Peer Assisted Learning in the Acquisition of
Musical Composition Skills

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DEDICATION

This study is dedicated to the memory of my husband John Malcolm Mugglestone.

It is also dedicated to my family: my three children and their children, and those of my friends who knew about my research and offered me support and encouragement.

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ABSTRACT

The purpose of the study was to discover the effects of using peer assisted learning in acquiring skills in music composition. The ten criteria used for assessing the effects of peer assisted learning comprised six concerning social qualities and four relating to cognitive aspects of what might be learned from working and learning together. The research used both qualitative and quantitative methods, encompassing interviews with the teacher, questionnaires for the students and observation. The latter included a quantitative element. The research took place in the natural settings of timetabled music lessons in Year Seven at an English comprehensive secondary school.

This peer assisted learning research is believed to be the only such project conducted entirely in the unadulterated classroom settings. The lessons followed the teacher's choice of lesson material and the length of time normally allowed for lessons in that school. No changes in classroom organisation, timing, or for any other reason were requested by, or made for, the researcher. Each class was divided into groups whose size, ability and gender were determined by the teacher. From these groups, the teacher selected the three which were the focus of this research.

All three of the sample groups showed some evidence of the beneficial effects of peer assisted learning socially and cognitively although this varied according to the children's different ability levels. Peer assisted learning was found to be most successful where children were able to work together cohesively and communicate well, either verbally or musically. Most children either acquired new musical skills or enhanced those they already possessed through the use of peer assisted learning.

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CHAPTER ONE: The research focus and the initial development of criteria

Introduction

The purpose of undertaking this research was to investigate the process of peer assisted learning for music composition amongst Year Seven students and to explore its social and cognitive effects on the students' acquisition of composing skills. The students selected for this study were from each of three classes in their first year in an English, comprehensive secondary school, each class consisting of a different general ability range, high, middle and low. These abilities are determined by their results in the national tests at the end of their final year at primary school; these tests do not include musical abilities. Within each class, the students operated in peer assisted learning groups of six to work out for themselves how to put a musical composition together and to decide how it should be performed at the end of their project. This research followed them through the natural settings of a normal term's lessons.

The problem for this research was to find out whether a peer assisted learning system did, or did not, assist students to acquire musical skills in composition. I first became curious about this when I was, from 1975-1993, head of the music department in an English comprehensive school. It was during a time of considerable reform in the school music curriculum and I introduced peer assisted learning in groups for creative music composition giving the children the opportunity to share ideas. The less able, I assumed, could be assisted by the better able so that everyone became involved in the work. This proved valuable in preparing children for the composing component in the new General Certificate of Secondary Education qualification first examined in 1988. Peer assisted learning was later recommended for similar use in the National Curriculum.

From that beginning came the desire to research the effects of peer assisted learning more thoroughly commencing with a small pilot study in 1996 in the school from which I had retired in 1993. The main research study was carried out later in 2001 with the same teacher but in a different school. Both studies were researched from a non-participatory viewpoint, although the origins of my enquiry lay in my own practice. My journey from practising teacher to researcher is reflected in the language of the thesis; the personal form is used more often in the early chapters than in Chapter Five onwards.

Three evaluative criteria, all from my teaching experience, were used to identify the effects of peer assisted learning in the pilot study in 1996. These were later justified, extended and developed by reading about the importance of sociological support groups as an aid to learning in school, beginning with the theory of Vygotsky (1896-1934). Confirmation of the first three evaluative criteria, and inspiration for additional criteria, were sought from the work of the music educators in both European and English schools in the twentieth century, culminating with both national and international empirical research and the emergence of the National Curriculum for music in secondary schools. These were then developed into a set of criteria for use in the main study in 2001.

This chapter introduces the research focus first and then the research question. The main reasons for researching this study are provided in the rationale. Theoretical resonance for peer assisted learning was found initially in the work of Vygotsky (1896-1934) and this chapter discusses how Vygotsky's theory relates to my study and to the emerging criteria designed for researching the social and cognitive aspects of peer assisted learning. The chapter then shows how the research design was organised and concludes by giving an outline of the thesis with a summary of the content of each chapter.

Research focus

The research focused on the social process of peer assisted learning where each student was to assist the others, within a small group, with ideas and techniques which were used for composing a piece of music. The intention of this study was to investigate the effects of peer assisted learning on the acquisition of musical compositional skills. This is a learning technique that provides assisted performance within a social support system, which, importantly, defines 'what a child can do with help, with the support of the environment, of others, and the self' (Tharp and Gallimore, 1988:45).

From my experience as a music teacher I felt that peer assisted learning built on what occurred naturally in classrooms; a student would frequently ask another student for assistance with a difficult task rather than ask the teacher who was probably occupied at the time with other students in the class. Whereas the teacher would usually be

expected to fulfil most of the educational needs of the students didactically, the students could sometimes provide a learning support system for each other through which learning occurred experientially. This system could assist children's progress with the teacher offering support in an advisory role during the peer assisted learning sessions. It was noticeable that a socially supportive system of this nature also appeared to assist the students' personal development.

From this informal learning, I became curious to find out if progressing to a formalised peer assisted learning system might enhance learning. Children often liked to consult each other about their work in my lessons and I noticed that they already possessed some of the social skills required for peer assisted learning. It was thought that most children would be quite keen to work in groups because the workload was shared amongst them. Providing a support system enhanced the social benefits of inter-relationships amongst the children whilst at the same time offering the possibility of improving the students' learning processes.

The intention of my proposed research study was to investigate the effects of the social processes of peer assisted learning in the acquisition of musical compositional skills by studying the children's learning interactions in their groups. This was done in two stages, first in a pilot study in 1996 followed by a much larger main study in 2001. The main study was focused on the interactions in each of three groups of six Year Seven students, aged twelve plus, each group in a different class and in their own music lessons. Therefore, an investigation of the suitability of peer assisted learning was made to find out if it was a method of motivating the students to get along well together in producing ideas for a composition and acquiring skills at the same time.

It was intended that natural settings would form an important part of the research focus. The research took place in two comprehensive schools in the natural settings of music lessons for Year Seven, one for the pilot study (1996), and the other for the main study (2001). No special advantages were asked for in either school to facilitate the research. No students were withdrawn from any lessons, music or otherwise, nor from their own leisure time in order to work on these projects. The aim was to keep their school day intact. The focus was on the time allotted for composing within their normal music lessons, as planned by the teacher, and exactly as they would have worked without the

presence of a researcher. This meant that the everyday problems of school life and administration, which can, and did interrupt lessons for both students and teacher, formed part of the natural settings in which the research took place.

The pilot study was located in a small, mixed, comprehensive school in April/May 1996, with Year Seven students who had completed two terms in the school and had worked together before in groups for music composition. These children were already familiar with both the lesson routine and music room resources. The timing of the main study in September was changed from that of the pilot in April/May because it suited the requirements of the teacher. This timing also enabled me to observe children socially when they had settled down in a new class, in a new school, as they entered Year Seven at secondary level. The main study took place in a large, mixed, city comprehensive school in September 2001 where the Year Seven students had been in the school for only three weeks. Some children were confused by being in a new school, by having lessons organised with a number of different teaching staff in special teaching rooms and by trying to get to know other students in order to settle into new friendship patterns. It was possible to observe these children using peer assisted learning at this demanding time of their school careers, so the research would be a test of peer assisted learning in a very challenging situation.

The teacher, who led the classes in which this research took place, was the head of the music department in both schools, having moved from the first to the second between the pilot and main studies. In both schools peer assisted learning was normally used for group work in music composition. I accepted whatever the schools could offer for my research into peer assisted learning whilst keeping the natural settings of the timetabled lessons intact. This enabled research to be focused on the children's pattern of normal teaching and learning experiences in the music lessons regarding peer assisted learning.

The music teacher had moved from the smaller school, with a three stream entry (pilot study), to a much larger school, with an eight stream entry (main study), and her workload was heavy at all times. She was expected to organise and carry out extra curricular music groups in the form of ensembles, choirs, concert preparation, the programme for peripatetic instrumental staff and piano accompaniment of students entered for the Associated Board of the Royal Schools of Music instrumental

examinations. All these duties had to be fitted in alongside the normal class teaching duties in which the research for peer assisted learning took place. No interventions were made to alter the teacher's normal work load for my research.

This brief description provides the settings and timings for both the pilot and main studies, gives an indication of the size and composition of groups for the main study, and introduces the teacher in whose lessons the research took place. The next stage is to introduce the research question and suggest what was being sought in peer assisted learning.

There was one question for this research: Did peer assisted learning help children to acquire musical compositional skills in the natural settings of the time- tabled lessons as guided by the National Curriculum for Year Seven (Department of Education and Skills, 2000)? Although the main research took place in 2001, the National Curriculum of 2000 was used as it was normally issued every two years. The research question was directed towards the effects that the process of peer assisted learning had on students' composition lessons with a view to what could be achieved in acquiring musical skills. The question arose because it was important to find out if the students collaborated socially and learned cognitively from each other in order to improve their musical skills or whether they were hindered in having to work with others. This depended on how well the students adjusted to peer assisted learning together in group work at secondary level in the natural settings of their time tabled lessons. The same teacher accommodated both studies but there was a considerable time difference between the placing of these studies in the school year. In the pilot study in 1996, the children had two terms to settle at secondary school. In the main study in 2001 the children had been in the secondary school for only three weeks before the research period began. Therefore, they had little time to settle to learning with a new music teacher, many new children and the new music room with its resources.

The outcomes of the research for the pilot study and theoretical underpinnings identified in Vygotsky suggested two important avenues for the main study, social and cognitive. The first avenue identified the social aspects of learning together, seen in the way children adjusted alongside each other and worked together in their peer assisted groups for music composition. This involved observing children at work to see if they found

opportunities to work together amiably as they exchanged ideas and developed their creativity in the natural settings of the time tabled lessons. It was difficult for them to adjust because the timing of the school day was different and possibly more demanding than that experienced in the eighteen primary schools they had left only a few weeks before. The second avenue identified whether peer assisted learning for music composition helped children to grow cognitively in their musical understanding, identified, from observation and teacher and student interviews, in the way that they composed and through their acquisition of musical skills and knowledge. It was noted also how well the children communicated with each other and learned to co-operate in their peer assisted learning groups.

The evaluative criteria for analysis developed for this research, are the means through which both the social and cognitive domains of peer assisted learning in music composition could be identified. It was found necessary to use different criteria for the purpose of evaluating progress in each of these two domains. In the absence of an existing specifically focused set of criteria, embracing both the social and cognitive domains, it was necessary to devise this set and to make it suited to the age of the children in my research. Meeting this requirement meant looking first at the theories of the early protagonist of peer assisted learning, Vygotsky, (after the following Rationale in this chapter), and then searching the works of musical educators for adaptations to this particular field of study as shown in Chapters Two, Three and Four.

Rationale

The main issue dominating the research philosophy was to discover what happened in groups where peer assisted learning was involved and to find out if it had a positive effect on the acquisition of musical skills. Traditionally, children were expected to learn from their teachers but they might also learn much from each other through peer assisted learning in small groups, which provided the facility of a support system for learning. Since the main study began as students commenced music education at secondary level, it was important to see if they could adjust to their new situation as the youngest in a secondary school, in some cases with children they did not know, while working together in groups for the purpose of producing a musical composition.

The rationale for wanting to study peer assisted learning at this stage of children's development lies in both its possible short-term and long-term effects. Children settling to work in a new school surrounded by new faces in a larger building than most primary schools may find benefit in the social interactions that peer assisted learning might foster. There may also be excellent long-term side effects, which occur through the use of peer assisted learning in general. For example, social benefits may be gained if children are able to collaborate with each other. Social skills learned by working together with other children may prove beneficial in the world of work in later life as well as in school. Both collaboration and co-operation are skills much welcomed in the workplace in professional and business situations. Collaborative learning techniques are based on the use of reciprocal relationships and the term collaboration indicates working together on projects with input from all students in each peer assisted learning group (Foot and Hare, 1998:28).

Peer assisted learning had the support of several previous educational initiatives for its value in getting children to work together in music composition. Its significance grew with its recommendation for Years Seven to Nine in preparation for composing in the General Certificate of Secondary Education, first examined in 1988. Its importance then continued with its inclusion in a similar way within the National Curriculum. The National Curriculum for music in 2000 stated that group work was recommended for composing, either in small groups or whole class work (Department of Education and Skills, 2000). Therefore, it seemed feasible to introduce peer assisted learning early in the first term for the children entering Year Seven.

Natural settings were chosen as an essential feature of my research because no other study was found which researched peer assisted learning in music composition in English schools taking place in normal timetabled classes and retaining teacher autonomy as this one does. The aim of the research was to reveal the realistic classroom conditions of the students as they worked together on their musical compositions, particularly as the National Curriculum expected work to be done in normal lessons. Therefore, my study aimed to research how peer assisted learning worked in the natural settings of normal school practice, especially since it was recommended for composing in the National Curriculum, and work was to be completed in timetabled lessons. This study focused on groups composing together in

their lessons as directed by their teacher and is as realistic in normal school practice as could be achieved. No requests were made by me for children to be extracted from normal work so that tasks or experiments could be completed. As part of the composition process, it was important to find out whether the students had the opportunity or adequate time to develop musical spontaneity and creativity in the natural settings of the timetabled lessons. In both 1996 for the pilot study, and 2001 for the main study, there was always a limited amount of time for timetabled lessons in music because it did not have the status of core subjects such as English, maths and science.

Justification for using peer assisted learning as a learning strategy has been recognised by both academics and government. Probably the most important function of peer assisted learning is that it is a valuable teaching strategy in raising standards of work (Topping and Ehly, 1998:2). The Government of 2001 indicated (as reported in the media on several occasions) that it was keen to promote the raising of standards of education in schools. As peer assisted learning works directly with the students as they participate in their lessons, the provision of expensive new governmental strategies would not be required. Peer assisted learning could be advantageous in moving towards the goal of raising standards because education could make use of a learning strategy already known to children. Gaining information from peers is a strategy used by children on a daily basis for their own purposes in leisure time. By treating the children themselves as a potential educational resource they can, through the use of collaborative learning, provide resource material for each other (Maheady, 1988:45). There may be an increase in memory skills because it is, by nature, a 'learning by doing' activity and in this way students learn subject matter by doing something with it (Labuta and Smith, 1997:81). Adapting and implementing this method in school lessons where student communications, particularly talking, are actively encouraged during lesson time whilst work is being done, could improve motivation and a sense of achievement. When motivated, students may feel that they are more in control of their own learning (Tharp and Gallimore, 1988:42). Although peer assisted learning was studied in a musical context in this research, it could have a much wider application as a flexible teaching method and could be used in other learning situations.

These rationales for research into peer assisted learning added to my personal rationale for beginning this study, a rationale for which I found both theoretical and empirical research support. My own work as a teacher, using this form of group learning, showed me that occasionally something special occurred in the students' processes of working together; they produced something extra, often unconsciously, something more than they could have produced alone. This came from both the verbal and non-verbal communications amongst the students. In other fields, this has been defined as 'an appreciative process' (Vickers, 1979, cited in Checkland and Casar, 1986:3). Using his business experiences with many different types of working groups, Vickers asserted that this phenomenon was universal. This confirmed the strength of the interactions within the peer assisted learning process. The phenomenon has been described in music composition as 'an emergent structure' (Kanellopoulos, 2000:204), and working together in other kinds of learning, or subjects, as a 'collective energy' or ' synergy' (Joyce and Weil, 1986:9). The emphasis is on the phenomenon that can occur when people work together, irrespective of the subject. Much depended on the attitude of the students in the groups in my research as to whether such a phenomenon would be found. Finding it would help to prove that extra intangible 'something' which would confirm the worth of peer assisted learning as a valuable teaching strategy.

Vygotsky and peer assisted learning

On first extending this study from a practising teacher's evaluation into a research project from 1996, I sought guidance in the literature on previous practical and theoretical experiences in peer assisted learning in musical composition in order to develop my analysis criteria. As Chapter Four shows, there was very little research literature written concerning peer assisted learning in music composition before 1996 so a beginning had to be made outside of music learning. It was noticed that the work of Vygotsky (1896-1934) had some resonance to my study concerning peer assisted learning although not in the musical sense. His work concerned language acquisition but it nevertheless provided valuable theoretical assistance because of the emphasis he placed on children requiring a socio-cultural support group to assist their learning. I considered that, as my research appeared to have a sociological similarity with Vygotsky's theory, it might be possible to seek foundations for some of my ideas in his.

The factor that most attracted me to the possible relevance of Vygotsky's theory to my research was in the findings of sociological transactions as the means of promoting cognitive learning. These alerted me to possible explanations for the process 'happenings' I had noticed amongst the students in my own peer assisted learning classes. I found that children who worked well together in their composing groups appeared to produce better results, with sometimes surprisingly good compositional ideas, than those who preferred to work alone. I knew then that those children who produced completed compositions and learned something about composing at the same time had worked together well to achieve that learning. I thought that my discovery could be linked to Vygotsky's theory because he found that the use of a socio-cultural support system helped children to achieve cognitive learning. This underlined what I suspected from my teaching experience and led me towards creating a first possible evaluative criterion for this research: that working well together helped children to complete their work and learn something at the same time. The criterion was tested in my pilot research in 1996 and in linking it to the work of Vygotsky I developed it further for use in the main study in 2001.

Vygotsky (1966) discovered the relationship between the support group and cognitive learning in his native Russia in the 1920s. He was ahead of his time in regarding the socio-cultural situation surrounding children as the essential beginning of their learning experience. Through observation of the children in the school where he taught, he gained an understanding of the social side of the learning process and discovered that it had a profound effect on children's achievement in cognitive learning. His daughter remembered that he applied practical tests concerning socialisation and learning on the children in his class and many more to her at home (Vygotskaya, 1998:330).

Using Vygotsky's 1920s theories, developed for a Russian context, may seem inappropriate for late twentieth and early twenty-first century research in England. Daniels, however, strongly argues (1996) that it is still appropriate to use Vygotsky's theory as an underpinning for research because his principle of socio-cultural support is universal in time and place. Nevertheless, it was necessary to be aware that the context and timing in which Vygotsky's research took place was approximately seventy years earlier than mine. Also, that his research was mainly concerned with pairs of children or an adult teacher and a child, whereas the peer assisted groups for children's work in

my study provided the essential support system for learning. In my study, as more than one 'learner' was involved in each group it was essential to the smooth running of the group work session that all children could feel that they were part of the support group and could take part in some way in the musical composition. Input of this nature could also help the group to work together.

Vygotsky's theoretical framework presented a very good reason for using peer assisted learning amongst children because he believed it helped both their development and learning. Vygotsky (1966) realised that children's development was also the result of their socialisation and culture and that this had an effect on mental development such as language acquisition, thinking and reasoning. He also stressed that play could help children to develop abstract thought. In play or other learning, thought development is determined by language (Vygotsky, 1962:51). He referred to the linguistic tools of thought and the socio-cultural experiences of the person concerned. The development of inner speech relied on external factors such as the development of logic, a direct function of socialised speech. This was an important stage in cognitive development where language held the key to both inner speech and thinking.

Although Vygotsky's theory was designed specifically for language acquisition, there did not appear to be any reasons why it would not work with groups of children composing music and producing musical thoughts about how it should be done. The provision of musical opportunities in school, within a socio-cultural support group, could help them to think in a musical situation by sharing ideas. Children may even loosely regard music making as a form of play when composing. Vygotsky (1978) claimed that children, with help, are able to imitate other actions well beyond their own capabilities when their imagination and conceptual abilities are stretched through play together. Through peer assisted learning a group could produce something extra, unconsciously, from within the process itself to the development of many of the life skills required in 2001. Therefore, a socio-cultural support system formed a necessary asset in acquiring many essential life skills resulting in the development of cultural learning and behaviour. This confirmed the importance of social relationships between individual children as they learned in school and provided another good reason for using peer assisted learning in the classroom.

Vygotsky (1978) explained why the support system was fundamental to children's cognitive learning and two links to this were made in my research study. The first link was about the support system being essential to children's cognitive learning. He discovered that every function in the child's cultural development appeared twice, first, on the social level between the children (interpsychological), and later, on a personal, individual level, internalised inside the mind of each child (intrapsychological). This applied to all of the higher mental functions such as voluntary attention, logical memory and also to the formation of concepts. The second link showed that a support system provided an essential environment in which children grow culturally as people and this had an effect on their behaviour as well. Whilst both of these links were interconnected and showed the importance of the development of support, my research with twelve years old children was focused primarily on their cognitive achievement in musical knowledge and skills in music composition. Therefore, in this chapter the linking of my research to Vygotsky's theory regarding how children learn cognitively is pursued.

Linking with Vygotsky's support system led me to find how children learn within it. Vygotsky's learning theory included a concept known as the zone of proximal development and my research can be linked directly to this theory. It shows 'what a child can do with help, with the support of the environment, of others and the self' (Tharp and Gallimore, 1988:45). The zone of proximal development is described as the distance between actual development already achieved by a learner and the potential development as yet unfulfilled. This may be achieved when the learner works with a more capable peer to progress further. 'What is in the zone of proximal development today will be the actual developmental level tomorrow, that is, what a child can do with assistance today she will be able to do by herself tomorrow' (Vygotsky, 1978:87).

The concept of the zone of proximal development was observed in my teaching experience amongst the children of the same biological age as they entered school in Year Seven but who did not necessarily have the same mental age or the same musical expertise or experience. Recognition of this concept was essential for assisting children to settle in class and begin to progress with their work. There was, therefore, a good reason for working together in groups where the less able could receive assistance from the more capable. I found there were a few children in each annual intake of Year Seven with either a good general musical background or some form of specialised

musical knowledge. These children, if willing, had the potential of becoming leaders in their groups. I devised, therefore, a new criterion especially for noting the positive leadership qualities by which certain children were able to pass on information to the other children in their groups. It was often found that these children could lead others to greater knowledge in a positive manner. Encouraging children to share their ideas in creative ways was also a good way of helping them to get to know each other and proved to be a contributory factor to co-operation in the classroom and learning about music composition. This could be accomplished when the more capable students provided the necessary knowledge through language, in a structured way to assist the less able to understand what was being passed on. After Vygotsky, a new term was devised for this action and it became known as 'scaffolding'.

The more capable children were able to provide 'scaffolding', a term used by Wood, Bruner and Ross (1976, cited in Wood, 1986:105). 'Scaffolding' describes the provision of a suitable framework or structure on which learners can build knowledge. It is a social transaction by a more capable peer enabling the others in the group to gain knowledge or skills through discussion described as 'transactive language'. Bruner (1985) suggested that from the initial learning at the social stage, it then became a matter of using whatever one has learned to progress but there must be a support system in place to assist this process. This situation may be helped in music lessons because previous private tuition may provide several above average 'capable peers' in one class, or even one group.

It should be noted that in any situation involving a socio-cultural support group where children are working creatively together, as in music composition, there is likely to be a conflict of opinions at some time. Schaffer (1992:273) claimed that although 'Vygotsky did not explicitly discuss the role of conflict in adult child interaction, it can be said to be implicit in his statement that instruction can only bring about change when it proceeds ahead of the child's development'. Therefore, it can be an aid to learning to have some conflict of opinions among the children whilst they are working in groups. There may perhaps be opposing views about the content of the composition by two 'capable peers' in the same group, or alternatively, three members want it one way and the others think it should be done differently. This situation provides the opportunity for active thinking and reasoning to solve compositional problems and without this,

decisions on how to proceed cannot be made. Schaffer (1992:273) claimed that, 'children must be actively engaged in opposing their particular opinions and reasoning with those of other individuals, thereby experiencing a socio-cognitive conflict'. The result of this requires mental restructuring on the part of those concerned to adopt an approach that is more advanced than when working as an individual. Opposing views encourage children to be active mentally and as long as they can keep the group atmosphere amiable, they will make decisions and learn from their mental deliberations.

Vygotsky (1966) emphasised the central function played by speech in the development of both social relations and cognitive learning. It was essential that learners could understand the information passed through transactive language if progress in cognitive learning was to be made. The passing on of information provided a link to Vygotsky's theory from my research. In mine, however, musical information was passed from the more capable to the less capable by transactive language and possibly by musical sounds as well. The learner in music composition was catered for within a similar support system as those trying to achieve the acquisition of language. Therefore, it seemed feasible that what the less able learned musically with help from a peer on one occasion could be internalised and used later by the learner alone.

That was not the end of the learning process, however. There were many zones of proximal development to be passed through in children's learning experiences. The learner needed to make an effort to assimilate more knowledge or skills and it should be noted that the 'the most essential feature of our hypothesis is the notion that the developmental processes do not coincide with the learning processes. Rather, the developmental process lags behind the learning process: this sequence results in several zones of proximal development' (Vygotsky, 1978:90). It should be noted therefore that this 'alters the traditional view that at the moment a child assimilates the meaning of a word or masters an operation, the developmental processes are basically completed. In fact, they have only just begun' (Vygotsky, 1978:91). Therefore, there will be many zones of proximal development as the child learns and develops as a person.

It is not a forgone conclusion however, that all children are able to assimilate musical facts from transactive language. A learner must want to learn and must ask for further explanation if the information and musical terminology is not understood.

Understanding is necessary to achieve some degree of success or nothing may be learned at all. This can present a problem when a child has failed to understand what was being learned (Bruner, 1985:92). There is a stage of voluntary handing over of responsibility from the capable peer to the learner. This requires willing acceptance and understanding of information on the part of the learner who must then take control of his or her own progress. The reliance on the support situation between peer students voluntarily giving and willingly receiving knowledge is highlighted at this stage. It is helped when there is a friendly and co-operative relationship between the peers and they can organise their thoughts in a constructive way. This situation may be found in a cohesive group atmosphere where children are keen to work together and are helped by the support system. The final decision about learning is made by the less able learner at the end of the process, making the choice of either accepting or rejecting the new knowledge from the more capable or more musically experienced student.

Vygotsky presented his theory as a positive learning strategy and he is regarded as one of the seminal theorists concerning peer assisted learning. A further reason for working with his theoretical framework was based on the experience of other researchers. Rogoff (1991), Bruner (1985), and Tharp and Gallimore (1988) have presented it as a positive learning strategy. Hedegaard (1990) found the concept useful as an analytical tool for evaluating children's cognitive development in biological science in school. It may help in both the evaluation of the process of peer assisted learning and to identify cognitive progress in my study. Although Vygotsky's method was planned initially for language acquisition, the positive nature of learning that resulted from it in his writings provided both confirmation and justification for the criteria that emerged from my teaching experience. This made the transfer of his theory to this experiment in music composition a worthwhile proposition.

Emerging criteria for the main study

Three criteria, used for evaluating children's peer assisted learning and all from my teaching experience, were developed and used in the pilot study in 1996. Knowledge gained from teaching proved invaluable in solving the problem of how to identify progress in the peer assisted learning process and evaluate the resulting compositions in the pilot study. The problem remained, however, of selecting a more comprehensive set

of criteria suitable for use in the main study. I began by considering how Vygotsky's theories could help me to confirm, refine or amend my initial criteria, which at that stage included two in the social domain and one in the cognitive domain. These three criteria helped to identify the value of the process of peer assisted learning in the pilot study as a technique for acquiring both knowledge and skills.

My original first criterion, 'Working together as a group with social cohesion', appeared justified by its link with Vygotsky's ideas concerning the value of socio-cultural support groups and I therefore retained it as my first criterion in the social domain. Working cohesively would be seen in practice if there were amiable and informative discussions about the composition, agreeing to differ when necessary but fostering a productive working and learning atmosphere. Whilst teaching, I found that children who worked together by helping each other were more likely to produce completed compositions and learn more about composing in the process. Composing done in a practical way included the use of voices and simple instruments, such as percussion designed for school use.

The next criterion, 'Even input from each member suggesting ideas or learning from the others' referred to everyone in the group trying to further the progress of the composition. This criterion complemented the first criterion because it could possibly reveal other details of how the group worked together. Vygotsky did not work with groups studying music composition but, in principle, there appears to be little difference between his ideas and my research. Both are concerned with one person helping another in providing support for learning. This criterion, which I added to my social domain criteria, arose initially from my observations that children offered varying amounts of information in group discussions and that the depth of interactions varied amongst the students. It seemed likely that the more children in the group who could put ideas forward, the more likely outcome was a finished composition and a shared acquisition of skills. I realised that in using this criterion for research observations, I would need to be aware that even input would not always be possible at the ideas stage but could be deemed present if children listened and observed the actions of others presenting ideas and if they took a part in later stages such as performance.

The third criterion from my teaching experience and used in the pilot study, 'Creating musical ideas with vision and imagination,' identified the children's musical ideas discussed and worked into their musical compositions. Whereas the first two criteria were firmly fixed in the social domain this one attempted to identify progress in learning in the cognitive domain. It indicated the presence of vision and a lively imagination in the use of musical ideas. It was the only criterion of the three in the cognitive domain but it also had potential for development for the main study. Some inspiration for cognitive criteria came from the zone of proximal development in Vygotsky's theory, but in my study these required a musical content that needed to be sought from reading musical sources.

A further criterion involved looking for, 'Positive domination of the group by one or more able students'. This criterion came also from teaching experience but was not used in the pilot study because of the restricted size of that study. It was added to the social domain for the main study. This criterion was formed from observing that some children entered Year Seven knowing more about music than most of the other children in the class. This meant that there were capable children who could play an important part in peer assisted group work. It happened, usually for two reasons. First, some had received very good music teaching in the primary school. (The National Curriculum for music became mandatory in primary schools in 1988 before reaching secondary schools in 1992.) Secondly, others received vocal or instrumental tuition privately or were withdrawn from their general class work in school for instrumental tuition, either singly or in small groups. These children were able to offer valuable assistance to other children in their group by becoming leaders in a positive way and possibly dominating the direction of the composition in a useful and inspiring manner when required. In this way they could help, as 'capable others', with both the completion of the composition and the progress made by the other children in the group. Socially, the able children learned to work with the less able and the less able were able to use help without having to ask the teacher. This may have reduced the feeling of inadequacy amongst some of the students during the lesson by helping to provide a better working atmosphere amongst them all. This criterion, justified by linking to Vygotsky's theory about the role of 'capable others' was included to help identify positive contributions in the process of peer assisted learning.

Vygotsky's emphasis on the use of speech in the learning process alerted me to devise a new criterion in the social domain directed towards transactive language between one capable person and one, or more, learners within each observed group. For this new criterion, time was needed to reflect on how to make it into an effective identifier of knowledge being passed by social transaction. Furthermore, whilst thinking about this criterion, the question entered my mind about possible criteria that could be used for identifying cognitive learning when it had taken place. This question was put on one side for the time being but an awareness of the issue remained with me because the importance of speech and thought dominated my thinking.

The new criterion, 'Positive discussion using transactive language' was introduced and justified by Vygotsky's theory and added to the social domain. Transactive language provided the link in his theory between the social process of passing information to the learner and the cognitive process where the learner accepts the information and internalises it. Transactive language provided an important link to my study also. This criterion looked for transactive language based on the musical task for peer assisted group work. It was clear that learners needed to understand the explanations and terminology of music in order to progress cognitively. This may be found in the observations of several group members working together or when a more capable peer is leading the work on the musical composition. Transactive language was an important new criterion because it formed a direct link from the social to the cognitive domain.

Four of the criteria that have emerged so far were socially based and designed to evaluate the quality of the process of peer assisted learning in the social domain. Only one criterion belonged to the cognitive domain. Further ideas for criteria in the cognitive domain were in the embryonic stage of being formed but not ready to emerge until the required reference to musical literature could be made to find a musical achievement content. The inspiration for developing the cognitive criteria was justified by implementing the concept of the zone of proximal development in Vygotsky's theory. All of these criteria needed to be tested against other research and other sources for peer assisted learning in music composition in Chapters Two to Four. The final list, developed from all sources, is presented and discussed in Chapter Four and shown in Table 4.1 on page 85 and Table 4.2 on page 86.

Research Design

The research design was divided into three phases: the pilot study, the review of literature for the main study and the main study itself. The pilot study was small and designed primarily to test the methods for possible use in the main study. For this, literature relating to research methodology was read and plans were made to find a school where peer assisted learning in groups was used in music composition lessons. This took place whilst I was attending a part-time course on research methodology in 1996, after I retired from teaching.

Permission for access to a secondary school for the pilot study involving Year Seven students was made in April/May of 1996 and in this study two sample groups, one from each of two classes, were selected. One sample group was of eight students and the other of four, both containing both male and female students. The research took place in the music room, corridor, or small practice room with a limited amount of time for group activity. The research focused on the question of whether peer assisted learning helped students in their acquisition of musical skills but in each of these places the researcher was aware of restrictions that hindered student progress.

Peer assisted learning was evaluated in the pilot study using three of the criteria devised during my teaching experience and re-used for the purpose of research. The pilot study tested the qualitative methods of observation and taking of field notes. These methods were used again with additional instruments introduced into the design of the main study. Two written questionnaires were designed for obtaining students' views about their work and their opinions of composing in a group situation.

The literature review for the main study began with Vygotsky's work to confirm the importance of the use of a socio-cultural support system and also to seek confirmation and development of the evaluative criteria already selected from my teaching experience and used in the pilot study. These were later confirmed, extended and developed by linking my research to the importance of support groups as a possible aid to cognitive learning in school. His theory also provided the inspiration for the development of a new criterion in the social domain and provided some direction towards developing cognitive criteria.

Searching for empirical research literature specifically in the area of music composition revealed that little had been written until the middle 1990s when more emphasis was placed on children's collaborations in their work. Therefore it was necessary to find other musical literature that explored the antecedents of peer assisted learning in music generally. Inspiration for ideas regarding the formation of further criteria, particularly of a cognitive nature was sought from music educators. Chapter Two deals with the earlier music educators and their work during the first half of the twentieth century and into the 1960s. Chapter Three explores the work of those whose influence was considered the most important in peer assisted group work during the 1970s and 1980s and culminates with the emergence of the National Curriculum for music in secondary schools in 1992. Further justification for the social criteria was found in this chapter and ideas for inclusion in the cognitive criteria.

The idea of using peer assisted learning in music composition lessons seemed appropriate for a subject where discussion and experimentation could go together. This was seen in the empirical research of Wiggins (1994), Morgan, Hargreaves and Joiner (1997; 1998), Miell and McDonald (2000), Wiggins (2000) and Burnard (1999). Their research is discussed in Chapter Four. Their findings showed opportunities for children's musical creativity to flourish. The final list of amended criteria was drawn up with validation from the literature in this chapter to become the principal means for identifying both the social aspects of peer assisted learning and the cognitive learning achieved through its use.

Reading of appropriate methodological literature concerning the approach used for case studies and how a research project of this nature might be conducted began in 1996. More extensive reading of methodological literature was required in 2000-1 for the main study and included Hitchcock and Hughes (1989), Bogdan and Biklen (1992), Wiggins (1994), Bassey (1999), Cohen, Mannion and Morrison (2000), Patton (1990) and Lincoln and Guba (1985). The choice was then made of the research methods and research instruments in preparation for the main study.

Permission for access to a different school for the main study was made in the spring of 2001 and finalised in June. There were three sample groups for observation, each

containing both boys and girls and a total of six students. Each group was from a different one of eight banded classes in Year Seven. The music teacher made the selection of students and friends were put together in some groups but this was not possible in all. The data was collected over a period of three months, September 17th to December 14th 2001. The students were observed, both in class and in their collaborative group sessions during which field notes were taken and an audio recording was made of whole lessons. Questionnaires were handed to each member of the sample groups and received back about halfway through and at the end of each of their two projects. There was an unstructured interview with the teacher and comments were recorded as they happened about the student progress or the lack of it. Table 5:2, shown in Chapter Five on page 124, was completed for each group during the observation period. There was a natural break for the half term holiday of one week at the end of October.

Data were collected from the observations and studied prior to the period of analysis and audiotapes heard and studied in relation to the field notes. The questionnaires filled in by the students were studied and noted. The data from the timed chart, Table 5:2, were fed into an Excel programme to find any possible correlations between the criteria of the social and cognitive domains. The purpose of this was to find out whether the social aspects of peer assisted learning in groups had any particular effects on the acquisition of musical skills. All relevant data obtained through the use of the criteria and also from the students and the teacher were analysed and the findings noted. The research design concluded with a written report of the findings with propositions for further research. A full discussion of the research design is in Chapter Five on page 108.

Outline of the thesis and content of each chapter

The thesis continues with a review of the literature from which I sought both social and cognitive ideas for the development of my criteria (Chapters Two to Four). Chapter Two traces the antecedents of peer assisted learning in the establishment of European music education found in the work of international music educators during the first half of the twentieth century. An antecedent could be any suggested incidence of students working collectively or being encouraged to make their own music. Due to a dearth of literature available concerning music research in secondary schools, other ways had to

be found of exploring the antecedents of peer assisted learning in composition. Chapter Two deals with this issue and one of the possible ways was through the work of innovative music educators who had the foresight to regard the inclusion of music as an important subject in school life. They established music as a viable subject within the school curriculum wherein students' spontaneity and creativity were encouraged to develop. They achieved international recognition for their efforts and without this foundation music might have remained a subject on the periphery of school life as a privately tutored subject for those who could afford it, but not for everyone. Antecedents of peer assisted learning in music were sought from the 1930s to the late 1950s. Ideas that might inspire the musical content of cognitive criteria were sought and although this chapter deals mainly with the antecedents to peer assisted learning, it was hoped that some indications might be found which would help with forming these criteria. Two new cognitive criteria emerged in this chapter and a further justification for the social criteria was developed.

Chapter Three engages with the reforms that were considered necessary to make music a subject in which students were actively engaged in a creative way from the late 1960s to the 1980s in English secondary schools. The use of social support groups, showing similar resonance to Vygotsky's theory, began to emerge during these years. Peer assisted learning was recommended and introduced during the 1980s in connection with the introduction of the new General Certificate of Secondary Education. This examination featured a composing component and it was thought useful to encourage children to work together on composing during the early years of their preparation. Of particular relevance to my research were the British music educators, some of whom were teachers, working through these reforms in the classroom with peer assisted learning in music composition in the 1970s and 1980s. They established creative composition in the classroom, using peer assisted learning in groups for this purpose. They built on what had gone before and the antecedents of peer assisted learning which had appeared in the thoughts of other educators were drawn together and prepared as a teaching method. Later an introduction to the National Curriculum regarding composition is given with details about what might be expected in student compositions and with consideration given to the students' own awareness and perception of composition and improvisation. Justification for the social criteria was made in this chapter. Ideas gained from the literature, indicating the skills and knowledge that

children were expected to achieve, justified the existing cognitive criteria. Help was sought for developing the cognitive criteria and found in the National Curriculum for music, introduced in 1992, but updated to 2000 at the time of the main study in 2001. One new cognitive criterion emerged in this chapter.

Chapter Four reviews both national and international empirical research literature concerning peer assisted learning as a teaching strategy for use specifically in music composition. The emphasis in this research has been placed mainly on primary education but particular attention is given to findings concerning the eleven to twelve year age group. Most of the research was produced after the middle 1990s. This chapter reviews research into the social process of peer assisted learning and gives insight into the students' perception of composition. Consideration is also given to the teaching problems that have been observed and includes some of the suggested strategies, which may help to foster creativity in the classroom. The criteria are validated in this chapter whilst reviewing the empirical literature concerning peer assisted learning in music composition. Two new criteria emerged for the social domain and the final list of ten criteria, six in the social domain and four in the cognitive domain, are presented with detailed explanations. The criteria are also compiled as two completed tables: Table 4.1 for the social domain and Table 4.2 for the cognitive domain. These are found on pages 85 and 86 respectively of Chapter Four.

Chapter Five reports the decisions on the research methodology for this study. It explores the nature of single focus group studies with qualitative methods involving observation, planned questionnaires and unstructured interviews. The research instruments are designed to look for the use of peer assisted learning in the acquisition of musical skills with the use of the abbreviated version of the criteria in Table 5.2.on page 124. This chapter gives details of how the research was conducted and describes the quantitative methods used for the data collected in Table 5.2 and from the questionnaires. These were designed to add to the results of the qualitative methods with anything that could be counted, and were found to be useful in illuminating aspects of the study not revealed by the qualitative methods.

Chapter Six presents the findings and analysis of the data. The findings include salient points observed with each group in relation to each of the criteria in turn. Findings from

the qualitative observations are presented first followed by the findings, some with tables and scatter graphs, of the data using quantitative methods. A summary of the findings appears at the end of the chapter beginning with the views of the students taken from the answers to their questionnaires, followed by the findings of the teacher and lastly, the researcher.

Chapter Seven concludes the thesis with the research findings and discussion. Attention is given to discoveries revealed in the two avenues of research related to the main question, as suggested in Chapter One. Other new discoveries are presented followed by additions to the existing empirical research and comments about the teaching of music using peer assisted learning. Opportunities for spontaneity and creativity were found in much of the research literature and these were found in my study also in varying amounts. Chapter Seven discusses the conclusions drawn from the research.

Conclusion

This chapter introduced the focus of the research and described what was being researched and why it was important. It stated the research question and put it into context with suggestions of two avenues of exploration related to it. The rationale confirmed the importance of peer assisted learning as a teaching method and gave the reasons why this study was undertaken.

The theory of peer assisted learning for this research was linked to Vygotsky's principles. Details were given of the links between the social criteria from my teaching experience and his theory using a support system to promote cognitive learning. A description of transactive language, sourced from his concept of the zone of proximal development was given and an explanation of the importance of internalisation of knowledge which, again, is relevant to my research.

Four criteria brought forward from my own teaching experience were introduced as evaluative criteria for this study and all found some theoretical links with the work of Vygotsky. A fifth criterion, inspired by Vygotsky's theory of learning by transaction, was devised and developed. It concerned language passed from a capable peer to a learner about composing music. These criteria emerged early in the thesis and were

discussed in this chapter because they were considered to be important for evaluating the social and cognitive processes of peer assisted learning in this study.

The penultimate section of this chapter concerned the three phases of the research design and presented the chronological progression of how the research was planned. It began with a description of the pilot study and how it was conducted to test methods that might be suitable for the main study. The second phase consisted of the empirical literature review and completion of the criteria specially designed for the identification of both the social and cognitive aspects of peer assisted learning. The reading of methodological literature was undertaken and decisions made about which methods would be appropriate for my study. The description of the main study formed the third phase, from access to the school, through data collection, to the type of data obtained, how it was analysed, and how the results were presented and discussed.

After reading Vygotsky's theory concerning the use of a support system to help children's learning it was felt that more information was required to build the scene of school music education before peer assisted learning was adopted in state schools for music composition in the 1970s. It was hoped that ideas for criteria would emerge in the next chapter because there were developments in children's musical learning which were vital to the later success of peer assisted learning. Some of these were introduced by pioneering music educators who had similar ideas about collaborative learning as those proposed by Vygotsky. Their ideas formed a new beginning for music education and these developments are discussed in Chapter Two.

CHAPTER TWO: Emergent criteria: using early music educators

Introduction

In this chapter the antecedents to peer assisted learning were sought specifically from music education, mainly in the first half of the twentieth century. Before commencing the empirical research in 2001 I sought these antecedents to help me because I felt the necessity to develop criteria for evaluating peer assisted learning in my study. It was hoped, therefore, that some of the musical aspects of learning could be found in the work of the early music educators. Their influence might inspire ideas for new criteria, particularly those in the cognitive domain. Any musical indication that could give direction to, or be incorporated into, the devising of new cognitive criteria was considered. I looked also for some evidence of children working together in groups in the pedagogies of the early educators hoping that would possibly further justify the social criteria already described in Chapter One. I began this task by looking for antecedents to peer assisted learning in their work.

An antecedent to peer assisted learning could be described as an indicator, or pointer, to one of the elements of peer assisted learning found in music composition at the end of the twentieth century. The indicators included the identification of the opportunity for creative elements to develop within an educator's pedagogy. This could involve the invention and introduction of a new teaching aid, or device, or a new musical instrument geared to the creative needs of children. The general aim was to provide some means of encouraging children to learn by becoming actively involved in making music. Some of these indicators were found in the pedagogies of innovative music educators who tried to establish or improve music as a school subject.

Antecedents to peer assisted learning were sought, therefore, in the pedagogies of the music educators who showed an interest in adopting a more child centred approach to stimulating musical learning than was normally used at the time. All had a different reason for producing their own pedagogies. Some believed in making music an interesting school subject for all children, whilst others were concerned with private teaching of instrumental and performing skills. Antecedents to children working collaboratively in performing or composing music and the encouragement of children's creativity were sought. Music educators up to the 1950s provided the groundwork in

which all children could benefit from music education. The choice was made of those whose contributions were the most significant in establishing the creativity of music, thus setting it free from the confines of restrictive classroom practices normally associated with non practical lessons.

As peer assisted learning in school music was not introduced by one music educator but evolved over many years from the ideas of many musicians and educators, it was necessary to consider small isolated ideas which appeared to be unrelated at the time but which would be developed later as an important part of peer assisted learning. These educators gradually developed theories about student creativity that enabled collaborative work to take place amongst the students themselves. This provided part of the historical context for the research undertaken in 2001.

It was not envisaged that peer collaboration in music composition, as used in 2001, would be found in the ideas and work of the early music educators. The strongest antecedent sought involved any form of work collaboration amongst students where some of the thinking and construction of knowledge was left to them to work out for themselves together. It was expected that antecedents to peer assisted learning could occur in almost any area of music making where students sang together in class or in choirs or practised playing instruments together. This collaborative antecedent would show them making decisions together about the style and quality of their performance or appraising each others' work and if they had the opportunity, devising their own musical material.

The chapter begins with an explanation of why antecedents to peer assisted learning in music education were pursued and continues by tracing the origins of some of the ideas that have become incorporated under the heading of peer assisted learning concerning children's collaborations in their music compositions. It ends with the emerging criteria and their justification found within this chapter and further confirmation for those already described in Chapter One.

The seminal ideas of music educators

During the first half of the twentieth century several innovative, European music educators produced their own individual pedagogies, each of which concerned a particular method of teaching music (Salaman, 1983:46; Bachman, 1991:82; Plummeridge. 1991:67). They contributed to reforming music education in European schools. Their new pedagogies contained elements from which the emergence of peer assisted learning could later be traced in English schools. However, none of the early educators discussed in the first part of this chapter used the terminology of peer assisted learning themselves, nor did they see their innovations in these terms. They could, however, be seen as important progenitors for the inclusion of peer assisted learning in music education in the late twentieth century.

Their pedagogies advocated the method approach in the way the curriculum was organised. These were related to the activities and conceptual approaches, which emphasised learning by doing (Labuta and Smith, 1997:64). Each provided a prescriptive programme so that both the musical content and the order in which it was presented were adhered to with the aim of involving children in singing and playing immediately. Apart from a limited amount of singing, learning by doing became a new experience for schoolchildren in English state schools when some of these innovative ideas were adopted in the 1950s and 1960s.

Several British innovators in the nineteenth century can be seen as seminal to the development of peer assisted learning, though their importance in this sphere was not recognised at the time. It could be said that they were born too soon for their ideas to become a reality but this must not detract from the fact that their isolated ideas were antecedents of peer assisted learning. Curwen (1816-1880), the inventor of the Tonic-Solfa method of learning to read music for singing, led students to discover musical facts for themselves rather than be fed with information (Watkins Shaw, 1976:30). This had the innovative effect of putting children in control of their own musical discovery and learning. Croger, a music teacher, produced a percussion instrument for children called the metallic harmonicon, which he advertised in 1859, but the support for his invention was not there (Simpson, 1976:12). His instrumental idea was the probable forerunner of the simple percussion instruments associated with peer assisted learning in

group music playing and composition in the 1970s. Yorke Trotter (1854-1934) recommended the use of pentatonic scales and proved their usefulness with student demonstrations in the very early years of the twentieth century (Simpson, 1976:12). Walford Davies (1869-1941) also drew attention to the virtues of the pentatonic scale in the 1920s and 1930s (Simpson, 1976:12). The pentatonic scale, a five-note scale with notes that sounded harmonically with each other without discordant sounds, was used with simple tuned percussion instruments in the 1970s for peer assisted group work. All of these educators produced useful, isolated ideas, which could help students to make practical creative music together but these ideas were not supported at the time. Isolated ideas such as these, however original and possibly useful, tended to be ignored or unsupported unless they were part of a pedagogy designed for teaching music.

A breakthrough in using a child centred approach to teaching and learning came with the Swiss teacher Dalcroze (1865-1950) who developed a pedagogy known as Eurythmics in 1905. Although designed initially for college students, young children who were taught his method were assisted in creating their own rhythms. Dobbs (1976) claimed that some of these rhythms were of a quality that would have been achieved by very few professional musicians. Dalcroze advocated that group work from the age of nine could prove to be a profitable activity in creative music (Bachman, 1991:82). He pioneered two very important antecedents of peer assisted learning by teaching young children to compose their own rhythms and encouraging them to work together in groups (Bachman, 1991:82). His work was admired and well supported for its pioneering originality.

From the mid-nineteenth to the mid-twentieth centuries, music educators made contributions which, when added together, were essential in making music a valid subject in schools for all children. Ideas that have become part of peer assisted learning 'were put to the test by our predecessors, who faced many of the same fundamental problems that we do' (Simpson, 1976:12). Without these contributions, intended or not, there may have been a poorer foundation for music in the curriculum and possibly no place for peer assisted learning in music composition later.

Establishing a good foundation in schools for music to flourish was the prime concern of the music educator, Kodaly (1882-1967), the Hungarian teacher and composer.

Three antecedents of peer assisted learning are linked to his pedagogy. First, he founded a musical education, inspired by his own native origins, which encompassed the needs of all children through which he emphasised that students' spontaneity must be encouraged. Spontaneity is an important antecedent to peer assisted learning because its presence implies that students are prepared to take part in music making by responding to it from within their own thinking. Secondly, traces of social collaboration can be detected in his work. He undertook the complete reform of music education in Hungary when he saw that the existing music lessons had little relevance to the students. The reason for this was, at that time, music of German culture was used in schools and songs for children were sung in German. He realised that the music was unsuitable for children and the language should be replaced with their own. Thirdly, he aimed to find musical material that was lively and attractive and would appeal to children. He enabled them to use it and to have words of songs written in their own Hungarian language (Eosze, 1962:71). There is a similarity here with Vygotsky's theory through the use of the vernacular in the words of songs. Both Vygotsky and Kodaly believed that children must be able to understand the language used in their lessons and Kodaly took this further by writing understandable music for young people to hear. Kodaly's child centred approach to the musical content of the curriculum was an important antecedent for the introduction of peer assisted learning many years later.

The context in which Kodaly developed his plan, was seen by him as necessitating ideas which we now take for granted as a normal and non-controversial part of peer assisted learning. His ideas then were, however, seen as pioneering and had controversial political resonance because Hungary was ruled by Germanic influence and tradition. Kodaly encountered the critics but his potential as an educator was recognised in the early 1920s when, 'the possibilities of music within education were revealed by the singing of the boys' choir in Psalmus Hungaricus in 1923' (Young, 1964: 82). He had difficulty convincing those in charge of the Hungarian state school system that his ideas would work, although he supported his philosophy with a teaching method and appropriate musical material, but 'he devoted himself to the arrangement and composition of suitable works and he harried the administrators' (Young, 1964: 83). Kodaly hoped that his new Singing Method would improve the standard of musical literacy throughout Hungarian schools providing a solid foundation for music education.

In 2001 the need for musical literacy was taken for granted in British schools where the learning of staff notation, for both reading and writing music, was a mandatory requirement to be taught alongside creative work in the National Curriculum (Department of Education and Skills, 2000). Its usefulness in 2001 meant that the students' own music composition could be read and performed by themselves and could also be played by other students. This therefore suggested, for my study, the inclusion of a criterion for the cognitive domain regarding the learning of staff notation. Musical literacy was not just about reading music however, it also concerned knowing how music was put together to make a composition and this should also be noted when devising cognitive criteria. Kodaly was very keen that musical literacy should become an essential part of the students' musical repertoire and that it should be taught from the primary level.

Music lessons adapted from Kodaly's Method were used in some British primary schools in 2000-2001, in the form of a prepared programme by the Voices Foundation (The Voices Foundation, 1999). Apart from developing musical literacy, Kodaly knew that vocal training encouraged other kinds of educational development such as language skills, personal confidence and self-esteem. His philosophy was that, whilst learning music helped to develop the whole person, it was of paramount importance that music should come from within and that ideas should be expressed in suitable terms (The Voices Foundation, 1999). Hence, the significance of his work for peer assisted learning when these ideas became more commonplace in children's musical activities in the 1970s.

The Kodaly Singing Method promoted vocal work with song material for school children to sing and staff notation which they could learn to read. He developed a special system to help them to read staff notation using note stems, without the note heads, for single beats. Kodaly used the ideas of earlier educators making his system based on that of Curwen (1816-1830, British), with rhythmic syllables derived from the work of Cheve (1804-1864, French). Kodaly also combined the ideas of these two earlier educators with the use of the pentatonic scale from Hungarian folk music, which proved helpful by eliminating discordant sounds (Kodaly, 1971:24, 2nd edition). The pentatonic scale was an important antecedent to children's collaborative music making because any combination of notes made pleasant musical sounds at all times. As there

were no discordant sounds children were encouraged to make music themselves which they liked to do because it always sounded pleasant.

[1]Kodaly pioneered the use of the vernacular in the form of simple folk material. Like Vygotsky, he knew that children must be able to understand the spoken language, in this case in songs, but at the same time, he wanted them to learn about the heritage and culture of their own native music. To this end he created a national music culture based on Hungarian folk songs and dances, using the Hungarian language instead of German, the language used in educational establishments. He worked on the songs very carefully by studying the rhythmic patterns of folk music in relation to their words and meaning (Eosze, 1962:83). This was both an artistic and a scientific achievement (Szabolcsi, 1964:91). He also used both melodic and rhythmic folk ideas in his own compositions, some of which have been used in English schools for many years (Young, 1964:85). His aim was to create music that was attractive for children to hear and he composed it so that they could understand it and use some of his ideas themselves in their own work. The Hary Janos Suite consists of a set of six short pieces easily understood by children because of its lively approach with an interesting story. His tuneful melodies with a well-marked pulse, appropriate harmony, and clear presentation of instruments with a variety of different timbres make attractive listening material combined with an exciting story. The Hary Janos Suite, which Kodaly made from his own opera in 1927 won immediate success and was performed in Henry Wood's Promenade Concerts in London in 1928. 'So far as the audiences were concerned, here was "modern music" not lacking in progressive ideas, but wholly intelligible and an antidote to pessimism' (Young, 1964:87).

Much is owed to Kodaly for making music listening an active pursuit for children. He provided both language and musical material at their intellectual level so that all children should be able to respond with interest and understanding. Through these means he tried to help children to develop their musical spontaneity in their lessons. He wanted all children to provide input into their musical experiences and this became a very important factor in peer assisted group work in 2001. His idea justifies my criterion about even input within group work as an indicator of all children being involved in the musical task.

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[1] There is a connection between Kodaly's perspective of children's enculturation of the Hungarian musical heritage and that of children absorbing their own culture described on page 46.

Kodaly received acclaim for his Singing Method, which was used as early as 1930 (Eosze, 1962:73). An antecedent to peer assisted learning, in the form of a support system, was apparent in his group work with children. He saw this as the essential way to teach orally, with vocal and visual contact between the teacher and the group of children. Working as a group provided support for all children as none were expected to sing alone but work together. This aspect of his work provided help during my teaching to develop the criterion concerning how well children work together as a group and whether their social interactions were effective in promoting learning. Kodaly's method was child centred, preferring music education to start with young children at nursery school level because he felt that they were receptive to music from a young age. Other music educators supported the notion that that young brains could benefit from early learning in music: 'There may be a critical period for the acquisition of musical competence and to the extent that the brain of the young child is especially plastic for this kind of learning' (Gardner, 1993:376).

Kodaly believed that singing for young children should be learned alongside language acquisition. To ensure that the teaching was appropriate in both content and method, he designed a specific learning programme to guide teachers, providing them with lesson notes on what to teach and how to teach it. The importance of this programme was seen in the fact that his lessons involved musical interactions between the teacher and the children and sometimes between the children themselves. With Kodaly, music teaching required an interactive lesson rather than learning about music from books. He believed that the spontaneous interaction, between adult and child, passed on much more in the form of socio-cultural factors, other skills and reasoning. His ideas were similar to those of Vygotsky and show very clearly in his socio-cultural approach to learning which benefits all forms of learning belonging to the higher mental functions. In this programme, the teacher was the able leader passing information and techniques to the learners. Kodaly's vocal techniques became part of the personality to be used and adapted in adult life because the teaching was not a school music sub-culture. The training in musical literacy and awareness was of great importance. 'The existence of accomplished singing skill in certain cultural groups suggests that musical achievement is not strictly a reflection of inborn ability but is susceptible to cultural stimulation and training' (Gardner, 1993:112).

Positive teaching points were raised in the work of Kodaly concerning what he wanted children to learn cognitively from their music lessons. These could be directed towards the formation of cognitive criteria because the ideas were about areas of music making which do not change as the years go by. What was relevant in the rudiments of music in the 1950s is just as relevant in 2001. It should be made clear that children working together in Kodaly's time were involved with class singing and specialised choir work, that is, vocal music and this gave them a splendid opportunity to learn to read staff notation. There was very little information about children composing then but there is no reason to suppose that his ideas could not be applied to the instrumental and vocal composition required by children in English schools in 2001.

Whereas Kodaly concentrated on making music a viable and enjoyable subject for children in Hungarian state schools, the educator/composer, Orff (1895-1982) contributed differently to school music in his native Germany. Orff influenced the school curriculum by contributing to creative music with opportunities for peer assisted learning in music composition through the use of classroom instruments and was one of the first educators to achieve international acclaim for his work. He brought together a number of existing ideas used by earlier music educators. These included the use of pentatonic scales and melodic percussion instruments in the classroom. He reintroduced these ideas at the right time in the 1950s when the reform of school music was of much concern in Germany (Simpson, 1976:12). His work showed several of the antecedents to peer assisted learning being used together as the group work in music composition began to be seen as collaborative music making. Although peer assisted learning, as such, was not mentioned, Orff's recommendations concerning group work established a support group for children's creative work in which the opportunity for peer assisted learning may have occurred. Orff believed that active musical improvisation was the way to create a new composition. This brings his thinking very much up to date with the National Curriculum in which improvisation was added as part of the component for composition (Department of Education and Skills, 2000).

In 1924 Orff became inspired when he explored a new connection between music and movement whilst a partner at the Guntherschule in Munich. This provided him with an ideal area for 'educational and artistic research, from which developed, up to 1930, the first great idea of his pedagogy, Schulwerk' (Liess, 1955:17). In this he introduced new

music teaching techniques and specially devised musical instruments into schools. The first rule of his pedagogy was that all teaching material should be written for children and from their own viewpoint (Liess, 1955:58). He was interested in how music related to him, and how he felt about it. This influenced the ideas he produced for schools where children could help each other to develop their own musical ideas with instant success. Swanwick (1988) recalls that much is owed to musical innovators of his calibre in that his emphasis, in the 1950s, was on musical involvement in the classroom, which should be immediate and for everyone to enjoy. He faced the difficulties of involving all children in making music and this is an important antecedent to peer assisted learning.

Orff persuaded musical instrument manufacturers to supply small, portable, tuned percussion instruments for students to use as classroom instruments for creative work. These instruments were technically less demanding than conventional orchestral instruments. They did not require a polished technique but allowed music to develop from instinct, or spontaneity, which it was argued was a better vehicle for developing creative music. The instruments were child centred and primitively rhythmic with the provision of melody as well. 'The xylophone, metallophone and glockenspiel, built especially for this purpose, are more suited to direct music making than the piano and the violin, with their burdensome traditions and techniques' (Liess, 1955:59). In this way, Orff founded the opportunity for students to work together instantly without the need for long periods of instruction on the playing of these percussion instruments. It was important, to Orff, that children could start learning music together at a level matching their own. It was the type of music making that children could understand. This was 'a well known and empirically established fact that learning should be matched in some manner with the child's developmental level' (Vygotsky, 1978:85).

The instruments were ideal for children to use together in groups, and this may have been the true beginning of creative peer assisted collaboration in composition. Orff considered rhythm to be the most important aspect of music and that music, movement, and speech (all rhythmic) were inseparable. He believed that children's musical development progressed similarly to the progression of musical history from primitive self-expression to a more sophisticated style as technique developed. Orff encouraged the use of the pentatonic scale for composing because of its pleasant sounding qualities. He had similar educational ideas to Vygotsky about children's education being child

centred, but he directed his work quite differently from Kodaly who was concerned chiefly with children's spontaneity and musical literacy. Orff wanted children to understand music and create their own in a socially supportive atmosphere. His specially made simple instruments were instantly playable and he encouraged children to work in groups. This justified the criterion selected for my study concerning how well children work together in their peer assisted groups because this could indicate progress being made with acquiring musical skills.

Gradually, antecedents to peer assisted learning can be seen coming together from both of these educators in the form of working together in socially supportive groups. The introduction of new easy to play percussion instruments, new lesson material, the use of the pentatonic scale and the encouragement in the use of voices for singing all helped to foster spontaneity and creativity. Both Kodaly and Orff favoured the use of the vernacular by including the pentatonic scale, one through primitive vocal music and the other through primitive instruments. Neither of these required much tuition prior to use and encouraged children's creative talents to develop with spontaneity and without the restrictive practices of conventional instruments. Both spontaneity and creativity are antecedents of peer assisted learning. Without them, even working together would lack essential features required for making a musical composition.

Probably the first real application of peer assisted learning in action with music composition occurred when Orff encouraged students to make their own music by working together, sharing ideas and resources. This again provides justification for the criterion of observing how well children work together in order to create their own compositions. The importance of children working together was a new idea in Germany in the 1950s and did not reach England until much later. This fact should not be underestimated in 2001 when children can be seen composing together in music as part of a normal lesson. Orff''s influence brought about radical changes in the organisation of music lessons to accommodate these ideas into the German state school system of the 1930s and 1940s. He brought a new perspective into school music, which included creativity and individual expression. 'Orff was never, as a composer, bound to his study; he drew his inspiration directly from life' (Liess, 1955:18). With such freedom as improvisation presented for children there were high demands on the teachers and, like Kodaly, he produced a pedagogy with teaching materials to

implement and execute his ideas. He established a training centre for teachers who could specialise in Schulwerk. The teaching method, Musik fur Kinder, presented a progression in the acquisition of skills through active expression of musical ideas. Easy ostinati (repeated rhythmic or melodic accompaniments) for singing could be devised to fit rhythmic speech patterns or a melody played on another instrument. Orff considered that active musical experience was essential in the musical life of children before being taught written notation. In the National Curriculum at Key Stage Three, the learning of notation is taken alongside composition (Department of Education and Skills, 2000). Orff's work earned the reputation of being 'truly fundamental to the establishment of a technique of musical education for the present day' (Liess, 1955:158). However, it was the practical instrumental work that was most used in English schools.

Much later, during the 1970s and 1980s, Orff's percussion instruments were still popular for use in English schools but their inadequacy was severely criticised. Although they were smaller versions of some orchestral percussion instruments, they were considered to be without adequate quality of timbre and the 'clunking of beaters' could not be regarded as having much feeling (Fletcher, 1987:136). They were also somewhat restrictive in their limited range of notes because of their small size. Their use should not be considered an end in itself but lead towards the greater use of the diatonic system (the major/minor key system). Nevertheless, these were cheaply produced instruments and easily available for developing musical ideas and improving skills and their use was still found in schools in 2001. Orff was further criticised by Swanwick (1997) for producing a school music sub-culture in the use of these instruments because it was regarded as music designed only for children, bearing little relationship to music elsewhere, except when it began to approximate to Indonesian Gamelan. Despite these criticisms, Orff's contribution to the development of school music, including group work, lay in his ability and foresight to produce musical material and suitable resources when they were most needed. The new instruments appealed to children when first introduced and their size enabled young children to move them anywhere in the classroom, making group work a new, innovative experience.

Both Kodaly and Orff were innovative for different reasons in their somewhat isolated positions in music education history. Reviewed from 2001, they stand as musical giants, each in his own particular era, for individual contributions in improving the way that music was taught in state schools. Both were seeking opportunities for all children

to develop musical skills. To help achieve this aim, Kodaly concentrated on giving children the opportunity to develop spontaneity and a natural approach in the use of music, whereas Orff concentrated on developing children's creative skills through making their own music.

It was useful, also, to compare the different attitudes to music education between Orff, who encouraged the use of primitive instruments for instant music making, and Suzuki (1898-1998), who was interested in large groups of privately funded children learning to play the violin by a pioneering method designed to promote learning from an early age (Eales, 1992:92). Although peer assisted learning was not encouraged in these large groups, because each child worked as an individual with the teacher, a form of peer assisted learning was present between parent and child. He believed very strongly in the total commitment of the child, the parent and the teacher, with triple collaboration between them. Triangulation was the key factor in the success of his method, and without it, the method failed. The parent learned about violin playing first so that supervision and support could be given at home. This operated a social support system similar to that recommended by Vygotsky (1896-1934) with the use of parental support, and also justifies my criterion concerning the help given to the learner by the more capable other.

Gardner, a Suzuki 'parent' himself, believed that Suzuki provided tuition of a high standard when the neurobiological development of the child's brain was at its most receptive. 'Of all the gifts with which individuals may be endowed, none emerges earlier than musical talent' (Gardner, 1993:99). This idea was shared by Kodaly, who believed that music education should begin with very young children but Suzuki exploited the mother/child relationship by insisting that the parent had to learn to play in order to supervise practice at home where parent and child could be regarded as peers.

Both Kodaly and Orff concentrated their efforts in the state school system, but Suzuki's method was not applied in the same situation because of the special workload, the young age of the children and the commitment of parental support required. Suzuki's pedagogy involved children in learning to play one of the most difficult instruments to master which both Kodaly and Orff had sought to avoid in the initial stages of learning music. His pedagogy was described as 'not so much a revolutionary method as a classic approach to talent education aimed at young children' (Stowell, 1992:229). Violin

playing was taught very strictly, without musical notation, and showed the lack of necessity for any spontaneous decision-making by the students (Eales, 1992:117). Suzuki differed from Orff in his approach, yet the work of both educators implemented a single important antecedent in the form of early application of peer assisted learning.

Emerging criteria for the main study

The work of the early music educators pointed me towards ideas for the development of the cognitive criteria for evaluation in this research. The first of these concerned the musical literacy that was so central to Kodaly's ideas. He wanted children to learn how to use music vocally so that it became internalised as part of their own thinking. Children were taught to read and write staff notation: a skill that helped them to acquire musical literacy as they learned about other aspects of music in their lessons. In English schools with the National Curriculum, the reading and writing of staff notation is integrated with learning to compose music where its practical use can be experienced in two ways; first by reading musical notation and secondly, by writing it to make a record of children's own compositions so that others can play or sing them. Therefore, I decided to add a new criterion to the cognitive domain entitled 'Musical literacy: competent reading and writing of staff notation'.

It seemed relevant to develop a second cognitive criterion from Kodaly's views on how musical ideas were put together as part of children's acquisition of musical literacy. I defined this criterion as 'Development of musical ideas'. In composition, this could be applied in a practical way to either vocal or instrumental music. The use of classroom percussion instruments would provide children with the opportunity to experiment with sounds and produce instant music or, alternatively recorders or electronic keyboards could be used. Acquiring musical literacy also involves learning about how musical ideas are put together. Kodaly helped children by composing attractive music specially written for them. It was important they could understand how music was constructed through the use of melodies that were lively and easy to recognise, the timbres of different orchestral instruments, and the structure of varied pieces of music. In my teaching, over a number of years, I used Kodaly's orchestral Hary Janos Suite at the beginning of Year Seven. It was valuable for the wealth of its teaching material, dressed in a lively story. The attractiveness of the music was such that children found

the fairly short pieces relatively easy to listen to and understand. This may have encouraged children to use their imaginative vision in their compositions at a later date. Although Kodaly was mostly concerned with vocal performance, these ideas can be transferred to either vocal or instrumental composition requiring the acquisition of knowledge about how music works.

There was further justification for some of the criteria in the social domain particularly from group work by Dalcroze for composing rhythms and from collaborative group work by Orff for creative music composition. The suggestion, by Dalcroze and Orff, that students should create their own compositions in groups implied that students were likely to have helped each other with the work being evenly distributed across the group. On the other hand, there may have been instances where some students were more knowledgeable and therefore more capable of helping the others. This idea justified my criterion about the more able students helping the other children in their group. There was also justification for the idea of children working collectively in Kodaly's choir work, and Orff's group work, with percussion instruments, and this showed that children could use both voices and musical instruments where appropriate in active class music making. Use of the vernacular helped children to maintain even input in their involvement in these situations. To some extent, their child centred ideas agree with the theory developed by Vygotsky where children learned within a social support system to make progress cognitively with their different musical studies.

Conclusion

This chapter has outlined the antecedents to peer assisted learning in the work of the early music educators together with the influence of their ideas on the evaluative criteria for this research. Students working together and helping each other in groups provided the most important antecedent to peer assisted learning and it was found in different circumstances with different educators. Orff's work was probably closest to the early twenty-first century peer assisted learning in group work since he had recommended that students worked together in groups with singing and playing their own music and sharing resources. Dalcroze and Suzuki had individual theories about group work whereas Kodaly first established music as a meaningful school subject and then became renowned for his excellent choir work in which students worked together to a very high standard.

Suggestions of how the cognitive criteria might be formed were found in this chapter already integrated into the history of music education. These were mainly about musical literacy, involving knowledge of how music is made up with the teaching of imaginative musical material and the reading and writing of staff notation. These ideas were incorporated into emerging criteria for the cognitive domain. There was some justification found for several of the criteria in the social domain as the approach to children's music making became more child centred in their involvement of a practical experience in learning.

Spontaneity and creativity were qualities in children's music making which emerged during these years because a child centred approach provided the opportunities for them to develop. Kodaly's 'Singing Method' involved the use of vocal techniques combined with the vernacular to produce spontaneity in children's work. Orff's concentration on group work with new portable, easy to play instruments encouraged creative musical expression to emerge in children's compositions. These qualities began to emerge in their teaching and students were able to feel that they could express themselves musically through being more in control of their own music making.

There was evidence of some important antecedents from the early music educators of the first half of the twentieth century who provided many new ideas that have become incorporated into peer assisted learning. These ideas are carried forward as part of the growth of peer assisted learning investigated in Chapter Three. During the 1970s attitudes to music education in English state schools began to change from sedentary music with an adult focus to something more exciting in the form of child centred creative music making.

CHAPTER THREE: Emergent criteria: using music educators from the 1960s to the introduction of the National Curriculum in 1992

Introduction

In seeking to develop the evaluative criteria for this research, the previous chapter investigated evidence of antecedents to peer assisted learning in music education generally during the first half of the twentieth century. This chapter continues with the gradual inclusion of the antecedents into peer assisted learning in music composition as later music educators realised its worth, although occasional contextual references are made to music education generally.

This chapter focuses on the emergence of peer assisted learning in music composition from the setting of the existing curriculum of the early 1960s in English schools. There was a need for reforms to encourage a more child-centred approach to music through the development of the students' own creative work. The evidence of these reforms is dealt with chronologically in this chapter. The development of peer assisted learning in music lessons is researched from the writings of the more recent music educators, of the late 1960s to the 1980s, who recommended its use. Their writings were selected because they were overtly specific about peer assisted learning in music composition rather than about music education generally.

Space has been given in this chapter to the music educators who helped with classroom problems by recommending how peer assisted group work should be organised to best effect in a practical subject. They suggested methods to overcome the difficulties concerning lesson content and advised on lesson continuity and classroom management. When teaching during this time I found the advice given in books by some of these educators very useful for organising classes with the new activities required for composing in groups. Their writings also showed the effects caused by educational reforms on the re-thinking of lesson structure to meet the needs of students through the initial period of the new curriculum. This had become standard teaching practice by the time of the introduction and implementation of the National Curriculum in 1992.

Throughout the chapter the research question should be considered in the light of evidence seen in the recommendations made by the music educators of the time. They

believed that peer assisted learning was focused on child centred learning applied to music composition, which they considered was well suited to students' needs. A redress of balance was needed between the existing taught methods of theory, singing and music appreciation and the more practical, child centred approach of creative composition. Children working together within a socio-cultural support system, (Vygotsky, 1966) was beginning to take hold in English state schools. The use of peer assisted learning in groups was thought to help students to formulate their own compositional ideas and help them to develop a creative attitude to music generally. In creating their own compositions, children were able to share skills and produce work that was unlikely to have been achieved by most of them individually. The use of peer assisted learning has continued in lesson practice in secondary schools to 2001 when the research for this thesis took place.

At this stage of the research, the emergent criteria were developed from the work of Vygotsky and the early music educators but there was neither process nor outcome evidence to guide my evaluations. The sources discussed in this chapter, however, were helpful in developing some of the evidence needed. As peer assisted learning became more acceptable in music lessons in English schools further indications were sought relating to the formation of new criteria and further justification for those already planned. It would then be possible to create a list of criteria critical enough to identify learning in both the social and cognitive domains.

This chapter begins with a brief description of why the music curriculum in English state schools was reformed and proceeds with the reforms made to include music composition. The importance of knowing how children learn music cognitively is explored in relation to the socio-cultural aspects of learned oral traditions from early childhood and to the thinking preceding the formulation of cognitive criteria for use in this study. The development of peer assisted learning is investigated from its introduction in the 1970s, as preparation for the examination of the General Certificate of Secondary Education in 1988. It concludes with the introduction of the National Curriculum for music introduced into secondary schools in 1992. Finally, the chapter concludes with an identification of the elements of peer assisted learning which includes the antecedents as an integral part of this learning technique.

The need for reform in the school music curriculum of the 1970s

The emergence of peer assisted learning as a significant factor in music composition became the main focus of the reform of school music in the 1970s. Working together or performing together may have been present in some schools but not usually with composition. Attitudes to the inclusion of music in the timetable began to change during the late 1960s in English schools, where it was a non-standardised, peripheral subject, and was omitted sometimes from the timetable. Without a standard curriculum, teachers were free to teach whatever they considered to be appropriate (Rainbow, 1996:18; Welch, 2001:206). There may have been some antecedents of peer assisted learning at work in the acquisition of singing skills in some grammar and secondary modern schools. It was unlikely, however, that students collaborated on compositions of their own making, although their performing skills may have improved by listening to each other's performances. The curriculum was based largely on singing, theory and musical appreciation, which involved the works of the 'great masters' of classical music (Green, 1997:144). This could not be described as a broad approach to music education but was common practice in many grammar schools where the emphasis was placed on knowledge and the quality of performance.

Some grammar schools presented the School Certificate Examination at Ordinary level in music for students at the age of 16+. For this, the work required theory, knowledge of certain set works by well-known composers and optional harmony or performance. Students at secondary modern and some comprehensive schools were encouraged to take a new examination when the Certificate of Secondary Education was introduced in 1965 (Jones, 2003:84). This was regarded generally as an easier option which ran concurrently with the Ordinary Level but assumed a more actively creative approach when the teacher-managed Mode Three was introduced and composing could be included (Jones, 2003:85). This heralded a change but the subject needed to develop a much more active approach before children's own creative music could begin to flourish. 'Musicians and educators had begun to argue for its necessity as part of a balanced music education during the 1960s and it gradually entered the curriculum through the ensuing decades' (Green, 1997:193).

The reform of the music curriculum in the 1970s was instigated by a number of national projects introduced by agencies such as the Schools Council and the Nuffield Foundation (Plummeridge, 1991:95; Everitt, 1997:67). The aim of such projects was twofold. First, to explore how music could be made more creatively practical and student centred with less of a theoretical approach. Secondly, evaluations were made of the suitability of new teaching programmes or teaching strategies. Of these, the Schools' Council Project, '*Music in the Secondary School Curriculum 1970*', was directed by John Paynter (Plummeridge, 1991:99). Paynter noted that the teaching of music differed from other arts lessons where students' own creative work had become established and was already the accepted norm. The main difference was that students painted their own pictures in art but did not compose their own songs in music lessons. He considered that the curriculum development in music lagged behind the other arts subjects (Durrant and Welch, 1995:18).

Paynter thought the difference between creative art and creative music to be significant in hindering students' progress. He decided that the music curriculum needed a practical approach that would involve students in composing musical material together by sharing ideas and skills through collaborative learning. If they were encouraged to take part in the process of composing, they might gain a better understanding of music at first hand, instead of listening only to music by other composers (Durrant and Welch, 1995:17). Particular antecedents found in the work of educators of the pre-1960s were becoming integrated now as necessary elements of group work. For example, students were encouraged to work together collaboratively, helping each other where possible to create their own compositions. This adds further justification for the inclusion of 'Working together' and initial justification for 'Positive domination of the group by one or more able students' in the list of criteria.

The new, creative approach to music lessons, through the introduction of practical composition for all students, was seen to be fulfilling the aims for music education as envisaged by Orff. This showed the progress of a creative, child-centred approach beginning to spread from Germany to England. When peer assisted learning was suggested for music composition in English schools, opinions were expressed by music educators about which type of music was best suited to children's needs in the early stages. Some educators thought that contemporary music would be the most suitable

for use with small groups (Swanwick and Taylor, 1982:123). This created a problem for some teachers who found problems with setting the level of difficulty of the musical content for peer assisted learning. It was essential to use musical ideas that students could cope with if they were to make advantageous use of working together in groups. A reminder of Vygotsky's requirement that children should be able to understand the language is appropriate here; in the case of music, the level of difficulty needed to start at the children's level, with musical material they could understand. Otherwise many children would have great difficulty in making sense of what was expected and peer assisted learning might not succeed. Students only learned effectively if their educational experiences were matched suitably to their current level of understanding (Davis, 1991:19). It was essential for my research to investigate how children learned music and developed an understanding of it generally. How children learn music through social and cognitive processes was studied and used as a reference point when considering the content of the cognitive criteria.

Social and cognitive processes involved in peer assisted learning

The research for this thesis focused on children learning together in a social context in music lessons in Year Seven. This context is linked with the socio cultural context described by Vygotsky in the first chapter, but in the case of my study, established music as something learned through socialising. This is described in my study in terms of Year Seven children's musical experience in England in 2001. [2]Therefore, whatever musical culture was absorbed during a child's early life is likely to influence the ideas that spring spontaneously from the mind when involved in composing with peer assisted learning. Musical social collaboration in England begins with young children hearing nursery rhymes from parents, siblings, and at school. Of all the gifts that children possess, musical talent can often be seen to emerge early (Gardner, 1993:99). This is probably because music is a natural gift and has a useful history in calling for parental attention. It has strong social connotations and is a means of identifying the child's own place in society and individual learning of musical songs and jingles begins when children are very young. It is possible that the attention given by parents in the form of

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[2] Enculturation in this instance describes the music background surrounding young children, which they absorb as their musical heritage. This heritage grows as the children grow and it is the music source they use later in music composition lessons in the classroom.

musical games and children's songs may encourage them to take an interest in socialising early with music.

Children absorb the musical cultures that surround them through socialising and listening. This is true of a folk tradition but can also be applied to jazz or popular music and to the taught music lessons they receive as part of the National Curriculum in school. It is done through socialising with those who already belong to a certain musical culture. There may be a strong creative element in the social context of the singing and playing of songs that were once learned only from oral tradition. Their use stimulated emotional involvement with the events or feelings that remained in the mind afterwards (Williams, 1983:164). In countries with an oral song tradition, the memory is often tapped into by the use of both the rhythm and the words. The musical memory may be aided by meaningful, rhyming words coupled with rhythmic application (Baddeley, 1996:349). This tradition implies the use of the vernacular, where the antecedent of using the children's own language, introduced by Kodaly, became an integral part of musical lyrics in the repertoire of children's songs. These traditions may re-emerge in the lyrics of children's compositions when they are older. The issue about children absorbing musical cultures through socialisation is very strong and often linked with specific cultures in music that become part of the child's repertoire. This is referred to again later in the context of schoolwork and the musical ideas that children produce for their compositions.

It was important to consider what children might achieve cognitively through the process of peer assisted learning in the musical setting of this research. This helped me to devise suitable cognitive criteria for use in my study. Most of the social criteria were described in Chapter One and discussed in relation to Vygotsky's theory, but the selection of cognitive criteria was left until later because they required musical content to record the student's achievement through the process of peer assisted learning. Final decisions about these were made only after reviewing the empirical literature and considering the requirements of the updated National Curriculum for 2000. As the effectiveness of peer assisted learning in enhancing the internalisation of compositional skills is the focus for this research, a review of some of the aspects of cognitive learning is appropriate. Studying cognition could indicate where the use of peer assisted learning might help in acquiring skills.

Some skills developed naturally through being crucial to the survival of the human race as it evolved over many years. Scientific thinking, for example, could be seen as a necessary rational process that allowed logical thinking and controlled observations of the world. Other mental processes were developed because they were initially appealing but then evolution seemed to provide a natural propensity for behaving in adaptive ways. These appeared to include the use of language and music in the process of survival. Therefore, humans have a motivation for music so that it has become natural to indulge in it as an enjoyable pastime (Sloboda, 1985:268). This underlines the importance of the use of 'transactive language' and 'creating musical ideas with vision and imagination'.

Through many years the brain has evolved a specific method of dealing with musical information. There are two hemispheres in the brain and the perception of music shows that both can operate musically but with different functions. The left hemisphere deals with analytical processes, with an interest in component parts, verbal encoding and musical notation (Gardner, 1993:119). The right hemisphere deals more with integrating components into a whole and with recognising patterns and is the side of the brain that recognises sensitivity to pitch (Gardner, 1993:118). When the stimuli are non-verbal, as in music, these are usually processed in the right hemisphere, so the perception of music offers an interesting working of both hemispheres (Williams, 1983:35). Therefore, although music can be processed in both hemispheres of the brain, it is usually considered to be a right hemisphere technique because musical learning is connected with other types of learning such as kinaesthetic and multi-sensory skills (Williams, 1983:35).

It was important to relate the musical working of the brain to the students in my research when working in their peer- assisted groups. There may be both the musically unpractised and the practised amongst them in the same class and working in the same group and how each listens to music determines in which hemisphere the information is processed. For instance, those who are relatively unsophisticated or unpractised in music show a left ear/right hemisphere working of the music they hear because it is heard as a whole entity. In contrast, those who are more sophisticated show a right ear/left hemisphere preference to include analytical processes and details of musical notation (Williams, 1983:27).

This augured well for using peer assisted learning because the potential was there to integrate all students into the common goal of composing a piece of music together. The use of the left hemisphere, which deals analytically, may increase with training, although the reason for this is not exactly clear (Gardner, 1993:119). Many children, however, find the learning of musical staff notation difficult because learning to read music requires the analytical skills that are processed in the left hemisphere, the use of which may increase with practice. This may not be the only reason, however, because musical literacy may be affected by cultural issues such as comparing the value of music learning with language learning. There is emphasis from a very early age at home and school for linguistic attainment, therefore, music compares less favourably with linguistic skills because it has a relatively low niche in the culture. It is more acceptable to society to be musically illiterate and consequently the motivation to learn notation is under-stressed (Gardner, 1993:109). Finally, there were several musical skills to be considered when selecting cognitive criteria for my study, for example, the improvement in the use of staff notation whilst realising that some children will find this skill very hard to comprehend. Named skills are necessary for indicating the progress made through the process of peer assisted learning towards the cognitive acquisition of a particular musical skill. The final choice of cognitive criteria was made with reference to the National Curriculum (2000) guidelines indicating which skills were required.

Peer assisted learning in music composition during the late 1970s

A curriculum for teaching composing in class groups was in use during the late 1970s. It was designed to encourage students to use their ears more widely by listening to sounds from life as well as musical sounds. The type of music composed by the avante-garde composers of the late 1960s, which provided a new and attractive method of self-expression, was eventually selected as being the most suitable for children to work with. More emphasis was placed on colour, texture and density in their music instead of using the more traditional methods of melody, harmony and metre (Salaman, 1983:69). The new music called for the availability of unconventional instruments for students to use in their peer assisted learning sessions. These consisted of easily available recycled materials such as yoghurt pots containing dried peas or small stones. When the pots were shaken, the dried peas gave a different sound 'colour' from the more distinct

sound 'colour' of the small stones. A new way of writing down representations of sounds, known as graphic notation, was devised. Its use allowed creativity to flourish and it was hoped that learning to read and write staff notation from students who could already use it would be encouraged. Unfortunately, this did not always happen because some regarded the use of graphic notation as making a 'virtue of musical illiteracy' (Rainbow, 1996:17). Not every one agreed with the ideas about the new creative content either or thought that art and music should be 'creatively moulded' in the same way (Fletcher, 1987:41). However, the outcome for peer assisted learning was positive because teachers found it appropriate for any situation, any standard, and the use of graphic notation omitted the need for pre-knowledge of musical staff notation. As a result of this Farmer (1979) considered that literacy skills should be developed with a practical approach, which would also help students to gain a better understanding of how music operates.

The use of peer assisted learning in groups was recommended by Paynter (1970) whose ideas included, wittingly or unwittingly, some of the antecedents seen in the general music education of earlier educators. Like Vygotsky, he thought that the more capable children could help others through positive discussion and like Dalcroze and Orff he encouraged students to work together on their music compositions. He was firm in suggesting the type of musical content for composition, which would encourage spontaneity to flourish. Kodaly had first tried to encourage children's spontaneity by reforming the content of Hungarian school music curriculum. Now it was happening in English state schools through the teaching of composition involving both instrumental and vocal sounds. Children's creative musical ideas were put to good use in their own compositions through the sharing of ideas with the new musical material. The introduction of experimental work with sound exploration gave freedom to discover new ways of making and recording sound. Graphic notation was introduced for indicating and recording written representations of sound patterns. Fletcher's (1987) opinion of this was that he did not believe that music was a 'creative' art like painting to be done by groups as a progressive course. He preferred that group work should be introductory only.

Some teachers were reluctant initially to take composition lessons. The main reason for this was thought to be the difficulty in organising practical lessons, which required good

class control for the practical approach of peer assisted learning. The second reason appeared to be the new lesson content which, for some, was controversial; not everyone agreed with the content recommended nor felt that group composition had any artistic value (Fletcher, 1987:44). One of the reasons why some teachers did not like the new music was because it did not rely on use of the major/minor scale system, but had a free atonal approach without the use of traditional tonal harmony. On the other hand, the new approach, adventurous in concept, required vision and imagination when compared with previous methods, but it had the advantage of attracting new, young teachers to the profession who started with the new creative work (Rainbow, 1996:17). Another reason for disquiet was that it was not always made clear about what was to be taught, how it was to be done and how children's work could be assessed. This needed to be resolved because of the teachers' responsibility in delivering the curriculum (Plummeridge, 1991:8). There was help provided for teachers. This was known as In Service Educational Training (INSET) and was provided for music teachers in secondary schools by some local education authorities. Help was offered with the practical issues of teaching composition required from Year Seven. Emphasis was laid upon organising the curriculum content for collaborative group work so that the process leading to a completed composition was made clearer (Paynter and Aston, 1970; Swanwick, 1994).

Many teachers appeared to need advice on lesson content and classroom management in order to cope with the new system. As a result, several teachers, Paynter (1970) and Salaman (1983) among them, first solved the problems of using the new material in their own lessons. They were able to offer help by writing books about their experiences in dealing with their own difficulties with peer assisted group work. In his book for teachers, *Sound and Silence* (1970), Paynter provided a plan for students to learn by doing in making music together. Paynter and Salaman were following a similar path to some of the earlier educators who, as practitioners, first discovered new ideas and provided appropriate information for others in the form of a pedagogy. The names of Dalcroze, Kodaly and Orff spring to mind. Paynter wrote lesson plans to provide assistance with both the organisation of lesson content and the avoidance of certain pitfalls. He suggested work for large groups and whole classes. Later, when some experience of the new class method of activity had been practised, work could be provided for smaller groups or even pairs (Paynter, 1982). In this way peer assisted learning could develop more naturally without too much intimidation for either teacher

or students. With a flexible approach to group work, he published inventive ideas in well-illustrated books for teachers and a students' version for use in the classroom. He saw children as musical improvisers or inventors: either in order to encourage something called self-expression, or as a direct way of coming to understand how music actually works. This was done through various activities that required decision-making and where sound could be used as an 'expressive medium' (Swanwick, 1988:14).

Paynter's recommendations concerning peer group collaborations were successfully received because his work proved useful to teachers. His ideas were positive, workable and realistic but many of the ideas that he received credit for were adapted or recycled from the innovations of earlier educators (Simpson, 1976:12). Unlike some of the earlier British music educators, who were ahead of their time, his ideas and principles in updating lesson content and teaching techniques were accepted. Like Orff he was able to produce workable ideas precisely when they were needed. He was considered to be an 'influential advocate' during the late 1960s and early 1970s in music education (Swanwick, 1988:14).

Problems hindering the progress of group work in the 1980s

The implementation of peer assisted learning was hindered by class management problems, which arose from the organisation of peer assisted group work. Farmer (1979) emphasised that excellent classroom organisation was required on the part of the teacher in both lesson preparation and execution. He gave advice for planning the syllabus to maintain continuity from one lesson stage to the next, giving classroom management and control the best chance of effective maintenance. It was difficult for teachers to organise group work efficiently when they were unsure how much content to include in tasks. These needed to be challenging enough to foster interest and also achievable at the same time. This aspect of the new curriculum was one of the hardest for teachers to implement. Limitations had to be set for students so that their tasks had obtainable 'specifics' so that they should see progress in their work by achieving results (Salaman, 1983:73).

Paynter tried to reconcile his ideas concerning the management of peer-assisted groups with the curriculum content. He became one of the first of the modern educators to

recommend peer assisted group work for its benefit as a child centred approach and its usefulness in making the best use of inadequate resources. To best achieve the anticipated benefits, group size was important, 'five people to a group is a good number: it offers a pool of useful ideas and with five pairs of hands it is possible to play several instruments at once' (Paynter and Aston, 1970:13). Later, having gained experience of this type of music making, children might feel ready to work in smaller groups or pairs or even individually.

Limited working space and lack of resources also impeded the practical implementation of peer assisted learning in some schools and this was a problem, which was difficult to solve. It was difficult to stimulate creative group work in a single small classroom (Everitt, 1997:71). Problems of too few work spaces and too much noise led music educators to suggest that teachers should press hard for better accommodation. This would hopefully provide better facilities for dividing a class into smaller peer assisted groups working independently of each other (Paynter, 1982:78). The lack of instrumental resources was common (Everitt, 1997:71). Teachers and students helped to solve this problem by recycling household waste products and containers to provide cheap percussion instruments. Kennedy (1993) described how the composer, Benjamin Britten, used recycled mugs in 'Noye's Fludde'. Raindrops were represented by 'slung mugs' of differing sizes and thickness, suspended by their handles from a string between two poles and struck with a wooden spoon. Such innovations proved useful in imaginative peer collaborations with either sand papers rubbed together or metal piping of different lengths, slung and struck with a beater. The recycling of materials for use as musical instruments was not a new idea nor was their use for making music in groups a modern invention. These ideas were innovated by earlier music educators although not put into practical use during their time (Simpson, 1976:12).

The new curriculum content received severe criticism from those who did not agree with the effects it made on students' musical education. The classroom instruments used for composing, particularly Orff's xylophones were considered to be poor regarding their sound quality and often regarded as mere toys by adolescents at secondary level. Furthermore, as instruments became more diverse the criticism became stronger. 'From violins to sitars and from electric guitars to classroom instruments', it was thought that much of the active music-making in secondary school

classrooms was being made on instruments whose sound quality was lacking in potential (Fletcher, 1987:136). Many music teachers agreed with Fletcher that all classroom sounds, Orff percussion instruments in particular, were restricted in their sound quality (Salaman, 1983:48). It is important to note that these criticisms were about the quality of the instruments, not the quality of peer assisted group work.

Progress of peer assisted learning in the 1980s

Peer assisted learning became established for use in composition during the 1980s because it was considered to be the most useful teaching method available at the time. It was also a means of sharing classroom resources fairly amongst the children. Collaborative group work both sanctioned and encouraged discussion amongst children about their work together, which was an advantage for them. They discovered that they were not just allowed to talk during group work but were encouraged to discuss their own ideas about composition as they learned. Agreeing and disagreeing were part of the process of choosing what should be included in a composition and how it should sound. This resulted in a more positive child centred approach to music in its relevance to students' needs. The emphasis was placed on a wide range of styles and creative work which made both teaching and learning more enjoyable through the increased motivation shown by students (Durrant and Welch, 1995:18).

A further advantage was the importance of decision-making by students in their peer-assisted groups. This became an essential feature of the new curriculum because students could not compose music effectively without making agreed decisions of what to include and what to omit. This turned the peer assisted learning situation into a decision-making exercise for every piece of completed work. If students were making genuine decisions about their handling of musical sounds then, by definition, they were creating their own musical compositions (Salaman, 1983:67; Swanwick, 1988:14).

This new method of working together inspired ideas amongst the children who discussed them first before either including or omitting them in the composition by means of effective decision making. Each group work session was a time of cognitive thinking about the selection of material for the finished composition. Decision-making

could happen at any time during the composing process and should be listed where appropriate with the criteria, in either or both, of the social or cognitive domains.

An advantage of peer assisted learning was that it made teaching and learning more enjoyable resulting in increased motivation by students. Some teachers expressed surprise at the new opportunities for collaboration and learning that group work offered in giving students new impetus to working in a classroom (Salaman, 1983:69). Students enjoyed the new experience in spite of existing difficulties. Other teachers claimed similar experiences with motivated students who enjoyed taking part and sharing musical ideas (Plummeridge, 1991:50). Students in peer assisted groups found a new impetus for motivation and learning which was a positive aspect of the new music curriculum.

Swanwick (1994) emphasised the advantage of the social implications of peer assisted learning, where imitation and emulation are very strong in groups of young people of a similar age. He thought that students were likely to learn more readily from each other than from instruction by teachers. Learning music in a social context such as this provided better opportunities to broaden the range of students' experience through involvement with building plans, images and schemes, which were brought to fruition by a joint effort. It also provided the opportunity to develop useful, critical assessment of each other's contributions. Students were encouraged to acquire the necessary skills and take advantage of the creative composition on offer in any type of classroom conditions. Traditional methods in the past had offered little opportunity for students to participate in ways that were directed by them (Paynter, 1982:136).

The advantage to children of the social value of peer assisted learning in groups was stressed also by Ben-Tovim (1979) because it provided an enjoyable way of sharing musical ideas and expertise. There was considerable social and musical value in working together for fun because it provided a situation where students could listen to each other and become a peer group critical audience. This issue set a value on the opinion of each student in the group, giving the work of each a validity not necessarily found in other areas of classroom music. Making music in groups broadens the range of experience including critical assessment of the playing of others (Swanwick, 1996:241). Composing music was found to be a very personal activity but able students provide an

asset to the learning of composition in peer assisted groups when their knowledge and expertise is shared with others. 'Composition itself is a relatively private creative act, the nature of which remains largely concealed in the minds of the composers' (Green, 1997:194). This is strengthened by the sharing of ideas between students and is a natural social phenomenon where any group of human beings becomes more than 'the sum of its parts' (Joyce and Weil, 1986:v).

The thoughts of Swanwick (1994; 1996) and Ben Tovim (1979) together provide a summary of the reasons why working together in groups could be beneficial to children's creative music making. These, along with the ideas of Paynter and Salaman, validated the social criteria already planned for my study. The benefits of working together appeared to outweigh any disadvantages that might be encountered and revealed that something extra may occur during the process, adding unexpected quality to the completed composition. Sharing ideas together may be advantageous for planning compositions and may also help children to develop a sense of critical assessment towards each other's work.

Educational recognition of peer assisted learning in preparation for music composition at secondary level in the late 1980s and early 1990s

Peer assisted learning emerged from its long period of growth and earned its place with music composition in a major educational initiative in England and Wales, the General Certificate of Secondary Education (1988), an examination for students in Year Eleven, age 16+. After experimental work had been concluded, the inclusion of composition in the curriculum was ratified by Her Majesty's Inspectorate in 1985 and was incorporated into the General Certificate of Secondary Education National Criteria of 1986. Two examination systems were combined and enhanced with a creative composition component to produce the General Certificate of Secondary Education, which was examined for the first time in 1988. This was particularly suitable for students in comprehensive schools, which covered all abilities and the general reaction to its introduction was good (Durrant and Welch, 1995:18).

Peer assisted learning in groups was emphasised as being an appropriate method of preparing for the General Certificate of Secondary Education during Years Seven to

Nine. Composing became compulsory in the music curriculum. Many teachers were helped by the innovative ideas and advice from music educators as composition, using both vocal and instrumental work, became an essential feature of music lessons (Paynter and Aston, 1970:13). Eventually, it was the national criteria for the General Certificate of Secondary Education and the detailed format of the examinations that signalled official acceptance of many of the innovative ideas about music education that had gone before (Swanwick, 1996:22).

This suggested that group work was proving beneficial to most students but strong evidence of this was hard to find in the writings of most educators except for Salaman (1983) who described dividing his class into groups and presenting them with specific tasks at which they worked purposefully. Gradually the groups improved by making important decisions about dynamics, tempo, instrumentation and form. Salaman (1983) claimed that there was evidence of gradual improvement in the acquisition of skills through the use of peer assisted learning in groups. He was one of the teachers who reconciled content with peer assisted group learning in the teaching of composition. Other teachers may not have found enough evidence in their own lessons to claim that this was true in their situation. Paynter emphasised that new styles of teaching with new content must be handled effectively for progress to be made and he considered that group work provided the best conditions for inventive work to flourish (Salaman, 1983:69). His work was summarised as having many ideas, of which two are of overriding importance to peer assisted learning: inventive processes, in which decision-making was vital; and group work, where the best conditions could be found for ideas to flourish and where students could share ideas between themselves. This indicated his satisfaction that it was the best method available at the time.

The new National Curriculum for music (Department of Education and Science, 1992) was the second major initiative in which group work featured in Years Seven to Nine as preparation for the music composition component, along with listening and performing. Although composition was required as a component for the music examination in the General Certificate of Secondary Education from its inception in 1988, it was not until 1992 that the new National Curriculum was introduced into Year Seven at secondary level, the age studied in this thesis. Many of the experiences and ideas concerning creative composition were carried forward and became embodied in the new National

Curriculum for music (Green, 1997:193; Everitt, 1997:70; Welch, 2001:206). It was written so that all children should experience music through listening, performing and composing activities. The Department of Education and Science and many local education authorities had previously published numerous documents about the 'listening, performing, composing' framework and it was considered to be a good model for music education (Plummeridge, 1991:47). Music teaching in state schools was required by law to follow these guidelines in the National Curriculum for music (Department of Education and Skills, 2000). It has remained in practice since 1992 and has been constantly updated with the addition of improvising in the composing section. A brief description of the relevant parts of the current National Curriculum for composition, used in 2001, is shown in Appendix 1 on page 217. This explains the type of work expected in music lessons, particularly composition and from which the data was obtained for this thesis in 2001.

[3]In addition to taught music in schools, a wealth of different musical genres exists in the public domain, which may have bearing on students' ideas of composition. This means that the ideas generated in peer assisted group work may show influences of many musical cultures other than those absorbed during early childhood and those previously taught in English schools. Musical styles from other countries have already earned their place in the music curriculum. 'Popular music, jazz and many other musical styles from around the world' have recently entered the formal educational scene' (Green, 1997:237). Radio, television, compact discs and audiotapes have brought music into the lives of almost everyone. A range of international genres of music influences children in discos, supermarkets and other public places and have become part of the popular culture of the twenty first century. Global music has formed part of the socio-cultural context for musical development and learning as these frame significant experiences from childhood through to adulthood (Welch, 2001:203). Ordinary people rather than highly trained musical practitioners have produced much of the popular music culture that has been heard in recent years. Therefore, popular music should be taken into consideration when discussing how children perceive music and composition. They will hear and think about music in the light of current practices, which may influence

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[3] This enculturation comes from the music that children hear all around them whatever their cultural background may be and they bring ideas from the sounds of twenty-first century global music to their composition lessons. These are musical sounds in which they have a 'shared understanding', a Vygotskian concept, elucidated by Rogoff (1991).

their musical thinking in school when composing and improvising. Working through a composition in a collaborative group may involve a rich background of musical styles to choose from. The importance of some children knowing different musical styles may enhance the knowledge and skills of other members of the group.

Emerging criteria for the main study

The literature reviewed in this chapter indicated that it was important to know what to look for when seeking how much children had learned cognitively. Furthermore the literature showed that almost every aspect of cognitive learning involved conscious decision-making on the part of group members. My ideas for the cognitive criteria, with reference to the literature were, in this chapter, updated to agree with the National Curriculum of 2000. This included knowing what to look for with each cognitive criterion (process evidence) and what the outcome of the composing session might be (outcome evidence). The two cognitive criteria already discussed in Chapters One and Two were extended to show progress from one to the other in cognitive learning.

First, the criterion that emerged from my personal experiences and Vygotsky's work (Chapter One), 'Creating musical ideas with vision and imagination' became, 'Creating musical ideas with vision, imagination and a sense of adventure'. This criterion looked for a willingness to experiment with ideas or fragments of notation, which could be sung, spoken, clapped or played on instruments and built into rhythmic or melodic motifs. It was expected that children would disagree at times about each other's ideas but the spirit sought in this criterion was the willingness to take part and learn what worked in a composition and what did not. It was important that group members should not be afraid to experiment with their ideas, trying them vocally or with instruments, to see what the effects were like before selecting motifs to keep and use in the composition.

The second cognitive criterion, inspired by Kodaly's thoughts in Chapter Two was also extended. This involved the development of musical ideas but the requirements of the National Curriculum of 2000 made me decide to add the extension about the musical elements. It became 'Development of musical ideas with progress in the use of musical elements'. It looked for the skill of making rhythmic or melodic motifs develop into

longer rhythms or melodies with some indication of inclusion of other elements of music, such as timbre (differing sound qualities) or form (the composition structure), perhaps in three sections as ABA, with one melody or rhythm, followed by a second and then finished by repeating the first melody or rhythm again. Changes in dynamics, which involved changing the volume or speed to vary the music would make the composition more interesting.

The development of a third cognitive criterion was suggested solely by my reading for this chapter. It followed on from the second by indicating further progress in the use of elements and dynamics in learning how to compose. I decided to entitle it as 'Confidence in using musical elements, expanding musical ideas and applying greater difficulty'. Not all groups might reach this stage but some would and this criterion would be particularly for those who have made good progress. Using this criterion, my observations would particularly need to note discussions and decisions about constructing a more advanced piece of music, showing the learning of musical skills required to complete a composition of greater difficulty.

All three criteria discussed above indicate what was sought in cognitive learning as the peer assisted learning sessions gave the children opportunities to develop their composing skills. It was important to emphasise that work of this nature involved decision-making in all three criteria. Also, opportunities for spontaneity and creativity to develop were sought where appropriate with these criteria. The fourth cognitive criterion concerning musical literacy through learning staff notation could possibly occur at any stage during composition depending on the existing knowledge of the group members. To clarify its inclusion at any time, it was placed last in the list of cognitive criteria. Staff notation was a requirement of the National Curriculum, learned alongside the composing of music, but had its own place as a criterion. Although it was not a creative composing skill in itself, it was needed to record a written version of the composition so that others, who had not seen or heard it before, could perform it.

A brief summary of the range of the cognitive domain at the end of this chapter shows that it covered the creation of musical ideas with vision, imagination and a sense of adventure and showed development of those musical ideas with progress in the use of the elements of music. It was hoped that children could continue their work by showing

confidence in the use of the musical elements, in expanding musical ideas and applying greater difficulty. Finally, they would be learning to be musically literate with competent reading and writing of staff notation.

Most of the social criteria were justified again during the review of the literature in this chapter as group work was repeatedly recommended for children to facilitate the learning of composition together. The range of the social domain at the end of this chapter showed that it covered working together with social cohesion and with even input in each group. Positive discussion using transactive communication was sought where help from capable peers might lead or dominate the direction taken by the group.

This concludes the thoughts about the criteria. It was hoped to validate them in the review of the empirical literature in the next chapter. The full list is summarised in Table 4.1 and Table 4.2 on pages 85 and 86 respectively.

Conclusion

Both the early and later music educators contributed in some way to the growth of peer assisted learning. The period between the late sixties and late eighties showed that Paynter and Salaman, in particular, built on the antecedents to peer assisted learning of Dalcroze, Kodaly and Orff, with new initiatives so that peer assisted learning evolved steadily from one decade to the next. The most important antecedent of working collectively became the new peer assisted element in collaborative group work. Students were expected to help each other by exchanging ideas and helping with skills. Innovative strategies were produced to deal effectively with the content of the new curriculum and with classroom organisation in the change over from teacher based work to student-based work. Through the collective efforts of the educators, music flourished and developed as a creative subject, with the necessary freedom for the interchange of ideas, making collaboration between students in the classroom an acceptable and enjoyable part of the learning process. The literature reviewed showed how students became better motivated, worked purposefully, and enjoyed the experience. The words of Paynter and Aston (1970) underpin the notion that group work is at the heart of this research where children work together as they discuss their compositions.

Three criteria of the cognitive domain were brought together to follow on from those of the social domain and indicate progress in cognitive learning in music composition. Considerable help was found in this chapter in extending these criteria. The criterion concerning staff notation now appears last in the group where it is more conveniently placed for observing children at work because it refers to the progress made in the learning of staff notation whilst composing. The criteria of the social domain were justified by the suggestions and advice given by the music educators of the time who attempted to sort out the problems with the new creative curriculum and its organisation. In brief, considerable progress was made with finding ideas for extending cognitive criteria and support for those of the social criteria already in existence. Gradually the criteria emerged concerning the development of music composition in schools during the latter part of the twentieth century. In the 1970s and 1980s many of these experiences were seen through the eyes of those who identified with the main problems found in the new approach to music education and then gave the benefit of their experience to other teachers.

The introduction of peer assisted learning heralded an era of new creativity unseen before in children's music making. Much progress was made during these years in fostering creativity amongst students as they composed. The music educators built on the compositional activities founded by Dalcroze and Orff. Progress was made from there by continually reinforcing the child centred approach with reforms in the music curriculum and the establishment of practical experience in composition, which encouraged children to create ideas through experimentation. The changes from sedentary theoretical music lessons to active, creative, music making, peer assisted lessons evolved steadily and changed the face of music education in English state schools. This gave the opportunity for spontaneous reaction to music composition as part of their creative enterprise. Opportunities were found for children to develop their creative skills in music by becoming composers.

The next chapter provides a review of the empirical music literature concerning peer assisted learning in music composition dating from 1994. The literature is divided between projects researched in English schools and those researched elsewhere. The criteria are validated by the findings in the empirical literature whilst it is being reviewed. There is a description of how the criteria for my study were finally drawn

together with the inclusion of two more new ones in the social domain and an explanation of the process evidence and outcome evidence for each criterion.

CHAPTER FOUR: Finalising the criteria: investigating empirical research into peer assisted learning in music composition

Introduction

This chapter provides a review of research literature concerning peer assisted learning in music composition. It reports findings about the effects that peer assisted learning had on students' work and of what the children might achieve through its use. None of the work reviewed was an exact replication of my study; differences are indicated where appropriate as the chapter proceeds. Research studies in an English context are reviewed separately from those set in other countries because of their differing contexts, in particular, the mandatory nature of the National Curriculum in English schools. This formed part of the natural settings required for my research into peer assisted learning and therefore had to be used to inform my evaluative criteria as discussed in the previous chapter. Other countries from which research is cited either have no national or state (provincial) requirements or ones that are considerably less detailed than England's or are advisory rather than mandatory.

Links were sought with any references in the music literature showing the influence of Vygotsky (Chapter One) and it was found that most of research reviewed in this chapter made general reference to Vygotsky's theory regarding the use of socio-cultural support groups. References to specific concepts in his theory are noted with the research concerned.

Attention was given to any of the strategies that helped to foster and evaluate creativity in the classroom and any specific evidence of peer assisted learning highlighted by the researchers. Both spontaneity and creativity were qualities in children's musical responses to practical work that emerged in musical learning in Chapter Two. They were developed further in the writings about peer assisted learning in Chapter Three. Incidences of the development of both spontaneity and creativity were also sought in the empirical music research reviewed in this chapter.

With justification of the criteria provided from the literature reviewed in the first three chapters it was hoped that evidence for their validation would be found in the research in peer assisted learning in music composition reviewed in this chapter. It was essential

to think about what was sought and what I expected to find as a result with each criterion, in terms of process and outcome evidence. It was then possible to complete the list of criteria in the form of two tables, one for each domain, so that the final versions were ready for use in collecting the data.

Before the middle 1990s there was very little empirical research into peer assisted learning in music composition because of its relatively late introduction into the school music curriculum. Therefore it is not 'bolstered by a long history of educational debate or a variety of pedagogic methods' (Green, 1997:193). Peer assisted learning was however, researched earlier in other subjects in the classroom where it was found to be successful. A brief look, in this introduction, at examples of the literature about peer assisted learning's application in subjects other than music revealed that students working together could assist each other in the learning process.

With peer assisted group work in other areas, stimulation in learning was noted by Light and Blaye (1990) concerning the effective use of collaborative learning with micro-computers in the classroom. They reviewed research studies, some undertaken by themselves, which concerned children, of both primary and secondary level in the United Kingdom, learning to work together with computers. Individual subject areas were not specified. Also in the United Kingdom the paired reading scheme invented by Roger Morgan in the mid-1970s consisted of training parents and children in reading together with both verbal and written input, practice and feedback. The children were given a free choice of reading material. Evidence from research claimed that children progressed at about three times the normal rate in reading accuracy and about five times the normal rate in reading comprehension (Topping, 1986:172). In the United States of America paired reading was used widely to improve the reading skills of primary school age children, although Block and Dellamura (2000) claimed that 'buddy pairing' quite often involved peer tutoring with an older student. All of these comments revealed that stimulation could be gained from collaborative learning with benefits in language communication and interaction. It was possible to assume that the benefits gained through collaborative learning in reading could be applied by similar means to other subject areas, such as composing music, where both knowledge and practical skills could be enhanced.

The first part of this chapter reviews findings from research projects related to the effects of peer assisted learning on the composing of music in English schools, followed by those researched from outside England. Attention was given to any evidence of the elements of peer assisted learning highlighted by researchers and any strategies that helped to foster creativity in the classroom. The second part of the chapter begins by gathering together and explaining the emerging criteria and any amendments to previous criteria before discussing and presenting the complete list of criteria formulated for data collection.

Projects and findings researched in English schools since 1996

Peer assisted learning in music composition was slow to attract research after the introduction of the National Curriculum in 1988. It was taught first at primary level but all children up to the age of fourteen would eventually study music. When research into music composition was begun in the middle 1990s, therefore, it began to attract interest at primary level but not necessarily in peer assisted learning. Until the late 1990s there was 'little research on the nature of collaboration in such musical tasks' and less on the more specific peer assisted learning, 'despite the current emphasis on group work and joint activity in music teaching' (Miell and MacDonald, 2000:350). Some of the findings reviewed in my study concern children from the primary age range as young as eight to secondary children in Year Seven. The latter were the most relevant to my study although the research findings for younger children were found to be useful.

Observation, of peer assisted friendship groups within natural settings similar to my study, was the focus of three teams of researchers: Miell and MacDonald (2000), MacDonald, Miell and Mitchell (2002) and Morgan, Hargreaves and Joiner (1997; 2000). The foci differed however, from my study because their studies were directed towards how peer assisted learning groups were formed initially and both the musical and cognitive processes were compared with those which contained friends and those which did not. In my study the focus was placed on the process of peer assisted learning after the groups were formed. My study concentrated more on the interaction of members in each group with peer assisted learning in the acquisition of musical skills although notice was taken of interaction between friends and non-friends.

Miell and MacDonald (2000) researched the effects of collaborative learning amongst friends and non-friends in Year Seven. This offered the same context (Year Seven) as in my study and as there was little research published on music learning for this age group when preparing mine, it was considered very important to review their findings. 'Children's creative collaborations: the importance of friendship when working together on a musical composition' investigated the social processes involved in children's collaborative compositions and acknowledged the ideas of Vygotsky about the benefit to children of learning through social co-operation with their peers. Miell and MacDonald's aim was to discover the process of interaction, both verbal and musical, in pairs where friends worked together compared with pairs who were not friends. Two issues were involved. The first was the nature of the task where little research was published previously examining children's open-ended creative work in Year Seven. Secondly, the focus was on the nature of children's interaction and the processes affecting it. Attention was paid to the amount of verbal interaction, which extended and developed musical ideas through the use of 'transactive' language or 'on task' talk. This contrasted with the amount of verbal interaction that did not lead anywhere and which Miell and MacDonald referred to as 'non-transactive' language or 'off task'talk.

Two of my criteria were validated by their research: 'working together' in their research involved children composing together as in my study, and 'transactive language' in their research was similar to mine in 'positive discussion using transactive language'. The latter referred to the passing of knowledge from a more capable peer to a learner. The attention shown in the use of 'transactive language' in the research of Miell and MacDonald (2000) revealed the emphasis they placed on the importance of speech in the transference of knowledge from a more capable peer to a learner. Furthermore, their attention paid to the amount of verbal interaction that did not lead anywhere suggested that a researcher should be prepared to observe children who may not want to work at all. My teaching experience revealed that, realistically, this can happen and so devising a criterion that noted most of the time spent in just talking or arguing without using transactive language about the task in hand should be added to the social domain.

The findings in their research showed that there was an advantage for friends in the same gender pairs where interactions included high levels of transactive communication in both the verbal and musical domains (Miell and MacDonald, 2000:364). Their ease

of conversational flow enabled them to progress with their work and build on each other's musical ideas because they had an established shared knowledge and a way of interacting which allowed them to anticipate each other's ideas (Miell and MacDonald, 2000:365). The disadvantage for non-friends was that they needed to establish a way of working with each other before finding a shared view of the task from where they were able to start to compare their views about it (ibid:365). It was thought that some teachers feared that allowing students to work with their friends would lead to too much off-task 'chat' but the results did not support this theory (ibid:366). It was found that single gender pairs of students worked together better and produced more transactive conversation than mixed pairs. Their study was planned with specific pairs focused on friendship and gender. My research was designed to keep the natural settings and events of the lesson as intact as possible allowing the teacher to choose the groups, the gender and the group size, with or without friends, as she would in her own lessons.

'An empirical investigation of the social and musical processes involved in children's collaborative compositions' was new research by MacDonald, Miell and Mitchell (2000) and reviewed from a proceedings paper. Their research, published later as 'An investigation of children's musical collaborations: the effect of friendship and age' (MacDonald, Miell and Mitchell, 2002) concentrated on friendship and non-friendship groups with forty primary school girls in pairs, twenty of which were aged eleven and twenty aged eight.

The findings highlighted the impact that social factors such as friendship have on younger children, both upon the process and the outcome of collaborative composition. The musical and verbal communication actions of the friendship pairs were qualitatively different from those of the non-friends pairs where the friends produced more transactive communication than the non-friends (MacDonald, Miell and Mitchell, 2002:158). Friends tended to build on, extend and elaborate each other's ideas expressed both in the talk and the music. This implied that peer assisted learning worked better with friends than with non-friends. The findings showed that eleven years old students, working with a friend, took part in more transactive conversation both verbally and musically than the younger children. Of interest to this study was the fact that eleven years old students were found to be less dependent on friendship groups than eight year olds who showed significant advantages in verbal interaction when they

had friends to work with. The older children took part in more musical repetition, practised their work and seemed to be better able to organise themselves than the younger ones (MacDonald, Miell and Mitchell, 2002:159). This was of particular interest because there is little difference in age between eleven and twelve years and these findings could provide useful indications for what might be expected with the twelve years old students in my study. Teacher evaluations were used for assessing the compositions produced by both age groups. Findings showed little difference in either the collaborative process or the quality of compositions between the eleven years old student friendship and non-friendship pairs. However, the compositions from the pairs of younger friends were judged to be of better quality than those from non-friends (ibid:159).

The pattern of findings for eleven years olds differed from the research by Miell and MacDonald (2000) where friendship was found to have a facilitating effect when working on collaborative compositions. The reason given for this was the nature of the tasks which they asked the students to do, the difference being that it was more free and open ended in 2000 and more structured, requiring less negotiation, in the task of 2002 (MacDonald, Miell and Mitchell, 2002:158). The setting of structured or unstructured work was considered likely to produce different levels of collaboration between students. Therefore, the nature of the task, whether it was structured or not, was borne in mind when the teacher set the task for peer assisted learning groups in my study.

In the research reviewed so far in this chapter, emphasis was placed on the good effect that friendship played on children's work when collaborating in creative music. Although friendship was not the main focus in my research, looking for the difference in attitudes among friends and non-friends was noted because it could be an important factor in the smooth running of a group, or alternatively, a group where the members cannot work well together. Miell and MacDonald (2000) and MacDonald, Miell and Mitchell (2002) chose pairs for their studies but in my study the teacher chose six children, of male and female gender, for each of the sample groups. Friendships amongst the children were not taken into account when she selected the groups. It was doubtful that the teacher knew who were friends and who were not from the experience of only two weeks so each group was likely to contain some friends and some non-friends.

Other researchers focused on gender differences rather than friendship. Morgan, Hargreaves and Joiner (1997) observed peer assisted groups, each of four children, from the ages of nine to eleven in their research entitled, 'How do children make music? Composition in small groups'. Their research investigated the process of peer collaboration in composition in order to find out how children worked together in small groups and how the processes affected the music that emerged. The findings were from two studies, one in 1997 and the other in 2000. These studies assessed the influence of verbal and non-verbal communication on the quality of children's group compositions with considerable focus placed on gender differences. In peer collaboration, they stressed the importance of 'the social instrument of language' that could promote group productivity and individual learning. There was reference to Vygotsky and transactive language in their literature section. The use of the term 'task directed talk' also appeared in their studies. This appeared to be a meaningful term to put with my criterion of 'working together'. There would then be no doubt that the children were working together with discussion directed towards the given task, indicating that they were talking about the composition and discussing its merits rather than digressing on some other aspect of music not related to the task.

The findings from the first study revealed a positive relationship between the amount of 'task-directed' talk and the quality of the group compositions. Girls were found to dominate verbally in mixed gender groups by taking part in significantly more verbal activity than boys (Morgan, Hargreaves and Joiner, 1997:18). Their findings supported the idea that co-ordination of joint activity was essential to the effectiveness of the resulting composition but suggested that children communicated their ideas in both verbal and non-verbal ways. It was evident that children could communicate through the music itself and this was important for group productivity (ibid:19). The findings from the second study revealed much more non-verbal communication than in the first, possibly due to the non-narrative nature of the topic. There was more 'task directed play' in the second study which showed that ideas were communicated non-verbally suggesting that the less verbal the topic, the less need there was for students to verbalise their thoughts (ibid:20). Boys and girls were capable of co-operating in mixed gender groups but did so more effectively in same gender groups (ibid:21). Although my study did not focus on gender interaction specifically, notice was taken of how boys and girls interacted with each other in peer assisted learning in their groups and whether the girls

tended to dominate verbally. Morgan, Hargreaves and Joiner (1997; 2000) chose groups of four children some of mixed gender and some single whereas in my study, the teacher chose each sample group of six which all were of mixed gender.

Morgan, Hargreaves and Joiner (2000) followed a similar subject area to their previous research in a later project but with an added third study. This project was researched from a proceedings paper of 1998 and has since been published in a book. Both the book and the proceedings paper are entitled 'Children's collaborative music composition: Communication through music'. The proceedings paper investigated the process of peer collaboration with emphasis on the use of both verbal and non-verbal interaction and with a focus on gender differences.

The findings from the first study indicated that eight years old children in groups of four communicated their ideas through the music and that this type of communication was important for group productivity. There was also more task directed talk than play, probably due, as before to the nature of the topic where the stimulus was highly verbal (Morgan, Hargreaves and Joiner, 2000:57). The second study revealed no relationship between group productivity and task directed talk. Instead ideas were presented musically rather than verbally because there was more playing than talking. This was thought to be due to the nature of the task where it was possible to express ideas more efficiently through the music than through verbal discussion (ibid:59).

The third study again showed higher levels of musical interaction and lower levels of talk directed activity. This was possibly because of the emotional nature of the topic: a piece of music to make someone happy. This was an emotionally based task in which it was possible to express ideas more easily through the music rather than the spoken language. The findings showed that communication occurred through the music itself rather than through words. Therefore talking about a composition may not necessarily be productive because of the necessity to experience ideas through the music itself (Morgan, Hargreaves and Joiner, 2000:60).

The researchers stated that these three studies provided 'the support for those who claim that communication among children in collaborating groups is crucial for group productivity' (Morgan, Hargreaves and Joiner, 2000:60). There were two types of

communication featured: verbal and musical. However, the terminology used the generic term 'collaborative learning' rather than the more specific peer assisted learning where behavioural interaction between the students in the process of peer assisted learning would also be in focus. Transactive language communication and transactive musical (non-verbal) communication were important social aspects to look for in peer assisted learning in music composition in my research study. Both Morgan, Hargreaves and Joiner (2000) and Miell and MacDonald (2000) examined transactive language in their research as a means of assessing the value of collaborative learning. Although the original idea came from Vygotsky, it is reassuring to know that other researchers have put considerable value on its use. This confirms its place again as a criterion in my study.

A doctoral research thesis 'Into different worlds: children's experience of musical improvisation and composition' (Burnard, 1999) included collaboration but was not focused on it entirely as a learning method. It researched the nature of children's compositions with the focus directed towards the discovery of the children's own perception of the meanings of their compositions. The aim was to explore children's experiences and understanding in both composing and improvising. Not all of the children wished to work in groups in this Year Seven study and their experiences served as a contrast to those who did. The findings were divided into the two areas of improvisation and composition but those most appropriate to peer assisted learning are reviewed here as important features of group collaboration. For the children who chose to work in pairs or trios, reference was made to Vygotsky's zone of proximal development and its effect. 'The zone of proximal development develops the idea that the process of composing, as with learning, may begin to occur first through interaction with others before being internalised as mental representation' (Burnard, 1999:303). Burnard appeared to be the only researcher reviewed in this chapter who referred to the zone of proximal development and also a trio of children, indicating a small group rather than a dyadic collaboration. This validated my own reference to the concept of the zone of proximal development from which some help was derived for the use of cognitive criteria in my study.

The findings showed that the nature of children's groups was always changing because new partnerships were formed continually as a means of participating and exploring

different roles within the learning process. This meant that roles amongst the students were constantly negotiated and re-negotiated. Whereas one day, one student took a leading role in the preparation of the improvisation, the same student was involved next time in a different role with someone else as leader. Certain qualities in relationships developed amongst the children in groups. The role of the leader was important for starting and stopping the group's performance of their work (Burnard, 1999:288). Students devised a set of roles within their groups, which characterised relationships between players and the rest of the group (Burnard, 1999:289). Feedback between the students was found to be a common characteristic of collaborative work and helpful in progressing with music making (Burnard, 1999:302). The role played by those happy to act as leaders in a group validates my criterion about 'positive domination of the group by one or more able students working as leaders'. Whilst this criterion would identify the positive aspects of children working together, it was possible that some might try to dominate group work in a disruptive manner. Preparation for this happening in my study was made by devising a new criterion to identify the antithesis of good leadership, where disruptive behaviour occurred and dominated the group's work. This criterion looked for negative domination by some members unwilling to work with the group. Certainly, behaviour by one or more students trying to disrupt or annoy the others could have a marked effect on peer assisted learning and on the production of a completed composition.

Findings showed that the children's choice of the most suitable group size varied according to the tasks and pairings were favoured for both composing and improvising. Pairings for composing extended the skills of the partners and offered some protection from total exposure to the rest of the class, which could be experienced when working alone. Working in pairs was the preferred group size for most students in this research who wished to work together although most of the students preferred to work alone (Burnard, 1999:299). The students chose whether to work in peer assisted groups or work alone in Burnard's study. In my study, when both the teacher and the children had agreed that all should work in groups there was no opportunity for anyone to opt out of this situation later.

Some of the children found there were advantages with peer assisted learning which did not happen when working alone. Some students realised they could 'feel strong

together' because all in the group faced a similar situation. The outcome was that group settings enabled students to go beyond their own potential (Burnard, 1999:279). There were also personal advantages to be gained from being helped by another, more experienced, student which required accepting uncertainty, sharing empathy and swapping ideas in give and take exchanges (Burnard, 1999:280). Some preferred working alone and saw it as an opportunity to 'go on your own' without having 'to fit in with whatever the other player is doing' though few students found great satisfaction in working alone as most preferred sharing work with others (Burnard, 1999:280). This prompted an idea for my study about asking the children in the sample groups, during data collection, whether they would have preferred to work alone. If so, the next question might ask if they would have been able to produce a composition alone that would have been comparable to the group composition.

Burnard (1999) found that the group members were constantly changing their roles to suit the talents and ideas in the process of completing the task. This presented some very revealing facets of children's relationships and how their changing positions in the group were re-negotiated to suit whatever purpose was required. Children's relationships, group cohesion or breakaway group members and the reasons for such changes were found to be a feature of group work where the focus was on the process of working together. This validates my criterion about 'Positive domination by able peers'. It was possible that group leaders would change roles quite frequently so that all could share the benefit of the talents in the group.

Projects and findings researched in schools outside England since 1994

In the United States of America, peer assisted learning in music composition was used as a teaching strategy without being required by a mandatory National Curriculum as in England and with more freedom of choice in both the lesson content and methods of teaching.

Wiggins (1994) researched in elementary schools (primary level) in the United States of America. Her work is seminal in the research of the process of children's collaborative music composition and was in direct contrast to that of Kratus (1989) who researched compositions produced by individual children under laboratory conditions. Wiggins

focused on 'Children's strategies for solving compositional problems with peers', which investigated the social interaction between group members as they shared musical ideas, devised strategies to solve compositional problems and made decisions about the construction of musical compositions. The research focus was directed towards the effects that the process of peer assisted learning had on students` composition lessons with a view to what could be achieved. This was very much in line with the social constructivist ideas of Vygotsky and acknowledged as such.

Wiggins' (1994) research, in which she was both teacher and researcher, took place in the music room, the natural place for children to interact with both people and music. This method of observing children in the process of composing together in the music room was very close to my research, but the conditions of the 'natural settings' were different. In the United States the situation of the mandatory English National Curriculum with all its requirements and restrictions on time does not exist. Therefore, the natural settings of the music room in the United States are not quite the same as those in Britain. It is likely, however, that the musical culture of the children in the United States will be influenced both by what is taught in the classroom and what they absorb from the musical culture of the area in which they live. The musical differences found internationally, also regionally with the same country, have bearing on the musical culture absorbed by young children. This issue was discussed in Chapter Three.

Two important issues emerged from Wiggins's research. First, students' comments and musical exchanges with their peers, revealed how they selected their ideas for composition during the collaborative process. Analysis of these peer interactions provided insight into their musical learning process (Wiggins, 1994:232). Secondly, it was found to be essential for research to take place in the social setting of the classroom where the processes of the interaction with music were within the normal context and students interacted with both music and people (Wiggins, 1994:233). As children composed they used the strategy of seeing the whole idea of the composition first, moving into fragments or parts during its construction until these came together again as the whole composition emerged. They had a holistic conception of composition during peer assisted sessions mainly because it played an important role in the performing and listening experiences of the students (Wiggins, 1994:250). They reflected the teacher's

work within the whole lesson structure stressing a particular way of thinking and the students made progress in learning through its use. The importance of the role of the teacher when introducing the lesson, as it leads into the peer assisted learning session is stressed here and this aspect was treated as an important feature in the lessons in my study because it provided the foundation for each of the peer assisted learning sessions.

Professor Wiggins elaborated further on these findings at a seminar in the Open University, England in May 2002, when it was explained that there was a shared understanding between students, which manifested itself within the groups creating music together. Evidence of this was shown in the musical elements which students produced as they shared, extended, varied and answered one another's or the teacher's ideas (Wiggins, 2002). This shared understanding showed in the students' musical conversations, their verbal conversations, evaluations of work and musical decisions. It influenced the type of music chosen as appropriate for the work they were doing and in the way they drew upon musical knowledge and understandings of their musical communities (Wiggins, 2002). Although these students were not actually described as improving their composing skills, it was implied in the way they handled their work together. They drew upon their shared understanding of the problem and what they believed the solution should be in terms of what they knew of their musical world. In this way they became skilled at solving problems and in deciding how to use musical material for the best results in a composition.

Further research exploring the nature of shared musical understanding amongst elementary age children was found in. 'The nature of shared musical understanding and its role in empowering independent musical thinking' (Wiggins, 2000). Findings from the data show that shared understanding was reflected in the musical elements of the children's products and further manifested itself in the students' musical conversations which were sometimes almost devoid of verbal interaction (Wiggins, 2000:84).

Shared understanding was also reflected in the ways that students drew upon musical knowledge and understanding of the various musical communities. This included the style characteristics of both American musical culture and music used in the classroom (Wiggins, 2000:85). The evidence of 'shared understanding', a Vygotskian concept elucidated by Rogoff (1991), was shown in a very practical way when students

collaborated together on a piece of music. One student began a musical idea that was completed by a second student. Shared understanding is shown also as an example of the modern interpretation of an oral musical tradition belonging to a particular culture, as suggested by Williams (1983) and Baddeley (1996) in Chapter Three.

A final and very important issue concerning peer assisted learning was raised by the evidence showing that the group's vision of the work was greater than the ideas of the individuals in the group (Wiggins, 2000:85). A characteristic of shared understanding may be defined as a shared vision of what was appropriate in a composition which reflected several identifiable influences such as local culture, the media, musical instrumental or singing tuition as well as classroom teaching, all of which became part of children's musical experiences and appeared in their work. A 'vision of what was appropriate' should be acknowledged here because this was chosen as a cognitive criterion for observing children in my research, with the addition of imaginative use of ideas and musical material.

The issue of a 'vision of what is appropriate' validates my criterion regarding the 'vision' that many children already possess about what sounds right and what is not acceptable. Using their own imaginative ideas within this parameter, evident in much of Wiggins' research cited in this chapter, showed that children can progress with music composition and work out the necessary problems that will arise. They do this together and learn cognitively as they progress with the task. This is an important validation of my criterion.

Also in the United States of America, Kaschub (2000) researched 'Sixth grade students descriptions of their individual and collaborative music composition processes and products initiated from prompted and unprompted task structures'. This investigated the differences between individual and collaborative composition by the eleven years old students. The research took place in the United States of America. The project teamed a local folk musician to lead as a composer/guide with the music teacher and twenty to twenty-five children, a normal class size. Individual group sizes were not specified. Although the teacher and composer designed the project together, the composer served as the primary instructor for the composition with the teacher assisting with supporting and management activities.

The findings revealed that there was a higher level of motivation among students in collaborating groups as they helped each other to solve musical problems. They generated more ideas together than when they worked individually and they liked their joint compositions better. Their view was that joint composing experiences appeal to students and, most importantly, challenge them to develop distinct skills (Kaschub, 2000:4). The opinions of these students revealed that they were challenged and motivated into developing skills. This was attributed to the use of peer assisted learning but nothing was said about being taught by the folk musician instead of their usual music teacher. It appeared that the students developed an enthusiastic approach to their work and gained enjoyment from it. Higher motivation through the use of collaborative group work is not a new idea, however. It was noticed in the 1970s in British schools by Salaman (1983) and was referred to in Chapter Three on page 55.

The teacher's role in preparing for peer assisted learning has already been mentioned because it was an important factor in how students produce their own work (Wiggins, 1994:250). The focus in 'Painting a big soup: Teaching and learning in a second-grade general music classroom' (Wiggins and Bodoin, 1998) was directed towards the role of the teacher rather than the children. This time, the teacher selected two target children, one boy and one girl requested by the researcher, in an elementary school in the United States of America. The findings related to the student/teacher interaction and focused on the importance of the relationship of the teacher and the children in carrying out a practical music lesson. A collection of recommendations for teachers was given later in the research paper entitled 'Teacher control and creativity' (Wiggins, 1999) where attention was drawn to students learning together and their perception of the music they created. It was stressed that students were unlikely to find the opportunity to develop their ideas and skills within their groups unless teaching techniques, which fostered students` creativity were used to make best use of peer assisted learning lessons (Wiggins, 1999:30). It is an important issue that encouraging creativity in children's work is the responsibility of the teacher. Much can be done to foster creativity in the choice of teaching material used and in the way the lesson is presented.

The findings for this paper were taken from several unnamed sources from Wiggins's own research and experience over a number of years. These showed that it was important for teachers to encourage students to experiment freely with their ideas and at

the same time keep the class under control. The long tradition of teacher control in directing work was no longer appropriate with the freedom required for groups to work together and teachers sometimes constructed their lessons in ways that failed to promote creativity by hampering it instead (Wiggins, 1999:31). Terminology and expressions should be made as clear as possible in what the students are supposed to do and they need to be given enough freedom to explore their own musical ideas (Wiggins, 1999:35).

It was essential to observe how the teacher introduced and managed peer assisted learning in music lessons in my study also. The importance of the teacher's recognition of the composing process, by allowing students to work out their own ideas, may well be reflected in the work of the students. It is clear that the teacher's introduction to group work should help children to help themselves in the peer assisted learning session but in my study, certain events occurred during data collection that made some of these aspects of the teacher's role in peer assisted learning difficult to assess. Therefore, her role is described as contextual rather than interpreted as integral to the success or not of peer assisted learning.

During the pilot study the teacher was relatively free to teach what she liked to enable children to pursue a creative composition but by 2001 the situation had changed. The learning of staff notation had been joined by other requirements in the National Curriculum to be taught alongside composing. Asking for staff notation to be written down whilst composing may mean that the outcome is a less creative piece than it might have been (Wiggins, 1999:32). Furthermore, my research began in September when the Year Seven children from eighteen different feeder primary schools had been in the school only two weeks. The teacher found that the standard of musical knowledge of many of the children was little more than that expected at the end of Key StageTwo. It was probable that composing in groups was too early for some children who needed longer preparation before trying peer assisted learning. These situations, however, may affect all music teachers and although important, were not the main reasons why her role was dealt with contextually.

The main reasons were that further restrictions were placed upon the teacher when two of the classes to be researched were withdrawn from one lesson each week. To save

time, most students were helped with suggested pitch notes or rhythms on which to build their own music but these can hinder rather than help their thought processes by keeping them within a framework not of their own making. There were other interruptions to a number of lessons with all three classes, which caused disruption to the creative sessions. Added to that, there was the paucity of varied, workable, classroom musical instruments to supply each group at the same time. Children could rarely choose which instruments they would like for their compositions because it was necessary for the teacher to share some instruments among groups. By taking all of these points into consideration, it was considered unfair in the circumstances to associate the skill of the teacher with the success or otherwise of peer assisted learning. As a result, the role of the teacherin my study was not subjected to critical interpretive 'academic' comment.

Peer assisted learning has also been researched in Greece where it was not bound by a National Curriculum nor conducted in natural lesson settings (Kanellopoulos, 2000). It explored peer assisted learning through a cultural psychological perspective. The research focused on the process of peer assisted learning but was seeking the roots of what composing meant to eight year old children and how they learned from a cognitive viewpoint. The findings showed that music making was a form of joint activity with children communicating their intentions to each other. The young students were, more often than not, goal oriented in their purpose of producing a composition although sometimes the group diverted into aimless improvising which led nowhere. Findings showed that there was dialogue between the music and the students and amongst the students themselves. The focus was on a shared intention and the references to musical dialogue implied the existence of the intention to communicate. With this, and with verbal dialogue, the joint musical activity created an emergent structure (Kanellopoulos, 2000:204).

The research, as a whole, appeared less restricted compared with English classes because the research was not in natural lesson settings with the limitations with which English schools were subject in 2001. An important finding in his research, which relates to my own, was that he found that the compositions improved considerably as the work progressed because children were working together on the experience. The focus on peer assisted learning may prove to show that students can acquire musical

skills through collaborative work and produce better work together than when alone. Therefore, seeking such a phenomenon in my research became a possibility.

This raised the question of exactly what caused the phenomenon to occur and the answer may lie in the quality of the social relationships within the group. An essential feature of good collaboration was probably founded on the building of good relationships amongst the students concerned. The task provided a challenge and each student experienced making progress by making contributions to the group project. This does not mean that children all progress at the same rate within a group however. One of the reasons for group work is that the more able provide 'scaffolding' for the less able and so all make some progress if the less able students show they are willing to learn too. Collaborative work provided a position of strength where motivation was increased when students supported each other in the group composition setting. Working together resulted in an increased level of motivation as expressed by the students themselves (Kashub, 2000). It was evident that there was a shared musical understanding between children of a similar age and culture that worked together on a musical task where some of the 'culture' was acquired from the local community or other source and some through the lesson itself. It was revealed in the ways that children composed, both verbally and musically and in the way that they shared an understanding of how a composition should sound (Wiggins, 1999). It was claimed that these qualities encouraged children to produce better work together than they might have produced alone and it was more fun in the process. Therefore, whilst peer assisted learning was shown in a favourable light generally for its usefulness as a learning method, there was a positive feel that students were motivated and helped by sharing ideas and were able to produce better work in a group.

Most researchers, in England and elsewhere, appeared to agree that there were two ways for students to communicate in their collaborative groups: verbally and musically. Other agreements among researchers related to the nature of peer assisted learning, the nature of groups, or the inherent nature of the children themselves. For instance, successful peer assisted learning was shown to identify special features in the cohesive working of groups, which allowed both social and cognitive abilities to prosper. It was thought that friends who liked each other and worked well together would presumably bring their verbal and musical skills into the collaborative music making session and

this was found to be true. Friendship groups were found to produce better work in groups than non-friends through 'on task' talk or 'transactive language' which was more likely to occur with friends and prove helpful in the progress of the task (Morgan, Hargreaves and Joiner, 1997; 1998; Miell and MacDonald, 2000; 2002).

The nature of groups, where friendship or non-friendship was not an issue, showed that students could work together flexibly and change roles when necessary or when it was felt to be appropriate. An example of this was when one who was a leader in the lesson played a different identity role in the next lesson (Burnard, 1999). Children were found to work beyond their individual potential when involved with a group situation. This agrees with the findings in the research of Kanellopoulos (2000), whose children were younger and had a different national culture, but their work also showed an emergent structure as it progressed beyond their individual potential. An 'emergent structure' produced and supported the reality of learning beyond one's potential (Kanellopoulos, 2000; Burnard, 1999).

Having reviewed and described the findings of a number of researchers in the first part of this chapter it was possible to both validate existing criteria and create new ideas for two new criteria from the findings of some of the researchers. The emergent criteria are dealt with fully in the next part of this chapter. The final list of ten criteria is presented and discussed in both tabular and defined form beginning on page 84.

Emerging criteria for the main study

Two new criteria were developed during the review of the research projects on peer assisted learning in musical composition in this chapter. The first new criterion was placed in the list after 'Positive discussion using transactive language' in the social domain. This was named, 'Negative argument using non-transactive language and/or musical distraction'. It concerned the lack of transactive language during the observed session when the conversations between the group members did not lead anywhere, or conversation was not related to the set task. Unnecessary playing of instruments and singing not connected with the task were described as musical distraction. This criterion was introduced whilst reviewing the research of Miell and MacDonald (2000) on page 67.

The second new criterion was placed after, 'Positive domination of the group by one or more able students working as leaders.' This was named, 'Negative domination by members unwilling to work with the group' and concerned a negative attitude by any members who had a disruptive influence and were unwilling to work with anyone else. A negative attitude by one or more children in the group could have an adverse effect on the task by hindering the progress of the other children and by dominating the situation. My study was intended to be realistic and the possibility of children disrupting a group session at some time could happen. Although negative in its approach, this criterion would indicate the breakdown of the group's direction of thoughts, possibly resulting in fragmentation of their work and where peer assisted learning may be less effective. These reasons appeared to be good enough for also adding this criterion to the social domain. This criterion was introduced whilst reviewing the research of Burnard (1999) on page 73. With the two new criteria placed in the social domain there were now three pairs of criteria, each connected in some way. This was also intended to make the criteria easier to use during observation sessions because they followed in logical order. It was hoped that neither of the two new criteria would be needed but they were available if required.

One criterion was extended during the review of literature in this chapter. After reading the research by Morgan, Hargreaves and Joiner (1997) and Miell and Macdonald (2000), the criterion about 'working together as a group with social cohesion' was amended by adding 'and task directed talk'. This emphasised that it was the given task for the composition that was followed and not unconnected work, or material for some other musical activity in school.

There were now ten criteria. It was my original intention to have four each of social and cognitive criteria but this idea was rejected because I felt it was wise to include the two new social criteria. This was partly because their inclusion would help my observation technique and partly because I thought they would clarify the occurrence of little or no group work being attempted. They also widened the range of the social criteria. The choice of the ratio of six social to four cognitive criteria was deemed appropriate because it was possible to find cognitive learning had taken place by using the four cognitive criteria named. Before finalising the cognitive criteria, they were checked alongside the relevant National Curriculum for music to see that they agreed with the

mandatory guidelines.

One of the most challenging aspects of this study was to develop these criteria, from both my teaching experience and the literature, for evaluating the effects of peer assisted learning in my research. Ideas about the benefits of shared learning were fairly well documented, particularly in core subject areas such as literacy or numeracy, by Topping and Ehly (1998), but no appropriate criteria for evaluating the peer assisted learning process itself were given. None of the researchers cited in this chapter, who observed peer assisted learning in a musical context, suggested a suitable set of criteria for evaluating the social learning process itself.

As a result of the deliberations described in the first four chapters of this thesis, my criteria emerged specifically for researching Year Seven students working with peer assisted learning in groups in the natural settings of their music lessons guided by the National Curriculum. The criteria focused on the attitudes, behaviour and interaction amongst the six students in each of the three sample groups. It was likely that meanings and perceptions within these interactions would require interpretation rather than measurement, although the possibility of using measurement was considered and so the criteria were devised to be flexible in their methodological application.

To fulfill this need, these criteria were created for use in my research with either qualitative or quantitative methods, or a mix of both. This helped me to focus on methods that would meet the requirements of the study and discover the answer to the research question. Although most of the researchers reviewed in this chapter chose to use either a qualitative or a quantitative study, it was possible to use a mixture of methods, if required, where the findings from one could support the findings of the other, as suggested by Hitchcock and Hughes (1989:38). This idea was borne in mind. The next section presents the final list of criteria, first in tabular form followed by a brief description and subsequently, on page 86 a descriptive explanation begins of each criterion in turn.

Final criteria for the main study

The ten criteria are presented now in this chapter with their requirements for process and outcome evidence. Each domain is shown in tabular form, as Table 4.1 for the

Social Domain on page 85 and Table 4.2 for the Cognitive Domain on page 86.

Table 4.1 Qualities of peer assisted learning: social domain

Criterion	Process Evidence	Outcome Evidence
1. Working together as a group with social cohesion and task directed talk.	Look for cohesive atmosphere, willingness to work together making decisions about ideas for the composition.	Cohesive group relationships should help produce a composition in the time allowed.
2. Even input by each member suggesting ideas or learning from the others in the group.	Look for an evenly distributed input of spontaneous musical ideas by all members of the group.	Ideas shared, adopted and worked between all members in learning to construct a composition.
3. Positive discussion of ideas using transactive language and /or musical communication with voices or percussion instruments.	Look for an amiable interaction of musical ideas where the most students are working and assisting the others.	Good use of transactive language or musical communication should produce a composition with which all members are satisfied
4. Negative argument using non-transactive language or musical distraction.	Look for a non-amiable working pattern where some are unwilling, for whatever reason, to work with the group.	Fragmentation of ideas, which may result in unfinished work and dissatisfaction with the composition.
5. Positive domination of group by one or more able students working as leaders.	Look for helpful persons who may be appointed by the group to lead in improving the composition.	Effective, knowledgeable leadership should produce a good composition with learning for all members in the group
6. Negative domination by members unwilling to work with the group.	Look for a difficult working situation, with members unhappily unable to do very little with collaboration.	Breakdown of relationships within the group may affect the production of a satisfactory composition.

Table 4.1 is divided into three columns and the first two, entitled Criterion and Process Evidence, refer directly to the peer assisted learning process in music composition. These columns indicate the social aspects concerning how the group might work together towards their completed task and in so doing promote cognitive learning. Each criterion looked for particular aspects of collaborative, or in some cases, non-collaborative behaviour in relationship patterns. The process evidence was devised to show probable modes of behaviour that might be seen. The outcome evidence refers to possible social progress of the group that might help to produce a completed composition and suggests some possible results of how the composition might finish.

Table 4.2 Qualities of peer assisted learning: cognitive domain

Criterion	Process Evidence	Outcome Evidence
7. Creating musical ideas with vision, imagination and a sense of adventure.	Look for a willingness to use experiments, using fragments of rhythm or melody to make motifs.	Imaginative use of ideas. Exploring and using new instruments, or experimenting with vocal technique. .
8. Development of musical ideas with progress in the use of some of the musical elements.	Look for the creative skill of developing motifs into longer rhythms or melodies and use of other elements.	Composition may be expanded, become more complex, and /or possibly longer.
9. Confidence in using musical elements, expanding musical ideas and applying greater difficulty.	Look for discussion about expanding the composition into a more interesting and advanced piece of music.	A well balanced composition with application of greater musical difficulty to add interest and imaginative use of musical elements.
10. Learning to be musically literate with competent reading and writing of staff notation	Look for reading of notation and writing it for making a record of the composition, using staff notation, or a combination of both staff and graphic notation.	A written composition, with the necessary accuracy of notation and instructions, other groups could perform. Reading of staff notation in the work of others.

Table 4.2 is also divided into three columns, of which the first two, Criterion and Process Evidence, refer directly to how the children are thinking and learning about their given task in the process of composing a piece of music and learning from their deliberations. The process evidence shows some indication of the musical skills to look for which might indicate progress in learning. The third column refers to the possible cognitive learning achieved as outcome evidence with reference to the composition, which may show expansion and complexity of ideas as a result of the internalisation of musical knowledge and skills. These criteria can be referenced in Appendix 2 on page 219, as part of the attainment levels in the National Curriculum of 2000.

The criteria are further presented and defined with the appropriate criterion stated in italics at the beginning of each paragraph. For those in the social domain, the criterion is followed by an explanation of what was sought in the interactions and manner in which the children worked together, according to the direction of that particular criterion and termed as process evidence. The outcome evidence relates to the finished composition and what might be found in it. For those in the cognitive domain, the process evidence describes which skills and knowledge were sought during the process of composing and the outcome evidence gives a guide to what the children might learn

from the experience. Attention has been paid to show any references to additions to the criteria made after reading the empirical literature reviewed in this chapter. Each criterion is presented in its amended order with the first to the sixth belonging to the social domain followed by the seventh to the tenth belonging to the cognitive domain.

Working together as a group with social cohesion and task directed talk
This criterion was directed towards how the group worked together. An awareness of working together among friends or non-friends, as found in the research of MacDonald, Miell and Mitchell (2002) was helpful in noting how quickly the children began to work together. Process evidence was sought in the form of a friendly atmosphere within the group and a willingness to work together on the given task. This required the discussion of musical ideas and decision making about which ones should be used for the composition. The outcome evidence was expected to show that amiable and helpful relationships amongst the group members had helped to contribute to a finished composition in the time allowed for the group work session.

Even input by each member suggesting ideas or learning from the others in the group
This criterion provided another opportunity to observe how the group worked together when looking for an evenly distributed input of spontaneous musical ideas by all members of the group. Morgan, Hargreaves and Joiner (1997) noted that verbal input was less evident by boys when in mixed groups and this could be a valid reason for less verbal input from boys at first. It was noted in the process of peer assisted learning whether some children were not working at all, merely letting the rest of the group do the work and identifying those with very little musical knowledge who were trying to learn from the others. The outcome might show that ideas were shared, adopted, or rejected with the agreement of all concerning the construction of the composition.

Positive discussion of ideas using transactive language and/or musical communication with voices or percussion instruments
This criterion was devised to observe the use of transactive language and/or musical communication and the idea was taken directly from Vygotsky's theory. References were made to transactive language in several of the research projects reviewed in this chapter, including Wiggins (1994), Morgan, Hargreaves and Joiner (1997) and Miell and MacDonald (2000). The process evidence looked for amiable interaction of

musical ideas through the spoken word and through musical demonstration or interaction, where the most able students worked and assisted the others. The outcome evidence was expected to reveal the use of transactive language and/or musical communication, where learning had taken place. The result was expected to be a composition with which all members were satisfied.

Negative argument using non-transactive language or musical distraction
This criterion was devised to counterbalance the previous one by noting a less amiable working pattern where some members were perhaps unwilling, for whatever reason, to work with the others. The process indicated possible deliberations that did not lead anywhere at all or were not related in any way to the given task. This could be described as a negative approach to peer assisted learning with the possible breakdown of social interaction. The outcome was likely to reveal fragmentation of ideas probably resulting in unfinished work or dissatisfaction with the composition.

Positive domination of the group by one or more able students working as leaders
This criterion was about effective leadership within the group where knowledgeable members were willing to give a positive lead to the others during the construction of the composition. Process evidence looked for helpful able persons, probably persuaded by group members to act as leaders in putting the composition together. It was likely that the leading roles might change among different members of the group according to their particular talents as found in the research by Burnard (1999). The outcome evidence was expected to reveal effective, knowledgeable leadership assisting towards the completion of a better composition with some learning for all group members.

Negative domination by members unwilling to work with the group
My study involved observing children in a lived in classroom where some may not have been enthusiastic about composing music. Therefore, it was decided to include this criterion to counterbalance the previous one by indicating repeated disruptive elements, should there be any. The process evidence might reveal a difficult working situation with most members unhappily unable to do very little with collaborating on a composition because of the attitude of one or two disruptive group members. The outcome might reveal a breakdown in relationships within the group, affecting the production of a satisfactory composition.

This concludes the description of the criteria of the social domain. Those in the cognitive domain are presented next. The four cognitive criteria were extended and finished in Chapter Three and checked with the National Curriculum for use in 2001. They follow in logical order of progression.

Creating musical ideas with vision, imagination and a sense of adventure

This cognitive criterion focused on the importance of vision and imaginative musical ideas used in the composition. Similar ideas were suggested also in the findings of Wiggins (1994), Burnard (1999) and Kanellopoulos (2000). It was important for the process evidence to look for a willingness to experiment with different musical ideas, by using fragments of either rhythm or melody to make musical motifs. The outcome evidence was likely to show imaginative and experimental use of musical material, using either voices or percussion instruments, or both.

Development of musical ideas with progress in the use of some of the musical elements

This criterion was designed to show progress made with developing the rhythmic and melodic ideas along with the use of the other elements of music such as harmony, form, texture and timbre. It was essential to look for the creative skill of developing motifs into longer rhythms or melodies and the use of other elements. In addition, marks of expression such as tempo, volume and mood would add interest. The outcome evidence was expected to reveal a completed composition, possibly expanded and more complex and/or possibly longer.

Confidence in using musical elements, expanding musical ideas and applying greater difficulty

This criterion looked for children feeling confident about their composing and able to use their ideas to build on what they had already learned to make the composition into a more interesting and advanced piece of music. This could be achieved by composing rhythmic or melodic lines for each group member to play or sing. The effect of this would thicken the musical texture and make it more interesting to both players and listeners. The outcome was expected to produce a well-balanced piece of greater difficulty to add interest by the imaginative use of musical elements. Applied knowledge of different musical styles and traditions might be included as part of the children's own culture.

Learning to be musically literate with competent reading and writing of staff notation

In my teaching experience children generally found the reading of staff notation quite difficult at first and writing it required even more mental application. The process evidence involved looking for the reading of notation first, and then writing it for making a record of the composition. Children were expected to use staff notation only but the use of graphic notation, probably from primary school was also accepted to begin with. The outcome evidence was expected to reveal a written composition with the necessary accuracy of notation and instructions so that other groups could perform it. This concludes the description of the criteria in the cognitive domain.

Conclusion

This chapter reviewed empirical research literature related to my study. Most of the researchers, several of whom made reference to Vygotsky's theory, agreed that their findings showed that peer assisted learning improved motivation where children could work and share their ideas with each other. Transactive communication occurred through both language and the music itself and children composing together tended to produce more interesting compositions than when alone. These were all important points to look for in my study. There was evidence to show that the researchers who had referred to Vygotsky did so because of one, or both, of two key concepts, the value of his socio-cultural support theory and the importance of transactive language in passing information from a more capable child to a learner within the zone of proximal development.

The research reviewed in this chapter showed that both spontaneity and creativity were present in the peer assisted learning sessions. Wiggins (2000) was keen to emphasise the importance of teacher encouragement of children's musical creativity. Much of her research was observed with this in mind that children should be allowed to sort out their compositional problems and the resultant strategies together in small groups. The type of teaching she recommended provided the necessary opportunities for creativity to develop.

Producing the final version of the criteria was a very important part of this chapter because it was necessary to find validation from the empirical research literature. Some

of the literature was found to be helpful in supporting the criteria for evaluating peer assisted learning, with the backing of ideas from the wider literature cited in the earlier chapters of the thesis. At first justified by the work of Vygotsky, the criteria were confirmed in the reading of the empirical research written by others who had also made reference to his work. The outcome of these mental deliberations concerning the criteria for the study was discussed and finalised in this chapter, with reference to teaching experience. The realistic approach of the criteria allowed for two new ones to be added with the intention of making the process of data collection easier for one researcher to manage more accurately. These were ready to take forward for use in the planning of the methodology in the next chapter.

The next chapter describes the methodology selected for this study beginning with the research design. The usefulness of the pilot study is discussed and recommendations from it are explained and amended in the main study where any additional or new methods are detailed. Of considerable importance is the implementation of the criteria introduced in this chapter and specially designed for assessing peer assisted learning in the main study. Details are given about the method of analysing the data and the validity of the whole methodology is discussed at the end of the chapter.

CHAPTER FIVE: Research methodology

Introduction

This chapter presents and explains the methodology of the research study. It begins with an overview of the research design, which is described and justified as a valid and reliable design appropriate for this study. The main issues concerning how and why the methodology was chosen are discussed briefly in this section. The research took place at the beginning and ending of a five-year period and used samples of single focus group studies from Year Seven in natural settings. After much careful deliberation in finding the most suitable methods for answering the research question, the final decision was to make it a qualitative study with some quantification of data and the ethnographic realism of a lived in classroom experience.

The first phase of the research consisted of a pilot study, which was designed to test the qualitative methods. After completion of the research, amendments were made to the methodology.   This involved revising, deleting or adding other methods and also increasing the criteria from three to ten for the main study.

The second phase of the research consisted of the main study: a much larger body of work prepared with amendments from the qualitative methods of the pilot study and with the addition of a quantitative element.   The function of the ten criteria, for evaluating peer assisted learning and the progress of musical skills finalised in Chapter Four, is described and explained fully in this chapter. Details of how the data were analysed and presented are given and also how emphasis was laid on the retaining of the natural settings in which the children worked.

The chapter begins with an overview of the research design. The pilot and main studies had a similar format but are described and examined separately. The use of the final list of the criteria, for evaluating peer assisted learning and the progress of musical skills, is described in the main study. A brief plan of the methods for the analysis of data is given and issues relating to the presentation of data are also discussed. The chapter concludes with points about the validity of the methodology and the study generally.

Research design of the study

The research was designed in two phases. The first phase was a pilot study, a small-scale piece of research designed specifically to test the suitability of the methods chosen for data collection in the main study. The second phase was the main study, a larger body of research, which used the recommendations from the pilot study to eliminate any problems encountered with the methods for data collection.

The initial design for both studies commenced by identifying a research hypothesis and focusing on a research question. The next step was to draw up ethical guidelines, gain access to an appropriate location, decide on the age group to be studied and decide on the research methods. The decision was made very early that both studies would be researched in Year Seven at secondary level when the children were settling into a new school as they began their studies in preparation for the General Certificate in Secondary Education in Year Eleven.

It was important to gain access to a school where the music teacher was willing to accommodate a researcher and where peer assisted learning in composition took place already so that the children could be observed in the natural settings of normal music lessons. To maintain the natural settings, the music teacher was asked to choose the groups and the group size. The research focused on the process of peer assisted learning in which the researcher assumed a non-participatory role but where the views of the teacher and the children were sought about peer assisted learning. Collecting and storing the data was carried out followed by analysis and interpretation. The study ended with the preparation and presentation of findings and recommendations in a research report. It was expected that problems might arise in the pilot study, which could be amended and improved for use in the main study and this was found to be so.

There was the problem of whether research concerning peer assisted learning could be carried out realistically and how this could be best achieved. As Measor and Woods (1991:61) have found, there can be a difficulty with a qualitative approach in that the design of the research is usually open ended making specificity at an early stage difficult. Both the pilot and main studies were initially planned in a similar way to include stages in doing fieldwork with an evaluative qualitative study in a school setting

(Hitchcock and Hughes, 1989:56; Bassey, 1999:66). The difference between my research and qualitative research of others was my use of criteria for evaluating peer assisted learning. These provided a specific focus to the research generally and to the data collection in particular and helped to avoid the open ended approach. It was possible at the same time, in both pilot and main studies, to note developments of a phenomenal nature as well. The approach needed to provide research methods that would explore phenomena adequately in the learning process through the oral activity of both speech and song, the aural transient nature of music making with voices and instruments and the unpredictability of natural settings. The main study was intended to be as realistic as possible showing the educational effects of peer assisted learning over a three month period in Year Seven.

There was one question for this research: Did peer assisted learning help children to acquire musical compositional skills in the natural settings of the time-tabled lessons as guided by the National Curriculum for Year Seven? Wiggins (1994:234) claimed, in her research that because the purpose of her 'study was to characterise the nature of children's interactions in a learning situation, a qualitative paradigm was deemed appropriate'. In contrast, Kratus (1989) preferred to withdraw individual students from the lesson and test their compositional skills in a timed study that produced statistical evidence of how children compose. Phenomena are difficult to measure from statistical evidence. Therefore, using qualitative methodology was deemed the most appropriate way of discovering and exploring peer assisted learning in this subject, where an evaluation needed to be made of the learning process. Since the focus of my research was on interactive processes, 'the appropriate definition and framework must be stated in terms of processes rather than in terms of quantitatively measurable operations' (Claire, 1993:22). However, if some form of measurement could be used, that would be a good enough reason for adding quantitative data as a support method to reveal facts that the qualitative methods might have missed.

After reflecting on the best course to take, and taking particular notice of the recommendations of Wiggins (1994) and Claire (1993), the decision was made to use qualitative methodology in the pilot study (Lincoln and Guba, 1985:40). Observation and interview techniques were used for data collection as the most appropriate way of obtaining as true a record as possible of the learning process (Lincoln and Guba,

1985:267; Patton, 1990:10). It was hoped that any problems occurring with this study could be addressed later by making changes to the existing research instruments for the main study.

Ideally, the selection of three groups of four or five students, one in each of three parallel classes in Year Seven would allow observation of three working groups. As this was a study in natural settings, the intention was to accept whatever group size was being used currently for peer assisted learning. This avoided disruption to the organisation of the class work by asking for group sizes that the teacher did not want to use or which could not be accommodated in the lesson conditions (Lincoln and Guba, 1985:39). It was understood that the teacher needed to be flexible in the use of peer assisted learning from year to year by adapting to the needs of current classes and situations whilst keeping within the framework of the National Curriculum. This variation was feasible in research using a qualitative approach and where the methodology allowed for the flexibility that inevitably occurred during the working term (Lincoln and Guba, 1985: 41; Patton, 1990:61).

The qualitative approach, using sample groups as described above, followed a similar pattern to research involving case studies where a single focus approach was required (Lincoln and Guba, 1985:234; Stake 2000:436). It was important to be aware that the ethnographic element in my study could produce an unpredictable situation of children working together and the single focus approach appeared to be the best way of noting the unpredictable interactions that could occur between the members of a group (Measor and Woods, 1991:59). Some children might work well with peer assisted learning whilst others might not. For the same reason, an awareness of the phenomenal element would also be catered for with the same approach and a researcher should be prepared to expect the unexpected to happen at some point during data collection.

Using the single focus approach of case study methods was considered to be appropriate for my research concerning peer assisted learning because the focus was 'narrow and deep' and would be suitable for providing 'unique examples of real people in real situations' (Cohen, Mannion and Morrison, 2000:181). The case study researcher typically involves the characteristics and interactions of a single unit or a small group of people, the purpose of which is to study intensively the phenomena that constitute the

life cycle of the unit or group (Cohen, Mannion and Morrison, 2000:185). Therefore, the single focus of the case study approach was used because it was the only method which would show what was happening in enough detail to supply sufficient data for exploring peer assisted learning in a classroom situation (Lincoln and Guba, 1985:214; Bassey, 1999:65).

The case study approach has no specific methods of data collection or of analysis, which are unique to it as a method of enquiry because each case study has different requirements. 'It is eclectic and in preparing a case study researchers use whatever methods are seen to them to be appropriate and practical' (Bassey, 1999:69). Therefore it was appropriate to consider the use of whatever methods were the most suitable to obtain the answer to the research question and appropriate for the type of data being collected (Patton, 1990:192; Pole and Morrison, 2003:17). The research designs of both pilot and main studies are described in detail in separate sections later in this chapter.

Research design: pilot study

The pilot study was carried out in 1996. Finding relevant literature concerning peer assisted learning in music composition was difficult at that time because of the lack of published research. It was necessary therefore, to rely on some knowledge of Vygotsky's theory (Chapter One) gained from a previous research project and my own teaching experience (page 102). The pilot study was designed primarily to test the qualitative methods of observation of groups of children chosen by the teacher, unstructured interviews with children, and one unstructured interview with the teacher.

The pilot study commenced with a research design, the choice of methods, and the location and context of the study. Access for the pilot study was made to a school where the teacher used peer assisted learning in her music lessons and was willing to accommodate a researcher in Year Seven. One sample group of eight students from class Seven W, and one sample group of four from Seven G, were each selected by the teacher for observation. The data was collected by observation of these groups, using three criteria: looking for children working well together, with even input in their project, and with the use of vision and imaginative musical ideas. These criteria were used for codifying and analysing the data. Data analysis began during data collection

and was worked on and completed afterwards with data categorisation and interpretation. Finally, there was the writing of the findings and the compilation of a brief research report.

Data collection proved to be a problem area for two reasons and amendments to the research design were required for the main study. The first concerned interruption to the collection of data by the proximity of the music room to the school hall where a General Certificate of Secondary Education public examination was taking place. This problem is dealt with more fully on page 103. The second problem revealed that tight scheduling of lessons made interviews with the children in the sample groups very difficult. Neither class had time within their lessons for making comments and giving feedback about their work or their groups and answers from them about peer assisted learning were essential for the research plan. A written comment about their thoughts on the group work, which they could do concurrently, would be useful instead of interviews. This is also dealt with more fully on page 105.

There were no other problems with the research design but receiving feedback from the children was planned as the lack of it could affect validity in the main study. The interview with the teacher was not affected in any way. The introduction of written questionnaires instead of interviews is discussed in the section concerning the revision of research instruments for use in the main study on page 106 of this chapter.

Location and context

It was decided at the outset that natural settings would form part of my research and there would be no alterations made to the normal process of the lessons. The school selected for the pilot study was a rural comprehensive with the age range of eleven to sixteen years where the researcher had previously taught. The teacher, who had been appointed when the researcher retired, was happy to accommodate research for the pilot study. Four classes of students entered the school in Year Seven and were banded according to general ability. The school was situated in a rural location about four miles from a city in the east midlands of England and the students entering Year Seven were divided by general ability into four classes. They were drawn mainly from five or six local feeder primary schools in nearby villages and one or two in the city, which meant that there would be some students who knew each other in each class. There

were about ninety-five children in the year group. All students to the end of Year Nine, including those in the pilot research project, followed the music syllabus guided by the National Curriculum.

There were no problems in gaining access to the school but there were some problems for the students when their lessons were affected by the natural settings of their music lessons during the summer term. It was found that the proximity of the music room to the hall used for public examinations curtailed active music participation in peer assisted group work for several weeks during the term. The researcher was then faced with a choice. It was possible either to observe lessons before exams began in the middle of May during normal lesson time but with fewer of them. Alternatively, observation could be carried out in normal lessons after the exams had finished. The exams finished at the end of June, and although more lessons could be observed, they would be interrupted and fragmented because of inter-house sports activities. The choice was made of the May option.

There was a four-stream entry into Year Seven. Most students showed an interest in creative music making but it was obvious that some had done very little before entering secondary school and said as much. Some had received considerable help with composing before and others could already perform quite well on different instruments. The teacher had used peer assisted learning prior to the research in the form of a teacher controlled 'buddy system' on recorders, where pairs of children helped each other earlier in the year (Topping, 1988; Block and Dellamura, 2000). Recorders were widely used in Year Seven in this school. The students' musical world was strongly influenced by popular styles of music, which were easily accessible for all out of school and their behaviour indicated that they regarded this as their normal musical experience.

There was one music room. It was less than adequate in size for the number of students that had to be fitted into it for a practical lesson. Difficulties also arose with other practical classes in the technology rooms nearby when students tended to spill into the neighbouring long corridor for composing sessions. There was one small practice room situated away from the music room along another corridor but this was often occupied by one of the six peripatetic instrumental staff and was rarely available for class use. The school hall was used when available as an over spill area in composition lessons.

There was a selection of musical instruments for classroom use, which included both un-tuned and tuned percussion instruments. Most of the un-tuned instruments were hand held such as tambourines, tambours, cymbals, wood blocks, guiros and castanets. There were six small glockenspiels, one large glockenspiel and one xylophone. About twenty descant recorders were available for use and were regularly disinfected. Twenty-nine electronic keyboards, of various types and all portable, were kept in the store cupboard and put into the music room when required. Despite the number of instruments there was very little storage space for them in the music room itself and only one long, narrow storeroom at the back of the music room. The drum kit was kept in the practice room away from the music room and not used generally for classroom work but could be brought in if needed. Recording equipment for student use included a robust portable tape recorder and a four-track machine. A tape-to-tape recording machine could be used to edit recordings of students' compositions. Most of the equipment was collected over a number of years by the researcher when head of department in this school.

The teacher supplied details of the lesson plans, within the music curriculum, about a month before commencing the field research. This showed how group work was organised for each lesson and how students kept their written work. Brief details from the teacher were noted about the aptitude and ability of students in the two classes, which instruments were available for classroom use and how any constraints in lessons, mainly due to the small music room in relation to class size and only one practice room, were dealt with.

The lesson plan for Year Seven included composing in peer-assisted groups following a four-week schedule. The first lesson was used to set the context for composing and form the groups. The students began their peer-assisted efforts in the second lesson. Ideas and the technical skills required for presentation were pursued in the third lesson and the fourth was used to finish the composition and perform it in front of the class. Unfinished work was performed as far as it had gone. Peer assisted learning in groups was allocated about twenty to twenty-five minutes in a lesson lasting seventy minutes.

The timing in the school year of the pilot study revealed that in the summer term children were affected by the public examination timetable arranged for older children.

The school was small and the building did not have very good facilities but these were the natural settings of the school location and the children were expected to cope. For the main study it might be preferable to select a larger school with better facilities where the music room is away from the examination hall. Alternatively, a different time of the academic school year may be better, probably in the autumn before examinations, field trips and sports activities take priority.

Sample group, selection, size and composition

Students from two of the Year Seven classes were divided into groups from which sample groups were selected. Seven W was divided into two friendship groups of eight for observation purposes. Either could be a case study and one was selected for this purpose by the teacher. The term 'friendship' was very loosely applied in these groups, not specifically, as in the research of Miell and Macdonald (2000) and MacDonald, Miell and Mitchell (2002). Some of the children did not know the others very well at all and were not with their own friends. There were both boys and girls in each of the groups. Eight children in a group was the teacher's recommended and preferred group size for this class.

Seven G was initially divided into five teams for a class activity with the teacher and subsequently divided into small groups of pairs or trios for peer assisted group work. The group sizes were the natural selection of the teacher who knew what the children were capable of doing. The advantage to the researcher was that the difference between the group sizes of Seven W and Seven G gave wider experience in observing groups of different sizes and taking field notes. It should be noted that these sample groups were selected from only two of the classes in Year Seven. Both of the other two classes were observed generally in peer assisted composition lessons but without identifying specific study groups.

The experience of observing different sized groups for peer assisted learning and taking field notes showed that it was difficult to observe as many as eight in one group. The teacher preferred this size because there were more children to produce ideas for the composition. The children appeared to enjoy the experience of working together. As part of the natural settings was that the teacher chose the group size, if it happened in the main study, then the researcher would have to find a way of coping with it. The use

of a technological aid, such as audio recording, was not used in the pilot. However, such aids would be an asset for the researcher in the main study because a permanent record of the group work could be retained for additional listening as many times as required after data collection had finished.

Research methodology: pilot study

After negotiating access to the school with the head teacher, the researcher met the music teacher in the music room and asked for information about the children in Year Seven and how far they had progressed with their work since entering the school the previous September. The school building was familiar to me as the researcher because of teaching there until retirement but the head teacher, some of the staff and all of the children in Years Seven to Nine were different.

Arrangements were made with the teacher for visits to the school for data collection and the research instruments were discussed. These were two qualitative research instruments: observation and unstructured interviews (Lincoln and Guba, 1985:268; Patton, 1990:281). They were tested to find out if they were appropriate and practical for this type of study and whether or not they should be kept as they were for the main study or should be amended. Observation played an important part in data collection because it was the chief research instrument selected for obtaining data. It was chosen to note both verbal and musical communication and pick up unspoken exchanges through attitudes and interactions (Lincoln and Guba, 1985:276). The researcher's previous teaching experience showed that collaborative creativity was likely to produce individual comments, discussions, or arguments during group work. There was also the opportunity to see when and where unstructured interviews with the teacher would best fit into the teaching schedule. This depended on when the teacher had time available, bearing in mind that interviews can become lengthy (Nias, 1989:151). In this school all unstructured interviews would need to be kept short and to the point because of the timetable schedule. It was hoped that children would be given the opportunity to comment on their work, either in unstructured interviews or, with comments providing feedback before they left the lesson. Children's views were sought about working together in groups and what progress they had made by being in a group.

The evaluative criteria for the pilot study were devised from the researcher's own previous teaching experience and it should be noted that the relevant empirical literature used for the main study in 2001, was not available when the pilot was conducted in 1996 but was published after the pilot had taken place. The first criterion was about children working together and communicating verbally, expressing ideas between themselves and making decisions about the structure of the piece of music they were working on. The second criterion looked for even input by all members in each group which could be in the form of offering ideas for discussion or suggesting ideas by musical communication. This used a musical method of implementing and expressing compositional ideas. Notice was also taken of attitudes because these might indicate the amount of interest taken in the project and feelings related towards working in a group. Thirdly, any imaginative musical ideas were noted and any students who had 'vision', knowing what sounded right and what did not.

Research instruments: pilot study

Observation

Using a qualitative approach was deemed the most suitable way of exploring phenomena but with reservations. Typically, such an approach would imply that the data was observed and collected by a participant researcher who accessed the school as a teacher or helper, established a rapport with the students collecting data whilst performing a participant duty with them (Ball, 1993:33). In my study as the researcher, I decided to take a non-participant role in the lessons and made this clear to both the teacher and students before data collection began. Before my retirement, I had used participant research in an earlier action research project (Mugglestone, 1991). For my current research I felt that this approach would not be suitable and a more distant attitude was required. To achieve non-participation I needed to establish a calm and unobtrusive role in the lessons where the students felt comfortable with my presence so that there was less likelihood of them developing the attitude of performing to an audience. Hitchcock and Hughes (1989) suggest that it is necessary to familiarise oneself with the school, the staff and the students beforehand in order to make data collection as smooth as possible. This advice helped me to remain non-participatory when the research began because I did not need to interrupt the lessons with any questions and I declined to assist students when they asked for musical help. It was

essential to maintain the research 'self' as a 'deliberate ploy' throughout (Measor and Woods, 1991:64; Ball, 1993:33).

One sample group of eight students in Seven W and one of three students in Seven G were observed as case studies. Both groups were observed in two of their own lessons in music composition, each lesson being one hour in length. The lesson format was similar in both classes but with more depth for Seven G. The work was introduced in the first lesson and continued into the second. For their second lesson, the group of eight students in Seven W worked under the eye of the teacher in the music room whilst the remaining group was sent to the small practice room along the corridor. The sample group in the classroom was observed and field notes were taken but observing eight children was difficult although it was the teacher's preferred choice of group size within the natural settings. Two or three of the children were very quiet and contributed little to peer assisted learning which was left to the apparently more able members of the group or those who had better developed social skills and who could express their ideas more fully than the others. The field notes were rather sketchy but were written up in detail on each evening of the day on which they were collected.

In Seven G the group work situation in the second lesson was completely different from that of Seven W. The students were unable to confer in groups but sat at their normal desk places because there was no room for mobility. Only those nearest to the researcher, who were not in the sample group, were observed because it was impossible to move among the desks without causing a disturbance. Walford (1991) warned that unexpected problems could happen with qualitative research and this was a prime example of unexpected problems occurring during data collection. The group of four had become three on this occasion. The students composed either graphically or with staff notation on paper, in groups of two or three, but were restricted by not having the use of musical instruments because of causing a disturbance to a General Certificate of Secondary Education examination being held in the school hall nearby. The music teacher was not warned about this particular examination, which was placed before the main block of examinations. The researcher made a mental note that observation for the main study should not be done during the summer term at all when examinations of this nature were in operation but in the autumn and winter months.

It was possible, however, to observe attitudes, application of task related ideas and cohesion within the groups, which would be indicators in recognising the early stages of the acquisition of skills aided by peer assisted learning. Observing the group of eight was difficult because of the large number when it was easy to miss some of the interaction and observing a group of three who were trying to keep their voices down was difficult also. An attempt was made to be objective in both situations and record the data (Eisner, 1991:49). In trying to evaluate the contribution of peer assisted learning during the pilot study, it was easier to do this with Seven W, who composed vocally and with instruments, rather than the group in Seven G, who composed verbally with ideas written down on paper in either staff or graphic notation. Yet both were valid learning situations and tested the researcher's observational techniques. Therefore, it is likely that every study is constrained by the limitations of the researcher (Lacey, 1976:116).

The technique of collecting and recording data was practised in the form of note taking of observations, which were written in full at the end of each day. Taking field notes became an art in itself because there was much to observe in the student group of eight in Seven W. The system required appropriate abbreviations, such as keywords and symbols that were jotted down at speed in a meaningful way. It was essential to write the notes in full at the earliest opportunity after each lesson, whilst both the visual and aural observations were still fresh. Time was allowed for this, but some practice at quick note taking would be useful prior to observing the case studies for the main study.

The pilot experience showed that it was possible to record observations, which picked up both verbal and non-verbal actions in the groups along with attitudes and perspectives. Although only a small number of groups were observed, the methodology appeared to work well. Admittedly, groups of eight students were found to be rather large for all to interact in constructing a piece of music. Some students said very little, although as a group, the teacher thought that they produced a very satisfactory piece of music to perform at the end of the lesson. The group size did not appear to present a problem for those students who preferred to listen and watch, neither did they appear to view their position as unusual. The main problem was for the researcher in observing a large group adequately.

Interviews

During fieldwork, very short unstructured interviews with the teacher were obtained after each lesson or at a more appropriate time for her. These were frequently about the lesson concerned and were useful for clarifying points, placing work in its correct context and confirming the data. The teacher answered questions about events which arose during group work in both classes and indicated that where group work was restricted in Seven G, it would mean re-planning the next lesson to include the practical side of the group work which was missed. Unstructured interviewing of this type was helpful as points concerning the content and projected aims were revealed after the appropriate lesson. It was fortunate that on each occasion there was either no lesson following the session or the teacher was involved in non-contact time. The field notes were written up later the same day.

Unstructured interviewing was tried with some of the children but was not successful. A short, structured interview, consisting of a set of questions, might have produced better results at this stage but the chief problem was the time required for interviews. It seemed wrong to take away time from the peer assisted group work in the lesson, or ask them to return later to answer questions about it. Feedback from students was required, however, and it would be better to obtain it by means of written comments or answers to pre-set written questions about their work and their peer assisted groups. This problem needed to be solved for the main study.

Revision of research design for the main study

It was clear from the pilot study that observing students in their groups presented the researcher with unexpected problems within the school. These were either time related or due to school organisational problems, which the researcher could not alter. They were part of the natural settings of the timetable. The important issue was that the method of observing the interactive processes amongst children was appropriate and should be carried forward for the main study (Claire, 1993:22). The researcher needed to adopt a quicker system of abbreviating writing, including symbols, for the field notes (Patton, 1990:240). The addition of audio recording whole lessons, as well as each sample group session, would show peer assisted learning in the lesson context and, at the same time, provide a permanent sound recording of the children at work, which could be replayed after data collection had finished (Lincoln and Guba, 1985:271;

Patton, 1990:348). This would be useful as sonic triangulation to written data and should not be intended to replace the use of field notes (Open University, 1991:33).

Planned interviews with the students were abandoned because there was not enough time for them without asking children to return to the music room later (Nias, 1989:150). Written questionnaires, to be answered separately but concurrently shortly before the group work session ended, were planned for the main study (Lincoln and Guba, 1985:306). These were designed as a strategy to replace the function of child interviews by probing to obtain the answers required in the shortest possible time (Measor and Woods, 1991:72). Furthermore, specific evidence gained from the questionnaires could be used in the analysis of data to compare one set of student views with another concerning their thoughts about peer assisted group work and the learning process. This would provide the opportunity to use a quantitative element (Open University, 1999:39). Hitchcock and Hughes (1989) suggest that there are no definite rules for or against using what seemed to be appropriate methods for research requirements and the use of some quantitative methods could probably confirm what had been seen during the observations.

Three evaluative criteria were adequate for gaining some idea of the peer assisted learning situation in the pilot study, but would not be enough for the main study. More criteria with social aspects, like the first and second in the pilot study, were needed to identify the attributes of a support system. Only one criterion in the pilot was designed to look for cognitive learning and others needed to be added, preferably to show a progression in the attainment of cognitive skills. Therefore, a new list of ten criteria was devised to evaluate peer assisted learning from both the social and cognitive viewpoints in the main study.

The pilot study was completed and the necessary amendments made for the main study. On the whole, the pilot served its purpose well as the experience revealed problem areas of conducting a qualitative study, giving insight into how these problems could be eased or eliminated altogether (Measor and Woods, 1991:61). This insight proved useful when planning how the research should be conducted in the main study. It was remembered that the pilot study provided the opportunity to test the observational skills of the researcher who was the primary research tool in finding, identifying and

collecting data (Ball, 1993:32). This presented a warning to the researcher that bias could creep in at almost any stage in the data collection and care must be taken with field notes in this respect (Open University, 1991:15).

As well as amending the pilot in preparation for the main study, I looked at the methods used in the empirical literature discussed in Chapter Four. Almost all of the projects reviewed were small-scale studies: Morgan, Hargreaves and Joiner (1997; 2000), Miell and Macdonald (2000), MacDonald, Miell and Mitchell (2002), Wiggins (1994:1999), Wiggins and Bodoin (1998), and Kaschub (2000). The larger studies reviewed were doctoral theses: Burnard (1999) and Kanellopoulos (2000). An important link between these studies and my own was that a reference to Vygotsky's theory of assisted performance was noted in the literature of most of the journal articles and in the literature review of both theses. Vygotsky's work in the context of collaborative learning through language was specifically noted in Miell and MacDonald (2000:349), Burnard (1999:302) and Wiggins (1994:233). Therefore, Vygotsky's theory was regarded generally to be of some significance and communication through language was used as a starting point for a personal exploration into different areas of collaborative musical research.

Validity: pilot study

Prior to data collection, an awareness of two problems that could affect the credibility of the pilot study became apparent. The first concerned bias because data was obtained in the same school where I had taught for twenty years. Although the pilot study was conducted in this school, entering the familiar building again did not present a problem regarding validity whilst observing because a conscious effort was made to 'make the familiar strange' when collecting data (Cohen, Mannion and Morrison, 2000:157). Although inside knowledge of a place is valuable for its authenticity, one must distance oneself from familiar things by noting the changes made, perhaps to the building. However, several years of new students and staff were useful for helping to adopt a critical eye and it was possible to concentrate on what was actually seen and not on what was seen or experienced several years before. A conscious effort was made on my part in trying to be objective from the start.

The second problem concerned the teaching of music, which I had previously done. It was difficult not to be biased about the way the lessons were taught and managed or the teacher's choice of group size (Lincoln and Guba, 1985:108). To remedy this, an attempt was made to observe both teacher and students from a neutral viewpoint, as if seeing lessons of this type for the first time. This was not easy as bias can creep in when least expected, for instance where I might have conducted the lesson differently. On the other hand, my own experience of students working in groups, using peer assisted learning for composition, was helpful in doing this research. It involved knowing how to observe, what to look for and keeping a disciplined distance from the students.

Both the reliability and validity of the research instruments appeared to be satisfactory at first but it became apparent that there would be no time for interviewing the students. The qualitative methods of observing students at work and unstructured interviews with the teacher both appeared to be suitable and valid. With longer teacher interviews, a tape recording would retain a permanent record of the points arising and this technique should be considered for the main study (Lincoln and Guba, 1985:314). As time did not allow for student interviews, written questionnaires were considered for the main study (Bassey, 1999:81). Therefore, with the methods of observation and questionnaires for the students and recorded interviews with the teacher, it should be possible to triangulate the data and give credibility to the main study (Patton, 1990:187; Charmaz, 2000:514).

Research design: main study

The revised research design for the main study, with the identification and establishment of the focus, was completed in the spring of 2001. The same teacher agreed to have the research carried out in her lessons again but had moved to a different school since the completion of the pilot study. The first requirement was to confirm her agreement, then formally access entry to the new school with the permission of the head teacher (Scott and Morrison, 2005:3). It was decided, between teacher and researcher, to collect data in the autumn term when there was less likelihood of disruption from public examinations, as had happened in the pilot study. Nonetheless, the same natural settings were otherwise retained and observation took place in the normal timetabled

lessons, with no changes to the conditions in which the children would usually be taught.

It was agreed between teacher and researcher that an audio recording should be made of each observed lesson in its entirety. This included the introduction to the peer assisted group work to show its position in the context of the whole lesson. Three single focus sample groups were selected: one from each of three different classes in Year Seven and each being of a different standard of general ability (Patton, 1990:108). The other peer assisted learning groups, as well as the sample group in each class, usually performed their work as a musical finale to the lesson. An unstructured interview with the teacher was also recorded after the first lesson.

Preparation for the main study began by amending the research instruments for data collection using the recommendations from the pilot study and the reading of the empirical literature directly concerned with my study. More research literature of this nature, about peer assisted learning in music composition, was available in 2000 than in 1996, mainly for Key Stage Two at primary level but with some at Key Stage Three at secondary level. The methodology used in these empirical studies was divided into two groups. Those who used either qualitative methodology for ethnography or those who used quantitative methodology with statistical analysis for research described as a scientific study of a psychological nature.

Although the empirical music literature tended to fall between two types of research, such as the scientific, quantitative studies of Morgan, Hargreaves and Joiner (1997; 2000) and those with a qualitative paradigm such as Wiggins (1994; 1999), a hybrid of mixed methods with mostly qualitative but some statistical work as well was found in Burnard (1999). There is perhaps, a sense of 'false dualism' in adhering to one rigid style or the other when the best methodology for the study is to use elements of each type of methodology for whatever the research requires (Pring, 2000:44). Within any one piece of research, there is often the use of a different approach or research instrument, which is appropriate because every study presents a unique picture at a particular instance in time (Pring, 2000:48). This theory was put into action in the main study.

After the empirical literature review was completed it was possible also to finalise the list of ten criteria for observing the social and cognitive domains of peer assisted learning as shown in Table 4.1 and 4.2 in Chapter Four. The decision was made to keep to the qualitative approach as tested in the pilot study but to add a quantitative element which would involve recording timed evidence of each criterion during data collection. Timed evidence could be used later to confirm the qualitative field notes (Patton, 1990:467). This was done with a tick box version of the criteria for use with each sample group every time they had a peer assisted learning session, shown as Table 5.2 on page 124. A further quantitative element was provided by an additional research instrument given to the students in the form of two questionnaires, which were used to indicate composing from the point of view of each student in each sample group (Patton, 1990:102). The questionnaires were designed in such a way as to be analysed either nominally or statistically, if required, to provide confirmation of what was observed by the researcher (Scott and Usher, 1999:71). A fuller account of these is given in the research instruments section of this chapter on page 121 and the Questionnaires are presented in Appendix 3 on page 221.

Although some analysis of data was begun during the data collection period, the researcher required much more time to dwell on analysis by reflecting on the issues that arose during the data collection (Stake, 2000:445). Following this, the findings were written up and the research report was prepared for presentation.

Location and context

The urban secondary comprehensive is a much larger school than the rural comprehensive where the pilot study was completed. Eight classes of students enter the school in Year Seven and are banded according to general ability. In the year in which the research took place, there were two hundred and ten new children entering school in Year Seven drawn from eighteen different feeder primary schools, some of which were rural schools and some within the city. All students up to and including Year Nine followed the music syllabus as laid down in the National Curriculum. The school had a strong tradition of success in arts subjects. Music, along with art and drama, offered students opportunities to develop their skills and display their talents.

The background of school life provided the context for the research situation and bearing in mind the findings of the pilot study, there were differences to be encountered in a larger school. The students in Year Seven were at the beginning of a new school experience rather than at the beginning of their third term. The teacher thought it was likely that some children might not have engaged with peer assisted group work in composition at their primary schools.

The largest of the three classrooms in the music suite was used for the observed lessons. There was an open square centrally placed between the three teaching rooms, used occasionally as an over-spill area and students were able to work outside the music room as well yet still remain in the music suite. Spatial facilities were good in this school. The largest music room had plenty of room for the children to move into their groups. When listening to music or to the teacher, even the largest of the three classes occupied only half the available space.

Both the quantity and quality of the hand held musical instruments for classroom use were poor compared with the excellent variety and quality of instruments available in the previous school where the pilot study took place. Many of the un-tuned percussion instruments, mostly tambours or tambourines, were worn or damaged. Several wood blocks were cracked, giving a flat sound, but there were plenty of xylophones in good condition. Electronic keyboards were lined up and fixed to long tables at the side of the room which was inconvenient for peer assisted composition in groups as they could not be moved from their positions. There was audio-recording equipment available for use in lessons and also a video camera although it was not used at any time during the research period.

Only a few days before the start of data collection, the music teacher was told that two of the three classes to be observed for this research were to be withdrawn from one of their two weekly lessons for most of the term for extra tuition in the use of computers. This meant the provision of only one lesson per week for these students to cover the same amount of work as the third class would cover in two normal lessons per week. In accordance with the aim of conducting the study in the normal circumstances of music teaching, no allowance was made when groups had to be absent from planned lessons.

The classes to be withdrawn were Seven O and Seven S, whilst Seven F retained the normal number of two lessons per week.

It was essential to establish beforehand exactly which tasks for composition the teacher had planned. A single composition project would normally last for four weeks using eight lessons, with an introductory lesson at the beginning and performance at the end. The half term holiday created a natural break between two composition projects. A pre-printed lesson plan was given to each group giving them an overview of the project requirements in steps with achievement points included. Peer assisted learning in groups was expected to last about twenty minutes out of each fifty-minute lesson. At the end of each of the two projects an assessment was made by the teacher and marks awarded.

The first composition project was about sounds made by machines and how to make them into a piece of rhythmic music. This was done vocally using the 'Songbustin' book as a guide (Raybould. Unpublished). 'Songbustin' was a photo-copied collection of instruction sheets stapled together containing groups of words coupled rhythmically with the essentials of staff notation for writing down the appropriate rhythm. The teacher decided it was better to give the students structured assistance to start them working straight away. This required the provision of some pre-set word patterns for improvisation although previous research has shown that this method can prove restrictive creatively for the students (Wiggins, 1999:31). The teacher thought that it would save time in the initial stages of peer group work and for the two groups whose time was curtailed. These students would not have the same freedom whilst composing as those in the pilot study. The lesson material was more structured too. Lessons were in a block of eight for Seven F but had to be hastily reduced to a block of four for both Seven O and Seven S because of their unexpected withdrawal for extra lessons in Information and Communication Technology. Both the block of eight lessons and the block of four were worked through as a single project.

Table 5.1 Plan of a four week composition project

Week One	Preparation for composing by listening, clapping rhythms getting into groups and discussing ideas.
Week Two	The beginnings of peer assisted learning, using words to make rhythms from the book and then progressing to making their own rhythms and their own words.
Week Three	Four beat, four bar rhythms, either improvising on the words suggested in the book or with their own newly composed words. Students had a choice of which to do, using voices and/or percussion instruments.
Week Four	Free choice but ideas from the book were allowed to expand work and help with staff notation. Students could use their own ideas entirely if they preferred to do so.

No requests were made concerning the children for my study. None of the projects reviewed in Chapter Four, however, claimed to be entirely in the context of natural settings of a normal lesson where all children took part in peer assisted learning and where the teacher organised everything as in everyday practice. The everyday practice in my research was closest to Wiggins (1998; 2000) when she observed the work of the whole class group in an elementary school but with one main difference when compared with mine. Wiggins asked the teacher to select one boy and one girl, who were typical second grade students, but of different ethnic origin, as key informants for observation. These students participated in class as they always did, the only difference being that they wore lapel microphones and carried mini-recorders in their pockets. This enabled recording to be made in different parts of the classroom since the students rarely interacted with one another but they gave the perspectives of two key informants within the whole group. The importance of classroom settings in the context of music and people was made clear by Wiggins (1994; 1999) as an essential part of the qualitative approach to research which looks for perceptions and meanings. The interaction between the children and the music they created in the classroom was as important to the research as the interaction amongst the children themselves working on the process of composing.

My research did not disrupt any organising of the groups because the teacher selected the children as she would normally without a researcher being present. Both Wiggins (1994; 1998) and Kaschub (2000) researched music collaboration in the music classroom where the process of composing was subject to the social influences of both children and music. In a similar context, children could opt for collaborative work in the classroom and could complete it in their own time if necessary (Burnard, 1999). Others made requests for children to be placed in specifically numbered groups as described by Miell and MacDonald (2000:352) who regarded their research as an experiment and pairs were chosen from the answers to their questionnaires about who were friends and who were not. Morgan, Hargreaves and Joiner (1997; 2000) requested groups of four and the teachers chose the groups for these randomly, bearing in mind some were to be single gender and some mixed. Data collection was claimed to have taken place with as little disruption as possible when once the gender of the sample groups had been decided. No one mentioned observing larger groups, containing more than four children in their research, except Kanellopoulos (2000) who worked with ten children withdrawn from their normal lessons.

The school for my research offered the setting of an urban comprehensive for the full age range from eleven to eighteen years, in a non-multi-ethnic city. Schools used in the other projects discussed in Chapter Four included a middle school in a suburban location in south east England where children were predominantly white and middle class (Miell and MacDonald, 2000), an unidentified primary school somewhere in England (Morgan, Hargreaves and Joiner, 1997), and a multi-ethnic, comprehensive middle-school (age range nine to twelve years) in West London (Burnard, 1999). The research from the United States was located in the sixth grade in a rural middle school where children belonged to the general music classes (Kaschub, 2000), a fifth grade general music classroom (Wiggins, 1994) and an elementary school in a suburban area, just outside a major mid-western city, where the school served a middle to upper-middle class community (Wiggins and Bodoin, 1998). The city comprehensive school in Eastern England in which my research took place, shared with the other English settings, the basics of the National Curriculum requirements and its designation as a state school, like the public schools in which the United States research occurred.

Most of these researchers of the projects discussed in Chapter Four were non-participant observers as in my research only Kanellopoulos was a participant researcher. The research by Morgan, Hargreaves and Joiner (1997; 2000) in Year Six gave insight into peer assisted learning in music composition at the older end of the primary school years in English schools and research of Year Five by Wiggins (1994) and Year Six by Kaschub (2000) gave insight into peer assisted learning at a similar age in the United States of America. Kanellopoulos (2000) was a participant researcher with ten eight year old children in Greece whilst they collaborated on composing in a separate classroom from the other children. In the schools in which the research by Burnard (1999), Miell and MacDonald (2000) and MacDonald, Miell and Mitchell (2000) were each located, sample groups in Year Seven were used, the same age group as observed in my research.

My data collection for the main study was completed in three months with two lessons timetabled per week. The period of time allotted for data collection in each research study varied with Kaschub (2000:2) and Wiggins (1994:234) taking five months each over their data collection, Burnard (1999:ii) twenty-one weekly classes over a period of six months and Wiggins and Bodoin (1998:283) four months. A specific time was not stated for the others.

Some researchers gave details of the musical instruments available for use by the students in their sample groups. Of these, free choices of keyboard with both tuned and un-tuned percussion available were for the selected groups to use in a practice room (Miell and MacDonald, 2000:352). In single rooms each pair composed with a full size Yamaha Keyboard (MacDonald, Miell and Mitchell, 2002). Each group was given a xylophone, drum, triangle and a cabasa and told that they had twenty minutes to work on a piece of music (Morgan, Hargreaves and Joiner, 1997; 2000). Keyboards and both tuned and un-tuned percussion were available (Wiggins, 1994:243) and a piano, classroom xylophones, percussion and an auto-harp (Wiggins and Bodoin, 1998). Whereas most children in the research cited had access to musical instruments from the beginning of the research study, mine did not, but used the children's own voices and hand clapping initially rather than starting with instruments. As the work progressed, the teacher allowed each of my groups to have access to classroom percussion in the form of two xylophones, a tambour, tambourine, and a wood block.

Sample group selection, size and composition

In my research the teacher selected a sample group of six students from the groups in each of three parallel classes in Year Seven. Each sample group represented one of the three areas of the general ability range; one each from Seven O of high general ability, from Seven F of medium ability and Seven S of low ability. The teacher decided that each group should have six students, thus keeping the natural settings for group work as it would be without a researcher present. These students had been in the school only two weeks and many of them did not know each other and none of the groups could be described as friendship groups as such. Some groups contained pairs or trios of friends but the students all agreed to work with each other for a limited time. Each group contained both boys and girls and again, this was the teacher's preference. The teacher indicated what the general ability was for each group but the actual musical knowledge and skills of individual students were not known and were left for the researcher to discover. It did not take long to form some impressions of the students in the three sample groups.

In Seven O, the sample group contained three girls and three boys. The girls had worked with creative musical experience before, either instrumental or vocal, or both, and one was continuing to receive regular weekly peripatetic musical tuition on the flute. Of the boys, one enjoyed singing, one had tried composing before and one confessed to having done nothing previously but was keen to learn within a group.

In Seven F, the sample group contained four girls and two boys. Two of the girls were already musically able but the other two had less confidence, which may have indicated either less experience or lack of ability. The teacher indicated that the two boys had not acquired the necessary musical skills required at the end of Year Six in the primary school. This made a group situation of able girls and less able boys so it was speculated that it might result in very good peer assisted learning or alternatively, a robustly argumentative situation.

In Seven S, the sample group contained three girls and three boys. The girls were all fairly well used to making music, which was very much influenced by popular styles. One of the boys had more musical knowledge that the other boys in the group although his attention often wandered and another had good planning skills. The third showed

some evidence that he might have done creative music at some time but his concentration lapsed all too frequently.

After meeting the students in the sample groups, it was noted that some of them were apprehensive about their lessons in the new school although they had been introduced to the school and the music suite during the previous summer term. Most showed interest on hearing that they could learn to compose in a group situation by talking to each other and making decisions about the compositions together.

In my study, three mixed gender groups of six children were selected by the teacher in accordance with her usual practice. In the research by Miell and MacDonald (2000) and that of MacDonald, Miell and Mitchell (2002), forty girls were allocated into pairs of single gender, with each pair having one girl with experience of formal instrumental training and one with little or no instrumental training. Pairs and trios were used in Burnard (1999:185), when peer collaboration was left to the choice of the students. Ten selected eight years old children, withdrawn from their class, were in the study by Kanellopoulos (2000). Fours, of both single and mixed gender groups, were considered appropriate for dividing eighty-eight children, aged nine to eleven into groups (Morgan, Hargreaves and Joiner, 1997). Similar groups of four were repeated with their later research (ibid:2000). One boy and one girl, preferably of different ethnic backgrounds and possibly of different socio-economic backgrounds also, were selected as two key informants (Wiggins, 1994:235) and the teacher's choice of one boy and one girl were selected, again as two key informants (Wiggins and Bodoin, 1998:283). It was evident that restrictions of various types stipulated by the researchers were put upon the choice of number and gender in the forming of groups. Some researchers were looking for specific situations, which could be analysed and measured afterwards.

Ethical issues

The question arose concerning how to preserve the anonymity of the school and its location. As a researcher and a privileged guest in the school it was my responsibility to maintain the privacy of both the staff and students by not talking to anyone about them except to those directly concerned with my study (Scott and Morrison, 2005:3). Care was taken to protect the confidentiality of the music teacher by observing her work in the most professional way possible. This included respect for her teaching and

maintenance of discipline, her assessment of children's abilities and any decisions that she made in her difficult role as head of the music department.

There were the children in the sample groups to consider, both as groups and as individuals. 'Access in the sense of trust only develops slowly in research, as it does in any relationship' (Measor and Woods, 1991:64). It was important for the students to know why a researcher was there and it was important for me to develop a good relationship with them so that they knew that they could trust me to keep their confidentiality. Each class in which the research took place was originally identified by the year followed by a class number. Therefore, the year was kept but the classes were identified by the substitution of an alphabetical letter instead of a number. Furthermore, as certain incidents and opinions that arose within the sample groups were later reported in the findings and analysis of this study, it was essential to change the students' names. The children knew about this, having been assured by the researcher beforehand that their own names would not be associated with this study (Scott and Morrison, 2005:3). As suggested by Cohen, Mannion and Morrison (2000:142) 'a standard protection is often the guarantee of confidentiality, withholding participants' real names' and using pseudonyms instead. Therefore, it was borne in mind, at all times, to uphold the ethics of research with respect for the children involved, respect for democracy and respect for the truth (Bassey, 1999:73).

Research methodology: design and process.

Permission was requested from the teacher by phone and from the head teacher, by letter, in June 2001 for access to the school for research purposes in the following September (Scott and Morrison, 2005:2). This was granted. A visit was made to the school on July 9th to discuss plans with the teacher and meet the head teacher after which an inspection was made of the music suite in order to prepare the details of the methodology required for data collection (Bassey, 1999; Cohen, Mannion and Morrison, 2000). This included information about the students who were entering the school for Year Seven plus the music curriculum and lessons plans. Information was gathered concerning the music suite where the lessons and the peer assisted group work took place. This involved the number and type of available instruments and where to place the audio recording equipment so that it complied with the Government's Health

and Safety rules in not being a dangerous addition to the music room. Careful preparation was essential in helping to gain first hand knowledge of the place and more importantly, establishing a 'rapport' with the three classes involved in the data collection (Ball, 1993:33). The music teacher stated that she intended to keep similar schemes of work as in the previous school. In the intervening time however, between the pilot and main studies, some changes to the National Curriculum had occurred, but there was very little that affected the research procedure.

The first change to the methodology, compared with the pilot study, was to make an audio recording of each lesson to show the introduction to peer assisted group work and the follow up after the group performances of compositions (Charmaz, 2000:514). The teacher was in favour of this approach instead of adding to the students' apprehension by using a video camera in their lessons, which may have required having another person in the room (Mercer, 1991:47). Therefore, it was decided to use the less visually challenging audio equipment instead (Bassey, 1999:82). Specialist recording equipment was obtained from the media department of the university and brought into school. The microphone was directionally sensitive and the portable recording machine had good quality reproduction, which picked up both conversation and music without distorting the sound. The equipment consisted of a multi-directional microphone and small stand, a Marantz portable audio recording machine, headset, battery charger and lead. Blank tapes were labelled and annotated for the lesson supplied by the researcher. The recording equipment was set up for every music lesson whether it contained peer assisted group work or not and showed how the lesson was organised with its inclusions and preparations for peer assisted learning in composition. Each music class was recorded on a separate tape. This procedure proved very useful indeed. Some children were curious about the equipment at first showing that they were aware of it but soon forgot about it, whereas this might not have been the case with a video camera (Mercer, 1991:47). The main concern was that its presence should not affect the validity of the data (Mercer, 1991:48) but this appeared to be unlikely. Later, the group work only was copied on to another tape on which subsequent group work sessions were added in chronological order. Each group had a separate tape. The aim of this procedure was to show the progression of each group in their peer assisted sessions more clearly from one lesson to the next.

A second change was made to extend the use of observations by using Table 5.2, shown on page 124 and a digital watch for observations every three minutes. This was done on every occasion that group work was in progress. An additional research instrument, in the form of Questionnaires One and Two, was issued when required, plus pencils for the students. A copy of each of the Questionnaires is shown in Appendix 3 on page 221, and their details are described on page 125 of this chapter. These changes to the methods were made to accommodate the addition of the quantitative element.

Small changes were made in the method of procedure through the data collection process to accommodate the two changes already mentioned and described in the previous two paragraphs. A revised plan of action was devised to accommodate the use of recording equipment in every lesson and addition of the quantitative element during data collection. Apart from those, the research process followed the same procedure as that used satisfactorily in the pilot study beginning with negotiation of access to the school, agreement of music teacher and permission of the head teacher. At the beginning of the autumn term, the researcher met the students in each of the three classes and observed the teacher selecting the students for the groups and of the sample group in each class. Data collection began on September 17th. Observations were made of music lessons and the sample groups and written as field notes, which were written in full at the end of the same day. Also during observation a timed chart Table 5.2 was ticked when and where appropriate. Lessons and sample groups were audio recorded. Unstructured interviews were made with the teacher plus notes of comments or audio recording of the same. Fieldnotes were fleshed out and the audio recording checked at the end of each day (Patton, 1990:10). Questionnaires One and Two for the students were handed out and collected in at the appropriate times: one half way through each project at the end of the second week and the other at the end of the fourth week. A copy of the teacher's evaluation of the work from the sample groups was given to the researcher during the data collection period. After data collection had finished analysis was made of the qualitative data obtained from observing each criterion with each sample group. Transcripts were made from the taped recordings of students' conversations showing peer assisted learning in each of the three sample groups (Patton, 1990:179; Charmaz, 2000:519).

The quantitative data was used nominally and statistically. After analysis, the findings were written up and discussed and some suggestions made for future research in a similar field. Finally, the writing up of the whole thesis was completed.

The lesson plan for the main study was similar to the one used for the pilot study. The only change concerned the items required for the quantitative element with the issuing and collection of questionnaires for the students. For these, the second week followed the same pattern as before and at the half way stage reached in the four week project, the first written questionnaire was given towards the end of the fourth lesson for Seven F, the second lesson for Seven O and Seven S, completed and handed back to the researcher. The third week followed the same pattern as the first week. When the fourth week brought the project to a close, towards the end of the last lesson, the second questionnaire was given out, duly filled in and handed back to the researcher. This completed Phase One of the data collection and this procedure was repeated again for Phase Two, the remaining four weeks of peer assisted learning. The second questionnaire each time provided feedback required about learning in a peer assisted situation. Each student's thoughts were obtained about whether it was found useful or not to work in a group when learning to compose. No changes were made to the natural settings of the lessons or to anything else affecting the research situation.

The children's completed group compositions were performed to the whole class, and if incomplete, performed in their unfinished state and mention made of the fact. The teacher assessed each composition for the National Curriculum. The second composition project followed the same pattern as the first and this composition, in all groups, became an extended and improved version of that produced in the first four weeks rather than an entirely new composition.

Research instruments

Observation
Before data collection began, the teacher introduced me to each of the three classes in the new intake of Year Seven who were involved in the study. By doing this, the students began to know the researcher and become familiar with the equipment before data collection began. As suggested by Hitchcock and Hughes (1989) and Bogdan and

Biklen (2003) the students were given the opportunity to ask questions about the equipment, which later discouraged them from being inhibited, or from showing off out of character as they began to ignore the recordings being made in the classroom. This also gave me the opportunity to tell them that I would be a non-participant researcher and not a helper, when data collection began.

Observation began on September 17th 2001. Whole lessons were audio recorded as a means of providing the context of group work within the lesson including its position and length. Each whole lesson was observed generally where there was a sample study group involved. Field notes were taken during the whole lesson, as well as the group work periods with the sample group. It was essential to have a consistent method of abbreviations for this purpose. Notes were made in a rough notebook using an abbreviated form of English language with signs and symbols for repeated items, which enabled notes to be made about actions, attitudes and perspectives. Field notes were studied with care each evening following data collection and re-written by hand in prose. This included observation notes of the lesson format and the position of the group work in the lesson. Detailed notes were written about the sample group work sessions. It was essential to be aware of initial interpretations of the data becoming mixed with the writing up of field notes (Open University, 1991:16). Group work data was transferred to the word processor in a similar method to the recorded peer assisted group work. This enabled the researcher to read through the notes in chronological order for each class. The aim of this procedure was to show the progression more clearly from one peer assisted learning session to the next of a particular group. Throughout data collection it was essential to remember that the qualitative researcher 'is the primary research tool' (Ball, 1993:32).

The importance of using observation as a research instrument in these studies was paramount. It was a successful method for following a group at work on their composing. What the ear might have missed during the lesson was retained by the audio recording machine which was used as a back up for the observation technique in making the data as accurate as possible (Open University, 1991:16). It was part of the natural settings of these lessons for the teacher to isolate one or two groups where and when there was space available to do it. This helped the children to concentrate on their

own work because it is an unfortunate feature of music lessons that sound considered as music by one group, is noise distraction to another.

Observing the sample groups from one lesson to the next provided the continuity for assessing how much peer assisted learning contributed towards progress in the acquisition of compositional or improvisational skills. Each lesson was considered as a unit for observation although there were different amounts of peer assisted learning in groups and some had none at all. A lesson lasting fifty minutes contained from fifteen to twenty-five minutes of peer assisted learning in groups in which students worked on improvising with given ideas or composing with their own ideas.

The value of observation as a method of data collection was supported by its use in other empirical research. In all of these research studies, observation was the main method of collecting data where groups composing collaboratively were observed. Field notes were taken usually with either audio or video recordings. In some cases other methods, such as the use of questionnaires and interviews, either structured or unstructured, were used to support the observations or provide feedback. Researchers generally did not favour questionnaires for gaining information from teachers and there was little evidence of either formal or informal interviewing. It was very clear, however, that those who selected an ethnographic style of study, using qualitative methodology, chose to do so because they considered that the nature of their research could not be quantified. The learning processes of groups required detailed observation to note the phenomenal qualities of meanings, perceptions and the effects that peer assisted working had on the children concerned, as found in Burnard (1999), Kanellopoulos (2000), Kashub (2000) and Wiggins (1994; 1999). The children's work was used by Burnard (1999) as source material for analysis when examining the nature of the music experienced by eighteen, twelve year olds. Interviews with the students were taken early to gain feedback at the start of the research programme.

Observation using criteria in the timed chart Table 5.2

The list of abbreviated criteria in Table 5.2 was used during observation to ensure that all criteria were considered. The criteria in the first column of both Tables 4.1 and 4.2 were abbreviated and joined together in the form of a preliminary checklist, which was

developed into Table 5.2 for practical use during data collection. The full list of criteria was given in Chapter Four on pages 85 and 86.

The checklist used all the criteria from the left column. These were substantive questions, which focused on the particular setting and the students within it (Bogdan and Biklen, 2003:150). The criteria were abbreviated in written form so that they became reminders on the small unobtrusive tick box chart used by the researcher in every observed group work session. For example, during the peer assisted sessions, staff notation was used and recorded by a tick in the appropriate place on the checklist. When the checklist was built into Table 5.2, it provided an accurate chart on which the observer could record both the social and cognitive aspects of peer-assisted learning in an easy to use format. It provided specific information, which could be either counted or correlated after data collection was completed.

Table 5.2   Three minute observations of criteria

Timed minutes(across) Criteria (down)	3	6	9	12	15	18	21	24	27	Total	%
Working together											
Even input											
Positive discussion.											
Negative argument											
Domination/Able											
Domination/Disruptive											
Vision											
Developing ideas											
Confidence in elements											
Staff notation											

Table 5.2 was used to make observations every three minutes of peer assisted learning in the group work session. Using the grid, a positive tick entry, timed by a small digital stopwatch, was made in the appropriate box during each of the three-minute sessions for the length of the group work session.

The cognitive criteria were used to devise Table 5.3. This table was given as a guide only to the teacher during the data collection period of the composition project for each sample group. She was asked to give her thoughts as fully as possible about the cognitive progress of the children's work during the peer assisted learning sessions.

Table 5.3 Teacher evaluation of the cognitive domain in peer assisted learning

Criteria	Thoughts about the cognitive aspects of group work sessions
Vision	
Developing ideas	
Confidence in elements	
Notation	

Interviews

The use of a semi-structured interview with the teacher provided useful information about the musical background, aims and lesson content before lessons were observed, as recommended by Hitchcock and Hughes (1989:83) and Scott and Usher (1999:110). It was focused on the lessons for Seven F and was useful for finding out what the teacher's expectations were of the children before the observations took place. After this interview, subsequent interviews became abbreviated to comments made before, during and after the lessons giving information about the teacher's perspective of the lesson concerned. A number of comments were automatically recorded as an integral part of the group work sessions. This was when the teacher was with each particular group being observed, or spoken as a comment to the researcher as she left to go to another group.

Interviews with students were not used but their individual, spontaneous comments about lesson content and about working in a group included some advantages and disadvantages of peer assisted group work. Sometimes their verbal or non-verbal attitudes gave an indication about how much they enjoyed composing together. Questionnaires replaced interviews for the students and all were encouraged to fill them in with their own answers.

Questionnaires

The introduction of Questionnaires One and Two for each student proved successful in gaining the information required in the form of answers to specific questions about peer

assisted learning and their own progress (Bassey, 1999:81; Scott and Morrison, 2005:192). These are shown, as given to the students, in Appendix 3 on page 221. They were filled in at the planned time and the provision of a pencil for each student meant that all present returned a completed questionnaire. Both questionnaires were distributed twice during the research period; the first halfway through the process of composing and the second at the end of the project in Phase One and the format was repeated for Phase Two. Obtaining written answers to questionnaires was much easier to arrange than interviews and in case students were worried about maintaining their confidentiality concerning their questionnaires, their names were substituted in the research report (Pole and Morrison, 2003:144). Care was taken to find the most appropriate time for issuing the questionnaires, so as not to interfere with the composing process. They were distributed to students just before the end of each lesson concerned (Jacques, 1991:175; Bassey, 1999).

The two short Questionnaires were framed so that respondents had only two options for replies, so making the subsequent analysis as simple as possible and saving time (Hitchcock and Hughes 1989:38; Open University 1991:52). Questionnaire One was given to the students half way through the composition project and Questionnaire Two at the end of the project in each phase. Attention was paid to both design and layout of each Questionnaire (Open University, 1991:53). To save time, the students were asked to underline the answer they thought was the nearest to each question asked. Using this method may have limited the responses that some of the students made but the answers were useful nevertheless because they provided information that could be counted (Open University, 1991:39). The students' opinions about the experience of working together on a composition were asked for and these provided valuable feedback concerning collaborative learning in producing creative music. Questionnaires were used to ensure that all participating students gave information, both social and cognitive, about the peer assisted group work. This was a satisfactory way of gaining feedback from students compared with the unsuccessful efforts with non-existent interviews in the pilot study, which provided no feedback at all.

Summary of the chosen methodology
There were some similarities in my choice of methodology with the empirical research of Wiggins (1994), Kaschub (1999) and Kanellopoulos (2000), whose methods used a

qualitative paradigm. It was most similar to that of Burnard (1999) who also used a quantitative and statistical element. This contrasts with the studies of Miell and McDonald (2000; 2002) and Morgan, Hargreaves and Joiner (1997; 2000) all of whom used a quantitative paradigm.

In summarising the methodology for my study, there were advantages in using the selected research instruments for providing three ways of obtaining data. The main one was qualitative and focussed on the students in their group sessions. The other two, timed observation with Table 5.2 and the questionnaires, were used either qualitatively or quantitatively or both (Patton, 1990:192; Pole and Morrison, 2003:8). Thus, it was possible to obtain a more accurate picture of the data by triangulating the evidence to provide a valid picture of what happened in the classroom (Open University, 1994:17; Pole and Morrison, 2003:9)). My study was a full-scale research study using a qualitatative methodology with mixed methods (Patton 1990:192). Utilising criteria was believed to be unique as a method of enquiry, wherein it 'seemed best to use methods, which were appropriate and practical' (Bassey, 1999:67; Hitchcock and Hughes, 1989:38). Field notes recorded the observed data, which could be checked against the data from the timed chart (Table 5.2) and there was feedback from children's answers to the questionnaires. Audio recordings were used as an additional tool, which picked up all the audible data and could be referred to at any time after data collection. This was done 'to help provide an ontologically objective view of what happened in the classroom' in hearing things as they really were (Eisner, 1991:50). It is likely that the combination of all three methods used, providing three views of the same data, led to a fuller understanding of the phenomena studied (Bogdan and Biklen, 2003:107; Pole and Morrison, 2003:9)).

Natural settings

Although Wiggins (1994) and Burnard (1999) were close to keeping natural settings in their studies, they were both different from mine. Wiggins (1994) had no British National Curriculum to adhere to and Burnard (1999) made group work optional and the children could finish off their work in their own time. My study was inclusive of natural settings in having respect for the existing lesson structure and not wishing to disturb it in any way. The teacher's autonomy in the classroom was sacrosanct and no pressure was put on her, or the school, for withdrawal of children for research purposes.

The aim was to observe what happened in the lessons and at the same time remain objective in collecting the data.

One or two particular features were noted in individual research projects. Only Burnard (1999), of all the researchers in English schools reviewed in Chapter Four, discussed working creatively within the confines of the National Curriculum. It was also noted that none of the qualitative research reviewed, from both England and the United States of America, included any extraneous events or circumstances emerging at different times to disrupt or interfere with either the children's work or with data collection. If there were any interruptions, the researchers chose not to include them in the reports of their studies although longer studies may have included them. This was not to be the case in my research where disruptions proved endemic in the natural classroom settings and two of the classes were withdrawn from one lesson each week, making the amount of work to be covered difficult for both teacher and students. As explained in Chapter Four, when considering the important role of the teacher in peer assisted learning, these were the main reasons why I chose not to make the teacher's role subject to critical interpretive 'academic' comment in my study.

The research took place in the natural settings of the music suite in the timetabled lessons as the students were taught in a particular secondary school. The teacher chose the lesson material, how it was taught and where the peer assisted learning group sessions were placed in the order of each lesson. Children were able to interact with the teacher and with other students in the lesson as part of normal practice. This was the natural setting where the students could interact with both each other and the music (Wiggins, 1994:233). The teacher chose mixed gender groups and stipulated that she preferred to have groups of six students working together. The researcher accepted this and did not ask for key informants as in the research of Wiggins (1998:283), or pairs as in the research of Miell and MacDonald (2000:352), or fours, as in the research of Morgan, Hargreaves and Joiner (1997:16). None of the children were isolated from groups to compose alone in a timed study as in the research of Kratus (1989:9), but because the music suite consisted of three large teaching rooms and several smaller practice rooms, it was possible for student groups to separate from each other at certain times to work on their compositions. The students did not have a choice of group size, as in Burnard (1999:299) and were told by the teacher to settle any differences that

might arise, stay in their groups and make peace whilst working together on their compositions. Since the object of this research was to observe peer assisted learning in collaborative groups in normal teaching and learning conditions, the changes made to the timetabled lessons for Seven O and Seven S became part of the natural settings for the two sample groups concerned and were worked through as required.

Observing students in the natural settings of their timetabled lessons was pursued in order to cause no disturbance to normal lessons and school procedure apart from being there (Bogdan and Biklen, 1992:35). It was hoped that this would reveal the normal situation that children face in the process of their everyday learning and particularly the social and verbal interaction during their peer assisted learning (Lloyd, 1990:69). Lack of classroom instruments, poor behaviour by some of the students and not enough time for children to complete their group work were all considered as part of the context of natural settings which influence children's musical learning and achievement.

Unexpected changes were made to the agreed arrangements for data collection over which neither the teacher nor the researcher had any control. These changes affected two of the sample groups. On arrival at school the day before data collection began, the teacher was upset to find that both Seven O and Seven S were withdrawn, at the last minute, from one of their two music lessons each week for extra work in computer skills with the computer teacher. For this, the music teacher was required to reorganise the music lessons so that students could cope with the workload and still perform adequately when the assessment for the National Curriculum took place at the normal time (Barrett, 1998:20). Seven O and Seven S were required to learn the work in half the number of lessons allotted on the timetable. The teacher was concerned about the consequences of the withdrawals for two reasons: first, making life difficult for the children concerned and secondly, affecting the agreed timing and content of the research plan.

As the research was designed to allow students to be observed in their natural settings, the decision was made to go ahead notwithstanding the decrease in lesson time (Lincoln and Guba, 1985:288). This decision was influenced by the results of the pilot study, which showed that researching from September to December avoided fragmentation to lessons through examinations or outings, which tended to occur more frequently after

Christmas. Nevertheless, the observations were curtailed for both Seven O and Seven S, but remained within the 'natural settings' that had been forced upon them and in which they were expected to cope. In contrast, Seven F were observed in all their timetabled lessons.

For the researcher, observations made in these natural settings were more likely to provide valid reflections of student behaviour because they were made in the everyday context of their school life (Open University, 1994:17). This unpredictable agenda of natural settings was the context of school lessons in which the children learned. As observation was directed towards children and peer assisted learning, it also involved probing into all aspects of the lessons and 'analysing the multifarious phenomena' that constituted the life cycle of the music classroom (Cohen, Mannion and Morrison, 2000:185).

Analysis and presentation of data

Some analysis was begun whilst data was being collected but the sorting and subsequent writing of the observed field notes was both time consuming and arduous and proved to be a challenging task. The written data was compiled from field notes taken during observations of the three sample groups and as the researcher was using the timed chart Table 5.2 at the same time, aspects of the criteria appeared in the field notes also. The focus was on the process of peer assisted learning noting how the children responded to it and worked with it. Questionnaires were distributed to the students and collected at the planned times. The oral material was recorded and stored on audiotapes. A detailed description of the procedure of analysing the data is given below.

Analysis of qualitative data

Analysis was for the three sample groups unless stated otherwise. A simple colour coding system was used during the reading of the text to highlight the name of each student whenever it appeared. This gave an immediate indication of which students were mentioned most and for whatever reason. From this it was easier to see who was verbally or behaviourally the most active within the group, giving a possible indication of engagement within peer assisted learning or merely being most attention seeking. The data was analysed to give a picture of each student's social and cognitive

contributions to the group work. Notes were made at any time during the reading when repeated themes or patterns of behaviour began to emerge.

The observed field notes were read in conjunction with Table 5.2 for each lesson to see if the data of Table 5.2 produced similar readings. Care was taken to note anything unusual that stood out from Table 5.2 in any of the three groups. Comparison was made of the work among the three sample groups.

The recordings on audiotape provided a permanent reference to the live action of words and music in the classroom by backing up the observed data. Many of the children's comments were spoken very quickly and not easy to decipher whilst observing a group of six students, but referencing some of them individually was possible from audio-tapes. A recording machine was borrowed from the university for this purpose.

The audiotapes for Seven F, who had the normal two lessons per week, were studied alone. Attention was given to the work of Seven O and Seven S who were both managing on just one lesson per week. It was possible to hear again the differences in attitude and inclination emerging between these two classes. Notes were made at any time during these stages when a repeated pattern, behavioural situation or phenomenon began to emerge in any of the three groups (Stake, 2000:438). Any emergent themes were sought as the essential details of children working in natural settings with peer assisted learning in composition (Van Manen, 1990:69).

Transcriptions made from group work where peer assisted learning was audibly in progress, gave insight into the thought processes of how students attempted to learn together and how they relied on each other for help. It revealed whether one student in particular was acting as a peer leader to the group and incidents of peer scaffolding in the process of learning to compose were identified by this method. Each group contained six children, a large number for observation purposes and also with audiotapes. Video would have been better for the researcher identifying each student taking part in collaborative learning. By playing back the tapes it was possible to pinpoint verbal details involved with peer assisted learning and with both on task and off task talk and emerging musical communication.

The researcher/ teacher interview, recorded before the first lesson with Seven F, was studied. This set out what the teacher planned to do in the composition lessons. Later the teacher supplied a written assessment of the children's progress in Seven F after the end of Phase One. This commented on the development of cognitive skill and was at the request of the researcher who wished the teacher to assess the compositions produced. The four items listed were the four cognitive criteria as shown in Table 5:3 on page 125. A similar assessment was not given for Seven O and Seven S, which were the groups having only one lesson per week. The trainee teacher, also present in most lessons, kindly offered the researcher some of the evaluation sheets of the later lessons she had taken with each class which included peer assisted group work. These were studied and relevant parts concerning the research were noted.

Although the research was planned mainly with a qualitative approach for data collection some quantitative procedures were included. With six children to observe concurrently other procedures, which involved checking and counting or a small amount of measuring where appropriate were considered to be useful for triangulation. Different types of data, which included the timed chart (Table 5.2) and Questionnaires One and Two for the students, were analysed for each group. Reading and analysis of the three sets of Questionnaires One and Two provided the students' views about the group work situation and their progress within the group. The significance of students' answers to the questions was noted.

Analysis of quantitative data

The data from each of the three sample groups was analysed separately. The analysis of the quantitative data for each group began with counting the number of ticks on Table 5.2 for each criterion within each peer assisted learning session. The percentage of time spent on each criterion in each lesson was calculated. The mean (average) percentage for each criterion was then calculated. Each mean percentage represented the average percentage of each session that was spent on a particular criterion. The different criteria were not mutually exclusive, so adding the percentages across the criteria within any group is unlikely to produce a total of 100%. For Seven F, the results of the two subgroups working during lesson sixteen were combined. The criteria were ticked if there was any evidence shown by either subgroup during each three-minute period.

Given the percentage of time that each group spent on each criterion, it was then possible to treat the groups as units of observation and to calculate correlation coefficients between pairs of criteria. Correlation coefficients can take any value between minus one and plus one. A value close to plus one represents a strong positive correlation. This means that the percentage of time spent on one criterion increases as the percentage of time spent on another criterion increases. A value close to minus one represents a strong negative correlation. This means that the percentage of time spent on one particular criterion decreases as the percentage of time spent on another criterion increases. A value close to zero means that the percentage of time spent on one criterion conveys very little information about the percentage of time spent on another criterion as they are close to agreement. It was important to discover whether any statistically significant correlations were shown between the different criteria. Each correlation coefficient was calculated from three observations, one observation from each sample group. The correlation between any pair of criteria needed to be smaller than -0.99692 or bigger than 0.99692 to be statistically significant at the 5% level (Murdoch and Barnes, 1998:22). Statistical significance at the 5% level means that fewer than 5% of samples would produce such a strong correlation if there were no correlation between the pair of criteria. In other words, a correlation coefficient that is statistically significant at the 5% level is believable in that it is unlikely to have been observed just by chance. It should be noted that in this study correlations do not refer to causal relations. This is because none of the criteria were under the control of the researcher. Observations were made within the natural settings of the classroom organisation.

The presentation of data and findings

Data and findings are presented in Chapter Six as a descriptive account to give an all round picture of a particular learning process observed with three separate groups of children in the same school. This was the reason for using different types of data collection methods. Each class sample group is presented in turn starting with the group of students with the highest general ability. In this way, as the analysis is read, a picture of all three groups emerges from the evidence and shows their working process in peer assisted learning. The qualitative written data provided evidence for most of the account. The criteria used in the timed chart, Table 5.2 and the data from the student questionnaires provided a quantitative backing for the account and were counted

nominally or correlated as appropriate. The importance of the criteria was that they were sensitively focused on the social and cognitive domains of peer assisted learning and designed to find the answer required to the research question. Tables, bar-charts and scatter graphs were used to provide visual impact for the data obtained from Table 5.2 whereas averages were used to show the results of the answers to the questionnaires.

The analysis of selected transcriptions gave the opportunity to quote some of the words heard from the children as they assisted each other in the learning process. In these it was heard who presented the scaffolding for learning and to whom and whether there was possible understanding gained from this by the recipient. The transcripts were divided into short conversations, sometimes between pairs, sometimes with more children involved (Tizard and Hughes, 1991:29). The aim was to locate and listen to peer assisted learning in process.

There were two issues that presented the researcher with difficulties. First, the collecting together of the criteria, which were directed towards two domains of peer assisted learning, the social and the cognitive where the process of learning was the most important for my study. The research of Miell and Macdonald (2000) focused particularly on cognitive skills although comparison was made of the compositions of friends and non-friends. Secondly, referring to my study design as an evaluative, qualitative single focus group study, similar to a case study, implies that it might include a participant researcher and that the sole research instrument might be observation only, to see what emerged and could be coded. Instead, a second research instrument was used with pre-assigned criteria and two sets of closed questions for the students. Therefore, referencing a combination of methods was difficult but both Hitchcock and Hughes (2003) and Bassey (1999) advised using whatever combination of methods was appropriate for finding answers to the research question.

Validity
Having established validity in the pilot study, the problem now was that the main study was larger and more involved. It was necessary to ask oneself whether the research methods chosen would do what they were supposed to do as objectively as possible. In choosing two different types of method there was less chance of the research being invalid because two different methods provided support for each other through

triangulation. The research data was as factually accurate as it could possibly be. The intention was to show the application of peer assisted learning by interpreting the spoken words, non-verbal communication, musical communication, meanings and stressful situations arising during data collection. All of these took place in the natural settings of the lesson in and around the music room.

There were different types of validity that could have bearing on research using qualitative methods (Cohen, Manion and Morrison, 2000:107). There was face validity in considering whether the account of what was found presented a true record of what was witnessed. My study took place in natural settings where the researcher did not interfere with any thing that the teacher normally had under her control. The fact that the three sample groups represented a cross section of the whole of the general ability range in this school strengthened its validity as a study. The chosen methods for data collection also ensured internal validity as far as could possibly be obtained through the use of different types of data which could be triangulated, or cross referenced, one appearing to support the other (Scott and Morrison, 2005:255).

Validity in research is a complex concept, which 'tells us whether an item measures or describes what it is supposed to measure or describe' (Bell, 1987:51). It was essential to establish that the methods selected were both appropriate and reliable for the type of research to be undertaken (Open University, 1994:17). Triangulation using quantitative analysis of the timed chart (Table 5.2), the feedback from the students' questionnaires and the evaluations from the teacher all helped to preserve validity.

The validity of the quantitative analysis was linked to both the face validity and internal validity discussed above. The collected data, using the timed chart Table 5.2, was as accurate and objective as was possible to obtain. In addition, the statistical methods used in the quantitative analysis were appropriate for the type of data collected using the timed chart. It was appropriate to treat the sample groups as units of observation by calculating the mean percentages of time spent on each criterion. It would have been inappropriate to use the separate percentages for the seven peer assisted learning sessions observed for Seven O, the thirteen sessions for Seven F and the eight sessions for Seven S (total twenty-eight sessions). This would have been appropriate if the

twenty-eight peer assisted learning sessions had been for twenty-eight different sample groups.

The researcher's observations were substantiated by the comments of the students concerning the value of peer assisted learning in the composition process and particularly from the answers to the two questionnaires. Their comments were collected individually and as a group, giving combined levels of triangulation (Cohen, Mannion and Morrison, 2000:113). Wiggins (1994) sought triangulation through both formal and informal interviews with students about their perceptions of the issues that emerged in their work. She also used peer de-briefing, 'the children confirmed the interpretations of the researcher in terms of the strategies they used in problem solving and why they chose to use them' (Wiggins, 1994:237). Asking students about their intentions was a direct method of discovering their opinions as they were involved with peer assisted learning. In my research, the students' answers to the two questionnaires were designed to give the researcher information relating directly to the research question.

The interview with the teacher prior to the commencement of work with Seven F and her evaluation of their work later gave her view of the progress of the sample group. She also made brief comments to the researcher about the learning progress of all three sample groups during or after some of the peer assisted learning sessions. These comments gave an immediate reaction to the way peer assisted learning was helping the children with their composing.

Conclusion

This chapter presented the methodology for data collection beginning with the research design. The research study included both qualitative and quantitative methods in contrast with other empirical research, which used solely one or the other. The decision to use different methods was made because it was considered that this was the most appropriate way of finding possible answers to the research question and to ensure validity.

The pilot study commenced with its own research design, location and context and was followed by the methodology and research instruments for data collection. At the end,

amendments and additions were suggested for the main study. These were put into practice and were described in the main study. The main study commenced with the research design. This was followed by location and context in which some references were made to previous empirical research to pinpoint the differences between my study and other research studies. Details were given concerning the research methodology and research instruments. The methods for analysing the data were given with an account of how the data was presented and the difficulties that this posed. The use of the evaluative criteria in the process of data collection was explained. There was consideration of the validity of the methodology at the end of the main study.

The development of the evaluative criteria, from three used in the pilot study, to the final list of ten for the main study proved useful during data collection for looking specifically into what was happening in the peer assisted sessions. Their preparation was discussed and finished early in the thesis so that their practical application, as an important tool in collecting specific data, could be more easily presented and explained in this chapter. Effective use was made of the abbreviated Table 5.2 during data collection and of Table 5.3 for obtaining teacher comments about the children's cognitive progress.

None of the other researchers cited in this chapter appeared to have used natural settings in their research in same way as in mine although some claimed that their research was done without upsetting the classroom regime. In my study everything was left to the teacher to work through as she would without a researcher present. None of the projects reviewed claimed to use more than four children in each group and most specified the group size and gender. Also, none of the projects reviewed used the same pre-assigned set of criteria for evaluating peer assisted learning. Therefore, it is likely that some of the findings in my research may be different from those reviewed in previous research.

The next chapter continues with the analysis and interpretation of the raw data in order to find meaningful and true answers to the research question. It is supported by an account of how this was carried out and how the conclusion was reached.

CHAPTER SIX: Findings and analysis

Introduction

In this chapter evidence is presented about the process of peer assisted learning in music composition from the three sample groups in Year Seven in three different general ability groups, labelled as O (the most able generally), F (of medium general ability) and S (the least able generally). The research sought to find evidence of the effectiveness of peer assisted learning in music composition through the application and assessment of social and cognitive criteria. These were designed to concentrate on the two main aspects of peer assisted learning: the social processes involved when children work together on musical tasks and the cognitive progress of what they achieved from the interactive collaborations. Although initial analysis began during data collection, most of it was carried out when all the data had been collected.

The chapter begins with reported findings on what the students appeared to achieve, first, in the social domain and secondly, in the cognitive domain. Each of these two sections is divided into the separate criteria and each criterion is worked through in turn. The criteria were introduced and explained in Chapter Four in Table 4.1 and Table 4.2. Evidence relating to the criteria is presented in the order of the qualitative evidence first, followed by the findings from the timed chart, Table 5.2. Where appropriate, feedback evidence from the two questionnaires given to the three sample groups is also included. Bar charts are used to compare the results among the three sample groups where they present a strong trend. A further section presents correlations between pairs of criteria. Scatter graphs are used to illustrate statistically significant correlations.

The next section identifies the factors found in the evidence that appeared to produce different results among the three classes. Some of these could be described as inherent factors relating to the children in particular classes whilst most concerned extraneous incidents or events, which were beyond the control of the teacher or the children concerned and formed part of the natural settings of the lessons. The research took place in the natural settings of the timetabled lessons in the music suite and everything that happened in these lessons was accepted as normal in the school day. Nothing was arranged or re-arranged especially for the researcher. As a result, it was possible to see how normal school day events affected the children's learning.

Evaluations of the children's progress in composition using peer assisted learning, first from the children, then from the teacher and finally from the researcher are in the final section of this chapter.

Criteria of the social domain

The criteria for the six social dimensions in Table 4.1 were the socially interactive aspects of collaborating in small groups associated with peer assisted learning and began with looking at how the students fared together as a group. Pseudonyms have replaced the students' names throughout Chapters Six and Seven.

Criterion 1: Working together as a group with social cohesion and task related talk

Working together provided an appropriate atmosphere for peer assisted learning to develop amongst the children. Attention was paid to how each group member adapted to peer assisted learning and whether the group as a whole was working together building on the teacher's introduction to the session. The students had individual personalities with different ideas and skills and it was important to know how much each student contributed to peer assisted learning in each of the sample groups. It was important to observe whether all the members were putting an effort into their work or whether there were any who contributed nothing or very little.

Seven O (The most able group of students)

The students settled quickly and proceeded with the given task. By the fourth lesson this group found that working together required a concerted effort from every member in order to produce a composition in the available time. Karen summed up the requirements very neatly as:

> If we are going to work together, we've got to listen to each other.
> (17th October 2001)

Well-developed oral and social skills made it possible for ideas to be discussed and either accepted or rejected. The group worked together by trying out different rhythmic effects that might be used for a composition and between themselves they tried to find out who had done this sort of work before, hoping that one of their number could lead by offering help. This proved to be a good, no doubt unwitting, attempt at setting peer assisted learning in motion. Their language skills provided good communication, which

assisted them to learn from each other. This importance of language skills in peer assisted learning was emphasised by Vygotsky (Tharp and Gallimore, 1988:46; Rogoff, 1991:67; Wiggins, 1994:233). The children's manners were reasonably good when agreeing to differ about compositional ideas, all of which helped in working together as found by Miell and MacDonald (2002). The response to peer assisted learning generally was good because those who were less able or less experienced could see that there were benefits in being with others who could cope. The three girl students assisted the cohesive group atmosphere to get underway by having plenty of suggestions to make mainly from a shared background of instrumental playing and composing in groups at primary school, a finding which supports that of MacDonald and Miell (2000). They helped the whole group to progress with working together collaboratively and creatively by producing ideas for all members to think about and discuss together, as found also by Sawyer (2004). The beginnings of peer assisted learning were observed from the second lesson onwards.

The six students were able to offer different skills, which were of benefit to all and these aided the ethos of working collaboratively. Karen was very able musically and she contributed most of the ideas using her experience of performing music. Carol and Kerry both worked well with anyone in the group and contributed musical ideas for the others to think about and develop further. Dean appeared, on the surface, to be less experienced musically but he worked well with the group. Oliver admitted that he did 'not know much about this sort of thing' but said he very much appreciated being with those who did. Mark was very positive and his enthusiasm sometimes led him off the beat when he should have been keeping time. He contributed later to the group work by singing a solo part in the group composition. None of the boys were very forthcoming with ideas but good at applying themselves when working in a group. All of the students appreciated the difficulties that the lack of time produced, and their attitude was very positive in working together using their different skills and knowledge to their best advantage.

The timed evidence was collected using Table 5.2, shown in Chapter Five on page 124. The students worked together, on average, 97% of the time spent in the group work sessions. There were very few times when peer assisted learning did not occur and this

was only when students were looking for instruments or trying out snippets of individual musical parts which they preferred to do alone.

The observer evidence was corroborated by the students' opinions. The students' feedback about peer assisted learning in groups was obtained from the two questionnaires explained in detail in Chapter Five. The first was dated October 17th and the second dated November 27th. Using both sets of answers, all the students agreed that for most of the time the group worked together and they all agreed that ideas were discussed in a friendly manner.

Seven F (Students of medium ability)

There were only four girls in the group for the first composing session because the two boys selected for the same group disappeared into another group. Therefore, the teacher co-opted two other boys into the group for the next lesson. The four girls worked together very well on the task of trying out rhythm patterns with rhyming words probably because they were friends and knew each other quite well (Miell and MacDonald, 2000). They discussed which words were worth one beat and which were worth two beats and made up the following rhyme, which they repeated together. The first line was:

> One two three four (counting in)
> Ink ink ink ink oi….nk, oi….nk (spoken)
> 1   2   3   4   1   2   3   4   (clapped beats)
> (18th September 2001)

In the next lesson, the two selected boys joined the four girls to make a group of six. For the next two or three lessons they were hesitant in working together as a group. The two boys appeared not to know the girls and they were unsure of them in the group situation. This inhibited their verbal communication at first. As they tried to work together in a group of six, evidence of some peer assisted learning began to emerge with the girls taking the lead most of the time. However, one of the boys was silently stubborn about being involved in the group composition and he did not willingly join the others or try to work with them or learn from them.

This group had talents of varying kinds, which helped eventually to weld the group together. Verbal skills were well developed with Julie, Kate and Nina who were able to express their musical thoughts. They were the most capable musically. Kate tended to

be moody and became bored with the subject material during the early sessions. She was absent twice but asked the teacher for details of missed work when she returned. As the peer assisted learning sessions progressed, Nina produced ideas, which she communicated verbally to the group. She had a pleasant attitude and was willing to work with anyone. Sally remained the shyest member of the group but was one of the most conscientious, rarely saying anything at all, but by watching and listening she was able to join in with all the practical work and contribute musically to the production of a composition. Carl's verbal communication skills improved and he became confident in enough of his own thoughts to pass them on, not always in conversational terms but rather by exhorting others to do things. All five of these students showed a positive attitude to working together, sometimes in pairs or threes, rather than a group of six. Only Neil showed little interest in music and in working with a group.

Lack of social skills regarding sharing became apparent when classroom instruments were introduced in lesson fifteen and the group split into a set of individuals, each wanting an instrument. There was a conflict of personalities at times, and to some extent a conflict of opinions about the ideas for the composition. Only three instruments were allowed per group in this lesson so that instrumental parts could be added gradually to the composition whilst the remaining three group members clapped or tapped the beat and the rhythm. It was at this stage that the group split temporarily into two groups of two, with two singles, Kate and Julie together, Sally and Carl together, Nina worked alone and Neil sat by himself. In the sixteenth lesson, they worked thus: Julie and Kate together, Nina, Carl, Sally and Neil together. This appeared to be a natural progression for working and both smaller groups worked much better apart and made headway with the development of their own ideas. In lesson seventeen, the two groups joined back together again, except for Neil because the teacher moved him to another group. The group of five supported each other and worked together to add a vocal part to the composition.

The timed evidence from Table 5.2 showed that on average this group worked together 85% of the time they were in the group session. The rest of the group did not let Neil's negative attitude affect their sharing of musical ideas during the first few lessons but this group was not particularly cohesive in working together either. In later lessons, the effect of Neil's attitude became more marked.

The corrobative data from the students' opinions reflected what had been observed. The student questionnaires for Seven F were dated September 28th and November 16th. In the first all agreed that the group worked together most of the time but in the second Neil disagreed with the others and said that the group did not work together most of the time. There was a division of opinion about the friendliness of working in this group. In the first questionnaire, Carl, Nina and Sally thought that the group discussed ideas in a friendly manner most of the time but Julie, Neil and Kate disagreed with this. In the second questionnaire, Neil was the only one who thought that the group was unfriendly.

Seven S (The least able group of students)

The group had problems in settling together from the very beginning because their oral and social skills were not well developed enough at this stage of their lives to enable them to work together by talking and listening to each other. They tried to settle to the task with the word rhythms, and having tried several, could not decide which to use so recited them over and over again to each other as children sometimes do when they find the particular sound of words attractive (Evans, 1978:74). Too much time spent on this meant that they were unable to move forward consistently with the composition but remained a group of individuals who had difficulty in working together. Seeing this, the teacher tried to make them more aware of each other as contributors in a group so that they could use their ideas in a constructive manner.

The lack of a second lesson in the week showed when the students had difficulty remembering the work of the previous week. The essential continuity from one lesson to the next was not there. There was some peer assisted learning with the help of Kerry, considered by Jon to be a good person to give help. Several children did not fully understand that they were supposed to build on each other's ideas to make a composition.

The students were quite friendly towards each other but were slow to make a joint effort and support each other socially as a group. They tended to talk or shout all at once, each trying to get his or her point of view noticed. They lacked the patience they required for listening and reflecting on any suggestions that were made. By lesson four,

Kerry, who was musically the most able, expressed desperation about the lack of progress but the group, as a whole, did not follow up her suggestions.

The timed evidence from Table 5.2 showed that, on average, these students worked together for 57% of the time, which meant that they wasted nearly half of their time in their one lesson per week.

The data from the students' perceptions differed slightly from the researcher's interpretations of their behaviour. The first student questionnaire was dated October 12th and the second November 2nd. All agreed that they had worked together most of the time and that ideas were discussed in a friendly way. This gave the impression that they were satisfied with their efforts.

Comparisons amongst the three sample groups

Figure 6.1 shows how much 'working together' was found in each of the three sample groups in their peer assisted learning sessions. Seven O, the students with the highest general ability were able to organise themselves to work for 97% of the time. Seven F with medium general ability were able to work together for 85% of the time despite some provocation shown in the qualitative data by one particular group member. Seven S with the lowest general ability achieved working together 57% of the time.

Figure 6.1 Comparative results of working together
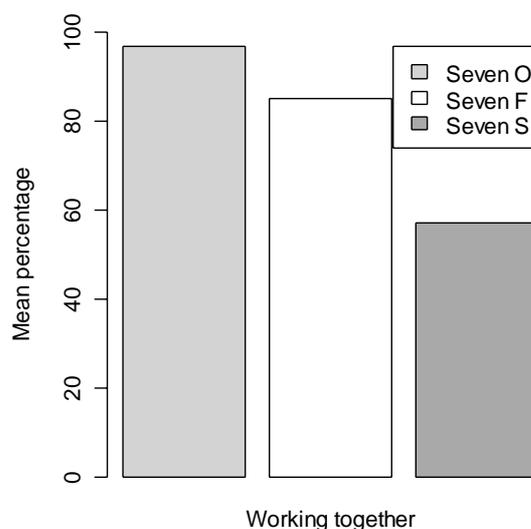
Criterion 2: Even input by each member suggesting ideas or learning from the others in the group

The observations recorded how often each student was engaged with the group or held back and whether students' input to the sessions involved regular contributions or reluctance to contribute.

Seven O

All the members were able to put something towards the composition because they understood what was required. There was even input but the type and content varied. The musical ideas and playing expertise came from the three girls, with Karen contributing more ideas than the other two. This was consistent and very helpful particularly to the three boys, who were less experienced musically and they, in turn, contributed to the group effort by putting these ideas into practice whenever they could. They listened to what was being discussed and in the first four lessons they were the learners in the peer assisted learning situation. The work in this group progressed well on only one lesson per week. Motivation was strong and came from two different sources. Working in a group provided them with a support system for each other so that all in the group were keen to work together, as also found by Burnard (1999) and Kaschub (2000). Secondly, the lack of lesson time spurred them on to produce work for each of the two National Curriculum assessments during the term. These were two diverse motivational forces but had a marked effect on the six students who did their best to concentrate on the given task. It was difficult to keep the continuity from one lesson to the next but this did not spoil or diminish their will to work.

The timed evidence from Table 5.2 showed that even input was found in 89% of the group sessions. This consisted of learning together about which ideas worked and which did not when putting rhythms together in a composition. When a problem arose, they proved to be a supportive group by making the effort to solve it together. In this way they became active and involved in their own learning. Composing was helped because several students were musically literate and could apply their knowledge to the situation. This made the input fairly even between those who gave and those who were willing to receive and learn from their peers.

Seven F

The input was inconsistent in this group, reflecting the fact that they did not work together particularly well but the students worked better when they divided themselves into pairs or threes for exchanging ideas. They seemed to be more comfortable and better motivated in smaller groups and particularly in pairs, where there was no room for a sub group to develop, as found by Hartley (1997). The four girls worked consistently well and were knowledgeable. It was possible to see which children were experienced or well practised in this subject and which were not. Occasionally the girls said that Carl was 'messing about' but he became more positive with the work as time passed and his input improved as he learned from the girls. Neil's input was minimal. He showed a negative attitude, sometimes verbally and sometimes silently, with the others, which was observed and noted in the field notes on at least twelve occasions. Only three of the peer assisted sessions recorded Neil making an effort. In lessons twelve, thirteen and fourteen he worked with Julie in a peer assisted pairing arranged by themselves when the group was asked to write the composition in staff notation. In most of the other lessons he did not contribute ideas. The teacher seemed unaware of this problem because Neil was quiet on the surface and obsessed with being 'cool'. Although he contributed nothing to the peer assisted learning sessions he said that he liked working in a group, but the result was that only five members were able to put ideas forward for discussion to be included in the composition. Despite criticism from Julie, Carl put a great deal of effort into sharing ideas enthusiastically with the others.

Julie, Nina and Kate gave the most in ideas, playing and singing skills in this group. Sally watched all the time but rarely verbalised anything. Perhaps she was not confident enough to speak out or she felt that she could not find a vocal silence long enough in which to contribute as suggested by Prisk (1987:92). The amount of Carl's input varied; sometimes he made a number of useful suggestions or learned something useful from the others but occasionally he lost interest.

The timed evidence from Table 5.2 showed that input in this group was even for 40% of the time that they spent in their group which reflects how much more time was spent with uneven input. This was a very low score when five of the group were working well but Neil's low input into most lessons reduced the effect of their even input.

Evidence showed that lessons three, six, eight, twelve and fifteen did not have even input.

Seven S

Even input was lacking in most lessons and Kerry, who was enthusiastic at the beginning, became exasperated with those who did not make an effort to contribute to the composition.

> Kerry.   We haven't done a thing! No-one is listening to me! (addressing the group)
> Jon.   It's sad because some people think you're rock solid.
> Kerry.   It's not very good because you're not listening to me!
> (5th October 2001)

Jon was keen to work most of the time and suggested ideas, encouraging the others to produce a finished item. His contribution to the group work was noticeable in the third and fourth lessons. Both Kerry and Jon showed a positive approach to working on the composition and most of the input came from them, as did most of the motivation.

Of the others, Jayne tried to work with the group but her few ideas were not taken up and Sean had some very good musical ideas which were produced very infrequently but little awareness of working with other students. Later, he was found to be better than the rest at reading and writing staff notation and on seeing this, the group delegated him to write their composition. Anna tried but made little impact on the group. She was the quietest person in the group and did not contribute many ideas. The last mentioned three group members had good intentions concerning working together but lacked the necessary verbal and social skills to make it happen. Finally, Jack was prone to silly behaviour with a rather negative attitude to working with the others and contributed little or nothing to the group composition.

On the whole, the input to the work in this group was uneven caused mainly by the same problems mentioned with working together. Lack of social skills was much in evidence.

The timed evidence from Table 5.2 showed that these students provided even input to the lesson 25% of the time, resulting in three quarters of their composing time being lost. They were unable to work together effectively as a group because the input was uneven. The effort of one or two was insufficient to make the group work effective because one or two other group members were not prepared to contribute or listen.

Criterion 3: Positive discussion of ideas using transactive language or musical communication with voices or percussion instruments

Transactive communication between the children whilst composing was a good indicator of the presence of peer assisted learning and usually associated with a cohesive group. Evidence of musical communication through the use of singing or instrumental playing was also sought, as described by Morgan, Hargreaves and Joiner, (1997; 2000).

Seven O

Searching for transactive verbal or musical communication in the transcriptions of the recorded data helped to prove the presence of peer assisted learning in the collaborative group sessions. For example, it was particularly prominent in the third lesson when, with only five students present during the eighteen-minute session, all were trying to help each other with ideas to try out rhythmic word patterns in preparation for an ABA completed rhythm. They worked on the B section first:

> We've got the middle bit we have to do for there.
> (10th October 2001)

Then they discussed using something appropriate for section A, which would be performed twice but they decided it might be possible to perform two different word patterns together, keeping the beat steady.

> That one where we do the 'ink ink' while you're doing the 'zoot' one?
> (10th October 2001)

That required starting together and staying together. Laughter followed and it took more practice to put it together. The conversation continued as they decided to work in two groups of three, each taking a particular section with its own word pattern. This was the beginning of a creative period in their work as they tried first one way then another to find out which sounded better and in so doing they were generating a collective synergy (Joyce and Weil, 1986:9; Kanellopoulos, 2000). This was an amiable session in which they all appeared to enjoy the interaction, with transactive communication and peer assisted learning. It was a time of important decision-making (Wiggins 1994).

The next lesson contained a longer twenty-seven minute session and Oliver, Kerry and Karen took turns at practising the counting in, ready for performing the ABA composition. Both Karen and Kerry used their playing experience to help the group by suggesting how the composition might be performed. Most of the work had been done in the previous lesson and it was performing the composition to the class that was their main focus. Karen suggested that:

> All the girls do the zip, zip, zoot bit, then we all do the middle bit and then the boys do the zip, zip, zoot bit last.
> (17th October 2001)

The students reached agreement on the three-section piece following the ABA pattern. Decisions were made about what it should contain, how it should be put together and how it should be performed. The teacher was very satisfied with the completed work in the peer assisted learning session and also with the performance to the rest of the class.

The teacher asked the students to make their composition more interesting by building up the texture, first with clapping and later with three percussion instruments to give both rhythmic and melodic interest. In the eighth lesson the group began putting beat and rhythm together, with melody to be added later. As the students played ideas for each other's approval they began to communicate through the music itself (Morgan, Hargreaves and Joiner, 1997; 2000).

The timed evidence from Table 5.2 revealed that positive on-task discussion occurred 87% of the time and was found in every peer assisted learning session. It was fairly well spread throughout most lessons.

Seven F

There was transactive communication among five of the members in the group in the earlier lessons but Neil made excuses not to be involved in constructing a composition. In lesson eight they worked with ideas for the composition in a corridor outside one of the small practice rooms and although interrupted whilst working by a different class, they put variation of timbre and texture into their rhythms, introducing clapping, whistling, stamping and clicking. The merits of the new sounds were discussed for suitability for inclusion in the composition. Carl suggested who should make each sound, Julie and Nina agreed to count the group in but they could not hold the beat

steady. Most seemed to know what they were trying to achieve but no real decisions were made on this occasion. Distraction from other students passing through lowered their powers of concentration.

Peer assisted learning was evident in transactive conversation particularly when the students were working in pairs, as this transcript of conversation between Julie and Neil shows:

> Juli.   Now we have to clap it through.
> Neil.   Clap it through?
> Juli.   What's that? (pointing to the page)
> Neil.   I need to have a look at yours.
> Juli.   One two three. We don't clap the first…it's silent. That's a silent bar there!
> Neil.   Just one two three go?
> Juli.   Oh Neil!
> Neil.   Where are we now? (they clap the rhythm together).
> (9th November 2001)

Neil was quite pleased to work with Julie and made some progress with writing staff notation, seemingly gaining confidence by being part of a pair and not with the whole group. He responded well and was willing to try, which he did not do in a group of six. His problem so far in these lessons appeared to be due to lack of musical knowledge, which had the effect of lowering his self-esteem. The individual help he received from Julie, who provided the necessary 'scaffolding' for him, began to show when they counted the beats and played the rhythm that was written later:

> Juli.   Do it again.
> Neil.   Right…one row?
> Juli.   We're not starting from the top….we're starting from there… (pointing).
> Neil.   Right ,right ,right. I've got you now.
> Juli.   One two three go. (they play) It's break, break, break, break, break. (to separate the beats).
> Neil.   Ooah!
> Juli.   Ready, steady, go. (they play again but Neil loses the count)
> Neil.   You lost me there!
> (9th November 2001)

It has already been noted that this group of six did not work together very well which in turn appeared to affect the amount of positive discussion that took place as a whole group. Julie, Nina and Kate were able musically and most of the positive on-task communication came from them. The same could be said for their use of instruments and all three showed imaginative playing on the xylophone. This was a mixed ability group musically with Carl struggling to compete with the girls whereas Neil knew he

could not keep up with them and appeared to give up, letting the rest of the group do the work.

The timed evidence from Table 5.2 showed that there was positive discussion in this group 62% of the time. This was spread fairly evenly throughout all lessons except for lessons fifteen and seventeen. Positive discussion was usually present when this group worked together in pairs or threes as they were working on a particular aspect of rhythm or on notation.

The students in this group thought that they worked positively without arguing very much about the composition but Neil disagreed with this in the second questionnaire because he thought that the rest of the group argued.

Seven S

The students had difficulty expressing their ideas to each other and this resulted in only a small amount of transactive communication in the early lessons. There was a great deal of repetition of rhythmic sounds from individual students whose efforts were sometimes prolonged (Evans, 1978:74). Although much of this was 'on task' work it led nowhere on most occasions. When instruments were introduced the students worked better, but as individuals.

In lesson eight Kerry, Jon, Sean and Anna were the only four members present. They produced ideas about which instruments should be used and how they should be played.

> Jon.   Ah….can we do it properly now?
> Jayne.   Me and Anna are doing it right.
> Anna.   Yeah!
> Jayne.   Ready, steady go!
> Jon.   It only sounds like a bit of wood. (the wood block was cracked).
> Sean.   Can't help it! I'm changing it for a better one.
> (23rd November 2001)

The students exchanged ideas much more easily in a group of four and listened to each other. They were able to begin building and extending their musical ideas and so move forward with their composition. Anna, who was usually silent, took an active part in the group as her confidence developed.

Jayne.   Ready then?   One, two three, four.
    Anna.   Not ready. Let me just stay away for a minute.
    Sean.   Doesn't sound right. For once I got the xylophone wrong!
    (23rd November 2001)

As a group of six, much of the conversation had been fragmentary up to this point and there was very little interaction, or verbal communication between students related to peer assisted learning.   There was a distinct improvement in both attitude and performance when only four children tried to compose together. Unfortunately, the on task talk was difficult to decipher on the tape because of the noise of instrument experimentation.

The timed evidence from Table 5.2 showed that in the first, eighth and tenth lessons there was some positive discussion about the composition but overall it was in evidence only 9% of the time. The positive discussion was usually found amongst two or three group members and rarely with everyone taking part.

Comparisons amongst the three sample groups

Figure 6.2 shows how much positive discussion took place in the peer assisted learning sessions in each of the three sample groups. Seven O, with the highest general ability, maintained positive discussion using transactive communication for 87% of the time. Seven F, with medium general ability, sustained positive discussion using transactive communication for 62% of the time despite some provocation shown by one particular group member. Seven S, with the lowest general ability, achieved positive discussion for only 9% of the time.

Figure 6.2 Comparative results of positive discussion
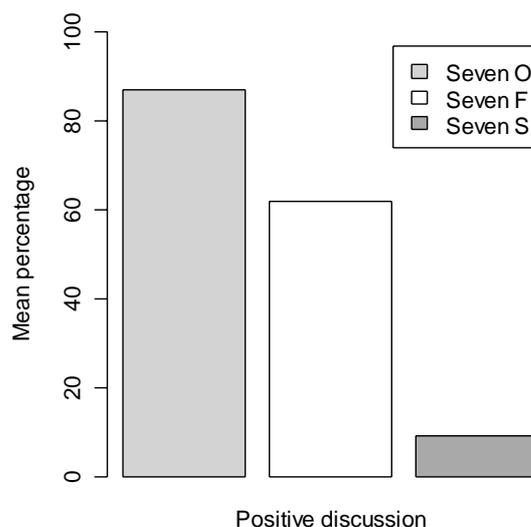
Criterion 4: Negative argument using non-transactive talk or musical distraction

The amount and nature of off-task, or non-transactive talk varied amongst the groups and, when it occurred, was usually an indication of lack of cohesion in the group. Anyone wishing to distract the others from working could do so vocally or by banging one of the percussion instruments very loudly. Both of these methods of disrupting the group could hinder the progress of peer assisted learning and the completion of a successful composition.

Seven O

Very little non-transactive conversation was detected in this group although various comments occurred from time to time but without consequence. These were usually of a more personal nature between the students during the later lessons by which time they were beginning to know each other better and establish their own identity within the group (Wilson and Macdonald, 2004).

The evidence from Table 5.2 revealed that negative argument occurred for 2% of the time in this group and only in one session. This was at the beginning of lesson nine when there was some confusion prior to putting the various parts of the composition

together by building up the texture about which they were told nothing. The argument arose because the students were trying to do everything at once.

The observer evidence was corroborated by only 50% of the student's opinions in the first questionnaire when Dean, Oliver and Kerry thought that the group argued about the composition although Mark, Karen and Carol did not agree. This was different from both the observed and timed evidences, which showed little or no negative argument in this group. However, the students' opinions on the second questionnaire were that the group hardly ever argued about the composition and this agreed with the observed data.

Seven F

Most of the arguments that arose in this group concerned a conflict of opinions about the composition, or each other's musical ideas, or who should play which musical instrument and these events hindered progress at times. Each student, except Sally, tried to establish his or her own identity in the group. There was little non-transactive communication relating to personal arguments outside the lesson situation however, nor did they attempt to talk about non-school issues when working on the staff notation for composition. Neil's negative attitude remained a problem for the others because he did not engage well in the group situation and this was noticed by all of the others. He did not want to commit to learning with the whole group, but appeared to be obsessed with retaining his 'cool' distant image. It seemed unlikely that he would reach the final takeover of information requiring him to internalise the musical material for himself.

The timed evidence from Table 5.2 showed that 21% of the time was lost in negative arguments. This was the overall score but there was little argument until lessons five and six when it appeared more often. The students settled down after that until lesson fifteen which was more argumentative than most and the group split into two sub groups.

The observer evidence showed that disagreements and arguments occurred mainly in three different lessons although the students' opinions in the questionnaires showed that they did not consider themselves to be argumentative. Only Neil thought differently.

Seven S

The students made little headway through lack of concentration and some spent more time 'messing about' than others in this group who seemed to work individually most of the time. There was off-task talk at times, which was fragmentary rather than continuous but could be abusive to other members of the group. It was about one person trying to dominate another. In lesson two, one of the girls started to talk about her cat, referring to it as a 'puddy cat', which invited the rebuff of being told to 'shut up' about her 'puddy cat'. When off-task talk began Kerry was keen to dominate the other students by trying to persuade them to work again but was unsuccessful.

The timed evidence from Table 5.2 showed that there was negative argument in this group for 30% of the time, which began very strongly in the second lesson.

The students' opinions from their questionnaires showed that they were equally divided about negative arguments. Jon, Kerry and Anna thought that the group argued but Jayne, Sean and Jack did not.

Criterion 5: Positive domination of the group by one or more able students working as leaders

The emergence of able students who tried to dominate the work of the group was noted. As each group was made up of unique individuals who were required to work together, there were those who felt they knew more than the rest and who therefore tried to make their own ideas those of the group, thus dominating the process of peer assisted learning and the direction of the composing process.

Seven O

Karen's musical skill was admired by the other children in the group. She became the first leader and it was mainly because of her musical ideas that their composing began so well. She tried to dominate the whole group but was teased quite often, particularly by the boys. She was very good-natured about sharing her knowledge but was also irritated by their comments, as this incident from lesson four indicates, when Mark and Karen had a very brief conversation:

Mark.   Karen, behave!
Karen.   Mark, be quiet!
(17th October 2001)

Karen tried to explain a point to the boys who were not listening and she threatened them with,

You must behave otherwise you will sit and listen to me for the rest of your entire life!
(17th October 2001)

With minor incidents of this type, there was always humour among the group members generally which resulted in laughter. This had the effect of defusing the tension that occasionally built up during the composing sessions but was over very quickly so that the group concentration was restored and they were back to work again.

Carol emerged as a very good leader also during both practice and performance because she could hold a steady beat. The three capable girl students in this group, Karen, Carol and Kerry, were able to dominate the group's direction with their ideas and were responsible for both the strategic and aesthetic decision-making (Wiggins, 1994; Barrett, 1996). The three boys appeared agreeable to be led so ably and contributed to the group work. Although Karen was the most musically dominating of these, there was a frequent interchanging of musical roles between Carol and Kerry. Their musical identities changed from one lesson to the next according to whatever was required by the rest of the group (Burnard, 1999). The boys seemed happy to go along with this. Oliver said that with little previous experience of creative work himself, he relished the fact that he was working with others who were so knowledgeable. Therefore, this situation could perhaps be better described as helpful leadership with peer assisted learning featuring strongly in the group.

The timed evidence from Table 5.2 showed that positive domination of the group by one or more able students occurred 17% of the time when the group was composing, or practising the performance of their finished composition. In this group the 'domination' was more accurately described as leadership and direction with co-operation from the others.

In the first questionnaire all students agreed that it was hardly at all that anyone gave particular help to the group. This opinion changed in the second questionnaire when

Karen, Dean and Oliver said that someone did help most of the time. Carol, Mark and Kerry, however, disagreed with this and said that help was given hardly at all. Perhaps those who were playing the role of leader did not notice that they were 'dominating' the learning situation.

Seven F

The data showed that Julie emerged fairly early as the most capable musically and she became the first natural leader of the group which she led most of the time, either formally by directing the flow of ideas, or indirectly when other group members asked her questions. She was good at working with the others although she had an inclination to be bossy but she helped the others individually, or some times in pairs, and produced ideas that the whole group could use. Leading roles interchanged in this group as students put their musical ideas forward, and Julie was heard to ask Kate to stop bossing her about! Kate, who could be quite forthright about her own ideas was rebuffed by Julie more than once for being too bossy. Carl proved to be a strong-minded member in this group who was happy to work with anyone, except Neil. His confidence increased as the lessons progressed.

Julie was self-assured and quite sophisticated knowing that she was fairly knowledgeable musically and capable of producing good work. Although the others looked up to her as leader, Kate and Nina were keen to lead as well and so there was an interchanging of musical roles between the three girls. Julie showed considerable patience in working with Neil on staff notation and provided the scaffolding he needed to progress but whether he was able to internalise the information was not clear. He was pleased that someone listened to him. Much of his quietly disruptive attitude disappeared when he was working with her at his level, only to reappear in the following lesson when she was not specifically working with him.

The timed evidence from Table 5.2 showed that there was some domination by an able person or persons for 37% of the time during composition. Julie, Nina and Kate did try to dominate the ideas of the group but not all at the same time. Julie was admired for her musical skill and others turned to her for assistance, therefore she was able to dominate the direction of the group in a helpful way.

In their first set of answers to the two questionnaires, Carl, Nina and Neil thought that someone did give help to the others most of the time but Julie, Sally and Kate, who did help, disagreed. However, in the second set, most thought that someone did help most of the time.

Seven S

Kerry tried desperately to lead the group and dominate its direction. Jon said that she was the obvious leader of the group. Evidence showed that Kerry was very motivated because she was both keen to suggest ideas and to work with anyone. Her absences in lessons four and seven meant that she ceased to have much influence on the group or on the composition. No one else had positive musical influence on this group until Sean emerged with some good ideas in the later lessons and because he understood a little about staff notation. The others regarded him as the most able leader in this respect.

The timed evidence from Table 5.2 revealed that there was attempted domination by an able person or persons for 11% of the time in this group.

The questionnaires showed that all the students in this group, except Kerry, thought that one person was trying to help most of the time. This shows that Kerry, who helped more than anyone else, did not regard herself as the helper whereas the others did and acknowledged it.

Criterion 6: Negative domination by disruptive members unwilling to work with the group

Students who became disruptively argumentative could try to fragment the learning process and this was looked for as the sixth criterion. Evidence was sought about each student's reactions to composing within a group by noting their contribution and attitude to the group effort. Any disruptive behaviour or unwillingness to work with the other students was noted and referred to as a negative attitude. Unnecessary overplaying of musical instruments was regarded as a distraction.

Seven O

No one in Seven O tried to seriously disrupt or stop the work by negative domination but both Dean and Mark teased Karen a great deal and sometimes their enthusiastic ripostes dominated. This was probably gender based as well as musical (Green, 1997). There was some conflict of opinions about the music itself, which happened naturally as part of the composing process (Schaffer, 1992:273). However, there was no malicious disruption but instead a number of comments were made that acted as an antidote to Karen's domination when she tried to help the group put the composition together. This was the researcher's view from the observations but Karen may have felt differently about it because she was on the receiving end of the teasing although she appeared to endure it cheerfully.

The timed evidence from Table 5.2 showed that negative argument was recorded as 3% of the time. It did not become a serious issue.

The students had a different opinion from that of the researcher. All agreed, in the first questionnaire, that someone did try to disrupt the group work most of the time although no one was named. This was a difficult time for them during their first term when the work was new and it appeared that some of the students felt that others were trying to be disruptive. In the second questionnaire all, except Oliver, felt that no one attempted to disrupt the group work.

Seven F

Neil did not appear to benefit very much from peer assisted learning because he lacked interest in the subject material most of the time and arrived at the group sessions on most occasions not knowing what the task was. He appeared to be lazy, difficult to work with and even insidious at times when he upset Carl. There was one particular occasion, however, when he used his negative attitude deliberately to annoy Carl, who became visibly upset and was unable to work for a short time (Prisk, 1987:145). Neil made his presence felt by developing a 'cool' behaviour pattern of either not working, or being quietly disruptive in at least seven of the lessons. The other group members continued to work, tried not to allow him to dominate them and consequently continued with their composing.

This behaviour affected both the identity and role of each student in the peer assisted learning session as they sought to find their own niche in collaborative learning. Some were unsure of their own identity in the group. The roles of the other children, from leading to taking a passive role, were constantly changing but Neil's cool reaction was to save face. He presented the same attitude to other group members most of the time when they were trying to work together and would occasionally attempt to distract them.

The timed evidence from Table 5.2 showed that there was some disruption by someone trying to dominate the group, which amounted to 17% of the time.

There were divided opinions in answer to this question in the first questionnaire. Julie and Kate thought that there was disruption for most of the time but the others disagreed. In the second questionnaire, only Neil said that others had disrupted work. He did not count his own attitude as disruptive.

Seven S

Jack was a disruptive influence on a several occasions by wasting time and distracting others. He appeared to be childish but he did not have a strong enough personality to dominate the others. There was disagreement in this group because some of the children did not want to work at all and seemed to think that being in a group and able to talk to each other meant that they could spend some of the time doing nothing in particular. Having only one lesson per week had a detrimental effect on their work. They found it hard to remember what they doing from one lesson to the next. Even Kerry, who tried to dominate positively, shouted at the rest of the group from time to time and the others shouted back as though she had become a disruptive influence. Sean, Jayne, and Jack found concentration on the task difficult and were easily distracted by any minor disruption.

The timed evidence from Table 5.2 showed that disruptive domination occurred 36% of the time in this group. This indicated that too many students were content to 'mess about' and time was wasted when working towards a completed composition.

There was a division of opinions about the domination of a disruptive influence in answer to the questionnaires. Jayne, Jack and Anna said there was disruption but Jon, Sean and Kerry said there was no disruption.

Comparisons amongst the three sample groups

Figure 6.3 shows how much disruptive behaviour took place in the peer assisted learning sessions in each of the three sample groups. Seven O, with the highest general ability, showed very little disruption for just 3% of the time. Seven F, with medium general ability, had disruption for 17 % of the time. Seven S, with the lowest general ability, showed disruptive behaviour for 36% of the time. This was more than double the amount shown in Seven F.

Figure 6.3 Comparative results of domination by disruptive members
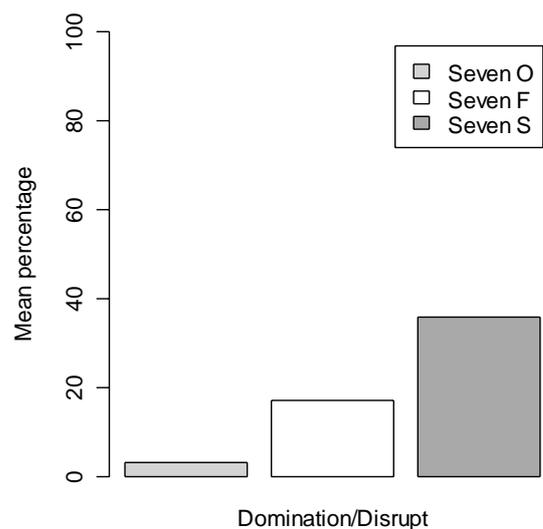
Table 6.1, on the next page, shows the comparative results of the six criteria of the social domain.

Comparative results of the six criteria of the social domain

Table 6:1 shows comparisons amongst all three groups concerning the six social criteria. It is placed at this point in the analysis as a comparative summary of the timed results.

Table 6.1 Mean percentage of time spent on social criteria

Criteria	Seven O	Seven F	Seven S
Working together	97	85	57
Even input	89	40	25
Positive discussion	87	62	9
Negative argument	2	21	30
Domination/Able	17	37	11
Domination/Disrupt	3	17	36

This concludes the analysis of the six criteria of the social domain. The next section presents the analysis of the four criteria of the cognitive domain.

Criteria of the cognitive domain

The criteria for the four areas of learning, sought as an indication of the effectiveness of peer assisted learning in the acquisition of musical skills for composition, showed how ideas were developed and how the students learned from each other in the production of a composition. These criteria were shown in Table 4.2 on page 86 of Chapter Four.

Criterion 7: Creating ideas with vision, imagination and a sense of adventure

This criterion was concerned with both vision and imagination in the creative use of musical ideas. It was expected that some children would not achieve these at the outset, depending how much work of this type of composition had been done at primary level, but as they became more experienced with composing during the second project it was hoped they would develop an adventurous and imaginative approach to composing.

Seven O

This group had a few doubts about how their music should sound at the beginning but showed a creative imagination in their approach to the rhythmic work. They had a strong sense of knowing what they were trying to do and liked to experiment with a variety of sounds. They showed a shared interest in what they wanted even if some of the group members did not know how to achieve it. Vision and a sense of adventure were very much in evidence in the first few weeks when different strategies were suggested and discussed. As the lack of time for composing caused them to rush their work in the later stages, quick decisions were made about which material to include because they felt it had to be something they could perform together. The result was that any adventurous ideas, that proved too difficult to perform, were dropped. The group was influenced by the most able who, themselves, were influenced by previous musical experience on classroom instruments or from private instrumental tuition.

The timed evidence was collected using Table 5.2 shown in Chapter Five, on page 124. The sense of adventure and a vision of the goals the students wanted to achieve were detected mainly in the early group work sessions when the work was new and working together was still a novelty. Karen could see how the composition could be designed and how it could develop and conveyed her ideas to the rest of the group. It was likely

that she did not envisage the whole at the outset, so perhaps this could not be described as an holistic vision, but she was adventurous enough to experiment and lead the group. This sense of vision was evident in 29% of their group work time as a whole.

Seven F

There were three musically experienced students, two prepared to be led, and one not sure about wanting to join in. There was a vision of what was required from about lesson five of the composing project but this group had more time for reflection than the other two and there was a freedom of working, which allowed creativity to develop and flourish (Sawyer, 2004). There was a shared vision of what was required in some of the peer assisted sessions as the girls and Carl worked towards goals (Barrett, 2004). Kate and Julie, each of whom played a xylophone with different lines of music, added embellishments or varied the melody for special effect. At times like this there was an emergent structure in the music they produced (Kanellopoulos, 2000). Work tended to be carried forward by the two or three most able students who formed a liaison with the discussion of ideas. They could visualise how the music might sound and showed application towards that goal but this was not true of the whole group. The three students who showed most knowledge of the subject also showed previous experience of composing. Sally, the quiet one, may have hidden what she knew by being less verbal than the others. Carl said that he knew little but he showed a willingness to learn and understood what was required. Neil paid little attention to anything but he did not appear to be less intelligent than the others.

The timed evidence showed that a sense of adventure or a glimmer of vision was detected first in lesson five and from then it was evident at some point in most lessons, except for lessons twelve and thirteen and fifteen and sixteen. Overall it was detected 12% of the time.

Seven S

This group showed vision in two of their lessons but it was not detectable in any of the others. They tended not to know where they were going because they were unable to engage in a group work project. They appeared not to understand the purpose of the task and therefore lost interest fairly quickly. To them the task was uninspiring and they appeared to learn little from it or do much with it constructively. Their peer

assisted learning sessions were beginning to develop a pattern of losing direction after a few minutes. This was probably because the session was too long for them. The lack of continuity from one lesson to the next meant they needed to think about what was done in the previous lesson the week before. Consequently, there was a considerable amount of unwitting repetition of words and rhythms from earlier lessons without a sense of building on ideas.

The timed evidence from Table 5.2 showed that there was very little sense of adventure or vision of how the music should sound although one or two were trying to develop a sense of direction in the way the composition should go. The total time it was detected amounted to 6%.

Criterion 8: Development of musical ideas with progress in the use of some of the musical elements

The development of musical ideas and ways of using them was an important stage required in composition for building layers of music on to the original ideas. This could be accomplished in various ways. Adding to word phrases, varying or extending existing musical motifs/phrases or adding another line of music with a different instrument were the most likely methods of building the texture. Children could explain this verbally or musically, showing how a particular development could be used imaginatively in the group composition.

Seven O

Both Karen and Carol invented ideas that were developed into rhythmic patterns with variations and the idea of placing two differently worded rhythms in the same piece produced an ABA pattern quite early. The students were asked to improvise on a given verbal theme but it reached its limits in this class rather quickly so the group decided to extend and vary their own rhythms by the addition of other word patterns. This was a spontaneous reaction to the structured word rhythms that were suggested for the beginning of the task and heard in most of their lessons. As the composition was built up by adding layers of rhythm with varied timbre, Mark adapted and varied his vocal melody with words to fit the composition. This melody was the last part to be added to

the composition. Their work resulted in well thought out plans for development and extension of the original ideas making their piece more attractive to the ear.

The timed evidence from Table 5.2 revealed that there were plenty of ideas shared in this group and the students were able to develop some of them. Development of ideas was recorded as 35% of the time and occurred mainly in the early lessons but later, the students were keen to complete their work, rather than spend time developing further new ideas. The strain of only one lesson per week was beginning to show by the end of the project and 35% of the time developing ideas seemed low but perhaps with both lessons each week instead of one, their work could have been less restricted.

In the first questionnaire all except Oliver agreed that there were plenty of ideas put forward by group members to discuss and work on and in the second all agreed about the plentiful number of ideas generated within the group. They all agreed that the group had worked on these ideas and developed them together.

Seven F

Julie, Kate and Nina were the producers of most of the musical ideas and all were able to interact on an individual idea to extend it (Sloboda, 1985:195). This was very good for Sally and Carl and sometimes Neil. The group had more time to think about developing ideas for their composition than the other two classes. They knew how to do it and during the time with instruments they experimented individually with different motifs of rhythm and instrumental timbres. This gave the group members time to decide which extensions or developments they liked best. Both Julie and Kate were well motivated and keen to share their musical ideas. The development of musical ideas was apparent in thirteen of their lessons.

The timed evidence from Table 5.2 showed that there were plenty of ideas aired, which were developed 56% of the time. This group received the normal number of lessons and had more time than the other two groups to spend on developing ideas. Most of the activity in this came in lessons seven to fourteen and again in lesson sixteen.

In both questionnaires, Julie was the only person who thought that there was a shortage of musical ideas to discuss, but probably from other people because she was the person

who produced most of the ideas. Most thought that musical ideas were developed by group collaboration.

Seven S

There was evidence of some development of ideas during four of the lessons. Kerry and Sean usually produced musical ideas and although there was some work done on these they were not necessarily brought into the composition in a practical way and retained as part of it. These students appeared unable to produce suitably connected ideas to move forward with developing the composition as a whole. There was little development of musical ideas through either verbal or musical means.

The timed evidence from Table 5.2 showed that ideas began to emerge in lesson three, with lessons four and eight being the most productive. The time spent overall in developing musical ideas was 15%.

The answers in the first questionnaire showed that the students thought they lacked musical ideas but they fared much better in the second one with only Sean thinking that there were few ideas.

Criterion 9: Confidence in using musical elements, expanding musical ideas and applying greater difficulty

Knowledge of the elements of music, which make music more interesting, was named as the ninth criterion. This involved the use of the elements of music that Year Seven children should be expected to know, particularly rhythm, melody and form. Confidence in using the elements would indicate some acquisition of musical knowledge. Interest could be added with appropriate use of tempo and dynamics.

Seven O

The three girls in this group showed confidence in both the understanding and use of the elements of music. They shared their expertise with the group and helped those who were not as proficient in these skills. The three boys increased their knowledge about the nature and application of the elements of music, as this was evident in their practical

work and in making the composition more interesting by use of different dynamics and tempo. The work was purposeful and showed improvement. They realised that playing or singing softly some of time in chosen passages of the music made the louder parts appear more effective and changing the speed produced a mood change or could be used as a special effect.

The timed evidence from Table 5.2 revealed that confidence in using the elements of music appeared to increase more than with the other three cognitive criteria. It reached 73% and was reasonably well spread throughout the lessons although it was detected on at least seven occasions in lesson four.

Seven F

Julie, Nina and Kate showed experience in the use of the elements of music in seven of the lessons and were able to offer help to others who knew little in this respect, but neither of the two boys appeared to know very much about the elements. Sally did not say whether she knew anything about them but possibly did because she could play the recorder and had probably learned something about their application through that. As the composition progressed with word rhythms, a steady beat and two different melodic lines on xylophones, the group's knowledge was improved concerning how much the thoughtful use of musical elements can transform a composition.

The timed data collected using Table 5.2 showed that the confidence in the use of the elements of music was patchy. Some sessions showed it was there and others did not but overall it was more prevalent in the middle lessons and was in evidence about 31% of the time over all.

Seven S

In this group there was very little evidence of confidence in the knowledge and use of the elements of music. Sean liked singing in class, as was shown in lesson eight, and he had learned some information about the elements through singing. Kerry was keen to sing too and enjoyed it but like most of the others in the group lacked knowledge about the elements generally.

The timed data collected using Table 5.2 showed that there was only one ticked square denoting confidence in the use of the elements of music and that was for one person only, Sean. His knowledge was limited but he made occasional suggestions to the teacher in the class introduction to the peer assisted learning group work but not necessarily in the group work itself. The overall score for confidence in using the elements of music was 2%.

Comparisons amongst the three sample groups

Figure 6.4 shows how much confidence the children in each sample group had in using the elements of music during their peer assisted learning sessions. Seven O showed the most confidence with 73% of the time. Seven F showed considerably less confidence. They showed it for 31 % of the time. Seven S showed confidence in using the elements of music for only 2% of the time.

Figure 6.4 Comparative results of confidence in the elements of music
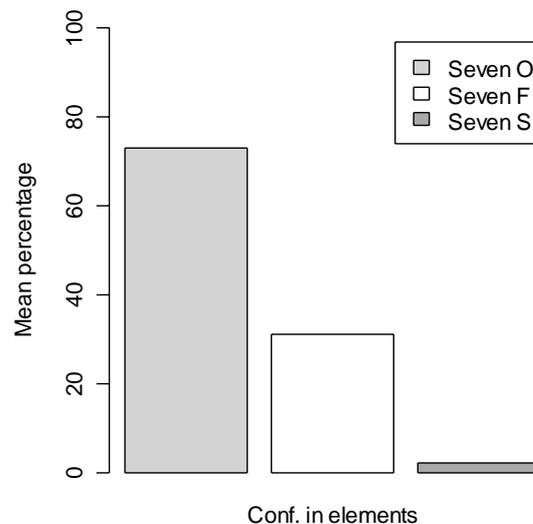
Criterion 10: Learning to be musically literate with competent reading and writing of staff notation

Finally, as the National Curriculum decreed that children should learn to use staff notation it was included as the tenth criterion. Although it does not indicate musicality or a creative approach as the other three cognitive criteria do, it is a skill that is essential for writing down the composition.

Seven O

All had to write their own contribution to the main composition in staff notation which was being taught concurrently. The reading of notation occurred at some point in every lesson of the composing project but by the seventh lesson the students were writing their own as part of the group composition. Most of the children could read staff notation fairly well although some were not as adept at writing it but sought appropriate help from other members of the group where necessary.

The timed data collected using Table 5.2 showed that the use of notation did not feature strongly in the earlier lessons. There was greater emphasis on the use of written notation in the later lessons. Overall it was shown as 67% of the time.

In the first questionnaire all except Oliver felt that working together had helped them to improve their skills with staff notation. In the second questionnaire, Oliver agreed that it had helped him to improve these skills too. So there was complete agreement about the value of working together to improve musical skills.

Seven F

Only one or two students tried to read staff notation to begin with although they were required later to write down their contributions to the group composition. Very little writing of staff notation was done until the twelfth lesson and in the thirteenth lesson it was much in focus for the students' individual efforts at writing their contributions for the group composition. Julie helped Neil with writing and understanding staff notation and also answered questions from some of the others. Their peer assisted learning was just as active in the lessons on writing as it was in the playing and composing sessions.

The timed data collected using Table 5.2 showed that the use of staff notation did not feature much in the earlier lessons. This group, with all their lessons intact, had more time than the other two groups to spend on learning notation later. Overall it featured about 37% of the time.

In the first questionnaire all the students except Julie felt that they were helped with staff notation by being in a group together. Julie could read notation quite well on entering Year Seven. In the second questionnaire all the students agreed that group work helped them to make progress with notation.

Seven S

One or two did attempt to read staff notation but without much success. They found the writing of it difficult and when their work had to be written down, it was left to Sean to do it during the last three lessons before the second assessment. He was rather pleased to be asked to do this and showed he had already acquired some of the necessary skills.

The timed data collected using Table 5.2 showed that staff notation was not used in the earlier lessons. An effort was made by some to learn to read notation. Overall, staff notation was used for 12 % of the time.

The students in this group were unanimous in their decision that being in a group helped them to learn about staff notation.

Comparative results of the four criteria of the cognitive domain

Table 6:2 shows comparisons amongst all three groups concerning the four cognitive criteria. It is placed at this point in the analysis as a comparative summary of these results.

Table 6.2 Mean percentage of time spent on cognitive criteria

Criteria	Seven O	Seven F	Seven S
Vision	29	12	6
Developing ideas	35	56	15
Confidence in elements	73	31	2
Notation	67	37	12

This concludes the analysis of the cognitive criteria.

Correlations between pairs of criteria

The statistical analysis in this research was intended as illuminative and supportive to the main qualitative data. Table 6.3 shows correlation coefficients for each pair of social criteria. Correlations that are less than –0.997 or greater than 0.997 are statistically significant at the 5% level. Statistically significant correlations are shown in bold. Only the correlations below the diagonal are shown because those above the diagonal would be repeats. The table shows that working together is positively associated with positive discussion (correlation coefficient 1.000). This association is illustrated in Figure 6.5 on page 174. Groups who spend more time working together tend to have more positive discussion about their composition. None of the other associations between the social criteria was statistically significant at the 5% level.

Table 6.3 Correlations between the social criteria

Criteria	Working together	Even input	Positive discussion	Negative argument	Dom. /Able	Dom. /Disrupt
Working together	1.000					
Even input	0.863	1.000				
Positive discussion	**1.000**	0.879	1.000			
Negative argument	-0.911	-0.995	-0.923	1.000		
Domination/Able	0.452	-0.060	0.424	-0.043	1.000	
Domination/Disrupt	-0.990	-0.926	-0.994	0.960	-0.321	1.000

Figure 6.5 Association between working together and positive discussion
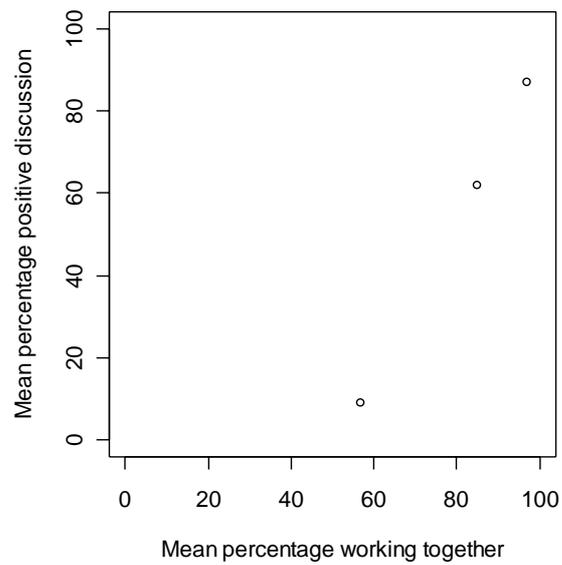
Table 6.4, on page 175, shows correlation coefficients for each pair of cognitive criteria. Correlations that are statistically significant at the 5% level are shown in bold. The table shows that confidence in the elements of music is positively associated with notation (correlation coefficient 0.999).

This association is illustrated in Figure 6.6, also shown on page 175. Groups showing more confidence in the use of the elements tend to spend more time with reading and writing notation. None of the other associations between the cognitive criteria was statistically significant at the 5% level.

Table 6.4 Correlations between the cognitive criteria

Criteria	Vision	Developing ideas	Conf. in elements	Notation
Vision	1.000			
Developing ideas	0.260	1.000		
Conf. in elements	0.987	0.413	1.000	
Notation	0.979	0.453	**0.999**	1.000

Figure 6.6 Association between confidence in the elements and notation
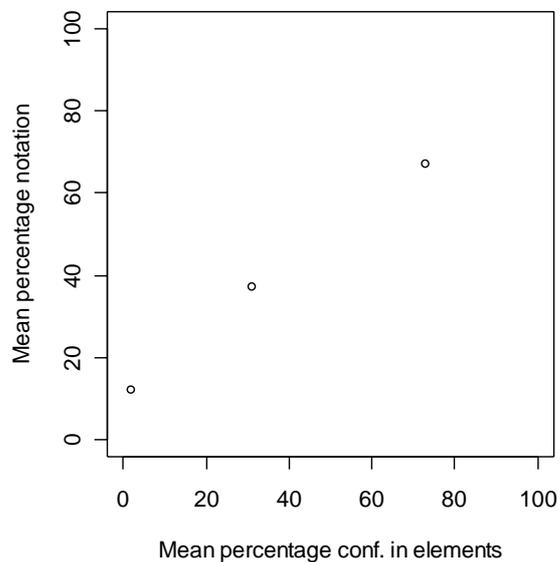
Table 6.5, on page 176, shows correlation coefficients for comparisons between pairs of social and cognitive criteria. Correlations that are statistically significant at the 5% level are shown in bold. The table shows that even input is positively associated with vision (correlation coefficient 0.999). This association is illustrated in Figure 6.7, also shown on page 176. Groups showing more even input tend to have greater vision. The

table also shows that negative argument is negatively associated with vision (correlation coefficient -0.998). This association is illustrated in Figure 6.8, on page 177. Groups showing more negative argument tend to show less vision. None of the other correlations between the social and cognitive criteria were statistically significant at the 5% level.

Table 6.5 Correlations between the social and cognitive criteria

Criteria	Working together	Even input	Positive discussion	Negative argument	Dom. /Able	Dom. /Disrupt
Vision	0.883	**0.999**	0.897	**-0.998**	-0.019	-0.941
Developing ideas	0.683	0.220	0.660	-0.320	0.960	-0.573
Conf. in elements	0.947	0.979	0.957	-0.995	0.142	-0.983
Notation	0.961	0.969	0.969	-0.990	0.187	-0.990

Figure 6.7   Association between even input and vision

176
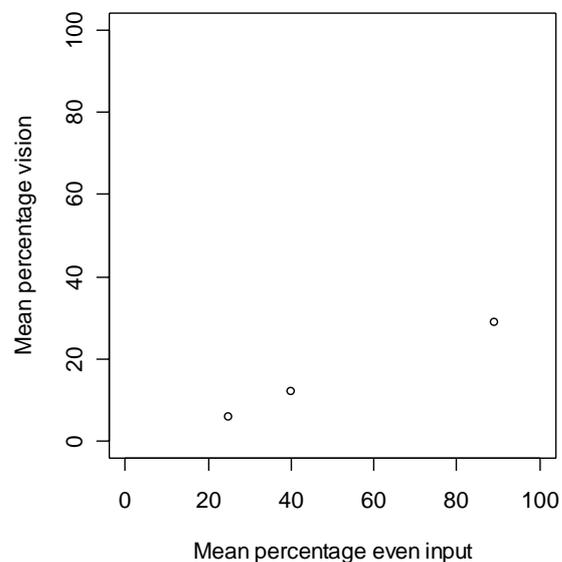
Figure 6.8 Association between negative argument and vision
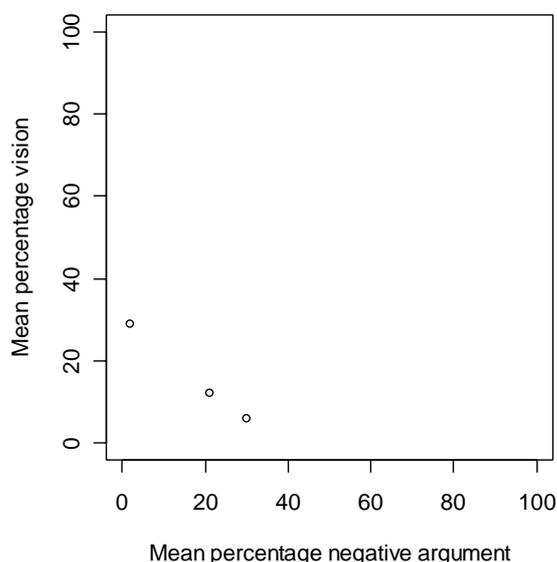
Comparative views of peer assisted learning

The overall summary of the findings is intended to differentiate between the views of the students, the teacher and the researcher. The students' views, from all three groups, were given in their answers to the questionnaires. The teacher evaluated the potential of Seven F after their first lesson, success of the progress of peer assisted learning during the project and their cognitive progress at the end of the project. Her evaluations for Seven O and Seven S were restricted to verbal comments made during the composing sessions. The summary ends with the researcher's analysis of peer assisted learning.

The students' views of peer assisted learning: Findings from Questionnaire One
Seven O (Issued on 17th October)

Four of the six students agreed that peer assisted learning was useful in the process of producing a composition, but Oliver and Dean, the other two students, thought that peer assisted learning was not particularly helpful. Four considered that they made progress with composing skills by working together and five said that it had helped with written notation even though some of the girls felt that the boys were occasionally disruptive. Oliver admitted to be the least helped by group work and judging by his behaviour and

attitude in the group work sessions he knew less than the others about music generally and about composing in particular from his primary school work. A significant point was that none thought they could have composed a similar piece alone, which showed the benefit of peer assisted learning and working together.

Seven F *(Issued on 28th September)*

All except Neil felt the benefit of peer assisted learning and said that it helped to improve composing skills and all except Julie said group work helped with notation. Kate, Julie, Nina and Carl said that being in a group had helped with composing but Neil, who had difficulty with a group of six, and Sally, who was always very quiet, disagreed. Julie, who gave more help than the others, thought that the group generally did not help much with suggesting ideas and developing them. Nina and Carl said that the group worked well.

Seven S *(Issued on 12th October)*

The students' answers to questions indicated that they thought they were working well most of the time and discussing their ideas in a friendly way. They were satisfied with their efforts in working together and most agreed that group work produced plenty of musical ideas and that they had developed the composition together. Five members of the group thought that someone had helped most of the time but Kerry disagreed with that probably because she felt that she was doing most of the work. As a group, they thought they had done well, but it was probable that they had done as well as they were able to do at that time with composing a piece of music.

The students' views of peer assisted learning: Findings from Questionnaire Two
Seven O *(Issued on 27th November)*

Evidence showed that this group improved their peer assisted learning sessions by working well together and learning from each other. Oliver had become closer to the others as an integral member of the group. This time he thought group work had improved his composing skills and helped with notation. Carol was confident that she could compose a similar piece by herself. The only other person who could do that was Karen whose written work had been played by the group.

Seven F *(Issued on 17th November)*

All except Neil agreed in a positive way that peer assisted group work had helped them. Neil added verbally that he liked working in groups. The standard of composition had improved with the second project and this was probably why Julie felt she could not have tackled composing a similar piece alone. Most of the students felt that working together happened most of the time and all said that being in a group had helped them to improve their composing skills and staff notation. None felt that they could have composed a similar piece alone.

Seven S *(Issued on 2nd November)*

None felt that they could have produced a composition alone. Sean was probably the most knowledgeable musically and thought that the group did not create many ideas. They knew that, as a group, they had few musical ideas but thought that these were developed well. All agreed that working together had helped them to improve their composing skills. Furthermore, all agreed that in learning to use staff notation it was better to be helped in a group. Jon added verbally that he enjoyed working in a group and hoped to learn more music with peer assisted learning and perhaps compose some songs.

Findings from both questionnaires

The students were asked for their views regarding the value of peer assisted learning in groups: 96% of the students thought that they worked together most of the time and 50% considered that someone more able than themselves helped most of the time. 87% said that working in a group did help to improve composing skills and 87% could not have produced a composition similar to that produced in their group, alone. When asked for their views on what they had learned about composing whilst in their peer assisted groups, 96% said that the group was able to develop ideas for the composition and 93% believed that working together helped to improve the staff notational skills.

The data supplied by the children, in the form of answers to two similar questionnaires given at intervals of about four weeks and eight weeks into the composing sessions provided feedback on the students' views about working in groups. The answers gave insight into how the children felt about learning together and what they thought they had learned in the peer assisted learning situation, as Burnard (1999) found in her

research. Although the sample total of eighteen students was small for counting purposes, the answers to the questionnaires indicated how many students thought that learning together was beneficial to them. The answers were all over 50% and very positive about the benefits of peer assisted learning. This was an important piece of information because the students were at the centre of the peer assisted learning situation.

The teacher's evaluation of the students' work

Points taken from an interview with the teacher about her plan for introducing composition after the first lesson with Seven F.

Her first impressions were that this class was well behaved and showed a certain amount of self-discipline. Their clapped rhythms were not particularly easy but were pleasing to hear. Generally speaking, she suggested that they did not know anything about staff notation but were willing to try it. Getting into groups was messy but, in her opinion, they should learn to stay together. The forty-five minute afternoon lesson was too short for the task where at least an hour was required but that was a timetabling problem and nothing could be done about it.

Although most details of the children's musical experience were not known, the teacher said that she intended to restrain them in the composition project so that they could achieve well at the beginning and expand later. Listening to music would give the idea of a regular rhythm and instruments could be brought in later, bit by bit, because it was essential to start in a small way. It was better to record the rhythm and build onto it so that there would be room for many areas of success.

The following main points were collected from incidental comments made to the researcher about class preparation for group work and/or the peer assisted group work itself, in Seven F.

The teacher expressed the view that the standard of work generally was poor in Year Seven. In lesson eleven, with Seven F, she said that it was very obvious that students did not have an understanding of rhythm and pitch and as many as 41% could not pitch notes. She felt that neither rhythm nor pitch had reached the standard required for the

end of Key Stage Two. By having to remedy these deficiencies, creativity was sacrificed.

The teacher was disappointed to find quarrelling and bad temper generally in lesson six, which hindered the work so that there was too much to do and not enough time to do it in. She noted that Kate had remarked that 'fifteen minutes is too short for group work'. In lesson ten the teacher hoped her decision to give some class instruction about being aware of each other in group work would have the desired effect. In lesson fourteen, she viewed bad temper as needing some investigation. The music room was very hot despite having no central heating on at the time. She found the students' propensity for instant gratification with the classroom instruments extremely irritating when they were given out for the first time and some had no control over their behaviour.

The teacher's comments on the development of cognitive skills over the period of research in the sample group in Seven F were supplied as requested. They were the last four items listed in Table 5:2.and shown separately in Table 5.3.

Vision was affected by the mood and relationships between the students in Seven F. The group showed they were willing to try new ideas and add to the parameters of the set task, however, these new elements were very limited by lack of basic knowledge. She knew she was teaching Key Stage One and Two concepts to Key Stage Three children. This meant that they did not have the basic 'tools' on which to build 'vision'. She used the parallel of asking someone to design and make a garment without teaching them to sew first.

The development of ideas was a problem for the students but when they were given basic knowledge they were able to extend them. However, the level was still 'worryingly' low, below Key Stage Two in most cases.

Confidence in the use of the elements of music varied according to the element and the child. Rhythm was a huge problem, as children could not differentiate between notes of different value. When they improved they found it difficult to put the different elements together in a cohesive whole. They succeeded by simplifying the outcome in such a way that they managed the task but at a low level, about Key Stage Two-plus by half

term. Staff notation was given very little attention or explanation before half term. Instead, the students used 'made up words' as an anchor to hold them together.

The researcher's view of peer assisted learning: Findings from Table 5.2

The six social aspects of group work showed that there was a difference in the way students worked together according to their general intelligence ratings. Seven O understood that they had to work hard and listen to each other to get the work done but Seven S did not realise this and wasted some of their time. There was a considerable difference between these two groups in their language, social skills and attitude to work. It is possible that if all the timetabled lessons were taught, both of these groups could have produced better results. Seven F, with the full number of lessons had more time to reflect on their composition. Seven S tended to be a group of individuals.

The four cognitive aspects of Table 5.2 showed that Seven O was able to work and think quickly and make progress. Seven F had three competent musicians but the group did not make the best use of them although, as a group, they produced and developed more musical ideas than either of the other two groups. Seven S were content to laugh at each other and, over all, did not treat the work as seriously as either of the other two groups. The lack of awareness of being able to work as a group inhibited their progress with peer assisted learning, as did the lack of musically able students with the ability to help others.

Table 5.2 produced evidence of peer assisted learning taking place in helping students to acquire these skills. Observations, ticked on the timed Table 5.2, pinpointed specific areas of work in the order of occurrence and were an accurate reference for the analysis. Items were noticed that the researcher might otherwise have missed. The analysis showed that Seven O worked well together trying to reach a better goal all of the time. Seven F were more spasmodic in their approach but worked very well together during lesson sixteen when the group re-joined after the split into two smaller groups. Seven S needed more help before attempting to compose with peer assisted learning. There was little time available for this, however, and peer assisted learning took longer to establish than in the other two groups.

When the social domain was correlated with the cognitive domain to see if there were any significant effects the following facts were revealed. It was safe to suggest that working together in the social domain was significantly correlated with both confidence in the use of the elements and the use of staff notation in the cognitive domain. Therefore, it is likely that the higher the score from the timed chart, Table 5.2 for working together, the more children were able to learn about the elements of music and staff notation.

The main points related to the research question can be seen from the comments of the students, bearing in mind that the teacher's view of their general low achievement was not necessarily the children's fault. The important issue here is whether the children knew they had made progress with composing skills, through the use of peer assisted learning in groups, in their first term in the school. Evidence from the data showed that most of them believed that working together with peer assisted learning had helped and most said that they could not have produced a similar piece of music by themselves.

Conclusion

This chapter presented the analysis of the data obtained from observations of the children in the three sample groups. This was taken from findings in the social and cognitive criteria, using observed notes and the timed chart Table 5.2. The children's opinions on the helpfulness of peer assisted learning and on their learning progress were taken from the two questionnaires.

The findings showed that all of the three sample groups fulfilled some degree of the social and cognitive criteria for the effectiveness of peer assisted learning in music composition in the natural settings of the classroom teaching. Seven O and Seven F showed more evidence of effectiveness in their learning than did Seven S.

The analysis and findings from the three types of data presented in this chapter show peer assisted learning to be an effective learning strategy but with reservations. The conclusion drawn from the descriptive data shows that peer assisted learning took place gradually and helped the students with their compositions. The results of the timed Table 5:2 reinforced this conclusion and the students thought that working together in

groups was a good method for learning to compose. Most students preferred to compose with the support of a group rather than alone.

The next chapter reviews the findings, discusses possible conclusions and explores connections between this study and the empirical and other literature described in previous chapters.

CHAPTER SEVEN: Findings and discussion

Introduction

The previous chapter presented an analysis of the data for the three sample groups relating to the criteria of the social and cognitive domains. Peer assisted learning was found to be effective in all three groups for both domains but there were differences in the way children responded to working with peers.

This chapter first summarises and reviews the findings concerning the children's social and cognitive learning. In the second section of this chapter connections are made between my research and the previous studies in empirical literature. The connections begin with new contributions from my research and continue with where my research confirms, disagrees or extends the finding of previous literature. Finally, there are reflections on my study and possible peer assisted learning developments.

Social and cognitive evaluations of peer assisted learning

All of the three sample groups showed some evidence of the social and cognitive criteria for the effectiveness of peer assisted learning in music composition in the natural settings of the classroom teaching. Through collaborative work of this nature, the children were in control of their own learning which gave them a sense of purpose so that group work was well motivated generally and feedback among the students was used to further their cause.

An important feature of peer assisted learning was that most children were able to see and value their own progress as part of a group working on music composition. Group work was well liked by most students who appeared to enjoy working together using transactive verbal and musical communication to further the prospects of their composition. Most of them preferred this to working alone and said that they could not have produced a composition by themselves similar to the one composed by the whole group. This was a very significant comment. It indicates that the students were of the opinion that better results were obtained when working in groups and sharing ideas. This could be because there was a certain amount of protection in composing together within the social structure that collaboration provided. No individual was exposed to

the rest of the class by working alone on a project that was probably too difficult for some of them.

As a result of peer assisted learning, the children and the teacher perceived that the children had acquired musical skills and produced better musical compositions than they might have done alone. My observations supported this view, which showed the phenomenon that group work can produce when the work of the whole group is better than the efforts of individuals. In this way, peer assisted learning in groups provided two essential features in children's learning: a social structure that was beneficial for most and the production of better work. The nature of a phenomenon in peer assisted work was shown to best effect in Seven O and Seven F where peer collaboration helped the less able musically. Here, children found themselves part of a project where ideas could be discussed, accepted or rejected and the composition appeared to grow by these means. This encouraged most children to work with the group and to suggest ideas. An important stage in peer assisted learning was reached when children found that they could see their own achievement through working together and they recognised that 'something extra' came from within the group.

The ultimate success of peer assisted learning as a strategy for the acquisition of knowledge and skills in this research depended on each group having at least one student in the group of six with the ability to provide the necessary scaffolding for the others. Evidence showed that this was the case in Seven O and to some extent in Seven F. The same could not be said of Seven S where no one was able to provide the necessary scaffolding consistently. This group appeared to become a set of individuals as their work became more fragmentary. Peer assisted learning for them was spasmodic with some good effects at times but rarely having the learning capacity observed in the other two groups.

Peer assisted learning was found to be most successful as a learning strategy where children communicated well, either verbally and/or musically, and worked together cohesively as a group. This was shown more markedly with the able students of Seven O and Seven F. These results were corroborated by the strong associations between two of the criteria shown to be statistically significant in the learning process. Working together in a group with social cohesion was associated with positive discussion using

transactive communication. This was an association between two of the social criteria suggesting that a group working well together and communicating positively is likely to make progress. In contrast, the children in Seven S who argued more, or were disruptive, could not be said to be working cohesively as a group. Their arguments may have had an effect upon the composition they produced. This was corroborated by the weak association shown between negative or disruptive argument (social) and the lack of vision in composing (cognitive). This suggested that children who were observed to be arguing in a negative way seemed to lack a sense of vision and adventure in their composing.

These points revealed that the differing levels of general ability appeared to affect the progress of peer assisted learning which was also shown in the way some settled more quickly than others. Those who settled well were the more able children with well-developed linguistic and social skills, usually in Seven O and Seven F. They started working earlier than the children in Seven S who were less articulate and had poorer social skills affecting their ability to work together cohesively. Seven S showed little previous evidence of working together in groups at primary level and needed help from the teacher before peer assisted learning could progress.

Seven O was in the top level of general ability and this was shown through the use of well-developed language and social skills, which were the requisite tools for the provision of scaffolding in the progress of peer assisted learning. Children in this group who possessed musical knowledge, from various sources as well classroom teaching, were able to express their information in suitable linguistic terms to provide scaffolding for other students. They approached their work in a positive manner with ideas and a method plan. The task was structured similarly for all groups but it was the way in which these students applied themselves to the task and used their ideas that led them forward to create a composition with which they were satisfied. It was noticeable that their input into group work was fairly even, with some students producing musical ideas and others commenting upon them. This augured well for their composition, because there was a statistically significant association between even input (social) and vision in composing (cognitive). This suggested that even input by the group, when all members contributed, or when some listened and commented upon the contributions, was associated with having vision and a sense of adventure in composing.

These skills were only a little less developed in Seven F, the class in the middle general ability range and some useful peer assisted learning took place amongst the students. Peer assisted learning was detected more often in pairs or threes rather than among all six in the group. Some of the problems with working together were that one group member would only work adequately on a peer assisted learning paired basis. His needs appeared to be on a different level from the rest of the group as he was not keen to learn with the others.

Both language and social skills were considerably less well developed in the children in Seven S, who represented the least able. They had some good ideas for composition but they also had difficulty in expressing themselves clearly. They struggled more in the early stages and although good ideas were put forward, peer assisted learning was harder to achieve for them. On the surface, peer assisted learning was slower in this group and the children did not appear to achieve as much as in the other two classes.

The differing levels of musical aptitude and experience were not necessarily related to general ability however. There were students with musical ability in all three of the sample groups. Students who had learned to play instruments already were useful to the others in their group because they could interpret music through their own playing experience. Some knowledge of how music was structured was gained from this, which was a considerable help to a group when thinking how to select material, develop and extend it and add dynamics to make a composition.

Peer assisted group work was enhanced when only one person with some previous musical knowledge or experience could build on the teacher's introduction to their task and help verbally and musically to lead the group forward. Making progress with musical skills required willing group members to enthuse and sustain a group work session. This meant maintaining social interaction in the sharing of ideas essential for completing the composition. The limitations of the structured vocal work and lack of variety of classroom instruments for imaginative use did not deter the students' spontaneity or creativity. Several students were seen to make the best possible use of these instruments through exploring the different aspects of the elements of music to make the composition more interesting. The correlation between two of the cognitive criteria confirmed that confidence in the use of the elements of music was strongly

associated with the use of staff notation. This suggests that children who have gained some knowledge and use of the elements of music in my research may be more likely to progress with staff notation.

The only class with the normal number of lessons, Seven F, showed genuine creative application to the subject material possibly because there was more time for them to reflect on what was being created. They took more time to discuss and try out musical ideas particularly when adding lines of accompaniment to the vocal melody. Sadly, the time was limited for the other two groups who had less opportunity to develop in the same way with their compositions.

This did not mean that Seven O and Seven S were unable to achieve anything because their 'natural settings' were different from those of Seven F. This research study showed how children made an effort to cope with a realistic and unexpected situation. The difference in creative achievement may have been affected by lesson withdrawals for Seven O and Seven S and it is interesting to speculate how much better their achievement might have been without the withdrawal of approximately half their timetabled lessons.

The effects of withdrawn lessons were an important factor in the progress, or lack of it, for both Seven O and Seven S. Life was difficult for these children but Seven O coped better than Seven S with peer assisted learning in the time allowed. The students in Seven O were well motivated and able to work together to produce results. Their enthusiasm for work meant that their concentration was good in most group sessions and therefore, their work improved at the same time. It was noted that in order to complete their composition, they rushed in the later lessons, rejecting some good ideas and applications on the way. Therefore, it is fairly safe to say, that with the normal number of lessons their work might have advanced further than was observed in this study.

Seven S responded very differently from Seven O when faced with fewer lessons than those marked on the timetable. One or two of the students did try very hard to use every bit of the existing lessons to the best advantage. That these lessons mattered in the scheme of things did not appear to occur to some of them, however. The most

noticeable effect on their work was that the students could not remember at what stage their composition was left the week before. They suffered from this much more than Seven O, with the lack of continuity from one lesson to the next affecting their work. This, combined with lack of concentration and inappropriate social skills, meant that they were not well placed for peer assisted learning to develop quickly. A further withdrawal on September 21st for all members of Year Seven for a cognitive ability test did not help matters either by occurring during their one lesson of the week. The effect of the withdrawals appeared to be detrimental to their progress, as there was neither time nor opportunity for the teacher to give adequate remedial help in this situation.

Observation revealed a hidden curriculum of interruptions to lessons, which affected the progress in all classes. Seven F, with the normal number of lessons, had more time to repair the damage made by these interruptions. Seven O and Seven S had to work very hard on one lesson a week to complete their tasks because a number of their existing lessons were also subjected to interruptions from outside.

The interruptions occurred for a variety of reasons, often happening when the task for group work was being set or when lesson material was explained to the students and this was the prime cause of lost concentration. They disturbed the lesson flow for everyone; the students, the trainee teacher and the teacher. Some interruptions were temporary whilst others were longer stoppages that proved distracting for the students by causing an unwanted break in the continuity of a practical subject. These interruptions were of several types and occurred from outside the room.

Students misbehaving and causing conflict in other music lessons were sent to the teacher as head of department to be disciplined. Peripatetic staff arriving in the school for individual music tuition usually required the key to one of the practice rooms and came into the music room for that purpose. There were interruptions from other staff and students disturbing the introduction of lessons with verbal information or written messages for the music teacher. The fire bell was obeyed not knowing whether it was a genuine alert or a practice and all students retreated to the school playing field. The many interruptions to lessons, none of which were the fault of the teacher but were part of school practice, required attention as they occurred. These were hindrances that caused stoppages in the day to day running of the school timetable.

Some interruptions were inevitable. Others were due to school policy and organisation where the head of the music department was obliged to deal with behavioural problems of students taught by other music staff. Some of the other interruptions were simply the product of unfortunate timing. It was clear that most had a perverse effect on the children's concentration, particularly those of the lowest general ability whose behaviour was also affected. The pressure that the music teacher bore, as part of the job, was evident.

All of these were minor interruptions and could be considered of little importance individually but over time and when added together, the effect on a practical lesson of students receiving instruction for group work resulted in loss of concentration for some of them. For example, in lesson seventeen, with Seven F, three distracting situations occurred in the same lesson. Many of the class entered wet from being caught in heavy rain at lunchtime, followed by one boy sent to the teacher for discipline and later by nine students from other classes sent for discipline. These interruptions fragmented the lesson for Seven F, who had already missed their group work session on one afternoon because the whole school was evacuated when the fire alarm sounded.

The music teacher had other responsibilities of a musical nature in the school and was absent from lessons on three different occasions: providing music for the Remembrance Service with the senior part of the school, a concert rehearsal and one whole day away from the school on an information and computer technology course. Absences of this nature happened to Seven O and Seven S twice and to Seven F once. Although cover teaching was supplied for the teacher's absences, it did not necessarily include the peer assisted learning group work sessions nor provide continuity from the previous lesson. Seven F managed to make up the time in other lessons and Seven O coped very well. Seven S, the least able group, lost the continuity of having their own teacher to help them with their own group composition.

There was little doubt that students' attitudes to work were affected by other conditions in the school as well as interruptions. This caused confusion for some and anger for others. The students appeared to dislike the afternoon lessons because they were shorter than those in the morning and they were required to follow the same lesson pattern. This affected Seven F particularly when there was less time for composing. Kate

complained that fifteen minutes was too short a time for working on the composition. An unfortunate feature of the weekly afternoon lesson for Seven F was that cross country running followed immediately afterwards. Very few wanted to do this and the tension built up during the lesson was noticeable. The children admitted this when asked what was wrong. The position of the lesson(s) in the week showed other features too. There were more regular absences on Fridays in Seven F and Seven S and some students became more tired as the first term in their new school progressed. All of these incidences could be attributed to natural settings of the timetable, but the effects on children's work could not be ignored.

It became evident that group size appeared to matter very much to some of the children. Each of the three sample groups responded differently to being in a group of six. One group worked satisfactorily with six but both of the other two showed a preference for splitting into smaller units within the group. The group size of six was not a problem for Seven O. There were several very effective leaders in the group who were able to interchange their roles easily according to what was required and to give each a turn at doing something different for the benefit of the whole group, such as counting in. They were well motivated in their work and the only division, to pairs or threes, was to provide another musical part to be played or sung concurrently with the others.

It was quite different, however, for Seven F, where a group of six students was probably convenient for organisational purposes for the teacher but not necessarily the most suitably sized group for the students. The data showed that Seven F worked together as a group of six in only four lessons. Julie and Kate quite often worked as a pair, so did Julie and Carl and, occasionally, Julie and Neil. These were all peer assisted learning situations. Neil did not join in well with the other five, but responded well when in a paired setting. Perhaps he did not like the attention he received in a group of six particularly since he did not appear to be able to contribute verbally with suggested ideas. For this group, pairs or threes seemed to be a satisfactory way of working on a musical point together before joining with the others to perform the composition to the rest of the class. They showed a preference for working together in smaller numbers and, left to their own devices, this is probably what they would have chosen for themselves.

In one of their covered lessons in the drama hall, Seven S were asked to work in pairs. They did this more effectively than working as a group of six. On this occasion they were located in the large, echoing drama hall for their lesson and in that situation pairs were a better practical option than larger groups. Several of the students worked well in pairs and began to develop their ideas with different word rhythms of their own making. Through this, they showed more imagination than just using the examples in the book, reflecting the introduction to the lesson given by the teacher providing cover. Some of the best efforts, however, were seen in lesson eight when two students were absent and the remaining four made good progress by working together as a group. Seven S did not work effectively as a group of six, although they tried to do so.

Friendship between students was noted but did not emerge as an important issue in the production of a composition. Each class contained students from some of the eighteen different feeder primary schools who did not know each other but the rest appeared to be making friends or knew students from the same school. Some were unsettled by the move, felt insecure and said as much to the teacher. Others in the same situation probably kept quiet about feeling 'new'. What was important was that the first few weeks were a settling down period as many students appeared to be affected by changing from one school to another. The data showed that it took time to settle in a new school with new children, new teachers and a new style of curriculum.

A recurring theme was observed, however, concerning relationships between students as they changed from primary to secondary education and the effect this had on each other and their work. It was shown initially in the changing roles of those who tried to dominate the group sessions but it went further than that to include personal relationships in the whole class situation. Establishing personal identity generally appeared to affect all students in each class as they began to settle with groups of new friends, sometimes changing direction from one lesson to the next. This served to distract some of the less able children from their work.

The interchanging musical relationships of students featured quite strongly in some of the lessons of all the observed groups and noted particularly in the criteria concerning domination of able or disruptive students. In the group work sessions, much of this was about each student establishing a musical identity in a new group with new people. It

was observed, in all three of the sample groups, that those who could play a musical instrument with some skill and/or read staff notation were generally looked upon as either talented or knowledgeable by the rest of the group. They appeared to be useful to others members of the group, particularly in Seven O and Seven F, because they could help with the process of composing a piece of music. Identities were constructed socially and this was about personalities and relationships when working together. This point has already been raised several times in the criteria but the issue of identity and relationships generally in the class had a wider implication.

This concludes the discussion of the findings in this study. Despite difficulties for some of the students it appeared that most in the three sample groups gained some benefit from peer assisted learning in their groups. Through this they acquired or improved their skills in the process. The outcome was the production of a better composition in each group than might have been produced individually. Most children appeared to enjoy working together and feedback from them indicated that they would like to do more group work. This research showed that peer assisted learning can be effective in natural settings without any special arrangements though it would be better for the children if distractions, interruptions, and withdrawals could be avoided.

Contributions from this research to the literature about the effectiveness of peer assisted learning in music composition.

> If education research is to yield important knowledge, it should occur within the constraints of the natural classroom setting where the researcher acknowledges and accommodates the complexity of the setting and the multiple confounding influences that exist there (Barrett, 1998:20).

The 'constraints of the natural classroom setting' and the 'multiple confounding influences that existed there' certainly affected the efficacy of peer assisted learning in this research as described in the previous section. The research focused on music lessons with peer assisted learning under the natural settings of normal school conditions, which were genuine natural settings with no researcher demands made on the teacher, students or school. The lessons were conducted with no special requirements from the researcher and the observations were made of the everyday routines in school life within which children were expected to cope and learn.

The unexpected withdrawal of lessons for Seven O and Seven S showed how children worked when they were short of time. The interruptions to lessons pinpointed the difficulties that children faced during their timetabled lessons when the 'complexities' of school life encroached upon the time that was set out for children's learning. Although this could be considered part of growing up and learning to cope with life, it affected children's learning by reducing the amount of time for creative and spontaneous music making in the lessons.

Despite difficulties, peer assisted learning worked well with children chosen randomly by the teacher in mixed gender groups and not in the requested single gender friendship pairs as in the research of Miell and Macdonald (2000). Peer assisted learning worked with children in my study where it was obvious that some did not know each other very well. Whether it would have worked better in friendship groups is debateable but that was not the focus of my study. The important point was that the value of peer assisted learning was confirmed because it worked, albeit at different levels, with all of the three sample groups in their normal class situation.

Furthermore, none of the empirical studies researched groups with more than four children together. Previous researchers used two key informants working separately or placed students in groups of twos or fours. My study used larger groups of six. Miell and MacDonald (2000; 2002) used pairs of students in both of their research projects but Wiggins (1994) used key informants. Burnard (1999) used optional peer assisted groups of either twos or threes and Morgan, Hargreaves and Joiner (1997; 2000) used groups of four.

The teacher chose groups of six because she felt it gave more compositional possibilities for the children than smaller groups. There were more children in each group to suggest and work on ideas for the composition, although at the same time, more children to cause disagreements. The groups with better developed language and social skills were more likely to be effective more of the time. A second advantage was that six children could, if capable, produce and perform a composition with six individual lines of music played and/or sung as the piece progressed.

The larger groups proved workable and effective. This was despite their random mix of

friendship and gender that has been deemed significant to the effectiveness of peer assisted learning in previous research (Miell and MacDonald, 2000). The groups of six were not, however, ideal for all the students all of the time in the three sample groups. It is safe to say that where there was motivation, capability and well-developed linguistic and social skills, peer assisted learning proved to be an effective method of learning in groups of six.

This study was found to agree with Vygotsky's theory. He claimed that a learner needs a more capable other person who can provide the necessary scaffolding to guide him/her through the zone of proximal development in order to achieve higher things. The vehicle for doing this was transactive language (Bruner, 1985; Tharp and Gallimore, 1988). The process of this learning strategy was observed at some time in all of the three sample groups. One example of this was Neil who made little progress until he found Julie to be the capable other person. When the group work was cohesive, as it was more often in Seven O than in either of the other two groups, the work began to flow and this combined with scaffolding provided a better chance for successful learning.

This study agreed with various findings from previous empirical research. One of the most important was that music composition students were found to have two ways of communicating. They were able to communicate through both transactive language and through the music itself (Morgan, Hargreaves and Joiner, 1997; 2000; Miell and MacDonald, 2000; 2002; MacDonald, Miell and Mitchell, 2002; Wiggins, 1994). In my research, transactive communication was observed and heard, verbally and musically in Seven O and Seven F especially. The musical communication lagged behind the verbal communication at first but became much more important in the composing process when musical instruments were introduced. With a higher level of musical interaction there was evidently less need to use transactive talk. This was noticed to some extent in all three groups. Co-ordination of the joint activity in peer assisted learning was essential to the effectiveness of the resulting composition by both verbal and musical means.

The students in the school where my study was located were fortunate in having plenty of room for music lessons. They were able to interact with their teacher, the other

children and the music within the music suite. Being able to do this was normal practice in this school and it helped to make composition through peer assisted learning more effective. This confirms Wiggins (1994) who stressed the importance of children working in the music room so that they had a shared reaction to both music and people.

In my study, the teacher's introduction to peer assisted learning for composing was carefully designed to promote interest and musical ideas amongst the students. She provided the children with a suitable semi-structured set of suggested ideas on which they could build their own work so that there was the possibility of seeing some achievement at the end of each lesson. The teacher limited the difficulty and the amount of task work so that children could see this achievement in a short time and feel encouraged to continue and build on previous successful work. The findings agreed with Wiggins (1999) who stressed that the introduction to the lesson should encourage children's musical thinking although too much use of semi-structured phrases could be limiting. It was important that children should have just enough help in this way to encourage them to compose. The importance of children recognising their own achievement was emphasised by Salaman (1983).

The shared understanding of how music should sound was evident at different levels in all three of the sample groups in my study. Wiggins (1994; 1999), Green (1996), Burnard (1999) and Kanellopoulos (2000), all stressed that the nature of shared musical understanding came from different sources, forming a shared musical culture. This did not mean that all of the children involved in my study knew how to obtain the sound required for the composition. Instead, peer assisted learning helped them to acquire the appropriate skills for doing so. In the context of primary school music, some of the girls had accepted and enjoyed the playing of recorders and tuned percussion. Styles of music for leisure from outside school and music from other cultures were found to be influential on musical ideas suggested by most students. The influence of the popular music culture generally was felt throughout all three ability groups. These cultures had an effect on their approach to composing because the students had ideas of their own to develop from the whole of the music context in their lives. This was evident in all of the three sample groups.

Previous research has revealed that friendship in groups has an underlying effect in

producing progress. Children who already knew each other well had an understanding of each other's likes and dislikes and these did not have to be explored to understand each other before learning could take place (Wiggins, 1994; Morgan, Hargreaves and Joiner, 1997; 2000; Miell and MacDonald, 2000; 2002; MacDonald, Miell and Mitchell, 2002). The findings in my study supported the view that friendship could have a noticeable effect on the success of peer assisted learning in music composition but it was not essential.

One or two girls in each group in my study appeared to know each other well and were probably friends out of school also. It was likely that knowing each other helped the four girls in Seven F in the initial stages of peer assisted learning. They were found to get on well together from the start and appeared to understand each other's musical thoughts. In the Seven O group, friendship was useful for knowing about each other's talents as found with two of the girls in particular. This advantage helped the social process of getting the ideas for the composition started because one person already knew who to ask for ideas and suggested ways of using them. Two or three friends perhaps worked more easily with each other within the group of six, tending to build on each other's thoughts by extending and elaborating ideas.

MacDonald, Miell and Mitchell (2002) suggested that the quality of process and work between friends and non-friends mattered less with students of Year Seven compared with their findings of younger children. In my study, it was found that a pair of friends in a group could help to get the work started which was very useful for Seven O where time was limited. Two friends were able to push the work forward initially so that the others could join in when they felt they were able to do so.

The nature of group work proved to have a very supportive quality in my study. Being in a socio-cultural support group had several advantages; the group members knew they were helped by others doing the same task and perhaps most important of all, the composition produced was beyond the potential of any one of them as individuals (Burnard, 1989; Wiggins, 1994; Kanellopoulos, 2000). To quote Burnard (1989), working together provided a quality of strength 'to feel strong together'. This could produce better work and possibly an emergent structure: a phenomenal occurrence (Kanellopoulos, 2000; Sawyer, 2004; Joyce and Weil, 1986; Hofstadter, 1986). Part of

the phenomenal quality was that group work, like music, was transient and always changing. This was apparent in Seven F where students interacted with each other and the music differently and disagreed about who should play which instrument. Group cohesion was lost and relationships changed so that division was inevitable. This lasted for only one lesson before the group came together again with most relationships restored.

Changing roles within the group sessions seemed inevitable. In Seven O, Karen led on one occasion then Carol took a turn in leading the next time. It was noticeable that the musical roles of the students changed as work on the composition progressed. One of the ways that group members could experience the role of leadership was to offer to take turns at counting the beat when the composition was played. Establishing musical identities in a new group may also have had some influence as suggested by Burnard (1999) and Wilson and Macdonald (2004).

Motivation varied amongst groups in my research but Seven O and Seven F were enthusiastic most of the time about their ideas and their compositions. Motivation was enhanced through talking and exchanging views about the work and encouraging others to talk also. Seven O and Seven F were actively involved in their own learning and by contributing and receiving feedback they could see when progress was made. Some students appeared to be challenged by working in groups. This helped both motivation and enjoyment although it should be said that some of the motivation in Seven O could be attributed to the challenge of completing their work in the time allowed. This confirms the value of children's motivation found in the work of Salaman (1983:69), Durrant and Welch (1991:50), Foot and Howe (1998) and Kaschub (2000)

There was one instance where the findings in this study tended to disagree with the findings from previous research of a similar nature. Wiggins (1994) found that students had a holistic conception of their work, which reflected the teacher's holistic vision of what was required in the introduction to the lesson. Seven S did not show a holistic vision about any of their work although some of the children in the other two groups did. An explanation could be that it was too soon to expect this to occur in Seven S with their few lessons and difficulty in getting peer assisted learning going or that the material was perhaps unsuitable for them. The same material was given to all three

different ability groups. Perhaps general ability affected the use that children made of the introduction to the lesson and later reflected in their own work. All classes appeared to have a similar introduction to the tasks that were set. It was possible, therefore, that ability and understanding were very much involved when some children reflected the teacher's introduction of the lesson and other children did not.

Peer assisted learning in music composition: reflections

In the light of evidence obtained in my study, peer assisted learning appeared to be an appropriate method for engaging children in compositional tasks. As the findings were of a qualitative study involving a relatively small group of participants they may be potentially transferable but not generalizable. The principle advantages of peer assisted learning in my study made it a motivating, socialising method of learning which could perhaps be transferred effectively in the natural settings of normal timetabled lessons across the whole of the general ability range.

It should not be envisaged that this is an easy option for the teacher. Lessons with peer assisted group work need to be planned meticulously to allow children the freedom to talk and compose. The teacher meanwhile needs to remain in control of the lesson whilst the children are working on their compositions. It can be very noisy at times. The lessons observed in my study revealed that much careful organisation of both the lesson content and class management went into the preparation of each lesson. The researcher noted that this study in 2001 showed there was less time allowed for purely creative work than for the pilot in 1996. There were also obvious differences in the approach to work in music lessons in the main study compared with the pilot although the same teacher was involved on both occasions. The time allowed for being more creative was subjected to other demands in 2001 because the National Curriculum included many more taught items compared with 1996, leaving less time for children's creative work to flourish. The teacher said that lessons tended to move straight on to the next area of study so that the time for practical work had declined over the years. The shrinking time allowance for creative work of this kind within the confines of the National Curriculum may not be extended in the future. This may inhibit the children's creative work but the advantages to both teacher and children are manifold. It is likely to produce better motivation with the opportunity for children's creativity to grow with

everyone in the class usefully working with someone else. The outcome of this could be original completed compositions in which children see their own achievements.

The challenge facing teachers in England is how this creativity can be encouraged within the context of the National Curriculum. The teachers' task is to deliver the National Curriculum in music and the students in my study began their lessons in Key Stage Three soon after leaving primary education. The teacher said it appeared that too many children had not completed the work to the end of Key Stage Two. She found this in Seven F and Seven S, particularly, where some children showed little evidence of having done any music at primary level. This led the researcher to speculate that the compulsory daily literature and numeracy hours respectively, required by the National Curriculum at primary level, may contribute to this problem by squeezing out the time allotted for music making. If more students in Year Seven had completed the requirements for the end of Key Stage Two (Year Six in primary schools) perhaps less time would need to be spent filling in gaps in Year Seven before the Key Stage Three work could begin.

The National Curriculum in music at secondary level may itself contribute to a 'squeezing out' of creative music in favour of more taught musical items. It was found in my study that children were very aware of forthcoming assessments and probably spent more time practising the performance of composed pieces than was necessary. This was because the students knew that assessments required by the National Curriculum were carried out on a regular basis. Therefore, they had the effect of damping down some of the spontaneity and creativity that peer assisted learning was beginning to achieve. However, motivation reached a high point for most students prior to the assessment. It should be made clear that the assessment was of the content of the compositions and not the quality of performance. Making up the composition and putting it together was time consuming because of involved discussion and decision-making. This was quite often curtailed to allow more time for making a more practised performance. Some problems arose when ideas outstripped the skills that were available in the group and when too ambitious a composition resulted in problems for performing. Teachers need to make it clear to the children concerned that during the assessment of compositional content, the performance is incidental.

Future research of creative musical composition will depend to a large extent on the direction taken by the National Curriculum concerning the workload of the taught content and the time allowed for creative music making. If creative work continues to be reduced in the classroom situation, there may be little peer assisted learning in music composition to research. It will depend also on whether or not teachers can arrange enough time to organise children working in groups. Examples from the work produced in Seven O and Seven F showed creative work set within parameters given as a short cut to save time but this limited the students' freedom to some extent. With little time available, some ideas from the teacher were helpful at the beginning and assisted them in achieving more within the tightly structured timetable.

During this study it was noted that the social skills developed in peer assisted learning may have a wider implication for these students when they are older. The social aspects of peer assisted learning may help them to work with each other managing their personal differences and similarities. This provides an opportunity to develop useful social skills whilst working on music composition. The skills they learn from working together and sharing a task may well relate to a wider experience of the working life after formal education has finished.

It would be interesting to compare the findings from sample groups in mixed ability classes with those from classes that were streamed according to general ability as in my study. This is suggested because general ability grouping was seen to have several influences in this study. Children in Seven O were able to manage themselves better and make musical progress in their one lesson each week. Those in Seven F managed well but all their lessons were intact. Seven S, of the lowest general ability found managing their work difficult partly because their social and language communication skills were less well developed that those of the children in both Seven O and Seven F. As it was, the problems of general ability grouping in music lessons were shown quite clearly in that one group could cope with both the music and time problems whereas the other could cope to some extent with the music but could not cope with reduced lessons. In theory, mixed ability groups may help peer assisted learning to become established at a more uniform rate across the sample groups where the least able and the most able children would not be segregated into different groups. The least able children may not have a reason to feel low self-esteem, which could occur in a low ability group. The

possibilities of peer assisted learning may be enhanced where the least able would have a good chance of learning from more capable others.

It is easy to speculate that there must be more than one way to use qualitative methodology for researching peer assisted learning in music composition but quite difficult to say how this could be achieved efficiently. Researching peer assisted learning in my study used a realistic, qualitative approach, illuminated by some quantitative data and with some element of ethnography. It had a detailed pre-determined set of criteria directed towards specific qualities of peer assisted learning and music learning. It would be possible, however, to proceed without a set of criteria where all the data gathered from the observations could be sorted into coded categories. In this type of study the researcher would remain as the primary research tool and take a non-participatory role. Alternatively, a teacher could study some of the students in the form of a participant researcher doing action research. Much would depend on the size of the class and the sample group(s) but it would be possible to be involved with a study over a fairly long period of time.

Other ways of researching peer assisted learning are limited, with quantitative methodology, to whatever can be counted. This means using controlled conditions where groups are separated and where they can work undisturbed. Research of this nature has already been completed and cited in this study in Chapter Four. The focus on the process of how children learn together and what they think about it in their answers to questionnaires would certainly provide valuable feedback relating to the success or failure of collaborative work. More use could perhaps be made of questionnaires and timed data that can be correlated. Much would depend on what the researcher wanted to find out about peer assisted learning which would inform the chosen methodology.

The natural settings of the children's lessons and working day were upheld throughout my study. There were no researcher requests for controlled conditions during the research period because they would have given a false representation of the children's lessons. It became obvious to the researcher that the working day was not the same for each of the three sample groups in Year Seven in this school. Therefore, it was important to observe how the children in each group learned their work and dealt with

their problems as they arose in what was, for them, the beginning of life in a new school.

The timetable changes had considerable effects on the composing sessions of the children in both Seven O and Seven S. Those in the sample group in Seven O were determined not to be left behind or to lose track of their thoughts between one week's lesson and the next. They organised themselves into keeping their work going and making the best use of both the time and the available musical talent in the group. The children in the sample group in Seven S appeared to have difficulty remembering what they had done from one week to the next. This affected the continuity of their work and they seemed to be unable to organise their lesson time and move forward each week. It was perhaps too soon for them to make good use of the musical talents in the group without more help from the teacher but they needed more help than the teacher could give during their one lesson of the week.

The ten pre-determined criteria, devised specifically for this study, proved to be extremely useful for identifying peer assisted learning in action during the composing process and showed the children's progress in the acquisition of cognitive musical knowledge and skills. They covered a range of ten focus points concerning the process of peer assisted learning and its effectiveness in helping children to acquire knowledge and skills in music composition. Their flexibility enabled data to be collected by different methods to suit the purpose of the research question. This resulted in different data about the same theme and different ways of analysing peer assisted learning. It was essential to observe qualitative case studies carefully and the ticking of the timed chart required a strict discipline with accurate timing, which was difficult to achieve but was diligently completed. It was also important to obtain feedback from the children about peer assisted learning. Keeping these disciplines intact in the natural settings of the lessons, as it would be without the presence of a researcher, showed that as much as possible was done to obtain accurate answers to the research question. By using three different kinds of data it was possible to achieve a balanced representation of the social aspects of peer assisted learning and of the progress the children made cognitively. It is possible, therefore to claim this study to be valid as an authentic example of what happened at a particular time in a particular school situation with its inherent problems.

It showed how children responded to using social support groups in the acquisition of musical skills through the use of peer assisted learning.

Children need practical experience if they are to learn about music composition by getting involved with it. 'Children learn by doing music as much as thinking it, by entering the musical arena as active players rather than sitters in silence at the periphery' (Campbell, 1988:187). This was particularly relevant in my study. When actively engaged with a project, children were found to work together with interest, motivation and enjoyment resulting in a better standard of achievement of work and learning than would have been achieved by them alone.

The conclusion drawn from my research and the answers to my research question showed that peer assisted learning helped most children in the acquisition of musical skills and others in the improvement of existing skills. The evidence pointed to some achievement by all of the three ability groups, although at different levels. Most seemed to be well motivated and enjoyed the experience. Some children were keen to share their knowledge and responded to social interaction with both the other children and the music whilst others were keen to accept new knowledge and took the opportunity to learn as much as was possible from the experience.

The study revealed that peer assisted learning worked, sometimes in difficult conditions, without special equipment or any extra financial expense. With an inspiring introduction to the lesson children were able to work, explore, discuss, share and use their own ideas for music composition and learn about it at the same time. The peer assisted learning did not finish there. After group work had finished, each composition was performed in its embryonic stage and shared with the class as a whole. Emphasis was placed on the content, not the performance. Good points were highlighted and discussed by the teacher.

My study supported the literature beginning with Vygotsky's theory of using a socio-cultural support system to bolster children's learning. His theory was adapted for use for my study in music composition. The decision to devise and use a specific set of ten criteria to identify both the social and cognitive aspects of peer assisted learning in the three sample groups was a very important part of this study and found validation when

referenced against the research of others. My study also supported and in some ways added to the empirical literature concerning peer assisted learning in music composition.

The natural settings of the lessons, the classroom and the timetable, with many interruptions, gave insight into what happened in a particular school at a particular time. It would have been easy to postpone the research until all children could receive their full timetable of music lessons, but there may have been other interruptions with a re-arranged time. It was valuable exercise to stay and observe how children were expected to cope with missed lessons as in this study. Yet it must be said, peer assisted learning appeared to work with most of them although it is feasible to suppose that the children with missed lessons may have done rather better with all their lessons intact.

Children's spontaneity and creativity in music lessons, enhanced through collective learning was first introduced by the early music educators discussed in Chapter Two and continued to be developed during the twentieth century. The teacher's work, researched in this study, was part of these developments. Through her use of peer assisted learning, she gave her classes opportunities to try out their natural imagination. The children were actively involved with composing in the peer assisted learning sessions. There was noise, both verbal and musical. The children who were the most motivated were rarely quiet about their work but were enthusiastic about the music they were creating together. What was perhaps the biggest surprise to these children was how well most of them achieved by working with each other. It can safely be said that peer assisted learning involved most of the children in contributing to a learning situation that produced work beyond their potential as individuals.

REFERENCES

Bachman, M-L. (1991). *Dalcroze Today.* Oxford: Clarendon Press.

Baddeley, A. (1996). *Your Memory. A User's Guide.* London: Prion.

Ball, S. J. (1993). Self-doubt and soft data: social and technical trajectories in ethnographic fieldwork. Pp. 166-192, in Hammersley, M. (Ed). *Educational Research: Current Issues.* Vol. 1. London: Paul Chapman Publishing.

Barrett, M. (1996). Children's aesthetic decision-making: an analysis of children's musical discourse as composers. *International Journal of Music Education* 1996. Vol.28, pp. 37-62.

Barrett, M. (1998). Researching children's compositional processes and products: connections to music education practice? Pp. 10-34, in Sundin, B. et al, (Eds). *Children Composing.* Malmo: Lund University.

Barrett, M. (2004). '*Creative collaboration': exploring the teaching-learning relationship in music composition* .Paper presented at the Society for Education, Music and Psychology Research (SEMPRE) Conference. Milton Keynes. April 2004.

Bassey, M. (1999). *Case Study Research in Educational Settings*. Buckingham. U.K: Open University Press.

Beardon, T. (1995). Peer Assisted Learning and Raising Standards. Pp. 117-120, in Goodlad, S. (Ed). *Students as Tutors and Mentors.* London: Kogan Page Ltd.

Bell, J. (1987). *Doing your research project.* Milton Keynes: Open University Press.

Bennett, N. and Dunne, E. (1995). Managing Groupwork. P. 166, in Moon, B. and Shelton Mayes, A. *Teaching and Learning in the Secondary School.* London: Routledge.

Ben-Tovim, A. (1979). *Children and Music.* London: A. and C. Black Ltd.

Berkowitz, M. and Gibbs, J. (1983). Measuring the developmental features of moral discussion. In *Merrill-Palmer Quarterly*. Vol.29, pp. 399-410.

Block, C. and Dellamura, R. (2000). Better Book Buddies. In *Reading Teacher* Vol.54, No. 4, pp. 364-370.

Bogdan, R. and Biklen, S. (1992). (2nd edition). *Qualitative Research for Education.* Boston: Allyn and Bacon.

Bogdan, R. and Biklen, S. (2003). (4th edition). *Qualitative Research for Education.* Boston: Allyn and Bacon.

Bruner, J. (1985*).* Vygotsky: A historical and conceptual perspective*.* In Mercer, N. (Ed) (1988). *Language and Literacy*. Vol. 1. Milton Keynes: Open University

Press.

Burnard, P. (1999). *Into Different Worlds: Children's Experience of Musical Improvisation and Composition.* Unpublished Ph.D. Thesis. University of Reading.

Campbell, P .S. (1998). *Songs in their Heads.* Oxford: Oxford University Press.

Charmaz, K. Grounded Theory. Objectivist and Constructivist Methods. In Denzin, N.K. and Lincoln, Y.S. (Eds). (2000). *Handbook of Qualitative Research.* (2nd Edition).* CA: Sage Publications.

Checkland, P. B. and Casar, A. (1986). Vicker's Concept of an Appreciative System: A Systemic Account. *Journal of Applied Systems Analysis.* Vol. 13, pp. 3-17.

Claire, L. (1993). The social psychology of creativity: the importance of peer social processes for students' academic and artistic creative activity in classroom contexts. In the *Bulletin of the Council for Research in Music Education (Winter 1993/94).* No. 119, pp. 21-28.

Cohen, L. Mannion, L. and Morrison, K. (2000). (5th edition). *Research Methods in Education.* London: Routledge Falmer.

Coppock, C. and Dwivedi, K. N. (1993). Group Work in Schools. Pp. 265-278, in Dwivedi, K. N. (Ed). *Group Work with Children and Adolescents.* London: Jessica Kingsley Publishers.

Cross, K. P. and Harris Steadman, M. (1996). *Classroom Research.* San Francisco: Jossey Bass Publishers.

Csikszentmihalyi, M. (1996). *Creativity: flow and the psychology of discovery and invention.* New York: Harper Collins Publishing.

Daniels, H. (1996). Psychology in a social world. Pp. 1-27, in Olivers, H. (Ed). *An introduction to Vygotsky.* London: Routledge.

Davis, A. (1991). Piaget, teachers and education: into the 1990s. Pp. 16-31, in Light, P. Sheldon, S. and Woodhead, M. (Eds.) *Learning to Think.* London: Routledge.

De Lorenzo, L. (1989). A field study of sixth-grade student's creative music problem-solving processes. In the *Journal of Research in Music Education* Vol. 37, Pt. 3, pp. 188-200.

Department of Education and Science. (1992). *Music in the National Curriculum (England).* London: HMSO.

Department of Education and Skills. (2000). *Music in the National Curriculum (England).* London: HMSO.

Dillon, T. (2004). *What does it mean to compose collaboratively and creatively when using music technologies?* Paper presented at the Society for Education, Music

and Psychology (SEMPRE) Conference. Milton Keynes. April 2004.

Dobbs, J. (1976). Emile Jaques-Dalcroze. In Simpson, K. (Ed). *Some Great Music Educators.* London: Routledge.

Donaldson, M. (1978). *Children's Minds.* London: Fontana.

Durrant, C. and Welch, G. (1995). *Making Sense of Music. Foundations for Music Education.* London: Cassell.

Eales, A. (1992). The fundamentals of violin playing and teaching. Pp. 92-117, in Stowell, R. (Ed). *The Cambridge Companion to the Violin*. Cambridge: Cambridge University Press.

Edwards, D. and Mercer, N. (1989). Reconstructing context: the conventionalisation of classroom knowledge. Pp. 121-135, in Light, P. Sheldon, S. and Woodhead, M. (Eds). (1991). *Learning to Think*. London: Routledge.

Eisner, E. (1991). Objectivity in educational research. Pp. 49-56, in Hammersley, M. (Ed). (1993). *Educational Research: Current Issues.* Vol. 1. London: Paul Chapman Publishing.

Eosze, L. (1962). *Zoltan Kodaly. His Life and Work.* London: Collet's Holdings Limited.

Evans, D. (1978). *Sharing Sounds* .London: Longman.

Everitt, A. (1997). *Joining In. An Investigation into Participatory Music.* London: Calouste Gulbenkian Foundation.

Farmer, P. (1979). *Music in the Comprehensive School.* Oxford: Oxford University Press.

Fletcher, P. (1987). *Education and Music.* Oxford: Oxford University Press.

Foot, H. and Howe, C. (1998). The Psychoeducational Basis of Peer Assisted Learning. Pp. 27-43, in Topping, K. and Ehly, S. (Eds). *Peer Assisted Learning*. New Jersey: Lawrence Erlbaum Associates Inc.

Gardner, H. (1999). *The Disciplined Mind: What All Students Should Understand.* USA: Simon & Schuster.

Gardner, H. (1993). *Frames of Mind.* London: Fontana.

Gladding, S.T. (1999). (3rd edition). *Group Work: A Counseling Specialty*. New Jersey: Prentice Hall Inc.

Green, L. (1997). *Music, Gender, Education.* Cambridge: Cambridge University Press.

Green, L. (1990). The Assessment of Composition: Style and Experience. In *British Journal of Music Education.* Vol. 7, No. 3, pp. 191-196.

Hage, J. and Meeker, B.F. (1988). How to think about causality. Pp. 75-90, in Hammersley, M. (Ed). (1993). *Educational Research :current issues.* Vol.1. London: Paul Chapman Publishing.

Hallam, S. (2002). Musical motivation: towards a model synthesising the research. *Music Education Research.* Vol. 4, No. 2, pp. 225-244.

Hargreaves, D. (2004). *Personalising learning –2.* Joint publication, Specialist Schools Trust and Secondary Heads Association. Dartford: Dexter Graphics.

Hartley, P. (1997). *Group Communication.* London: Routledge.

Hedegaard, M. (1990). The zone of proximal development as basis for instruction. Pp. 171-195, in Olivers, H. (Ed). (1996) *An introduction to Vygotsky.* London: Routledge.

Hitchcock, G. and Hughes, D. (1989). R*esearch and the teacher*. London: Routledge.

Hofstadter, D. R. (1986). *Metamagical Themes: questing for the essence of mind and pattern.* Toronto: Bantam Books.

Jacques, D. (1991). (2nd edition). *Learning in Groups.* London: Kogan Page Limited.

Jones, K. (2003). *Education in Britain. Cambridge:* Polity Press.

Joyce, B. and Weil, M. (1986). (3rd edition). *Models of Teaching*. New Jersey: Prentice Hall Inc.

Kanellopoulos, P. (2000). *A Study of Children's Understandings of Their Musical Improvisations.* Unpublished Ph.D. Thesis. University of Reading.

Kaschub, M. (1997). A comparison of two composer-guided large group compositional projects. In *Research Studies in Music Education.* Vol. 8, pp. 15-28.

Kaschub, M. (2000). *Sixth grade students' descriptions of their individual and collaborative music composition* processes *and products initiated from prompted and unprompted task structures.* Paper presented at the National Association of Music Educators Biennial Conference. Washington. D.C. March 2000.

Kennedy, M. (1993). B*ritten*. London: J.M.Dent.

Kennell, R. (2004). *Music in collaboration: scaffolding in applied music lessons and the ensemble rehearsal.* Paper presented at the Society for Education, Music and Psychology (SEMPRE) Conference. Milton Keynes. April 2004.

Kodaly, Z. (1927). *Hary Janos Suite.* (music score) London: Universal Edition.

Kodaly, Z. (1971). (2nd edition). *Folk Music of Hungary.* London: Barrie and Jenkins.

Kratus, J.K. (1989). A Time Analysis of the Compositional Processes Used by Children Ages 7 to 11. *Journal of Research In Music Education.* Vol. 37, No. 1, pp. 5-20.

Labuta, J.A. and Smith, D.A. (1997). *Music Education. Historical Contexts and Perspectives.* New Jersey: Prentice Hall Inc.

Lacey, C. (1976). Problems of sociological fieldwork: A review of the methodology of Hightown Grammar. In Hammersley, M, (Ed). (1993). *Educational Research: Current Issues* Vol.1. London: Paul Chapman Publishing.

Liess, A. (1955). *Carl Orff.* London: Calder and Boyars.

Light, P. and Perret-Clermont, A. (1989). Social context effects in learning and testing. Pp. 136-150, in Light, P. Sheldon, S. and Woodhead, M. (Eds). *Learning to Think.* London: Routledge.

Light, P. and Blaye, A. (1990). Computer based learning: the social dimensions. Pp. 205-218, in Light, P. Sheldon, S. and Woodhead, M. (Eds). *Learning to Think.* London: Routledge.

Lincoln, Y.S. and Guba, E.G. (1985). *Naturalistic Inquiry.* CA: Sage Publications.

Lloyd, P. (1990). Children's Communication. Pp. 51-70, in Grieve, R. and Hughes, M. (Eds). *Understanding Children.* Oxford: Blackwell.

MacDonald, R. and Miell, D. (2000). Musical conversations: collaborating with a friend on creative tasks. Pp. 65-78, in Joiner, R. Littleton, K. Faulkner, D. and Miell, D. (Eds). *Rethinking collaborative learning.* London: Free Association Books.

MacDonald, R. Miell, D. and Mitchell, L. (2000). *An empirical investigation of the social and musical processes involved in children's collaborative compositions.* A proceedings paper with a report on two studies. Unpublished.

MacDonald, R. Miell, D. and Mitchell, L. (2002). An investigation of children's musical collaborations: the effect of friendship and age. *Psychology of Music.* Vol. 30, pt. 2, pp. 148-164.

Maheady, L. (1998). Advantages and Disadvantages of Peer-Assisted Learning Strategies. Pp. 45-65, in Topping, K. and Ehly, S. (Eds). *Peer Assisted Learning.* New Jersey: Lawrence Erlbaum Associates Inc.

Maher, C.A. Maher, B.C. and Thurston, C.J. (1998). Disruptive Students as Tutors: A Systems Approach to Planning and Evaluation of Programs. Pp. 145-163, in Topping, K. and Ehly, S. (Eds). *Peer Assisted Learning.* New Jersey: Lawrence Erlbaum Associates. Inc.

Mason, L. (1996). An analysis of children's construction of new knowledge through their use of reasoning and arguing in classroom discussions. *International Journal of Qualitative Studies In Education.* Vol. 9, No. 4, pp. 411-433.

Measor, L. and Woods, P. (1991). Breakthroughs and blockages in ethnographic

research: Contrasting experiences during the Changing Schools project. Pp 59-81, in Walford, G. (Ed). *Doing Educational Research*. London: Routledge.

Mercer, N. (1991). Researching Common Knowledge: Studying the content and context of educational discourse. Pp 41–58, in Walford, G. (Ed). *Doing Educational Research*. London: Routledge.

Miell, D. and Macdonald, R. (2000). Children's creative collaborations: the importance of friendship when working together on a musical composition. In *Social Development*. Vol.9, No. 3, pp. 349-369.

Morgan, L. Hargreaves, D. and Joiner, R. (1997). How do children make music? Composition in small groups. In *Early Childhood Connections*. Winter 1997/1998 pp. 15-21.

Morgan, L. Hargreaves, D. and Joiner, R. (1998). Children's collaborative music composition: communication through music. Proceedings paper. Unpublished.

Morgan, L. Hargreaves, D. and Joiner, R. (2000). Children's collaborative music composition: Communication through Music. Pp. 52-64, in Joiner, R, Littleton, K. Faulkner D. and Miell, D. (Eds). *Rethinking collaborative learning*. London: Free Association Books

Mugglestone, H. (1991). *Peer facilitation of learning concerning a musical skill*. Unpublished MRes assignment. Milton Keynes UK: Open University.

Murdoch, J. and Barnes, J.A. (1998) (4th edition). *Statistical Tables, for students of Science, Engineering, Psychology, Business Management Finance*. London: Macmillan Press Limited.

Neill, S. (1991). *Classroom Nonverbal Communication*. London: Routledge.

Nettl, B. (1965). *Folk and Traditional Music of the Western Continents*. New Jersey: Prentice Hall Inc.

Nias, J. (1989). Primary Teachers Talking. A reflexive account of longitudinal research. Pp. 147-165, in Walford, G. (Ed). *Doing Educational Research*. London: Routledge.

Open University, (1991). *E621 Methodology Handbook*. Milton Keynes: Open University Press.

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Newbury Park, CA: Sage Publications.

Paynter, J. and Aston, P. (1970). *Sound and Silence*. Cambridge: Cambridge University Press.

Paynter, J. (1982). *Music in the Secondary School Curriculum*. Cambridge: Cambridge University Press.

Plummeridge, C. (1991). *Music Education in Theory and Practice.* London: Falmer Press.

Pole, C.and Morrison, M. (2003). *Ethnography for Education.* Maidenhead: Open University Press.

Pring, R. (2000). *Philosophy of Educational Research.* London: Continuum.

Prisk, T. (1987). Letting them get on with it. In Pollard, A. (Ed). *Children and their primary schools.* London: Falmer.

Raybould, J. *Songbustin'.* Book 1. Unpublished.

Rainbow, B. (1996). Onward from Butler. School Music 1945-1985. Pp. 9-20, in Spruce, G. (Ed). *Teaching Music.* London: Routledge.

Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context.* New York: Oxford University Press.

Rogoff, B. (1991). The Joint Socialization of Development by Young Children and Adults. Pp. 67-96, in Light, P. Sheldon, S. and Woodhead, M. (Eds). *Learning to Think.* London: Routledge.

Sawyer, K. (2004). *Group creativity: musical performance and collaboration.* (Keynote Presentation). Paper presented at the Society for Education, Music and Psychology (SEMPRE) Conference. Milton Keynes. April 2004.

Salaman, W. (1983). *Living School Music.* Cambridge: Cambridge University Press.

Schaffer, H. (1992). Joint involvement episodes as context for development. Pp. 251-280, in Olivers, H. (1996). (Ed). *An introduction to Vygotsky.* London:Routledge.

Scott, D. and Morrison, M. (2006). *Key ideas in Educational Research.* London: Continuum International Publishing group.

Scott, D. and Usher, R. (1999). *Researching Education.* London: Continuum.

Simpson, K. (1976). The Antiquity of Modern Educational Ideas. Pp. 12-13, in Simpson. K. (Ed.) S*ome Great Music Educators.* London: Novello.

Sloboda, J. (1985). *The Musical Mind.* Oxford: Oxford University Press.

Sloboda, J. A. Davidson, J. W., and Howe, M. J. A. (1999). Is Everyone Musical? Pp. 46-57, in Murphy, P. (Ed). *Learners, Learning, and Assessment.* London: Paul Chapman Publishing Limited.

St. John, P. (2004). *Collective music making: observing early childhood collaborators.* Paper presented at the Society for Education, Music and Psychology (SEMPRE) Conference. Milton Keynes. April 2004.

Stake, R. Case Studies. In Denzin, N.K. and Lincoln, Y.S. (Eds). (2000). *Handbook of Qualitative Research.* (2nd Edition). CA: Sage Publications.

Stephenson, C. (1993). Use of Drama. Pp. 170-181, in Dwivedi, K. N. (Ed). *Group Work with Children and Adolescents.* London: Jessica Kingsley Publishers.

Stowell, R. (1992). Technique and performing practice. Pp. 122-134, in Stowell, R, (Ed). *The Cambridge Companion to the Violin.* Cambridge: Cambridge University Press.

Stowell, R. (1992). The pedagogical literature. P. 229, in Stowell, R. (Ed*). The Cambridge Companion to the Violin.* Cambridge: Cambridge University Press.

Swanwick, K. (1994). *Musical Knowledge.* London: Routledge.

Swanwick, K. (1996). Music Education Before the National Curriculum. Pp. 21-46, in Spruce, G. (Ed). *Teaching Music.* London: Routledge.

Swanwick, K. (1997). *Music as Culture.* Based on Action for change in Music Education. The May Day Group. (Published on Internet.)

Swanwick, K. (1988). *Music, Mind and Education.* London: Routledge.

Swanwick, K. and Taylor, D. (1982). *Discovering Music. Developing the Music Curriculum in Secondary Schools.* London: Batsford Academic and Educational Limited.

Szabolcsi, B. (1964). *A Concise History of Hungarian Music.* London: Barrie and Rockliff.

Tharp, R. and Gallimore, R. (1988). A theory of teaching as assisted performance. Pp. 42-61, in Light, P. Sheldon. S. and Woodhead. M. (Eds). *Learning to Think.* London: Routledge.

The Voices Foundation. (1999). Primary Education Programme. *To every child a voice.* (Brochure) London: The Poet's House.

Thody, A.M. (2006). *Writing and presenting research.* London: Sage. Ch. 11 in press.

Tizard, B. and Hughes, M. (1991). Reflections on young children learning. Pp. 19-40, in Walford, G. (Ed). D*oing Educational Research.* London:Routledge.

Topping, K. and Ehly, S. (Eds). (1998). *Peer Assisted Learning.* New Jersey: Lawrence Erlbaum Associates Inc:.

Topping, K. and Ehly, S. (1998). Introduction to peer assisted learning. InTopping, K. and Ehly, S. (Eds). *Peer Assisted Learning.* New Jersey: Lawrence Earlbaum Associates Inc:.

Van Manen, M. (1990). Researching lived experience. NY: State University of New York.

Vygotskaya, G. (1998). Afterword. In Topping, K. and Ehly, S. (Eds). *Peer Assisted Learning*. New jersey: Lawrence Earlbaum Associates Inc.

Vygotsky, L. (1962). *Thought and Language*. Haufmann, E. and Vakar, G. (Eds). Cambridge M.A.: M.I.T.Press.

Vygotsky, L. (1966). Genesis of the Higher Mental Functions. Pp. 32-41, in Light, P. Sheldon, S. and Woodhead, M. (Eds). (1991). *Learning to Think*. London: Routledge.

Vygotsky, L. (1978). *Mind in Society: The development of higher psychological processes*. Cole, M. John-Steiner, V. Scriber, S. and Soubermann, E. (Eds). Cambridge M.A.: Harvard University Press.

Watkins-Shaw, J. (1976). John Curwen. P. 12, in Simpson, K. (Ed). *Some Great Music Educators*. London: Novello.

Walford, G. (1991). Researching the City Technical College, Kingshurst. In Walford, G. (Ed). (1991). *Doing educational research*. London: Routledge.

Welch, G. F. (2001). United Kingdom. Pp. 202-219, in Hargreaves, D. T. and North, A. C. (Eds). *Music Development and Learning. The International Perspective*. London: Continuum.

Wiggins, J. (1994). Children's strategies for solving compositional problems with peers. *Journal of Research in Music Education*. Vol. 42, No. 3, pp. 232-252.

Wiggins, J. and Bodoin, K. (1998). Painting a Big Soup: Teaching and Learning in a Second-Grade Music Classroom. *Journal of Research in Music Education*. Vol. 46, No. 2, pp. 281-302.

Wiggins, J. (1999). Teacher control and creativity. *The Music Educators Journal*. Vol. 85, No. 5, pp. 30-35.

Wiggins, J. (2000). The nature of shared musical understanding and its role in empowering independent musical thinking. *The Bulletin of the Council for Research in Music Education*. Vol. 143, pp. 65-90.

Wiggins, J. (2001). *Teaching for musical understanding*. NewYork: McGraw-Hill.

Wiggins, J. (2002). *Children's collaborative creative process in the music classroom*. Seminar at Open University, Milton Keynes. Thursday, May 2nd 2002.

Williams, L. (1983). *Teaching for the Two Sided Mind*. New York: Simon & Schuster.

Wilson, G. and MacDonald, R. (2004). *Constructions of jazz: how jazz musicians present their collaborative music practice*. Paper presented at the Society for Education Music and Psychology (SEMPRE) Conference. Milton Keynes. April

2004.

Wood, D. (1986). Aspects of teaching and learning. Pp. 97-120, in Light, P. Sheldon, S. and Woodhead, M. (Eds). *Learning to Think.* London: Routledge.

Young, P.M. (1964). *Zoltan Kodaly.* London: Ernest Benn Limited.

Younker, B-A. (2000). Thought processes and strategies of students engaged in musical composition. *Research Studies in Music Composition.* Vol. 14, pp. 24-39.

Younker, B-A. and Burnard, P. (2004). *Democracy and peer collaboration in creative music making.* Paper presented at the Society for Education, music and Psychology (SEMPRE) Conference. Milton Keynes. April 2004.

APPENDIX 1: The National Curriculum requirements for music composition in Key Stage Three.

(Department of Education and Skills, 2000)

The National Curriculum has three interrelated areas of study, which are briefly described as: listening, performing and composing. 'Teaching should ensure that listening and applying knowledge and understanding are developed through the interrelated skills of performing, composing and appraising' (Department of Education and Skills, 2000).

The National Curriculum states that for Key Stage Three there are two areas of composition.

'Creating and developing musical ideas – composing skills

2   Pupils should be taught how to:

  a   improvise, exploring and developing musical ideas when performing.

  b   produce, develop and extend musical ideas, selecting and combining resources within musical structures and given genres, styles and traditions.' (Department of Education and Skills, 2000).

The National Curriculum includes three interrelated areas of study and although my research observed students composing together in groups, the data obtained also included areas of performing the compositions for assessment by the teacher. The importance of the National Curriculum attainment requirements, which were assessed on a regular basis, placed considerable emphasis on the assessment of the group compositions, which occurred once in each half of the term.

Improvising only became a specific part of the National Curriculum from 2000. It is concerned with the technique of using an existing rhythm or melody and developing and extending it into a new piece of music in their group work. It gives the children the opportunity to build on a chosen rhythm, melody, harmony or form to make a creative piece of music of their own. In my research the teacher concentrated on the children's

own ideas for composition, rather than improvisation, although she suggested some simple rhythmic phrases with words to stimulate the initial production of their own ideas.

APPENDIX 2: National Curriculum attainment target for music Key Stage Three. (Department of Education and Skills, 2000).

The following points are selected from the attainment target given in the National Curriculum (2000). Selection has been made of the target areas, mainly relating to composition, in the eight different levels of attainment.

Level 1. Pupils explore how sounds can be made and changed. They repeat short rhythmic and melodic patterns and create and choose sounds in response to given starting points. They respond to different moods in music and recognise well-defined changes in sounds.

Level 2. Pupils recognise and explore how sounds can be organised. They choose carefully and order sounds within simple structures such as beginning, middle, end, and in response to given starting points. They improve their own work.

Level 3. Pupils recognise and explore the ways sounds can be combined and used expressively. They improvise repeated patterns and combine several layers of sound with awareness of the combined effect. They recognise how the different musical elements are combined and used expressively and make improvements to their own work.

Level 4. Pupils identify and explore the relationship between sounds and how music reflects different intentions. They improvise melodic and rhythmic phrases as part of a group performance and compose by developing ideas within musical structures. They suggest improvements to their own and others' work.

Level 5. Pupils identify and explore musical devices and how music reflects time and place. They improvise melodic and rhythmic material within given structures, use a variety of notations and compose music for different occasions using appropriate musical devices such as melody, rhythms, chords and structures. They refine and improve their work.

Level 6. Pupils identify and explore the different processes and contexts of selected musical genres and styles. They select and make expressive use of tempo, dynamics, phrasing and timbre. They make subtle adjustments to fit their own part within a group performance. They improvise and compose in different genres and styles, using harmonic and non-harmonic devices where relevant, sustaining and developing musical ideas and achieving different intended effects. They use relevant notations to plan, revise and refine material. They make improvements to their own and others' work.

Level 7. Pupils discriminate and explore musical conventions in, and influences on, selected musical genres, styles and traditions. They create coherent compositions drawing on internalised sounds and adapt, improvise, develop, extend and discard musical ideas within given and chosen musical structures, genres, styles and traditions.

Level 8. Pupils discriminate and exploit the characteristics and expressive potential of selected musical resources, genres, styles and traditions. They…compose extended compositions with a sense of direction and shape, both within the melodic and rhythmic phrases and overall form. They…make accurate use of appropriate notations.

APPENDIX 3: Questionnaires given to the students

Questionnaire One

Do you think that,

1. All the members of the group worked together? Most of the time. Hardly at all.

2. The group discussed ideas in a friendly way? Most of the time. Hardly at all.

3. The group argued about the composition? Most of the time. Hardly at all.

4.   Anyone gave particular help in the group? Most of the time. Hardly at all.

5.   Anyone disrupted the work in the group? Most of the time. Hardly at all.

Questionnaire Two

 Do you think that,

6. There were plenty of musical ideas to discuss in your group? Most of the time. Hardly at all.

7. The group together developed ideas to make the composition? Most of the time. Hardly at all.

8. Working in a group helped you to improve your composing skills? Yes. No.

9. You could have composed a similar piece of music by yourself? Yes. No.

10. Working together helped you with learning notation? Yes. No.