

The characteristics of action research in music education

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This review article discusses the use of action research in music education and its potential for producing knowledge and improving practice. The discussion is situated in an analysis of action research studies in music education. The review demonstrates that action research in music education focuses on a wide variety of subject matter, integrates research and action, is collaborative, grounded in a body of existing knowledge, and leads to powerful learning for the participants. However, few action research projects are cyclical, deal with aspects of social transformation, or broad historical, political or ideological contexts, and there is little focus on reflexivity. The review suggests that, in order to undertake high-quality action research, researchers need a good understanding of action research, a focused use of research literature and a defensible position with regard to data analysis and the generation of trustworthy findings.

Action research

I first encountered action research as a secondary school teacher, on a part-time diploma course, during which we were challenged to focus on a series of our lessons in detail. Reflecting on each lesson, we were required to ask, ‘What did the pupils do?’ ‘What did they learn?’ ‘How worthwhile was it?’ ‘What did I do?’ ‘What did I learn?’ and ‘What will I do next?’ I audio-recorded and transcribed lessons on the music of Messiaen, Schoenberg and Harrison Birtwistle, music which the pupils found difficult to understand, and planned each lesson in the light of the answers about the previous lesson. Towards the end of the course we presented summaries of our learning to the whole group; I explained how I had developed my views of teaching, resulting in a less didactic, more practical approach.

Later I discovered that this process was a form of action research, typically conceptualised as research undertaken by practitioners into their own practice, in order to improve it (Elliott, 1991). Practitioners (such as teachers) decide what is worth researching, carry out research and thereby become research-informed. Action research is sometimes contrasted with more traditional methods in which knowledge production is the job of researchers:

The social sciences position researchers as spectators of other people’s practices, in the sense that they produce explanations for the practices and influences of others . . . In action research however the individual practitioner researches their own practice. (McNiff & Whitehead, 2005: 161)

Action research is thus associated with the terms ‘teacher research’ (Lytle & Cochran-Smith, 1992) ‘practitioner research’ (Middlewood *et al.*, 1999) and ‘self-study’ (Loughran, 2005). It is used in fields where it is helpful to integrate research with action, and is essentially practical in nature.

Although there are various models of action research, it is possible to generalise about what it is, how, and why it is done. Its process has been encapsulated in various models, which are usually variations of a plan – act – evaluate – reflect cycle, first described by Lewin in the 1940s and since elaborated in many different ways (e.g. Elliott, 1991: 70–71; McNiff, 1988: 21–46, Zuber-Skerritt, 1996: 99). Educational action research can begin with practitioners asking, ‘how do I improve my practice?’ (Whitehead, 1989). In seeking answers, they investigate their own practice, plan and carry out interventions to improve it and evaluate the intended and unintended consequences of these interventions, interrogating data in order to ground their evaluations in evidence. They reflect on each stage in order to generate new plans, thus starting the cycle again. As Harris (2000) says,

In many respects this is a natural extension of a teacher’s professionalism, one where reflection and development of one’s practice is crucial. Action research, though, takes this further by combining theory and practice in a powerful way. It is practical in the sense that it is based in one’s own needs and is designed to improve one’s practice, but it is also underpinned by educational theory and ... extensive and focused data gathering. (p. 65)

On our diploma course the questions, ‘What did I do?’ ‘What did the pupils do?’ and ‘What did they learn?’ required us to consider our actions and the consequences for the pupils. The question, ‘How worthwhile was it?’ prompted us to evaluate these consequences. The question, ‘What did I learn?’ helped us to reflect and consider changes to our teaching, whilst the final question prompted us to re-start the action research cycle.

Because action research positions practitioners as constructing their own knowledge, it is seen as a democratic process; a ‘grass-roots movement’ (Ormell, 2000). The aims of action research are frequently political, to do with attaining greater social justice for the participants and the people they serve, and it is sometimes used to challenge unjust systems and practices in organisations, including schools. Action research processes are often collaborative; people working together, in a democratic process, to effect change. Somekh (2006) provides a useful summary of action research by summarising the ‘methodological principles’ that underpin her ‘broad, inclusive definition’ of the process. For her, action research:

- (1) integrates research and action (1a) in a series of flexible cycles
- (2) is conducted by a collaborative partnership of participants and researchers
- (3) involves the development of knowledge and understanding of ... change and development in a natural (as opposed to contrived) social situation
- (4) starts from a vision of social transformation and aspirations of greater social justice for all
- (5) involves a high level of reflexivity and sensitivity to the role of the self
- (6) involves exploratory engagement with a wide range of existing knowledge
- (7) engenders powerful learning for participants

- (8) locates the enquiry in an understanding of broader historical, political and ideological contexts (Somekh, 2006: 6–8, numbers not in original)

Educational action research has had a considerable growth in popularity during its 60-year history. However, in a major review of music education research, Rideout & Feldman (2002) reported that, ‘action research has had little impact on research in music education and music student teaching even though its potential contributions were expounded 30 years ago’ (p. 882). In the same review Leglar & Collay (2002) noted a recent ‘considerable interest’ in action research from music educators, saying,

Because the methodology [of action research] is quite complex, practitioners often undertake their first action research projects to fulfil the requirements for a graduate degree. Several general music teachers have reported that conducting research had a profound effect on their practice – which is the primary goal of action research. (p. 868)

Previous reviews of action research in music education

Previous reviews have related music education action research to other endeavours and have typically cited a small number of studies to illustrate its characteristics. Regelski (1995) contended that music teaching is conducted largely ‘on the basis of past practice, recipe teaching, and passing fads’ (p. 65). He argued that action research, underpinned by critical theory, can challenge teachers by uncovering their false consciousness and misplaced faith in common-sense teaching, providing ‘a new and disciplined basis for the rational critique of current practices, ideals and rationales of music education’ as well as, ‘facilitat(ing) change through a systematic, scientific process’ (p. 64). Regelski did not consider actual reports of action research but based his argument on philosophical writings, including Lewin (1946) and Carr & Kemmis (1986). Gifford (1997) compared action research with action learning (in which people study their own actions and experience in order to maximise their learning and improve their performance) and conceptualised action research as including action learning but being ‘more deliberate, systematic and rigorous and is made public’ (p. 113). Roulston (2006) situated action research within a qualitative paradigm, stressing its participatory nature and citing Miller’s (1996: 2004) studies as examples. Bresler (1996) also situated action research within a family of applied qualitative approaches. She located the roots of such approaches in *L’Art de toucher le clavecin* (published in 1717), in which ‘Francois Couperin expressed pedagogical assertions based on extensive observations of student behaviour’. Bresler (1996) argued that, ‘through action research we learn about the processes of improvement in music instruction’ (p. 5) and described Miller’s (1996) doctoral thesis by way of illustration. A more extended exploration of the subject (Bresler, 1995/2006) compared the questions, methods and findings that are characteristic of action research with those of ethnography and phenomenology, and characterised action research questions as ‘practical, local, how-to issues, directly concerned with improving a specific classroom practice’. Although she saw action research as operating within a qualitative paradigm, Bresler (1995/2006) noted that it can also involve quantitative methods, and described findings as leading to, ‘deep(er) understandings of the operational and experienced curriculum and ... changes in teaching’ (p. 21). She pointed out that,

'Because the act of teaching is intense, energy consuming and oriented toward doing as opposed to reflecting, the perspective of an outsider often proves extremely helpful' (p. 19) and cited Soby (1989) as an illustrative example of action research. Each of these reviews explained the value of action research and related this to music education. However, because the actual reports they refer to were illustrative, they lacked inductive analysis that might explore the characteristics of different studies.

Some studies have investigated action research enquiries by teachers or student teachers. Roulston *et al.* (2005), investigating a research group of two early-career music teachers and two academics, found the group's work was mutually beneficial, especially in developing the skills or 'asking critical questions . . . and seeking evidence based answers' (p. 14). The authors suggested that, to maximise professional development potential, such groups should develop over a substantial period, and adopt a structured framework with specific goals. Both Strand (2006) and Cain *et al.* (2007) found that being involved in action research encouraged student teachers to read educational literature and engage with theory. The students' writing went beyond expressing their feelings about teaching and focused more on their personal development as teachers. The present article builds on these studies by analysing 24 action research reports by teachers and academics in music education and asking, 'What are the distinguishing characteristics of action research in music education?'

Methods

Wanting to ground this review in a large number of studies, I searched for published action research reports in music education using ERIC, BEI, CERUK, *Google Scholar* and Sage. I also searched the abstracts of music education journals for references to action research and *Educational Action Research* for references to music education. I examined the reports thus revealed, focusing on those which were short (journal articles, papers in conference proceedings and book chapters, not theses), because they were published since 1990, in the public domain, in English, and because they are explicitly identified by their authors as action research.

Reading, re-reading and summarising each report, I identified the elements of planning, acting, evaluating and reflecting. I included data collection with acting, and data analysis with evaluating. Most action research reports are not structured in this way because each element typically changes during the research, sometimes occurring more or less simultaneously, with distinctions between them being blurred. The reports typically simplify the research processes and my analysis simplified it further – to understand any particular report, it should be read in full. Where possible I incorporated the author's words in the analysis. Concerned that it might be too formulaic to deal with the complexities of the research under review, wherever I could find the authors' email address, I sent them the analysis for member-checking. Some suggested minor changes, most of which I incorporated, but none reported that their work had been seriously misrepresented.

In order to understand the strengths of each report as action research, I identified which of Somekh's (2006) methodological principles was apparent in each report (see Table 1, Column 1). These principles provide a trustworthy account of action research because they encapsulate similar points by other authors, and because Somekh (an acknowledged expert in action research) cites considerable personal experience in support of them. They also

provide the possibility of a more comprehensive analysis than other typologies of action research, including Carr & Kemmis' (1986) distinction between technical, practical and emancipatory levels, and Noffke's (1997) categories of professional, personal and political dimensions.

Analysis

The analysis in Table 1 reveals a wide range of action research projects, involving single teachers and many teachers, with and without support from academics, in sites which include schools, universities, conservatoires, extra-curricular and community spaces. The focus of the action included curriculum, resources, assessment, behaviour management and teaching approaches, with participants including teachers, parents and students: the very young, school-children, adolescents and adults. Although the most common data collection methods were qualitative, including reflective journals, interviews and participant observations, some studies also employed quantitative methods. Where data analysis was described, it was sometimes inductive, deriving themes from the data (e.g. Davidson, 2004) and sometimes deductive, relating data to pre-existing theories (e.g. Miller, 2004). With regard to Somekh's methodological principles, all projects employed some of the principles but none employed all, and some occurred markedly more often than others (see Table 2). The following section explores the extent to which Somekh's principles were observed in these reports.

Characteristics of many reports: (a) integrating research and action, (b) collaboration, (c) drawing on existing knowledge, and (d) engendering powerful learning

(a) Somekh conceptualised research as 'the collection of data' and 'analysis and interpretation of those data' and described this process as being integrated holistically with 'the planning and introduction of action strategies to bring about positive change'. Achieving holistic integration is not easy; Hammersley (2004), arguing that such integration is logically impossible, suggested that either research must be subordinated to action or vice-versa. In some reports the research element appeared subordinate; for example several reports did not explain how their data were collected or analysed. Viewed purely as research, many reports might be considered weak, tending towards anecdotalism or selective treatment of data, and it could be argued that the improvements claimed might exist mainly in the minds of the researchers. In contrast, the research element in Welch *et al.* (2005) included a very detailed analysis of lessons, but the action was restricted to providing technology and training for the teachers in the study.

(b) Although action research is considered a grassroots movement, Somekh recognised that insider researchers (such as teachers) often work with outsiders (such as university staff), and she discussed different combinations of researchers and participants (including pupils). She insisted that there should be 'equality of esteem' between researchers, allowing the perspectives of 'insiders', who possess detailed understandings of their immediate contexts, to complement those of 'outsiders' who possess understandings of broader contexts surrounding education and research. These reports show a variety of collaborations: nine were instigated by teachers, either in school or private practice, ten by university staff,

Table 1 *Reports of action research in music education*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
Mackworth-Young (1990) Somekh: 1 2 5 6 7	The research tested the hypothesis, 'that a pupil-centred approach to piano lessons . . . will result in increased enjoyment of the lesson, increased interest, positive attitudes, motivation and progress, and a better teacher-pupil relationship.'	4 research subjects were given 10 lessons each: 3 were 'teacher-directed', 2 'pupil-directed' and 4 'pupil-centred'; the remaining lesson contained an interview. Lessons were audio- and video-taped, pupils' and parents' views were sought via questionnaires.	A modified version of the Flanders Interaction Analysis Category System was used to analyse audio and video data. 2 independent observers reported on these data. Pupil-centred lessons resulted in greater teacher-pupil communication and empathy, and increased motivation. This was not consistent across all pupils, two of whom reported feelings of being 'abandoned' in the pupil-centred lessons.	Pupil-directed lessons, recordings, questionnaires and contracts help the teacher understand psychological and emotional factors. To teach pupil-directed lessons the teacher needs a broad base of knowledge, e.g. learning music by ear, to teach on request. Too much pupil-direction can lead to a sense of abandonment and stagnation; too much teacher-direction can lead to loss of freedom and empathy, risking alienating the pupil.
Barrett (1994) Somekh: 1 2 6 7	A music course for intending Primary teachers was developed with, 'compositional experience [rather than traditionally-taught skills] at the heart of the music education enterprise'.	14 sessions of 2 hours each were taught, in which ITE students 'worked through a series of compositional challenges'. Data collected by participant observation by the teacher, and students' reflective diaries.	Students gained a greater understanding of the learning processes inherent in the arts. Diary entries showed that, 'Through active engagement in the composition process, students displayed an understanding of the basic music concepts . . . developing aural capacities . . . graphic notation . . . conventional notation . . . began to perceive themselves as composers and musicians'.	Factors which led to greater musical understanding included meeting open-ended challenges in a natural learning environment and modelling by the teacher.

<p>Hookey (1994) Somekh: 1 2 3 5 6 7</p>	<p>To explore how generalist classroom teachers teach music when supported by a specialist teacher; to discover how their jointly-planned music curriculum was, 'negotiated and enacted'.</p>	<p>The author, a music specialist, worked with two generalist class teachers to plan and teach music in an elementary school. Data included audio and video recordings of planning, teaching and 'reflective conferences'.</p>	<p>Analysis investigated, 'patterns in the consultative process . . . our reflections . . . the negotiation process'. Collaboration involved sharing stories of current practice, then finding an appropriate music education focus. Integrating music with poetry and reading was 'a practice that enfolded music education into the overarching rationale of classroom instruction'. Pedagogy became more loosely structured as pupils' questions and responses guided the lessons. Mutual understanding developed as one teacher shared 'the images of curriculum and pedagogy . . . in her personal practical knowledge'.</p>	<p>Collaborative research allowed the teachers to confront previously-held assumptions. Music might be better taught if teachers allow pupils to play musically with sounds and to discover connections and construct meaning for themselves. The focus on generalist and specialist roles should be supplanted with a concern for the students . . . draw[ing] all persons into the web of curriculum responsibility'.</p>
<p>Miller (1996) Somekh: 1 1a 2 3 6 7 8</p>	<p>The author, a music specialist, worked with a generalist class teacher to improve the way in which music learning was integrated into the elementary (Primary) school curriculum, 'looking for ways to make truly authentic connections between</p>	<p>Over a 2-year period, weekly, 25-minute, music lessons for first-grade children were collaboratively planned and evaluated. Some lessons were videotaped; there was participant and non-participant observation, and</p>	<p>The generalist teacher's practice was analysed using a model of curricular integration; the same model was used to analyse the music lessons.</p>	<p>Integrating music is not a single entity; it can involve associating music with topics from other areas of the curriculum, connecting musical skills with other skills including higher level thinking skills, connecting underlying concepts (such as form, line and texture) across different disciplines, and borrowing pedagogical approaches from</p>

Table 1 *Continued*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
	my music education agenda and her curriculum [rather than being] ... 'a handmaiden to other subjects'.	individual and group assessments. Lesson content included musical elements; pedagogical strategies included 'engagement of every child' as 'the immediate goal'.		other subjects. Benefits of collaboration are described: 'Teachers know their children and their programmes so much better than outsiders can ever know them that it makes sense for teachers to be answering their own pedagogical questions'. Difficulties of collaborative action research include the problem of finding time, and sustained commitment.
Howard & Martin (1997) Somekh: 1 1a 2 3 6 7 8	'to develop young composers', aged 11–19, in a year-long, after hours, creative music project. Specific objectives are listed; these changed during the 3 projects (1993, 1994 and 1995) reported on.	1993: students composed for a symphonic band; stimuli included performances by the band and a handbook about composing. 1994: The emphasis changed to group composing and 'to be better musicians	A case study approach: 4 individuals and 1 group. Patterns found by comparing cases. 2 individual cases presented in this report, of students participating in 1994 and 1995 projects. Student A composed in a single sitting, influenced by classical forms, learned to 'think creatively, have confidence in her ideas, to compose a complete work ... with a wider	Some students aspired to high cognitive/technical levels, but not always those with greater academic experience in music. Group work can be 'highly beneficial in the early stages of learning composition'. Singaporean students are 'capable of completing original compositions ... approaches

		through composing'. 2 group assignments and 1 individual. Pieces performed in a concert. 1995: Composing for a professional piano duo. Stimuli included pieces for duo. Data collection included observation, interviews and video recordings.	range of instruments'. Student B kept compositional sketches, used 20th century techniques and original notation and related music to other aspects of life.	to composing were wide-ranging and students relied on their own music background in generating ideas.' The act of composing 'produced a reinterpretation and extension' of this background knowledge. A refined, 3-year project design resulted.
Black (1998) Somekh: 1 1a 2 3 4 5 6 7	Aims, 'to create in my class an atmosphere of trust, acceptance, tolerance and respect for one another'. Faced with a difficult class, Black asked, 'How can I help my students develop their self-esteem so they will take a more active role in their own learning?'	Pupils wrote 'one hundred good thing about themselves' on cards. In later lessons, they wrote compliments about each other. Data included journals kept by pupils and teacher over 4 months, plus transcriptions of class discussions	Discussed data with a critical friend, described 2 cases in detail. Quotes from pupils show positive attitudes towards themselves and their vocal class. Data showed that they developed, 'an improved sense of social responsibility' and 'the atmosphere improved more than that of any other class I have taught'.	'As a minimum, I intend to include journal writing in my vocal classes ... everyone should have 100 good things about themselves that they review every day ... students always appreciate positive reinforcement ... essential complicated [musical] concepts were mastered' [despite time spent on writing and reading cards and journals].

Table 1 *Continued*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
James (1998) Somekh: 1 3	To discover whether pupils' understanding of the expressive qualities of music would be enhanced by certain kinds of conducting activities (e.g. beating time).	A class of 8- and 9-year-olds was taught to beat time to recordings of songs in three structured lessons. A written test was administered before and afterwards and pupils wrote about their experiences of conducting.	The post-test scores showed a 10% increase in correct answers to questions about metre, tempo, dynamics and style, with particularly large increases in questions relating to tempo and dynamics. Their writing showed that they enjoyed the activities.	'Research of this kind has the possibility of generating great classroom lessons and curricular approaches'.
Cope (1999) Somekh: 1 1a 2 6 7 8	'To make music-making a more authentic activity', 'to move instrument learning from its position as a peripheral part of the school curriculum to something with much stronger roots in the community'.	Children, aged 7–11, were encouraged to join a traditional fiddling group in a small town. Instruments were provided for those who could not afford them and parents were involved in setting up the project, fundraising, and helping their children to practise together. There was no selection, no formal tuition, technique	Participation was 'well above the normal level for violin playing' (participation figures over 3 years are provided). 'Players [became] competent enough to win convincingly in local competitions (these are listed). 'A reasonable level of practice [was maintained]' (widely varying patterns of practice are described). 'We have permeated the local culture with notions of fiddling' (regular performances are described).	'We have been reasonably successful in finding a common chord between children, parents and community. Our experience is that parents do not want their children to be classical musicians – they want them to be able to play confidently and competently at social events.'

was considered secondary to participating. Data collection is not described; 'it is not possible to give an objective measure of progress ... because such judgements are culture-bound'.

Conway & Borst (2001) Somekh: 2 6

To discover why many pupils, who had experienced high-quality choral music in middle school, chose not to continue with choral music at high school level. Research questions included, 'what personal factors ... motivated vocal music students to continue their study of chorus?' and 'what non-musical influences motivated the students to value their choir class experiences?'

Six pupils who continued with the elective choral music class were given structured individual interviews. They were also interviewed together, and parents were given a 5-minute telephone interview.

'Data were analysed through coding and categorization from transcripts of audiotape, videotape and notes. Seven categories included singing for, 'learning's sake', 'self-expression', 'social reasons', 'enjoyment', 'performance', 'to be identified with the school program' and 'for the music itself'. Findings included students and parents expressing positive feelings; reasons included 'social reasons', 'personal gain' and 'entertainment' but, 'the value of art for art's sake did not emerge as a significant reason for participating in choir'.

Findings, 'will help the overall choral program to develop a plan of action that fosters student involvement'. Suggestions include middle school students having buddies in high school and concerts, involving pupils from different schools including social time which will 'get people together'.

Table 1 *Continued*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
Reynolds & Conway (2003) Somekh: 1 2 6 7	To discover student teachers' perceptions of a fieldwork experience.	Reynolds taught student teachers to teach music lessons, which they then taught in an elementary school, using video to examine their own practice. Individual interviews assessed their perceptions of the experience.	Interviews were transcribed and coded; both authors analysed data. All students responded positively, seeing the fieldwork as relevant to future careers and boosting confidence. Some reported that the experience had positively influenced their career choice of teaching.	The students' positive comments corroborate findings from other studies. It is difficult to motivate music students to choose elementary teaching as a career; 'If service-learning experiences assist students with making that choice, it is a model that must be examined further'.
Bannan (2004) Somekh: 1 2 6 7	'To develop a consistent and flexible pedagogical tool' ['harmony signing'] which develops, 'participants' feel for harmony and their confidence to explore music through vocal improvisation'	'Harmony signing', a pedagogical approach to singing in harmony, was developed with 12 groups of singers including children, young people and adults with varied experience of singing. Data collection included live	Data analysis methods are not stated but 5 examples of musical development are listed.	(a) 'Harmony signing can have a valuable role in the development of musicianship and aural skills' in participants from age 7 to conservatoire level. It can also be used to assess musical thinking. (b) The more expertise had been developed in formal thinking about harmony, the less able the participants were to harmonise intuitively.

Conway & Jeffers (2004) Somekh: 1 1a 2 5 6 7	'To examine the perceptions of parents, students and the teacher regarding assessment in beginning instrumental tuition.'	observation, video analysis and discussion with participants; singers and signers. Over 2 years, an instrumental teacher (Jeffers) worked with a university researcher (Conway) to develop and administer assessment tools which rated students' abilities to 'sing, move, play in tune, play with good rhythm', and to obtain the views of parents and pupils on the tools' strengths and weaknesses. Data included a teacher's log, a reflective interview, surveys and interviews with pupils and parents.	Coding and categorising were undertaken collaboratively. Findings included, 'parents and students . . . want an accurate assessment based on musical criteria' . . . some did not understand musical terminology . . . parents had contradictory expectations: 'you can't please them all' although 'providing different types of assessment of a variety of skills could help to satisfy more of the students and parents'.	The project occupied considerable time but 'was the most important period of professional growth and development' for the teacher. Success was linked to the collaborative research processes.
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Table 1 *Continued*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
Davidson (2004) Somekh: 1 1a 2 5 6 7	'To research the dramatic and musical elements of an opera production (Purcell's <i>Dido and Aeneas</i>) being constructed in rehearsal'.	The researcher directed the rehearsals and performance. Data included questionnaires and diary entries from each member of the cast, discussions and written feedback after the final performance.	'All data were systematically examined with emergent like-content being grouped . . . these groups of data were arranged according to theme . . . taken back to participants and their advice was sought about the validity of the categorisations'.	Participants worked together to create 'a shared psychic life' with 'a sense of association to the whole'. Creativity involved 'finding answers to questions (by) thinking broadly about issues, then limiting our options in order to come to a conclusion'. Group dynamics functioned because of flexibility of individuals, some of whom started by feeling separate but ended by feeling assimilated into the group. The process is described as 'a journey of self-discovery and change'.
Miller (2004) Somekh: 1 1a 2 6 7 8	Goal: that children 'experience deep conceptual understanding . . . that results from student	1 lesson per week (20–35 minutes) taught to elementary children in 2 schools. Observations	Bruner's theories – spiral curriculum, enactive & iconic representations of learning, scaffolding – were used as a framework to understand classroom	It is possible to 'construct a curriculum which incorporates improvisational and compositional tasks that are developmental, spiral and

composition' [not merely] 'sing, play move!' This involves a 'change in focus from behaviourism to constructivism'. Questions included, 'how could I achieve this with whole classes of very active elementary children' ... in a 'limited time frame' ... meeting the needs of 'diverse ability levels'?

recorded in a journal, children's compositions collected, written and aural feedback from children and other teacher-observers. Lessons became 'small assignments' which built into 'whole projects', involving children inventing their own means of notating music. 3 cases of lessons are described in detail.

events. Wolf & Gardner (1980) and Swanwick & Tillman (1986) were used to understand children's compositions. Findings include: 1st grade – used iconic and enactive representations, made overt, 'blatant and romantic' musical gestures. 2nd grade – devised their own representations, displayed 'delight with the sounds themselves', moved to 'higher order thinking goals'. 5th grade – used techniques met in instrumental or vocal lessons, talked about purposely choosing melody, rhythm or tone colours.

individualized'. Composition projects 'allow all children to work at their own levels'. All children were able to participate and to discuss and perform their compositions ... children have enough recall to continue a compositional project from week to week ... most children can concentrate through the confusion'. Keys to success included the use of high-quality, motivational materials, music and words, and activities which were sequenced to provide 'a secure footing of small incremental steps' in learning.

Auh (2005)
Somekh:
1 3 4 7

To 'make a difference' in a public high school in a socially and economically deprived area, through creative

The researcher taught music full-time in one school from May–December, teaching performing, listening &

Data analysis is described as reflection. Evidence is cited for improvements in both achievement and attitudes. For example, 'Before I arrived at the school, Years 7 and 8 students had had no musical

Teaching strategies found to be successful included, (a) teaching music with sounds, not worksheets, (b) using specially-prepared music books for accumulating

Table 1 *Continued*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
	approaches to teaching music. Research questions included, 'What differences in learning were facilitated?' and, 'What teaching strategies were effective?'	composing. Data collection was chiefly through participant observation.	instruments for class use . . . At the end of my teaching, most students were able to play the keyboards for <i>Happy Birthday to you</i> , <i>Für Elize</i> by Beethoven, <i>Jingle Bells</i> and <i>Silent Night</i> . . . They could sing songs in tune . . . Some students developed a liking for other styles of music than popular music, for example, <i>Rigoletto</i> '.	work and making progress visible, (c) using <i>Australian Idol</i> to motivate singing, (d) using short, regular tasks to start composing, (e) spotting and encouraging talented pupils (often with low self-esteem), (f) using copying as a means of encouraging notation.
Savage (2005) Somekh: 1 2 3 6 7 8	'To analyse and evaluate the use of ICT as a way to develop new approaches to music in the classroom'. The main research question was, 'What impact does ICT have on the ways that pupils learn about music, particularly composition?'	Three linked action research projects, the author using ICT in a Secondary school. In each, he used a model of composing which he had previously developed from observing electroacoustic composers in a university: starting points,	Data analysis is not described but evidence shows that ICT enabled pupils to become directly engaged with sound (i.e. timbres); that pupils needed time and space in order to engage in the playful exploration or 'musical doodling' that led to powerful learning; that they found the process of selecting sounds straightforward because they chose sounds that caught their aural imagination; and that they tended to close down exploratory processes,	The pupils' need to move quickly to completion might be connected to their experiences in other curriculum areas, where 'subject knowledge and content came pre-packed and easily digestible'.

		experimentation, selection, structure, evaluate/revise. Data collection included journal notes, pupil diaries, interviews, whole-class discussions and musical products.	moving 'too quickly to completion'	
Wasiak (2005) Somekh: 1 2 3 4 6 7	To produce a multi-media concert for children, combining contemporary art forms with elements of the Blackfoot traditions and to discover, (a) whether children would respond positively to it, (b) whether the instructional materials would help them better to appreciate it	The multi-media concert was devised jointly by people from the indigenous Blackfoot population and a university in Southern Alberta, Canada. They also developed instructional materials. Data included surveys, journal reflections, interviews and videotaped samples	Statistical analysis of surveys, videos sampled at 5-minute intervals and analysed using Givens (2003), qualitative data coded and emergent themes listed. (a) Most students responded positively. (b) The teachers were mostly unable to complete the instructional unit, although evidence suggests that the materials, 'had great potential and, at the very least, some efficacy'. (c) The project was successful in promoting cultural understanding although not everyone involved agreed: two non-aboriginal children	Conventional programming for young people's concerts 'need to be re-examined . . . using traditional and non-traditional ensembles [and] new media'. Research is needed on the efficacy of children's concerts. 'Collaboration between artists and educators to create a concert with local cultural content can result in . . . considerable benefits . . . [these] require careful planning, co-ordination and

Table 1 *Continued*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
	and (c) whether the aboriginal and non-aboriginal participants would develop mutual understanding and respect.	of children's responses to the concert.	were withdrawn from the project by their parents and some Blackfoot people among the audience responded negatively to the concert.	adherence to established timelines'.
Welch <i>et al.</i> (2005) Somekh: 1 2 6	'To research alternative pedagogical approaches and to explore the extent to which advanced voice science technology could be incorporated in a meaningful way in the singing studio'. This technology provided real-time visual feedback on a computer, providing	Two singing teachers, each with two students who used the technology and two who didn't; these formed a 'control' group. Data collection included data saved on computers, real-time and video-recorded observation of singing lessons, interviews and teacher and student journals; the	Two sample lessons of each teacher – one without technology and one with technology available - were analysed second-by-second. Teacher and student behaviours categorised according to an existing protocol which included conversation, demonstrating, listening and performing; the use of technology in the second lesson of each teacher was also analysed.	Teachers and students reported clear benefits to the technology. There were significant differences between the basic pedagogical approaches of the two teachers, and the effect, of having the technology, varied with the teachers. For example, Teacher 1 watched it and referred to it for around 38% of the lesson but didn't change the use of his time; Teacher 2 increased the time spent on instructing with a

potential for a better match between the teacher's intended outcomes, in terms of the quality of vocal sound, and the students' actual outcomes. Research questions included the extent to which students and teachers used the technology, and how it was integrated into singing lessons.

report focuses on an analysis of four sample lessons.

shared focus on the technology; this occupied around 61% of her sampled lesson.

Young (2005)
Somekh:
1 2 3 6

'To extend and develop existing versions of practice ... to push the boundaries of practice' of professional artists (including musicians), working in early-years settings.

Artists, 'selected on the basis of well-referenced prior experience' worked in a variety of pre-school settings including nurseries, daycare and family hostels. Researchers, including the author, used 'a set of

The musician 'increasingly found that being cast in the role of 'musician' ... could be restricting.' Especially with the youngest children/babies, she worked in a multi-modal way (visual, aural, tactile and kinaesthetic) e.g. 'encourag[ing] storylines and mini-dramas to emerge in play with instruments ... vocalis[ing] dramatically in response, or dance

The musical game-like activities played by the musician and the very young were multi-modal, involving 'a sense of forward direction and a momentum towards a point of climax followed by closure ... not necessarily 'about' anything but the play of rhythm, shape, pattern and structure'. Music for the very

Table 1 *Continued*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
		common tools for data collection'. The report focuses on one community musician in a 'stay and play' setting.	with instruments and beaters rather than focus on their sound-making qualities alone'. Playful activity was extended by repetitions and variations 'usually in turn-taking dialogues between children and adults', underpinned by 'interpersonal dynamics – the rhythmic give and take of sympathetic, well-timed communicative processes'.	young 'should move towards versions which allow them to engage creatively with generic time-based, multi-modal improvisations that expand into playful game-like or narrative-like forms'. This implies, 'a broad conception of musicality'.
Strand (2005) Somekh: 1 2 3 5 6 7	To find ways of better facilitating concept transfer: pupils using concepts they had learned in music lessons in their composing.	A summer enrichment class in Chicago; pupils aged 9–12. c. 32 hours of class time over four weeks. 'A collaborative transfer composing task' given on the last day of each set of lessons. Data included lesson plans, video and	Data transcribed and coded with 3 levels of coding. Another analyst coded data independently. Emergent themes included 'teaching concepts, teaching the students to compose, developing the learning environment, and ... evidence of transfer ... in student compositions'.	Concept transfer was facilitated through, (a) a combination of direct instruction and guided discovery strategies, (b) instruction which helped students to learn how to compose, (c) an approach which developed the pupils as a community of learners.

		<p>audio recordings of lessons and work produced, field notes, written artefacts and discussions with expert observers.</p>		
<p>Odena & Cabrera (2006) Somekh: 1 2 5 6 7</p>	<p>‘To go beyond the score’ looking for ways to help advanced clarinet students to better understand and perform the first movement of <i>Mozart’s Concerto for Clarinet</i>.</p>	<p>In consultation with three experienced performers, a 4-session programme was designed and taught to five conservatoire students, who were encouraged to see the dramatic/operatic qualities of the concerto. In the final session, students performed the piece wearing costumes inspired by characters in <i>The Magic Flute</i>, and playing only those passages associated with the</p>	<p>Data analysis is not described, but quotes from students showed that the project ‘helped the students to better understand the concerto . . . to remember that they were actors . . . to lose fear . . . and to see it with renewed eyes’.</p>	<p>Dramatising the score helped to link together multiple intelligences, including visual, aural and sensory-motor representations. It also encouraged an emotional involvement with the music.</p>

Table 1 *Continued*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
		characters. Students' opinions were canvassed via questionnaires and interviews, and sessions were videoed.		
Gaunt (2007) Somekh: 1 2 3 6 7	'To explore a range of approaches to teaching and learning breathing in oboe playing, and to understand more about their impact on students' development of their practice as instrumentalists.' Key principles, arising from a literature review, included	The author taught and researched 11 oboe students at a conservatoire, over an 11-week period. Teaching included individual lessons, a seminar on breathing, Alexander Technique classes and workshops, focused on breathing. Data collection included video recordings,	At first, students characterised breathing as being physically uncomfortable and musically intrusive, had limited physiological understanding and made few connections between breathing and musical line. Breathing was connected with physical tension and anxiety; they had difficulty in articulating knowledge about breathing. During the research they developed a stronger awareness of breathing, took fewer gasping breaths and developed a more	Key principles were shown to contribute to practice to different degrees. 'The simple concepts were most useful'; more complex ideas, 'were not taken up so enthusiastically and had relatively little impact'. The research process allowed students to reflect on their own learning and learn from each other, benefiting 'from each other's perspectives and ideas'.

	<p>anatomical and physiological matters, connections between breathing and (a) posture/movement, (b) musical expression and (c) performance.</p>	<p>interviews, a questionnaire, the teacher's reflective notes and observations by a critical friend. Triangulation was provided via multiple perspectives (teacher, pupils and critical friend).</p>	<p>relaxed relationship between breathing, posture and movement. They made stronger connections between breathing and music, and developed strategies for reducing anxiety and self-criticism, but did not integrate physiological understanding with practical knowledge.</p>	
<p>Major (2007) Somekh: 1 1a 2 3 6</p>	<p>'to reflect on and explore the ways in which talk is used by teachers and children to further their composing work, and thereby to improve practice and inform professional judgement'.</p>	<p>The teacher-researcher taught class lessons to school pupils aged 11–16. She made video and audio recordings of her lessons, and 1 lesson by a colleague. She also interviewed pupils. There were 3 cycles; in the 3rd cycle, pupils were asked 'to demonstrate their music to each other and to talk to</p>	<p>Data from the first 2 cycles were analysed inductively to produce a typology of talk: exploratory, description, opinions, affective, evaluative and problem solving. The 3rd cycle task was imaginative and designed to elicit more evaluative responses: although most talk was descriptive, one group of pupils produced evaluative and analytical, problem solving talk.</p>	<p>'Children's capacity to talk about what they understand is far more limited than the understandings which are demonstrated in their music'. Evaluative talk requires a sensitive setting, unlikely to be present in whole-class context, but teachers can encourage this in 'written evaluations or . . . collective peer evaluations'. Higher level evaluative appraising is encouraged by, 'peer evaluation, using an imaginative task'.</p>

Table 1 *Continued*

	Plan (aims, ideals, reasons for action)	Action (and data collection)	Evaluation of consequences (and data analysis)	Reflection and conclusions
		each other about their musical compositions'.		
Price & D'Amore (2007) Somekh: 1 2 3 4 6 7 8	'To help create real partnerships across the formal and informal sectors of arts education, and to influence policy and practice in music education'. Main areas of enquiry: improving pedagogy, learner disengagement, hindrances to motivation, dialogue between sectors, development of music leaders, infrastructural blocks, young people as directors of their own learning.	Major projects involving teachers, musicians and researchers in three areas of England: 1. to develop an informal model of music learning in schools 2. to develop a range of out of hours music and to pilot a new initial teacher education (ITE) course, 3. to develop an e-learning resource, an alternative curriculum for music learning out of school, and to	1. In 21 schools Year 9 used an adapted form of informal learning practices (Green, 2008). Data were collected by observation, interview, transcribed meetings and questionnaires. In some classes peripatetic teachers helped; in all classes students engaged in peer-teaching and learning. 2. Music leaders worked in 3 schools to develop a year-long curriculum for Y8, also developed a new ITE programme. 3. A web-based media company, developing an e-learning resource, discovered that such a site cannot match MySpace as a means of social networking for young people. The resource became an adult-led tool; now Numu: www.numu.org.uk/default.asp . The	1. Informal learning practices often result in a high level of ownership and enjoyment on behalf of the students, which often leads to improved motivation, attitude and attainment. Music leaders are best employed when the class teacher instigates this. Pupils, as peer leaders can effectively inspire others. A significant training programme is needed to develop music leaders. 2. Pupils can learn 'real' instruments in class if Music Service resources are re-focused. Many pupils choose to stay after school when this builds on their experience in lessons. Introducing public

develop an accreditation model for non-formal learning,

alternative curriculum developed into industry-related projects, 'genre-free' projects and those which progressively built student competence.

performance into the curriculum can make learning authentic and develop pupils' musical identities and performing styles.

3. Young people need to be able to engage with music when, where, how and with whom they want: it is important to support them to become leaders and managers of their own learning.

Reaching disengaged (or wavering) music participants was effective only with school involvement. Music Services can work with schools to ensure connections between formal and informal music.

Reynolds & Conway 2003; Howard & Martin 1997; Strand 2005; Wolf & Gardner 1980; Swanwick & Tillman 1986; Green 2008.

Table 2 *The extent to which Somekh's methodological principles were observed in these reports*

Somekh's principles	1	1a	2	3	4	5	6	7	8
Action research reports (n = 24)	23	8	22	13	4	7	22	19	6

whilst others were undertaken by teachers, supported by university researchers. Most involved partnership with learner-participants but not all described how the consent of participants was obtained; indeed, ethical issues were not mentioned in most reports. (A notable exception is Gaunt, 2007.) Furthermore, some of the research was undertaken by a sole researcher without the support of critical friends, which might have strengthened the trustworthiness of the findings.

(c) Somekh described existing knowledge, 'drawn from psychology, philosophy, sociology and other fields' becoming 'an integral part of analysis and interpretation'. As we have seen, Strand (2006) and Cain *et al.* (2007) found that action research encouraged student teachers to read, understand and cite academic literature; a similar effect can be noted with teachers. Almost all reports cited many other research texts, demonstrating knowledge of the field under study. However, not all cited action research methodology texts, few referred to other action research projects, and there is little evidence that music education action researchers know each other's work. It is also notable that the project with perhaps the greatest potential impact on practice in England (Price and D'Amore, 2007) cited very few texts.

(d) Powerful learning, according to Somekh, occurs through a combination of research and reflection, and might be 'less intense' for outsider researchers. Most reports claimed powerful learning for the researchers and some went further, citing evidence of powerful learning for the participant pupils (e.g. Black, 1998; Auh, 2005) and even the surrounding community (e.g. Cope, 1999; Wasiak, 2005).

Characteristics of few reports: (a) cyclical design, (b) social justice, (c) reflexivity and (d) location within broader contexts

(a) Although Somekh refers to action research as a 'cyclical process', Conway & Borst (2001) pointed out that much reflection, of which action research is a part, is 'temporally truncated'; that is, there is only one turn of the action research cycle. Most of these projects were not cyclical and some were carried out as before-and-after studies; indeed James (1998) actually had an experimental design. However, several projects appeared to gain in depth as a result of sustained reflection over time. Helpfully, Cope (1999) documented a deterioration in the second year of the project, leading to improvements in the third year, reminding us that not all action leads to improvement.

(b) For Somekh, social transformation is related to a moral and political standpoint of aiming for greater social justice for all. Few of these reports allied themselves explicitly with such a position, although Auh (2005) was concerned with impact in a school serving a socially and economically deprived area and Black (1998) was concerned to achieve the cohesion, that is a consequence of greater social justice, in her own class. The report

which most fully embodies Somekh's notions of action research promoting social justice, is Wasiak (2005) which had a clear aim of diminishing power differentials between groups of people.

(c) Somekh acknowledged that one approach to action research, seen especially in the work of Whitehead (e.g. 1989) and McNiff (e.g. 1988) views 'an exploration of the self . . . as the central purpose of carrying out research'. She rejected this view as oriented towards professional development rather than research, but nevertheless stated that, 'the development of self-understanding is important in action research'. Given that music can be seen partly as a means of self-expression, it is perhaps surprising that none of these reports contain anything that could be described as 'an exploration of the self'. Examples of reflexivity are confined to the authors' reflecting on the significance of their learning to their professional development (e.g. Conway & Jeffers, 2004), rather than achieving greater self-knowledge.

(d) Finally, Somekh saw the broader historical, political and ideological contexts as inevitably shaping activity at local levels. Several of these reports drew links between their own research and its wider contexts. For example, Miller's (1996) study was situated in a context in which music is seen as merely a 'handmaiden' to other subjects; she took a stance against ideologies that position music as peripheral. However, it would be misleading to argue that these reports are strongly influenced by historical, political and ideological contexts, or that action researchers in music education are generally concerned with changing such contexts; such change as occurs is usually conceptualised as having a local effect, rather than being allied to wider political movements.

Conclusion

This review has demonstrated that reports, of music education action research, focus on a wide variety of subject matter, although there is not yet a substantial body of reports from any particular field within music education. They integrate research and action, are collaborative, grounded in a body of existing knowledge, and lead to powerful learning for the participants, although few are cyclical, deal with aspects of social transformation, or broad historical, political or ideological contexts. There is little focus on reflexivity. Thus most reports describe fairly pragmatic (rather than ideals-driven) attempts to improve practice locally – in the terms used by Carr & Kemmis (1986) they are more often practical than emancipatory. And, although no single report meets all of Somekh's principles, this might be because at least two of these principles can be seen as mutually incompatible – no report focuses both on the self and on societal contexts and this could be because both foci cannot be equally well served by the same project.

Discussion

There are issues of quality. Unlike some other types of research, action research is seen as having a value in itself, independently of any published report, because the process of carrying out the project can positively affect practice. (The only instance I found in which action research did not affect practice, was Byrne & Sheridan (2001); their SCARLATTI project generated teaching materials but failed, in its action research component, to get

teachers to share their practice in an online teachers' network.) But action research also generates practitioners' knowledge, and Leglar & Collay (2002) saw the accumulation of such knowledge, as, 'central to the evolution of teaching . . . to a true profession' (p. 868). So action research affects practice, and action research reports can lead to dissemination of practitioners' knowledge.

However, whereas social science research is largely concerned with generating propositional (i.e. 'factual' or 'declarative') knowledge, practitioners' knowledge is more varied than this. Swanwick (1994) describes four overlapping, but logically distinguishable types of knowledge: propositional knowledge (e.g. knowing how many symphonies Beethoven wrote); procedural knowledge (e.g. how to play a violin); acquaintance knowledge (e.g. knowing Elgar's overture, *In the South*) and attitudinal knowledge (e.g. valuing rock music as profoundly significant). Action research projects can generate propositional knowledge but claims to such knowledge are often weak (Foreman-Peck & Murray, 2007); the studies reviewed here appear, on the whole, to have also generated much procedural, acquaintance and attitudinal knowledge. For example, Black (1998) reported *how* pupils' self-esteem was raised and *acquainted* readers with her class, focusing particularly on two pupils. She articulated her *values* saying, for instance, 'I have always tried to create in my class an atmosphere of trust, acceptance, tolerance and respect for one another' (p. 1). Her report presented richly variegated knowledge, which, I believe, has more to offer practitioners than purely propositional knowledge. It is trustworthy because it details changes clearly and self-critically, and worth publishing also because it analyses a substantial and committed attempt to tackle a significant practitioner problem.

If an accumulation of such knowledge is to be developed through action research, practitioner-researchers might benefit from three things: a good understanding of action research, a focused use of research literature and a defensible position with regard to data analysis and the generation of trustworthy findings. First, Somekh's methodological principles can provide good understandings of action research because, although no report met all her principles, those which met many are more akin to action research, as commonly understood, than those which did not. The projects which met many principles usually did so because their focus was clearly on the researcher's own actions and their consequences (sometimes assisted by 'outside' researchers) and because they documented change over time. Second, although action researchers might accumulate practitioner knowledge better by considering previous, similar action research projects, the small list of references in Price & D'Amore (2007) is evidence that there might be less need to cite substantial numbers of social science research texts. Instead, it might be helpful for action researchers to employ texts which carry procedural, acquaintance and attitudinal knowledge, including those from outside the social science research field. Third, action researchers need a defensible position with regard to data analysis and the generation of trustworthy findings. Taking place in naturalistic settings, action research generates huge quantities of data; it is impossible to collect and analyse everything, but it is important that data are selected, not only to provide evidence of improvement, but also to chart the limits of the improvement. For example, although Auh (2005) listed the repertoire that 'most students' could play, her account would have been more trustworthy if it had included an analysis of how many students played which music, and how well. Action researchers cannot make their findings more

trustworthy by reducing variables, but they can present clear analyses of data, involve credible others as critical commentators, and detail the stages that they make on their (cyclical) journeys of discovery.

Finally, although it can be difficult to present procedural, acquaintance and attitudinal knowledge in written form, it is possible to do this more effectively in video. In a locally produced report, Parker & Furness (2006) presented their action research outcomes as, 'a series of video essays, some of which are profiles of individual participants, some of which are mini-documentaries about different aspects of the work, and some of which are resources and teaching materials' (p. 11). The two DVDs that accompany the written report are linked to a password-protected website which allows readers to acquire knowledge that is easier to show than to write about. As well as being an interesting (albeit unpublished) piece of research in its own right, it shows the potential for the future development of action research reports in music education.

There is a large and ever-growing stock of social science research about music education, although several writers agree that teachers rarely use research findings in support of their own teaching (e.g. Hemsley-Brown & Sharp, 2003). There is a much smaller corpus of action research. However, if action researchers develop their understanding of action research, and take a more focused use of research literature and a defensible position with regard to data analysis and the generation of trustworthy findings, they might make a very significant contribution to music education.

References

- AUH, M. (2005) 'Make a difference in a public high school? A personal experience in music classes', *Proceedings of the 15th National Conference, Australian Society for Music Education*, Melbourne, July 3–7.
- BANNAN, N. (2004) 'A role for action research projects in developing new pedagogical approaches to aural and musicianship education', in J. W. Davidson (Ed.), *The music Practitioner: Research for the Music Performer, Teacher and Listener*. Aldershot: Ashgate.
- BARRETT, M. (1994) 'Music education and the primary/early childhood teacher: a solution', *British Journal of Music Education*, **11** (3), 197–207.
- BLACK, C. (1998) 'Improving group dynamics and student motivation in a Grade 9 music class', *The Ontario Action Researcher*, **1** (1), www.nipissingu.ca/oar/archive-Vol1.htm accessed 23/01/07.
- BRESLER, L. (1996) 'Basic and applied qualitative research in music education'. *Research Studies in Music Education*, **6**, 5–17.
- BRESLER, L. (1995/2006) 'Ethnography, phenomenology and action research in music education'. *Visions of Research in Music Education*, **8**. www.rider.edu/~vrme [accessed 10/01/07].
- BYRNE, C. & SHERIDAN, M. (2001) 'The SCARLATTI papers: development of an action research project in music', *British Journal of Music Education*, **18** (2), 173–185.
- CAIN, T., HOLMES, M., LARRETT, A. & MATTOCK, J. (2007) 'Literature-informed, one-turn action research: three examples and a commentary'. *British Educational Research Journal*, **33** (1), 91–106.
- CARR, W. & KEMMIS, S. (1986) *Becoming Critical: Education, Knowledge and Action Research*. Lewes: Falmer.
- CONWAY, C. M. & BORST, J. (2001) 'Action research in music education', *Update: Applications of Research in Music Education*, **19** (2), 3–8.
- CONWAY, C. M. & JEFFERS, T. (2004) 'Parent, student and teacher perceptions of assessment procedures in beginning instrumental music', *Bulletin of the Council for Research in Music Education*, **160**, 16–25.

- COPE, P. (1999) 'Community-based traditional fiddling as a basis for increasing participation in instrument playing', *Music Education Research*, **1** (1), 61–73.
- DAVIDSON, J. W. (2004) 'Making a reflexive turn: practical music-making becomes conventional research', in J. W. Davidson (Ed.), *The Music Practitioner: Research for the Music Performer, Teacher and Listener*. Aldershot: Ashgate.
- ELLIOTT, J. (1991) *Action Research for Educational Change*. Milton Keynes: Open University Press.
- FOREMAN-PECK, L. & MURRAY, J. (2007) Epistemological bases of educational research: ESRC teaching and learning programme. Paper presented at the *Annual Conference of the British Educational Research Association*, London, 5–8 September.
- GAUNT, H. (2007) 'Learning and teaching breathing and oboe playing: action research in a conservatoire', *British Journal of Music Education*, **24** (2), 207–231.
- GIFFORD, E. (1997) 'Improving music learning and teaching through action learning and action research', *Proceedings of the 15th National Conference, Australian Society for Music Education*, Brisbane, July 4–8.
- GREEN, L. (2008) *Music, Informal Learning and the School: A New Classroom Pedagogy*. Aldershot: Ashgate.
- HAMMERSLEY, M. (2004) 'Action research: a contradiction in terms?', *Oxford Review of Education*, **30** (2), 165–181.
- HARRIS, R. (2000) 'An action research project to improve the quality of A Level history writing', *Prospero*, **6**, 65–69.
- HEMSLEY-BROWN, J. & SHARP, C. (2003) 'The use of research to improve professional practice: a systematic review of the literature', *Oxford Review of Education*, **29** (4), 449–471.
- HOOKEY, M. (1994) 'Music education as a collaborative project: insights from teacher research', *Bulletin of the Council for Research in Music Education*, **123**, 39–46.
- HOWARD, J. & MARTIN, J. (1997) 'Developing musical creativity: the Singapore Young Composers' Project as a case-study', *Research Studies in Music Education*, **8**(1), 71–82.
- JAMES, L. (1988) 'Action research: conducting activities for third graders', *Teaching Music*, **5** (5), 42–43, 88.
- LEGLAR, M. & COLLAY, M. (2002) 'Research by teachers on teacher education', in R. Colwell & C. Richardson (Ed.), *The New Handbook of Research on Music Teaching and Learning* (pp. 855–873). New York: Oxford University Press.
- LEWIN, K. (1946) 'Action research and minority problems', *Journal of Social Issues*, **2** (4), 34–46.
- LOUGHRAN, J. (2005) 'Researching teaching about teaching: self-study of teacher education practices', *Studying Teacher Education*, **1** (1), 5–16.
- LYTLE, S. L. & COCHRAN-SMITH, M. (1992) 'Teacher research as a way of knowing', *Harvard Educational Review*, **62** (4), 447–474.
- MACKWORTH-YOUNG, L. (1990) 'Pupil-centred learning in piano lessons: an evaluated action-research programme focusing on the psychology of the individual', *Psychology of Music*, **18**, 73–86.
- MAJOR, A. E. (2007) 'Talking about composing in secondary school music lessons', *British Journal of Music Education*, **24** (2), 165–178.
- MCNIFF, J. (1988) *Action Research: Principles and Practice*. Basingstoke: Macmillan.
- MCNIFF, J. & WHITEHEAD, J. (2005) *Action Research for Teachers: a Practical Guide*. London: David Fulton.
- MIDDLEWOOD, D., COLEMAN, M. & LUMBY, J. (1999) *Practitioner Research in Education: Making a Difference*. London: Paul Chapman.
- MILLER, B. A. (1996) 'Integrating elementary general music: a collaborative action research study', *Bulletin of the Council for Research in Music Education*, **130**, 100–115.
- MILLER, B. A. (2004) 'Designing compositional tasks for elementary music classrooms', *Research Studies in Music Education*, **22**, 59–71.
- NOFFKE, S. E. (1997) 'Professional, personal and political dimensions of action research', in M. W. Apple (Ed.), *Review of Research in Education*. Washington, DC: American Educational Research Association.

- ODENA, O. & CABRERA, L. (2006) 'Dramatising the score: an action research investigation of the use of Mozart's Magic Flute as performance guide for his clarinet concert', *Proceedings of the 9th International Conference on Music Perception and Cognition*, University of Bologna, August 22–26.
- ORMELL, C (2000) 'Can action research rebut charges of intrinsic subjectivity and subversity?', *Prospero*, **6**, 111–121.
- PARKER, E. & FURNESS, E. (2006) *Groove On: Music for the Future*. Middlesex: IMPRO integrated music projects.
- PRICE, D. & D'AMORE, A. (2007) *Musical Futures: from vision to practice*. www.musicalfutures.org.uk/publications_inner_KeyFindings.html accessed 24/07/07.
- REGELSKI, T. A. (1995) 'Action research and critical theory: empowering music teachers to professionalize praxis', *Bulletin of the Council for Research in Music Education*, **123**, 63–89.
- REYNOLDS, A. M. & CONWAY, C. M. (2003) 'Service-learning in music education methods: perceptions of participants', *Bulletin of the Council for Research in Music Education*, **155**, 1–10.
- RIDEOUT, R. & FELDMAN, A. (2002) 'Research in music student teaching', in R. Colwell & C. Richardson (Ed.), *The New Handbook of Research on Music Teaching and Learning* (pp. 874–886). New York: Oxford University Press.
- ROULSTON, K., LEGETTE, R., DELOACH, M., BUCKHALTER-PITTMAN, C., CORY, L. & GRENIER, R. S. (2005) 'Developing a teacher-research group in music education: mentoring and community through research', *Research Studies in Music Education*, **25**, 14–35.
- ROULSTON, K. (2006) 'Mapping the possibilities of qualitative research in music education: a primer', *Music Education Research*, **8** (2), 153–173.
- SAVAGE, J. (2005) 'Working towards a theory for music technologies in the classroom: how pupils engage with and organize sounds with new technologies', *British Journal of Music Education*, **22** (2), 167–180.
- SOBY, D. (1989) 'Encouraging and assessing listening skills in music (13–14 years)', in V. Treacher (Ed.), *Assessment and Evaluation in the Arts*. Reading: Berkshire Local Education Authority.
- SOMEKH, B. (2006) *Action Research: A Methodology for Change and Development*. Maidenhead: Open University Press.
- STRAND, K. (2005) 'Nurturing young composers: exploring the relationship between instruction and transfer in 9–12 year-old students', *Bulletin of the Council for Research in Music Education*, **165**, 17–36.
- STRAND, K. (2006) 'Learning to inquire: Teacher research in undergraduate teacher training', *Journal of Music Teacher Education*, **15**, 29–42.
- SWANWICK, K. & TILLMAN, J. (1986) 'The sequence of musical development: a study of children's compositions', *British Journal of Music Education*, **3**(3), 305–339.
- SWANWICK, K. (1994) *Musical Knowledge: Intuition, Analysis and Music Education*. London: Routledge.
- WASIAK, E. B. (2005) 'litaohkanao'pi – The Meeting Place Project: an alternative approach to young people's concerts', *International Journal of Music Education*, **23** (1), 73–88.
- WELCH, G. F., HOWARD, D. M., HIMONIDES, E. & BRERETON, J. (2005) 'Real-time feedback in the singing studio: an innovatory action-research project using new voice technology', *Music Education Research*, **7** (2), 225–249.
- WHITEHEAD, J. (1989) 'Creating a living educational theory from questions of the kind, "How do I improve my practice?"', *Cambridge Journal of Education*, **19** (1), 137–153.
- WOLF, D. & GARDNER, H. (1980) 'Beyond playing or polishing: a developmental view of artistry', in J. Hausman (Ed.), *Arts and the Schools*. New York: McGraw-Hill.
- YOUNG, S. (2005) 'Changing tune: reconceptualising music with under three year olds', *International Journal of Early Years Education*, **13** (3), 289–303.
- ZUBER-SKERRITT, O. (Ed.) (1996) *New Directions in Action Research*. London: Falmer Press.