, some for whom it was compulsory.

Teaching perspective:

- | |
|--|
| <ul style="list-style-type: none"> the expanders favoured flexibility and creativity in their personal curriculum ranking while the developers did not address this question; |
|--|

Approaches and strategies:

- | |
|---|
| <ul style="list-style-type: none"> the expanders outlined aims focused on students organizing sound through composition and performance while one developer named notation skills; all developers noted common ground with previous knowledge while one developer noted that the material was new; while all teachers noted the relevance of minimal music as a contemporary music, the expanders contextualised minimalist composing activities by making them relevant to contemporary society - titles, cultural discussion, concerts, for example; two of the expanders adopted a multi-focused task design while both developers adopted a single focused model task design; expanders engaged their students with the project material for between four and ten lessons while the developers used a shorter period, two to four lessons; one expander gave students composing activities for homework while one developer noted that students composed within a lesson and another specified three to four weeks; while two expanders and both developers engaged their students with class and group composition, all expanders also engaged students in composing as individuals; the students of two expanders adopted titles for some of their compositions while neither developer noted titles as being important for student composition; two of the expanders controlled the pulse by incorporating it into the music while the developers did not; all of the expanders submitted recordings of strong, accurate performances of over half of the compositions while the developers submitted recordings with many inaccuracies some of which suggested compositional ideas for development and expansion; the developers noted difficulties playing phase shifting while the expanders did not mention this; the expanders selected and adapted learning tasks according to the students' different developmental levels and the students' reasoning was sought within these tasks while the developers undertook this approach less intensively; I interpreted the roles adopted by all expanders to be enablers who allowed and encouraged the students to explore as they composed. The developers also adopted some, but not all, aspects of this role leading their students to, at times, strong developments of the project models but unable to lead to exploration resulting in compositional expansion; two expanders worked as teacher as composer while none of the developers adopted this role; |
|---|

- both developers worked as teacher as student while none of the expanders overtly adopted this role.

Outcomes:

- all expanders submitted compositions which expanded the structure of the project models while those submitted by the developers did not;
- two expanders were able to draw on their previous knowledge of minimalism and/or Indonesian music to combine compositional techniques and processes from a number of projects resulting in student compositions which expanded ideas introduced in the project models while the developers were not;
- the students of expanders were positive about their engagement with the material with reservations while students of the developers gave mixed responses.

Individual histories, different paths

One of the two tertiary teachers, (an expander), working with primary teachers in training, had previous experience teaching composition and techniques in twentieth century music while the other (the developer) was inexperienced with both. Working with the researcher, an experienced composer, over 4-5 lessons, the expander adopted a holistic composition objective, moving the students who had had previous, although limited, experience with composing activities through multi-model task designs to shaping the student compositions and performances into complete musical entities. The developer, over only two lessons, focused on skills and pastiche writing, at the same time enabling the students to develop musical elements by drawing on their previous musical knowledge.

Similarly, the three secondary level teachers devoted very different length periods of time, and times of year, within which to explore the project material. One had previous knowledge of minimalism and experience with composing activities enabling the students to compose pieces which drew on a number of musical ideas other than minimalism and expand beyond the ideas presented in the projects. Another had previous knowledge of minimalism and through recycling and improvisation expanded aspects of the model while the third had no previous knowledge of minimalism and the students produced pastiche compositions which developed some aspects of the model.

9.8 Summary across the four age groups 9, 12,15 and 18 years.

The summary begins by examining commonalities and differences between the expanders and developers across the four age groups, then looks at commonalities and differences amongst the four age groups seeking developmental factors. The teachers are summarised according to each student age group they engaged with projects from *The Pulse Music Album*.

9.8.1 Commonalities and differences between the twelve expanders (seventeen reports) and the seven developers (nine reports)

Education, preferences and experience:

- all were musically qualified;
- the majority were experienced music teachers, an exception being the composer-in-schools and a developer working with the 18 year age group;
- the majority were specialist music teachers, one a composer-in-schools;
- the majority of expanders listed eclectic music preferences, while one or two developers in each age group either listed narrow music preferences or did not address the question;
- the majority noted a preference for twentieth century art music;
- the majority engaged in composing and arranging activities outside the classroom;
- all expanders and the majority of developers had introduced their students to music of non-Western cultures.

Teaching environment:

- the majority of teachers who engaged their students with composing activities drawn from *The Pulse Music Album* taught in public institutions, exceptions being two expanders (9 and 15 year age groups) and three developers (9 and 12 year age groups);
- all but two teachers at primary/intermediate level taught in private schools;
- all but one teacher at secondary level taught in public schools;
- the majority of expanders across the age groups felt that music was supported by the school while the majority of developers expressed more negative comments;
- teachers working with students in the 9 year age group noted that their students were mixed musical ability, most of whom had undertaken a music programme previously at the school. Students in the 12, 15 and 18 year age groups working with expanders were of higher musical ability, stronger musical knowledge and presented a less diverse range of abilities and knowledge than those working with developers.

Teaching perspective:

- the majority of expanders outlined an empowering, holistic music philosophy while one or more developers in each age group did not address the question;
- composing and arranging activities were ranked highest by half or more expanders in the 9, 12 and 15 year age groups with those working with the 18 year age group favouring flexibility and creativity. Half or more of the developers with the three younger age groups ranked singing/performing highest and neither teacher in the 18 year age group addressed the question.

Approaches and strategies:

- the majority of teachers felt that the project material would fit into their current music curriculum;
- all but three teachers engaged students with the first project, Phase Shifting;
- the majority of teachers noted common ground between the project material and previously held knowledge;
- the majority of expanders focused their teaching on composition while the majority of developers focused on other music activities including performance, notation, computer software, culture, improvisation;
- all developers and all but two of the expanders adopted a strategy sequence which included performing one of the project compositions as model, discussion, composition based on a model, performance with improvisation, recording and evaluation being part of the sequence for the majority of teachers. Only the composer in schools and one expander working with the 15 year age group did not adopt the first stage of the sequence;
- the majority of expanders and developers working with the 15 and 18 year age groups played excerpts of minimalist music to students while no developers working with the younger age groups played excerpts;
- the majority of expanders and all of the developers working with the 15 year age group contextualised composing activities with the project material by making it relevant to contemporary society while developers working with the 18 year age group recognised the relevance of introducing students to a contemporary art music. Developers working with the two younger age groups did not contextualise the material for the students;
- all teachers adopted a prescriptive task design – model – however, at least half of the expanders working with the 12,15 and 18 year age groups offered students a multi-focused or multi-model task design;
- all expanders working with the 9, 12 and 18 year age groups, developers working with the 15 and 18 year age groups and the majority of expanders with the 15 year group discussed aspects of construction and structure with their students while none of the developers working with the two younger age groups did so;
- five expanders and one developer noted that they worked with the material through composing prior to introducing it to students;

- while the majority of expanders worked with the material over four to 25 lessons, as did one developer in each of the 9 and 12 age groups and two in the 15 age group, other developers stayed with the material for shorter time, those working with the 18 year age group noting that this time period was insufficient;
- while several teachers did not address the question of how much time students took to compose, the majority of expanders who responded noted shorter time periods ranging from several minutes, homework, to 3 lessons, while the developers often wrote of days and weeks;
- the majority of expanders engaged their students in group and class composing activities resulting in student interaction with others in the classroom and composition by committee. At least half of the expanders in each age group also engaged their students as individual composers. The developers favoured group and class composition with three teachers working with the two younger age groups engaging students as individual composers;
- seven expanders across the age groups and three developers working with the youngest and oldest age groups recycled material from one composition to another;
- the majority of expanders working with the 9, 12 and 18 year age groups, and developers working with the 15 year age group submitted compositions with titles;
- three expanders working with the 9 and 15 year age groups and two developers working with the 15 and 18 year age groups integrated the project material with other subject areas including school topic, Asian studies, mathematics, computers, minimalist art;
- expanders working with the 9, 12 and 15 year age groups who addressed the question, noted that students worked from sound to symbol with some working from symbol to sound in the 15 year group. Developers in the same three age groups noted that students at all levels composed both ways;
- three expanders, two with the 9 year old group, and one developer noted that they composed with the students;
- the majority of expanders working with the two younger age groups and all working with the two older age groups engaged students in improvisation while working with the project material. Four developers working with the three older age groups engaged students with improvisation;
- the majority of teachers, with the exception of both expanders working with the 9 year age group, offered their students keyed percussion for composition and performance. The two expanders working with students in the 9 year group engaged students with the recorder for composition and performance, an instrument on which they already had facility;
- the majority of expanders across the age groups introduced deliberate control of the pulse, often building it into the compositions, while few developers did this;
- the majority of expanders working with students in the 12, 15 and 18 year age groups noted that students played from memory and/or ear plus notation while

students of the developers and the expanders working with the 9 year age group played from notation;

- the majority of expanders all submitted accurate, often strong and vigorous performances of many of the student compositions while most developers submitted a small number of largely inaccurate performances, those working with the 18 year age group commenting on performance problems;
- the majority of teachers noted that recording student works was valuable for self-reflection, self-evaluation, empowerment and discussion of composition and/or performance;
- over half of the expanders deliberately selected and adapted project material according to the students' developmental level while the majority of developers used the material from the project essentially unchanged;
- the majority of teachers were student-centred;
- the majority of expanders were enablers who allowed and encouraged the students to explore as they composed. The majority of developers were largely instructors, as was one expander less able to encourage students to compositional exploration;
- eight expanders across the age groups worked as teacher as composer in the classroom while three developers working with the 12 and 15 year age groups adopted this role;
- five expanders with the 12 and 15 year age groups adopted the role of teacher as student while four developers working with the two older age groups, a higher proportion in relation to the total number of developers, adopted this role;
- one expander working with the 9 year age group overtly engaged with two-way learning through composing with the students.

Outcomes:

- all expanders submitted compositions which expanded and/or developed aspects of the project models. Seven of those working with the 15 year age group expanded aspects of structure;
- all developers submitted compositions which developed several aspects of the project models but did not expand them;
- the majority of expanders and the developers working with the 18 year age group empowered their students for example, through concerts, humour, practical primary teaching, student topics;
- the majority of teachers were positive about all or some of their engagement with the project material;
- the majority of students working with expanders registered a positive response to aspects of their engagement with the project material, students of six teachers with the 15 year age group being positive about composing with projects involving pitch and students of two teachers with the 18 year age group expressing some reservations. Students of developers, overall, gave mixed responses to their engagement;

- the majority of teachers expressed an interest in using some of the material in the future.

9.8.2 Commonalities and differences between the age groups 9,12,15 and 18 years, of expanders and developers

Education, preferences and experience:

- the majority of teachers working with the 15 year age group and expanders working with the 18 year age group wrote of previous experience teaching twentieth century art music, often through composing activities. However, most teachers working with the 9 year age group had had little classroom experience with twentieth century art music and a developer with the 18 year age group at tertiary level had had no experience.

Teaching environment:

- all teachers working with students in the 9 year old groups noted they were drawn from the medium to high socio-economic groups while the expanders working with the 12 year group drew from medium to high group and the developers the medium to low. Teachers with the 15 and 18 year age groups worked with students from high, low and mixed socio-economic levels;
- students in the 9 year age group had not elected to study music, nor had those in the 12 year group with the exception of the students taught by the composer-in-schools. All students in the 15 year age group, secondary students in the 18 year age group and one class of 18 year old tertiary students had elected to study music while the second tertiary teacher did not clarify this point;
- the majority of teachers working with the 9 year age group expressed concerns about teaching resources and/or venue. The majority working with the 12 and 15 year age groups were positive about music resources and/or venue while those with the 18 year age group noted they were reasonable to well-resourced;
- expanders' aims for the 9 and 12 year age groups were focused on skills and concepts while the developers focused on empowerment, improvisation and performance. For the older age groups the two groups reversed their focuses with expanders aiming for empowerment, organizing sound through composition and performance plus some skills knowledge and the developers focused on skills, notation, culture (African) and some composition.

Approaches and strategies:

- while the majority of expanders and developers working with the 15 and 18 year age groups played excerpts of minimalist music to students, developers working with students in the 9 and 12 year age groups did not;

- developers working with students in the 9 and 12 year age groups did not contextualise the project material while those with the 15 and 18 year age groups made it relevant, or recognized the relevance, with contemporary society;
- developers working with students in the 9 and 12 year age groups did not discuss aspects of structure while those in the 15 and 18 year age groups did.

Outcomes:

- while most teachers voiced some positive comments about *The Pulse Music Album*, criticism of the projects was most strongly and frequently voiced from expanders working with the 12 and 15 year age groups. Two expanders and one developer with the 18 year age group were positive about the material's accessibility.

In Chapter Ten conclusions drawn from Chapters Seven, Eight, Nine and Ten about teachers' approaches to engaging their students with material from *The Pulse Music Kit* are discussed in relation to student age group and in relation to the student compositions. From these conclusions a number of implications for teachers and for further research are suggested.