B. J. Music Ed. 2013 30:1, 125–148
doi:10.1017/S0265051712000460 First published online 29 November 2012
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Standing 'on our own two feet': A comparison of teacher-directed and group learning in an extra-curricular instrumental group

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This practitioner-based research, undertaken by the author in her own teaching context with herself as participant, explores how autonomous learning skills and motivation can be fostered in primary-aged instrumentalists. A primary school extra-curricular recorder group was observed participating in two stages of lessons: the first, teacher-directed and the second, focused around group learning. Lessons were videoed and transcribed for analysis and pupils' views on the two styles of lessons gained through interviews. The teacher-directed lessons were considered in the light of the apprenticeship conception of the teacher's role, with its potential to balance direction and facilitation, and scaffolding was observed to be used in various ways, both promoting and restricting pupil autonomy. The group learning lessons used aspects of the Musical Futures[1] *informal learning approach, particularly self-directed learning in friendship groups, using aural models on CD, with the teacher's role facilitative rather than directive. These lessons were considered in the light of theories of group learning, with pupils observed providing mutual support, scaffolding in different ways to a teacher, and engaging in transactive communication. Pupils, though positive about both stages, valued the opportunity to learn independently in the group learning lessons, gaining a sense of flow through the challenge involved. Findings suggest that whilst both teacher-directed and group learning can be effective, music teachers could develop their pupils' capacity for autonomous learning by taking opportunities to adopt a more facilitative role, providing the learning context and assistance when required, but allowing the pupils to direct their own learning.*

Introduction

Recent years have seen a new focus on informal musical learning, the way in which musical learning is acquired independently by young people outside the adult-led contexts of formal educational institutions or non-formal community groups (Campbell, 1998; Green, 2001, 2008; Allsup, 2003). Such research often features a common concern over the disparity between pupils' active engagement in music outside school and the negative experience of many pupils in the formal setting of the music classroom (Green, 2006). Green's (2001) study of the informal learning practices of popular musicians identified a number of common themes distinct to informal learning. These were the importance of enculturation, aural learning, haphazard learning of theory and technique, the valuing

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of the 'feel' of the music, the valuing of social relationships within the band, and group learning without an expert, either through peer-directed or group learning.

There is a growing body of research on projects attempting to bring aspects of informal learning into the school (Allsup, 2003; Evelein, 2006; Seifried, 2006), but the most influential in England currently is Green's (2008) research which forms the informal learning pathway of *Musical Futures* (Green 2009), a music education programme providing teaching strategies and curriculum resources to secondary schools in the UK. This research, investigating whether it is possible and beneficial to bring aspects of the informal music learning practices observed by Green (2001) to the school classroom, found that

> one of the reasons why pupils indicated that they benefited from the project, in relation to both motivation and educational achievement, was that they were granted the autonomy to direct their own learning practices. (Green, 2008:102)

Research methodology, procedures and design

As a specialist music teacher in primary schools where, in addition to whole class curriculum music teaching, I was responsible for teaching extra-curricular instrumental groups and managing the teaching of peripatetic instrumental tutors, I had experienced my own concerns about lack of motivation and autonomous learning skills amongst many of the pupils that I had taught, and wondered how my colleagues and I could better prepare pupils for a future of independent musical learning. In light of Green's (2008) findings of increased autonomy through group learning in the *Musical Futures* programme leading to enhanced motivation amongst secondary-aged pupils engaged in their compulsory curriculum, my aim was to explore how such an approach to group learning, suitably adapted, could be used amongst younger pupils engaged in extra-curricular instrumental groups, what effect it would have on pupils learning behaviour, particularly their ability to learn autonomously, and how this would compare with their response to the more teacher-directed approach that they were accustomed to. With these concerns in mind, my primary research question was:

- To what extent can group learning be considered to increase learner autonomy in extra-curricular instrumental groups?

Within this, I explored these sub-questions:

- How does pupils' learning behaviour differ between teacher-directed and group learning lessons?
- In what ways can peer support facilitate learning?

My research is practitioner-based research, located within my own teaching context and combining aspects of case study and action research, with myself as participant observer (Stenhouse, 1985; Scott & Usher, 1999; Opie, 2004; Stock, 2004). It took place in a state primary school situated in an ethnically diverse area of East London with significant levels of social deprivation and special educational needs. The Year Five and Six Recorder Club, of 12 pupils aged 9–11, was selected for the research project since this was a group likely to remain stable throughout the project, as they had previously shown high levels of motivation and regular attendance at this voluntary club. The group was held once a week for half an hour at lunchtime, and contained a variety of abilities and experience ranging from two terms of learning to three years. Some children played tenor and treble recorders,

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using them flexibly, learning the descant part also and deciding amongst themselves who would play which recorder on any given piece.

My research took place in two stages, over the autumn and spring terms. BERA Revised Ethical Guidelines for Educational Research were followed, pupils participated in the club on a voluntary basis and written consent was sought from their parents for them to participate in the research and be videoed. Names in this article have been changed using culturally appropriate substitutions.

In the first, teacher-directed, stage I taught five lessons, adopting an approach typical of my normal recorder teaching. Lessons included teacher demonstration and pupil copying, teacher explanations of fingerings and notation, short periods of individual pupil practice, and teacher-directed performances.

In the second, group learning, stage I adopted features of the second stage of the *Musical Futures* informal learning approach, 'modelling aural learning' (Green, 2009), though with some adaptations for my differing context. This approach, undertaken with secondary-aged pupils as part of their compulsory music curriculum, followed a sequence of lessons in which they had worked in friendship groups to listen to and copy a recording of a self-selected piece of music. The pupils were provided with a CD of a song, selected for its popular style and layers of riffs, with complete instrumental and vocal versions and a variety of riffs and repeated rhythms played separately and in combination. Working in friendship groups the students were asked to direct their own learning using the CD, to select instruments, listen to and copy the riffs and combine them into a performance of the song. The role of the teacher, after setting the ground rules for behaviour and setting the task going, was to stand back, observe and diagnose, before giving guidance through suggestion and modelling:

> Teachers told their pupils that they would be available for help if required, but that they would not be instructing in the normal way. The role of the teacher was thus rather different from a normal, formal educational role . . . (Green 2008)

In my study, the pupils worked in two self-selected groups in adjoining rooms for six weeks, each provided with a CD player, a CD with aural models of the piece to be learnt and a track list detailing the different learning tracks available. Each piece was performed complete and broken down into phrases for each recorder part, mostly of two bars, which were played in a continuous loop for two minutes each. The pupils were told that they were directing their own learning, organising themselves and supporting each other when needed, and learning by listening rather than from notated music (Mills & McPherson, 2006). Each lesson started with the two groups together for a brief teacher-led introduction covering aspects such as how to use the CD tracks to learn aurally and to clear up any procedural problems noted the previous week. After this the groups worked in their separate rooms, whilst I alternated between the two rooms to observe. The pupils were told they could ask me if they were unsure about anything, and I intervened on occasions where problems persisted, but kept interventions to a minimum.

This second stage remained faithful to *Musical Futures'* key principles. Learning was aural, it took place in friendship groups with minimal adult guidance (the teacher providing resources and explaining the task before stepping back to observe and only offer assistance when requested or after observing pupils attempt their own solutions), assimilating skills

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in a haphazard way, and integrating listening and performing (though not improvising and composing). However, there were also some key differences. The children were of primary age, they were participating voluntarily in an extra-curricular group and therefore more likely to be well-motivated and have positive views towards music at the outset of the project. This differing context means that there are limitations in how far comparisons can be made between my study and that of Green (2008), particularly with regard to the attitudes of the pupils towards the approaches, and so my findings are primarily concerned with the comparison of the differing approaches within my own study. Another key difference is that the combination of instruments in the group made it appropriate to look to a different range of music genres to the mainly popular music of *Musical Futures*.

For each stage I used a tune familiar to the pupils, *Winds through the Olive Trees* (Stage 1) and *Theme from 'Titanic'* (Stage 2), and also an unfamiliar piece, *La Bergamasca* (Stage 1) and *La Parma* (Stage 2), both sixteenth century recorder pieces. Though it was impossible to completely standardise levels of difficulty, each piece provided a comparable amount of material to be learnt with similar phrase lengths and numbers of differing phrases, and with more challenging elements being balanced out by easier. *Winds through the Olive Trees* was my own arrangement, the other pieces were downloaded from recorder resources available on a Local Authority music service website.

Each lesson was videoed to enable transcription and detailed analysis, with one group videoed each lesson in Stage 2. Pupils were aware they were being videoed, and though this did seem to have a slightly modifying effect on their behaviour at first, by Stage 2 they were habituated to the extent that they sometimes engaged in conversations that they would not usually have in the presence of an adult.

The videos provided a wealth of non-verbal behaviour, offering considerable insight into the children's learning; since it would have been impossible to record every instance of observable behaviour from all twelve children, some selection had to take place in terms of what behaviour was considered to be significant. In the transcriptions italics have been used for description, with brackets where necessary to distinguish it from speech, ellipses have been used to indicate missing text, and a dash at the end of a word to indicate where speakers were interrupted.

During Stage 2, when my role in lessons was more that of observer, I also took field notes in which I noted my observations and interventions and issues arising with both groups as I alternated between them.

At the end of each stage, semi-structured interviews were conducted with individual pupils, exploring their views and attitudes towards their recorder learning and the lessons. These were audio recorded for transcription, providing triangulation with the lesson observations, enabling comparison of pupils' perceptions with their observed behaviour. Concerned about the possibility of pupils' answers being influenced by my status as their teacher, I attempted to counteract this by emphasising that I was interested in finding out their opinions and inviting the children to give criticism or suggestions for improvements in the lessons, though I was careful not to ask questions about my teaching which the pupils might have found difficult to answer honestly to my face, and any comments directly about my teaching were unsolicited.

In analysing the data, though my starting point was the belief that, as Green (2008) found in the Music Futures informal learning approach, group learning may increase learner

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autonomy, I had no hypothesis about how this might be evidenced. Having simply recorded what happened in the lessons in the form of transcripts, I was then able to compare theory and research around teaching (Wood *et al.*, 1976; De Corte, 1990; Hallam, 1998; Byrne, 2005), group learning (Slavin, 1995; Bielaczyc & Collins, 2000; MacDonald & Miell, 2000; Faulkner, 2003) and informal musical learning (Jorgensen, 1997; Harwood, 1998; Green 2001, 2008; Allsup, 2003; Jaffurs, 2004; Folkestad, 2005, 2006; Evelein, 2006) with the data, and categorise the data as common themes emerged.

The teacher-directed lessons

In considering the teacher-directed lessons, it is helpful first to examine different conceptions of the role of the teacher. Hallam (1998), considering the role of the instrumental teacher, outlines several conceptions of the nature of teaching in decreasing order of teacher-domination. These range from the engineering conception, focusing on the transmission of knowledge by the teacher to the passive recipient, through apprenticeship and the developmental conception, to facilitation of learning. She suggests that the apprenticeship model might be the most appropriate for instrumental tuition. Key to apprenticeship are the concepts of the zone of proximal development (Vygotsky, 1978) and scaffolding (Wood *et al.*, 1976), concerning the guiding of the learner beyond their current capabilities by an expert. However, Hallam questions whether teachers are adopting the best methods to make this work in practice, suggesting a tendency amongst some instrumental teachers to engender dependency from their pupils, and she suggests the need for a more reflective approach by teachers to enable learners to develop autonomy and independence. Others (Allsup, 2003; Westerlund, 2006) have likewise disputed the effectiveness of the apprentice model, questioning whether such an authoritarian and hierarchical model stifles problem solving and creativity.

De Corte (1990) considers the balance between direction and facilitation in his model of the classroom as a powerful learning environment, characterised by a balance of discovery learning and systematic instruction and guidance through the teacher roles of modelling, coaching, and scaffolding. Byrne (2005) suggests that as the learner moves through their zone of proximal development to a new developmental level, the teacher reduces the amount of scaffolding given, in a phase termed 'fading'. As progress is made through these phases, from teacher-regulation of learning in the modelling phase to self-regulation in the fading phase, the roles change from active teacher and passive learner to active learner and passive teacher.

The teacher-directed lessons: findings

My analysis of the teacher-directed lessons considers the extent to which these lessons balance the direction and facilitation of learning, within the apprenticeship conception. Wood *et al.*'s (1976) study of scaffolded problem solving amongst young children identified six distinct functions of the tutor:

These functions can clearly be seen in the lessons, to varying degrees. Reduction in degrees of freedom was seen as tunes were broken into phrases, with short practice periods given for children to work out or practise the notes. Demonstration ranged from call and

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Table 1 *The scaffolding functions of the tutor in problem solving, adapted from Wood* et al. (*1976*).

Functions of the tutor	Definition
Recruitment	Enlisting the problem-solver's adherence to the requirements of the task, e.g. by engaging their interest
Reduction in degrees of freedom	Simplifying the task by reducing the number of constituent acts required to reach solution, e.g. by breaking the task down into manageable sub-components
Direction maintenance	Keeping the learner in pursuit of a particular objective e.g. keeping them motivated and encouraging them to move onto the next step
Marking critical features	Marking or accentuating certain features of the task that are relevant, e.g. providing information about the discrepancy between what the child has produced and the correct procedure
Frustration control	Reducing stress for the problem-solver, e.g. by enabling the learner to 'save face' for errors
Demonstration	Modelling the solution to a task, e.g. by completing an idealised version of an act for the learner to imitate

response, singing of note names and vocalisation or clapping of rhythms, to modelling and comparison of poor and ideal recorder technique. Recruitment was sometimes used to encourage reticent pupils to participate, and direction maintenance employed as pupils who found it difficult to concentrate were prompted to focus more effectively on the task in hand. Frustration control was used to help pupils to cope effectively with difficulties, sometimes giving pupils appropriate strategies to maximise their strengths whilst minimising their weaknesses.

The scaffolding technique that received the most time was the marking of critical features, in line with Hallam's (1998) summary of research on instrumental lessons, although demonstration received almost as much time. A new phrase was often introduced by the pointing out of landmark features in the music, with patterns or repetition in the music highlighted:

> -KA: Can you spot anything in it that's going to make it easy?. . . (*Children now lean over or pick up their music to study. . .*)
> -Kayla: I think, does it, is it the same when it, on the second-
> -Several pupils: Oh yes, the lines repeat!
> . . .
> -Adwoa: Erm, it's mostly the notes next door and there's not big jumps.
>
> (TDL[2] 1)

When pupils were struggling with a phrase, attention would be drawn to the particular aspect they needed to improve, particular notes that may be problematic were brought to notice and awareness drawn to aspects of poor recorder technique that were hampering progress. However, though instigated by me, these interactions didn't always fit into

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Hallam's criticism of the teacher as 'being directive mainly through the use of verbal statements' (Hallam, 1998:235). Questioning was frequently used, as I directed pupils to relate features of the music to their previous knowledge, to analyse aurally and focus on notated features of the music. Though I often gave confirmatory statements, this often followed only after pupils had found the features themselves.

A flexible scaffold?

A key difference with Wood *et al.*'s (1976) model of scaffolding is that whereas their model was developed with individual children, my scaffold had to be flexible enough to adapt to varying abilities within the group. The brief periods of practice which interspersed the direct teaching were used either to give extra support to weaker pupils or to keep a broader overview of the whole group and briefly trouble-shoot various discrepancies.

Sometimes, I relaxed the restrictions of the reduced degrees of freedom for more able pupils:

> -KA: Kimberley you can add in the second quaver, like this... so the rest of you concentrate on the (*sings the pitches*) der da, der da, der da, der da.
>
> (TDL 2)

There are also examples where I pushed pupils further through their zone of proximal development when they were in danger of playing safe:

> (*Aysha plays first 4 notes of the phrase then stops, and whispers something*)
> *-KA:* It's two more notes. Come on Aysha, I'm sure you could read those instantly. (*Aysha studies the music... she plays a tentative A, A, B A. KA starts singing the phrase, Aysha plays along accurately*)
>
> (TDL 4)

However, there were occasions where teaching may have verged on over-scaffolding. There were times when difficulties prompted me to reduce the degrees of freedom still further, when simple repetition may have resolved the problem:

> -KA: (*Sings rhythmically*) Everybody! (*Group play the 2 bars, which peters out in 2nd bar, as giggling ensues and Kayla rolls backwards on floor*) Ok, let's do the first bar; let's break it down a bit.
>
> (TDL 1)

There is a danger that over-fragmentation of the music may prove frustrating in itself, risking demotivating pupils and leading to the sense of the music being lost. Though levels of motivation remained high throughout, a less motivated group may have responded differently, and there were times when there was a palpable sense of pupils having been let off the leash:

> -KA: I think... we could just give that a go from the beginning now.
> -Adwoa: Yes! (*Holds fists up in gesture of excitement*)
>
> (TDL 1)

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Some pupils did not need the same level of scaffolding as others and could have been given more freedom earlier to work out the difficulties for themselves:

> -KA: Kimberley, we're not doing the second quaver, just to make it easier today.
> -Kimberley: Oh!
>
> (TDL 1)

Directing or facilitating?

There is no doubt that the teacher's role in these lessons was directive, with a high degree of scaffolding taking place. Interactions were routed through me, and were mainly confined to answering questions, the few spontaneous interactions concerning clarifications or occasional prompts to peers. However, within these confines, some pupil autonomy was encouraged. Questioning was used to engage pupils in finding the critical features for themselves, the brief periods of practice were effective in encouraging pupils to work out notes for themselves rather than simply relying on copying, and I provided alternative strategies, such as encouraging pupils to make aural associations with particular fingerings:

> -KA: Work it out; what note are we playing on the three? . . . (*Sings*) 'Five, four, three'. (*Speaks*) Do the fingering, do the fingering and see what you get, work it out. . .
>
> (TDL 5)

To encourage autonomy I also encouraged the pupils to listen to each other so that they could perform without me conducting.

Whilst managing three different groups of recorders in one lesson could result in some degree of passivity from the pupils not being directly taught, I encouraged active engagement in practice from the rest of the pupils whilst one group was being helped:

> -KA: Descants, I'd like you to do some silent practice on that. Sing it in your head like this. Dorcas? (*KA hums the first phrase quietly, whilst miming the fingering*) So, humming quietly to yourself and doing it on your chin. To get those fingerings back in your head while I hear the trebles, ok?
>
> (TDL 5)

I also encouraged self-evaluation from pupils:

> -KA: What do you think we need to work on now?
> . . .
> -Sarah: I think, maybe. . . blending it together?. . .
> -KA: Blending it together, yes. It sounds a little bit jerky, doesn't it-
> -Sarah: Yeah!
> -KA: -so blending it together, getting it a little more (*pause, as KA makes flowing movements with her arms*) smooth, maybe.
>
> (TDL 3)

Sometimes, as in this case, I developed the pupil's initial response rather than encouraging them to elaborate further. However, at other times, evaluation came more spontaneously from pupils, or they elaborated on my evaluation:

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-KA: Good Aysha. You know all the notes, Aysha, now you need to think about making your notes beautiful.
-Sarah: Flowing. (*She makes a smooth figure of eight gesture with her recorder*)
(TDL 5)

Group learning

Whilst the emphasis was on teacher-direction, some elements of group learning could be seen. The brief periods of practice gave the chance for pupils to work with others if they wished. This was only once directly prompted by the teacher,

-KA: When you're feeling confident, see if there's someone else who's not so confident.
(TDL 2)

but was for some children a natural response to being told to practise. Though little spontaneous verbal interaction between pupils was recorded, it is likely that significant interactions between pupils occurred unrecorded in these practice periods:

Kavetha, Neela and Adwoa are practising their treble notes silently, with much non-verbal communication going on between them as they watch each other, and correct or affirm what each other is doing.
(TDL 2)

Particularly interesting were the pupils' responses when I had to leave the group to speak to an adult at the door:

KA walks to door. The descants practise the phrase, and some play from the beginning of the song. Kavetha sits uncertainly at first, and then seems to be conferring on fingering with Simone. Adwoa plays her treble, Kimberley, Sarah and Gabriela are conferring over their music as Sarah writes something down, while Ella looks on . . .
(TDL 5)

Unprompted, most of the pupils had worked collaboratively to use the time productively. It is noticeable that some pupils were more likely to collaborate than others, depending on factors such as friendships and which recorder they were playing, but all pupils took part in collaborative behaviour at some point, with the exception of Dorcas.

Though the exact nature of these individual interactions was difficult to ascertain, there were also occasions where it was apparent that a more confident peer was fulfilling a scaffolding-like role for a less confident pupil:

Amirtha is initially unsure of the rhythm but quickly falls in with Sarah's lead. Sarah hesitates on several occasions as she struggles to stretch her fingers to the note, but otherwise plays accurately. Amirtha is slightly less sure, but seamlessly joins in with Sarah on the notes she is more confident on.
(TDL 3)

Pupils also supported each other in other ways, unprompted:

Tenors play their first line. They are still struggling to achieve clear notes, but are changing fingers at the correct time. Kimberley, Sarah and others, sing the note names with them.
(TDL 5)

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Kimberley, the most able of the group, often took the lead and was viewed by other pupils as an expert. She displayed a degree of autonomous learning beyond the rest of the group, as evidenced in this example:

> -KA: We're going to play 'One, two, three, four, five, five, five' in the key of D. So what note will we be starting on? (*KA leaves chair to speak to someone at the door*)
> -Kimberley: A?[3] (*Giggles. Adwoa plays an A on her descant*) With the trebles, anyway.
> -Adwoa: Ah! (*Puts down her descant and picks up her treble. Adwoa plays D, Kimberley then plays, D E, D E, D E F natural, D E F sharp, D E F sharp G. Adwoa continues to play D E, watching Kimberley. Sarah also watches Kimberley intently. The rest of the group talk amongst themselves but do not appear to be doing any practice or preparation. KA returns to her chair*)
>
> (TDL 4)

Pupils' views of teacher-directed lessons

The interviews conducted at the end of the teacher-directed lessons showed overwhelmingly positive views of the lessons, with few pupils able to think of anything they didn't enjoy or would like to see improved. Enjoyment levels were high, with six pupils specifically mentioning fun:

> -Sarah: It's just so fun! I always love coming every single session, so it's great.

Other positive views concerned enjoyment of the repertoire, and feelings of challenge or accomplishment. Social factors were important, with five pupils mentioning enjoyment of being with friends or working in groups:

> -Gabriela: What I most enjoy about recorder club is that I get to spend time with my friends and learn new notes on the treble recorder.

Most pupils perceived a balance of easy and difficult aspects to playing the recorder, with difficulties often concerning learning new songs and fingerings for new notes. Surprisingly, given that the group were in no way fluent readers of notation, this was not directly mentioned as a difficulty. Aural learning, however, emerged as an important strategy for some pupils. One pupil mentioned listening to an aural model as a helpful part of lessons:

> -Adwoa: Erm, when you put the song on . . . it helps us know the tune of the song, so when we play we'll know what tune it goes on, so we'll know if we're playing the right notes or not.

Some of the discussion of learning at home revealed that, in common with Green's (2001) findings with popular musicians, aural learning was an important feature of their informal playing. Kimberley when talking about her aunt's support said:

> -Kimberley: . . . when she hears a tune, sometimes she thinks it sounds a little bit different, and I play the wrong notes, so, 'cause she knew I was doing a song, so she played it on the piano for me, and then I could hear it properly.

Adwoa also mentioned the importance of peers providing aural models in lessons.

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Comments about the teaching, when offered, were positive:

> -Kavetha: I most enjoy the song selection that we do, and Miss Andrews, I enjoy the way you teach.

However given that the preceding lessons had been teacher-directed, it was interesting that few examples of direct teaching were mentioned by pupils when they were asked what they found helpful in lessons, though three pupils appreciated teacher input to correct mistakes and help when stuck:

> -Simone: I think we go through the songs quite a lot. You don't just send us straight away to work, you help us with the tune, and if we get stuck you'll come and individually work with us.

The value of learning in groups was mentioned by three pupils:

> -Amirtha: . . . we sometimes split into groups. I think it's easier to put it into smaller groups and learn because if we're in a big group then there's loads of people and you have to teach, some people might find it difficult . . .

Two of the less able pupils mentioned peer support as something they found helpful:

> -Kayla: . . . they help me to tell me what notes they are and stuff like that . . . if I forget what the notes are.

It was interesting to note that the pupils' perceptions could give the impression that the preceding lessons had more emphasis on group learning and peer support than was intended.

Summary

In the Stage 1 teacher-directed lessons I displayed a range of scaffolding behaviours, of which the most common was the marking of critical features, closely followed by demonstration. Scaffolding was often varied to meet pupils' individual needs, and was generally effective. Although the lessons were highly structured, various strategies aimed at promoting autonomy were observed, including practice segments and questioning. However, there were occasions where my high level of direction may have restricted progress amongst the most able. Group learning, though not an intentional feature of these lessons, was evident and pupils were seen to benefit in various ways from peer support. Though overall the balance was clearly on the side of direction, aspects of facilitation could be seen in the encouragement of pupil autonomy, which could prepare for a future phase of fading, and the reduction of scaffolding. Pupils showed positive attitudes towards lessons and the support given by the teacher. Some natural preferences for aural learning were evident, and working in groups and being supported by peers was found to be helpful.

The group learning lessons

Research into cooperative learning has identified a number of benefits, both cognitive and motivational (Slavin, 1995; Bielaczyc & Collins, 2000), which will be considered

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further below. Studies in specifically musical contexts (MacDonald & Miell, 2000; Faulkner, 2003) have also found benefits, suggesting that working in friendship groups enables an intersubjectivity that can lead to high levels of transactive communication, the sum of the pupils' cognitive and musical skills being greater than their parts.

Increasing recognition of the richness of pupils' musical learning outside school has aroused interest in how informal learning practices may relate to the formal world of educational institutions. Folkestad (2005, 2006) suggests that rather than being seen as a dichotomy, formal/informal learning form two poles of a continuum whereby aspects of each may be present and interacting in any learning situation, regardless of location or musical content, dependent on the learning approach, with formal learning sequenced by an expert who leads the activity, and informal learning proceeding by the interaction of the participants in the activity, as they engage in musicking. He identifies the term eduction, from the verb 'educe' (Jorgensen, 1997, in Folkestad, 2006) to describe the meeting ground for formal and informal learning, involving

> bringing forth and/or developing the capacities, abilities and aptitudes that already potentially exist in the student. In this process the teacher is like a gardener, creating good conditions for learning to take place. (Folkestad, 2006:139)

Recent research (Allsup, 2003; Jaffurs, 2004) has explored how the music teacher, taking a facilitative role, can enable pupils to learn through collaborative, mutually democratic processes.

A key aspect of the *Musical Futures* informal learning approach (Green, 2008) was learning alongside friends in a group with little or no adult guidance. The learning approach followed that of eduction, the teacher adopting a facilitative role, acting in a response to learner-perceived needs rather than in a directive way to pre-established aims or objectives. Teachers, initially concerned about this approach, found that by standing back they learnt about pupils' learning approaches and allowed them to find their own solutions, the pupils often surpassing teachers' expectations. Pupils were overwhelmingly positive about the autonomy granted them, valuing being able to play for long periods of time without teacher interruption, relieved from 'the demand to 'get it right' by teachers' (Green, 2008:105), but valuing teacher help when it was needed or wanted. Though there was a perception amongst pupils that in self-directed learning you can't get it wrong, pupils were also developing learning skills such as goal-setting and self-evaluation and at later stages of the project, increasingly linked the fact that the music was challenging with it being fun.

Key to the pupils' learning experience and feelings of autonomy was the fact that, in accordance with theories of cooperative learning, every individual's participation contributed to the success of the whole group. Learning took the form of group learning, unconsciously acquired through observation, imitation and exchange of ideas in a manner akin to enculturation, and of peer-directed learning, where knowledge and skills are intentionally imparted, as in the apprenticeship tradition. However, Green suggests that even when peers adopted traditional teaching methods it was a different experience from being taught by a teacher, with the issues of power and expertise that they bring to the situation. Pupils tended to use non-verbal forms of teaching, or translate teacher's language into their own words to explain to their peers, thus demonstrating cognitive restructuring

https://doi.org/10.1017/S0265051712000460 Published online by Cambridge University Press

(Slavin, 1995), and they were regarded as less threatening than teachers, working within their tutee's zone of proximal development, only a few steps ahead.

The group learning lessons: findings

In my analysis of the group learning lessons I will consider how group learning theories outlined by Slavin (1995) are evidenced in these lessons, and how the learning differs from that of the teacher-directed lessons, in order to ascertain the extent to which peer-directed learning can increase pupil autonomy.

Motivational theory – for the good of the group

Though there was still occasionally a sense of competition from some pupils, there was also an overwhelming sense of corporate endeavour, in which the group members were not only responsible for their own learning but also that of their peers, in line with Slavin's (1995) analysis of the motivational benefits of group learning. The only exception to this was Dorcas, who took a rather more individualistic approach, often working in parallel with the rest of the group, or disruptively, and frequently the subject of exasperated requests from the rest of the group to be quiet or cooperate. This was commented upon by Sarah in her interview, who felt that the teacher's input would have lessened this:

> -Sarah: . . . some people just go all wayward and think they can do whatever they want with the group . . . I think we, erm, we did get together without the teacher's help, but I think it is best with the teacher's help.
>
> (Pupil Interview 2)

However, Dorcas' frequent off-task behaviour observed in the teacher-directed lessons was not seen in these lessons. Away from the teacher she proved to be a highly autonomous, self-motivated learner, though not one who contributed to or benefited to any great extent from the group. Nonetheless, the individualistic behaviour of Dorcas contrasts with the highly cohesive and supportive behaviour of the others.

Developmental theory – a more fitting scaffold

Slavin (1995) suggests that peers are likely to be operating within each other's zones of proximal development, scaffolding each other to achieve more than they could alone. The scaffolding role of the teacher in the previous stage can be compared to the ways in which the pupils scaffolded each other in the group lessons.

Since social factors feature so highly in pupils' experience of music (MacDonald & Miell, 2000; Faulkner, 2003) and received prominence in the Stage 1 interviews, it is not surprising that the pupils were adept at motivating each other. Less able pupils received encouragement to persevere and affirmation when they succeeded:

> *Adwoa watches Ella intently, and applauds in her direction at the end of the phrase.*
>
> (GLL 4)

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Members of Dorcas' group tried at times to focus her attention on the task in hand:

> (*Kimberley carries on watching Dorcas, who is attempting to play with the CD but is very uncertain of the notes.*)
> -Kimberley: Listen, listen to the phrases.
>
> (GLL 5)

These interventions were similar in style to that of the teacher, and could be considered to fulfilling the scaffolding roles of recruitment, direction maintenance and frustration control.

However, in contrast, the roles of marking critical features and reduction in degrees of freedom, a significant part of the teacher's repertoire, were barely evident in the pupils' interactions. Pupils occasionally marked critical features by pointing out similarities and differences in the phrases,

> -Neela: It changes at phrase five for the trebles as well . . . It's just, like the difference between the Gs and the As.
>
> (GLL 3)

but this was rare.

The reduction of levels of freedom was not observed at all, though it was referred to in one pupil's interview, presumably from an unvideoed lesson:

> -Simone: . . . for Ella we, like, made the beat go a bit slower, like, we counted it so then she could do it slower, and then get a bit more faster.
>
> (Pupil Interview 2)

The absence of reduction of levels of freedom in observed lessons could be because the CD, with the tune broken down into repeated phrases, imposed a pre-prepared structure and reduced the flexibility to change the speed or break phrases down further. This absence also reflects Green's (2001) findings that popular musicians learn aurally, copying complete recordings, rather than having music broken down or simplified. Likewise, Harwood (1998), observing girls engaging in musical games in an after school club, found that songs were always performed in their entirety, never segmented, slowed down, simplified or consciously taught in any way.

The balance of scaffolding roles in this stage leant far more towards demonstration than in the teacher-directed lessons, whilst the demonstration also took a somewhat different form. Both group learning and peer-directed learning could be seen in the group lessons, but rather than being distinctive, formed a continuum from unconscious imitation to overt demonstration, with varying levels of awareness of the process taking place. Sometimes pupils provided scaffolding by simply accompanying a peer in a supportive way, sometimes with voice, a different recorder, or even by conducting:

> (*CD descant phrase 1 starts. Dorcas plays along. Although she knows most of the notes she is having problems articulating the change to and from C1 clearly*)
> -Sarah: (*singing the pitches*) doo doo doo doo doo doo doo doo.
>
> (GLL 5)

This support did not seem to involve direct modelling or imitation, but seemed to provide the moral support to engender confidence.

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Sometimes pupils would, almost without realising it, fall into imitation of a more able peer:

> -Kimberley: (*On second try plays correct note*) G, it's a G. (*Kimberley plays bar 1. Rest of group start playing bar 1 repeatedly . . . By now they are standing in a semi-circle facing Kimberley*)
>
> (GLL 1)

Pupils could frequently be seen watching more able peers closely and copying them as they played repeated phrases, and this proved a very effective strategy for some:

> *Ella is at first unsure of the second half of the phrase. By the last repetition, she is playing the correct notes, but with a slight delay, as she copies the other girls.*
>
> (GLL 2)

Sometimes the modelling, though still unspoken, was more overt and intentional:

> *Gabriela is unsure at first but grows in confidence. Sarah and Kimberley are facing her miming the fingering.*
>
> (GLL 1)

Though some children provided the model for imitation more often than others, the roles of model and imitator could also be interchangeable, varying between two pupils in a short space of time:

> (*Halfway through the phrase, Kavetha and Simone start playing, Kavetha copying Simone, slightly behind. Simone tentatively plays B C1 B, B A G. . .*)
> -Kavetha: It is like (*Kavetha plays G, Simone plays G. Kavetha plays B C1, B C1 B, Simone follows slightly behind*)
>
> (GLL 4)

Sometimes the modelling took place as explicit peer-directed teaching:

> -Simone: Pause it, pause it, I need to teach her. Right, copy. (*Simone plays G A B*) . . . and then go (*Simone plays C1 B B, Ella imitates . . . Simone repeats the phrase, Ella copies her as Amirtha sings the notes names again*)
>
> (GLL 6)

However, explicit peer teaching sometimes proved to be misleading:

> -Dorcas: (*to Gabriela who is now sitting at the back facing her*) You do (*in the rhythm of descant phrase 1*) der der der der der der der der der der der der three times.
> -Gabriela: Three times? (Inaudible) four or five. (*Dorcas plays phrase 1 three times, followed by phrase 5 with the dotted rhythm of phrase 1*)
>
> (GLL 3)

In another example, Kimberley, believing she needed to help Dorcas, remained oblivious to the fact that Dorcas actually knew the phrases better than her:

> -Kimberley: I'll be helping Dorcas. (*As Dorcas nears the end of phrase 6, Kimberley gestures for her to stop and they both lean in to listen intently to the CD player . . .*

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Dorcas plays the last two phrases. Kimberley attempts them but is unsure of some of the notes)

(GLL 3)

It seems that the most effective peer teaching happened when it occurred in a less conscious and more mutual way, and the majority of the interaction that took place in the lessons involved imitation rather than conscious teaching.

Transactive communication

One of the most significant areas of learning observed was one distinct to group learning – that of transactive communication. In accordance with the Piagetian theory of cognitive conflict (Slavin, 1995), and MacDonald and Miell's (2000) observations of children as they built on, extended and elaborated each other's ideas to develop a shared conception of a problem, this became an increasingly dominant feature of the group lessons.

The pupils found the aural learning challenging. Uncertainty and confusion frequently arose but were often resolved as pupils compared their varying conceptions of the matter:

-Adwoa: What's the notes on the treble? (*Simone plays the phrase correctly, though omitting the D*) Same notes?
-Amirtha: It's the same for treble.
-Adwoa: Is it?
-Amirtha: Treble one and three are the same, two and four are the same.
-Adwoa: No, I mean for the descant (inaudible)
-Amirtha: (Inaudible) tenor.
-Adwoa: Is it the same, for the, what's it called, the descants?
-Amirtha: Erm, yeah. No, I don't think so, not.

(GLL 2)

Pupils often worked collaboratively to find the notes, making suggestions, trying out ideas and evaluating them as they progressed towards a solution:

-Gabriela: That's what I mean, da doo. (*Gabriela sings the pitches of the last two notes of the phrase, with accompanying pitch gestures*). . .
-Dorcas: Ok, that's the short note.
-Gabriela: I know, but we're missing out the going low. (*Dorcas plays phrase 5 and phrase 6 omitting the last note*)
-Dorcas: There's something missing from there.
-Gabriela: (*Singing the pitches and gesticulating with her recorder*) Doo doo doo
-Dorcas: I'll try that.

(GLL 3)

Sometimes these transactive interactions reached a correct solution. At other times pupils lost patience, became side-tracked by the demands of other pupils, or arrived at the correct solution only to depart from it in the midst of alternative suggestions offered, and phrases had to be revisited later or receive teacher input. However, at times, pupils showed remarkable persistence and focus in working towards a solution, as can be seen in this example from Lesson 2, where Amirtha and Adwoa are trying to work out the treble notes[4] for phrase 6, aided by Simone:

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(*CD treble phrase 6 starts. Everyone listens in silence. Adwoa and Amirtha face each other over the table with trebles ready . . . After 2 repetitions, Amirtha tries an E1, then stops, realising it is incorrect. Adwoa stands up in readiness to play. On the 4th repetition Amirtha plays an F1, then a G1*)
-Amirtha: (*Whispering and demonstrating the fingering for G1*) It's this. (*Adwoa walks behind Amirtha to check where her thumb is. On the 5th repetition Amirtha plays G1 F#1 G1*)
-Simone: Isn't it (*Simone shows the fingering for G F G on her descant. Amirtha plays a G1 again, followed by a F1. She shakes her head, then plays an F#1*)
. . .
-Adwoa: Ok, let's try it. (*Adwoa stops the CD player. Adwoa and Amirtha play G1 A1 G1 F#1 E1 D1 C1 D1 C1*)
-Amirtha: I think G's a bit too-
-Adwoa: Yeah, it is that.
-Simone: I think it's too low.
-Amirtha: G's too low, yeah. (*Adwoa plays C1*)
-Simone: Is it B? (*Amirtha plays a D1*)
-Amirtha: B's higher than A. (*Adwoa correctly plays D1 E1 D1*)
-Amirtha: What did you just do? (*Adwoa plays D1 C1, Amirtha plays D1 E1 D1 at the same time*)
-Simone: Yeah, it's that (*sings the pitches D C*) doo doo (*Adwoa plays D1 C1. Amirtha plays G1 A1 G1 F#1, all notes as crotchets*)
-Amirtha: There's a pause in between. I think.

(GLL 4)

This interaction lasts for 12 minutes, by which time the unknown phrase is learnt. This could undoubtedly have been achieved with teacher guidance in less time, and I could have been tempted to intervene and speed up the learning process with some scaffolded support. However, at no time did these pupils appear to be frustrated or discouraged; their absorption in the task evoked Csikszentmihalyi's (1996) concept of flow, the task providing a level of challenge in balance with the learner's current skills. It may well be that the autonomous learning skills practised, particularly the perseverance needed to learn unknown material, were more valuable than the mere accomplishment of one musical phrase. Indeed, Simone in her first interview had suggested that an important skill for future musicianship was

> . . . I think not giving up straight away, like, if I can't get something I might get quite annoyed and I give up, kind of, but, yeah, I think I'd have to have more faith.
>
> (Pupil Interview 1)

and on the evidence of this lesson she showed admirable perseverance, as did other pupils on various occasions.

Mutuality, division of labour and evaluation

An interesting feature of these interactions was their mutuality. The sense of any one pupil being the expert lessened as all pupils combined their incomplete understanding to reach a joint solution. Also noticeable was the way in which division of labour seemed to happen

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naturally; whilst the learning of three different recorder parts using one CD player presented a challenge, there was little evidence of pupils passively waiting for their turn. Although they would sometimes separate into smaller groups to practise individual parts, they often worked together on one recorder part, taking different roles, such as modelling, conducting, operating the CD player, notating, singing, and evaluating:

> -Kimberley: Dorcas, let's listen. (*After listening to one phrase, Kimberley plays B C1 and shakes her head. She then correctly plays B D1 D1 D1 D1. Neela is writing in her exercise book. Sarah is beating time. Kayla joins in correctly and they continue for 6 repetitions*)
> -Sarah: Four beats. (*Sarah holds four fingers up*)
> -Kimberley: Got it.
>
> (GLL 5)

Frequent peer evaluation could be observed throughout these lessons. Sometimes this was in the form of affirmation:

> -Sarah: Dorcas, I think you're rather confident on that, do you think you could be the leader for descants?
>
> (GLL 1)

Often it came in the form of diagnosing specific errors, and making suggestions:

> (*Dorcas starts playing along tentatively with the CD. The 1st time, she starts correctly on G. By the 3rd time she is playing G A B B C B A A*)
> -Sarah: No, that doesn't sound right.
> -Kimberley: That second B's out. (*Dorcas stops and everyone listens to one repetition. Dorcas tries again, still making the same error*) Try singing it.
>
> (GLL 5)

At other times it was an integral part of transactive communications, as outlined above. In these frequent evaluations, though the diagnosis was not always correct or solutions found, it was clear that the pupils were spontaneously using quite sophisticated aural skills of discrimination which, with increased experience, would become highly useful for future autonomous musicianship.

Teacher intervention

As in the *Musical Futures* informal learning approach I attempted to stand back, observe and diagnose before intervening. In the first two lessons my only interventions were to hint at a more correct fingering, and to help the group to make better use of the model CD tracks. Here, my approach was to give a general suggestion, only following it up with more precise help when it was not understood. In later lessons my interventions increased as I began to diagnose which problems remained unresolved, or respond to pupils' requests for help. However, I still tried to lead the pupils to find their own solutions by way of questioning, hinting and directing their attention towards the significant parts of the problem:

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-KA: Girls, can I just make a suggestion? The note that you're trying to work out, do you think it's a higher note or a lower note than what you were playing? (*Adwoa answers instantly*)
-Adwoa: Lower.
-KA: Have another listen. (*Amirtha and Adwoa listen again to the CD, until they hear the A1*)
-Amirtha: (*Whispered*) It's high.
-Adwoa: It's higher.
-KA: It is, isn't it. So, just from what you know about recorder fingering can you work out what it might be?

(GLL 4)

Progress was at times slow and, as in Green's (2008) study, progress sometimes got worse before it got better as pupils wandered away from correct solutions or forgot previously learnt phrases. There were numerous instances when I could have intervened to solve problems, and on reviewing the lessons I did question whether I had intervened sufficiently. However, had I intervened more I may well have disrupted the delicate balance of group learning that was taking place for the large part successfully, risking demotivating the pupils.

Pupils' views of group learning lessons

The interviews conducted at the end of this stage of lessons showed unanimously positive views of the lessons. Whilst, in contrast with the Stage 1 interviews, most pupils articulated difficulties or challenges, these did not seem to take away from their overall enjoyment of the lessons. Indeed, the same aspects were often mentioned as both positives and negatives:

-KA: What did you most enjoy about this project?
-Simone: Erm, probably, like, having to figure out the notes and listening to new music without any help and being able to do it by ourselves.
-KA: Ok, and what did you least enjoy about this project?
-Simone: Maybe sometimes, like, when you know you're doing it right and you keep on getting the same note, you can't really figure it out, it kind of gets annoying . . .

The sense of enjoyment that pupils had in this stage of the project did not come from finding it easy, but rather from the balance of 'challenge and competence' (Evelein, 2006:184) that is necessary to achieve flow.

The enjoyment of working in a group was mentioned as a key feature by seven pupils, with two more mentioning working independently from the teacher. A variety of benefits of group work were perceived by the pupils. Kimberley noted the organisational benefits of working in groups:

-Kimberley: I think in a group, erm, we're getting more done because we can concentrate on one part.

Most pupils were able to describe how they gave, or benefited from, peer support within their group. Demonstration was the most commonly mentioned form of support:

-Ella: Erm, it was Simone. She helped me when . . . if I, erm, stuck on a note then she just comes and then . . . she was, like, 'look at the note, you have to copy me what I do' and then you copy her.

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Simone also mentioned offering more teacher-like scaffolding support, reducing the degrees of freedom by slowing a phrase down. The giving of mutual support to aid confidence was mentioned, as was the reassurance given by peers.

> -Gabriela: Erm, well, those people, they knew what they were doing, so when they were trying to help somebody like me they were like 'come here' and then we would get that together and 'you'll get it right, so don't worry'.

The role of peers in evaluating and making suggestions was mentioned by four out of five members of one group:

> -Kavetha: When we were playing the descant, me, Simone and Ella, erm, Amirtha and Adwoa they were telling us, 'cause when we got a note wrong they would say, erm, 'I think this wouldn't quite fit in' or they would say 'yeah, I think this might be right' and then we'd listen to it again and then 'cause of their help we would've got it . . .

Though some children, such as Kimberley, were cited as offering support more often than others, in general there was a sense of mutual support in which everyone could help or be helped.

Three pupils, including Simone quoted above, specifically mentioned working independently as a feature they most enjoyed in these lessons. When asked if enough teacher help was given, the group were unanimously satisfied with the amount of teacher help given and would not have wanted any more. A number of pupils saw the granting of autonomy as an important factor in these lessons, and even a beneficial life skill:

> -Sarah: Well, Miss, I think you do help rather enough, and you did give us an opportunity to actually stand on our own two feet for us in the music, so what we actually had to do was, like, cultivate our patience in this project . . .
> -Simone: Good points is maybe that you can just be more independent because, like, if you wanted to learn when you were older, obviously you have to be independent in life . . .

Simone described her feelings when first asked to work autonomously:

> -Simone: . . . maybe the first weeks were not that easy because you'd think, oh, usually Miss could help me out with this, but then it got, you got used to it after a while.

However, she had clearly come to a new understanding by the end of the project, as she described the ideal balance of teacher-directed and group learning:

> -Simone: . . . if there was teachers you couldn't really learn by yourself . . . 'cause if you had the teachers there all the time they might get carried away and tell you every single note (*laughs*)

Most pupils felt that they had benefited from help when needed but mentioned various ways in which the help was given in such a way as to get them to 'figure it out' for themselves:

> -Amirtha: . . . sometimes if we were doing the wrong note continuously you would show us, like, give us a clue of what, erm, how to change it.

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Although pupils were overwhelming positive about the reduced role of the teacher, they did see some drawbacks, such as the opportunity for some pupils to 'go wayward' (Sarah), and the problem of noise management. Kayla perceptively pointed out the difficulty of discerning the correct notes in the absence of a teacher, and Neela voiced her frustration at her group being unable to complete the song to her satisfaction.

When asked about the ideal balance between group learning and teacher-directed learning, all pupils felt that there should be a combination of both, with ideas of balance ranging from half and half to predominantly group learning, with a small amount of teacher direction, with some pupils suggesting teacher help varying according to need.

> -Amirtha: I think we'd probably have half and half, because, like, we can get, like, work it out more ourselves and become more independent, and then when we're with you, you can correct our mistakes, and . . . we can perfect it more.

Whilst all pupils had appreciated the opportunity to work autonomously and wanted this aspect of learning to continue, they all, to varying degrees, admitted the importance of a teacher to teach the basics and correct mistakes.

Summary

In the Stage 2 group learning lessons there was evidence of Slavin's (1995) analysis of cooperative group learning with pupils working cohesively, scaffolding each other, and reaching better understanding through cognitive conflict. Scaffolding, unlike that of a teacher, involved mainly demonstration, in a continuum ranging from unconscious imitation to overt modelling. A significant area of behaviour distinctive to group learning was that of transactive communication, as pupils built on and extended each other's understanding, showing high levels of aural discrimination and perseverance in these sometimes lengthy interactions. Learning was often mutual, with the role of expert interchangeable, and direct peer teaching was rarely seen. Pupils' evaluation of their own and each other's work was ongoing and exercised their aural discrimination. Teacher intervention was minimal, happening only at pupils' request or after unsuccessful attempts to solve difficulties themselves, and involving guiding pupils towards finding their own solutions. Though increased teacher intervention may have speeded up the learning process, it was judged that to do so may have disrupted the balance of group learning.

Pupils showed high levels of enjoyment, mainly attributable to the group learning and the autonomy they were granted. Their discussions of how they gave and received support within their group showed mutuality. Though most found the aural learning challenging, there was a clear sense of these lessons having been enjoyed not only despite, but often because of, these challenges, with the mix of challenge and competence engendering a sense of flow and enhancing pupil motivation. Though the pupils were eager to continue with group learning, they also valued teacher input and most expressed the desire to combine the two.

Conclusion

Having considered theories on the role of the teacher and benefits of group learning in the light of the insights offered by informal music practices which have at their heart notions of

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autonomy and intrinsic motivation, my analysis of the teacher-directed and group learning lessons in this project have raised several interesting points of comparison.

In the teacher-directed lessons interactions were mainly controlled by the teacher, with limited opportunities for pupil talk, and relations were somewhat hierarchical. In contrast, the group learning gave vast opportunity for pupil talk, with all the cognitive benefits that such interaction brings (Slavin, 1995) and expertise was shared mutually.

The teacher-directed lessons provided varied scaffolding strategies, which though often used flexibly to cater for differing needs, could also sometimes become a cage that restricted pupils' ability to fulfil their potential. Though strategies were used to encourage independent learning, the mere fact of them being controlled by the teacher served at times to limit their effectiveness. However, scaffolding provided by peers in the group lessons most commonly took the form of imitation, following the real life practices noted in informal learning (Harwood, 1998; Green, 2001).

The most striking difference in learning behaviour facilitated by the group learning situation occurred during the often extended periods of transactive communications, which were absent from the teacher-directed lessons. Here pupils were practising problem solving skills essential for future autonomous learning – the ability to evaluate, test out alternative solutions, discriminate aurally, and most importantly to persist. Whereas the tendency of teacher-direction is to reduce challenge to more easily attainable segments, at the risk of breaking up the flow of the learning, the extended transactive communications of the group lessons shows pupils' capacity to gain enjoyment from challenge, a fact also reflected in their interviews.

Also interesting is to compare my findings with those of the *Musical Futures* informal learning approach (Green, 2008), which inspired my research design. Like the teachers in that study, I shared concerns over adopting a facilitative rather than directive role, but discovered that I could learn much about the pupils' learning by simply standing back and allowing them to find their own solutions and realised that a high level of pace and structure may sometimes restrict my pupils' ability to explore, play, or simply think. My pupils, like the secondary pupils, relished the opportunity to direct their own learning, and appreciated the fact that teacher help was given only when needed, appearing at times to achieve a sense of flow through the challenge presented. Interesting to note is the finding that unlike the pupils in Green's (2008) study who expressed somewhat negative views of their previous experience of teacher-directed lessons, my pupils expressed very positive views of the teacher-directed learning. Since my study's context of a voluntary recorder club of only 12 pupils was significantly different from the compulsory curriculum context of Green's research, it is not possible to make a direct comparison in this respect, beyond speculating that the younger age of the pupils and the precise scaffolding possible between a teacher and a small group of pupils of whom the teacher has in-depth knowledge may have led to the more positive views of my pupils.

The teacher-directed lessons in this research reflected the apprenticeship conception with its conflicting potential for both encouraging independence with the gradual fading of the scaffold (Hallam, 1998; Byrne, 2005), and also for engendering dependence and stifling problem solving and creativity (Allsup, 2003; Westerlund, 2006), both of which were observed. The group learning lessons reflected Folkestad's (2006) category of eduction, with the teacher as facilitator, creating the environment for the pupils' aptitudes to flourish.

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However, the model of the continuum of pupil autonomy suggested by Byrne (2005) and Folkestad (2006) does suggest that when considering the benefits of teacher-directed or group learning it is not a question of either/or. As my pupils recognised, each have their place; without the scaffolding support of the teacher, the pupils may not have the necessary foundation to progress to autonomy; the responsibility of the teacher is to ensure that the scaffold is a support rather than a cage and that pupils are given frequent opportunities to stand on their 'own two feet' (Sarah, Pupil Interview 2), otherwise we may miss seeing what they are capable of achieving independently.

I am aware that this research is already influencing me as a teacher, and I now find myself standing back and observing more to give pupils a chance to show what they can achieve independently. Though this research concerns one case, with its own unique characteristics, it is likely that there are other teachers who like me may have their conceptions of the role of the teacher changed if they give their pupils the chance to show their capacity for independent learning and problem solving in their own context.

Acknowledgements

This article is based on a dissertation completed as part of an MA in Music Education at the Institute of Education, University of London, in 2011. Thanks go to Professor Lucy Green for her invaluable advice and encouragement throughout this research project.

Notes

1 Musical Futures is a music education programme providing teaching strategies and curriculum resources to secondary schools in the UK.
2 TDL refers to teacher-directed lesson
3 Pupils playing treble recorders commonly referred to their notes by the descant equivalent fingerings, as in this instance.
4 The treble notes are described by pupils using the equivalent descant fingering, but are described by me at their sounding pitch.

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https://doi.org/10.1017/S0265051712000460 Published online by Cambridge University Press