An investigation into how the development of musical improvisation skills impacts Year 7 girls' self-efficacy as performers of sub-Saharan African music

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Abstract

The research examines the correlation between the development of improvisatory skills and pupil self-efficacy with regard to musical performance. The case-study highlights the difference between self-concept and self-efficacy, drawing attention to their importance within and beyond the Music classroom. Six, twelve-year-old students were observed within small-group, African Drumming lessons, and, in this setting, a social constructivist approach was used to explore improvisation. Whilst learning improvisatory skills appeared to strengthen the self-concept of all participants, this did not necessarily result in an increase in students' self-efficacy. The research demonstrates the complexity of self-efficacy and suggests a need for further study, focusing particularly on the relationship between pupil expectations, ability and self-efficacy.

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Introduction

The study aimed to explore how the development of musical improvisation skills impacts girls' self-efficacy as performers in the Year 7, sub-Saharan African classroom. The study attempted to define improvisation and self-efficacy, exploring the extent to which the latter can be affected through a sequence of carefully scaffolded (Wood, Bruner & Ross, 1976), African-drumming lessons. The research was conducted at a non-selective, girls' school in the East of England during my PGCE training year. The school had approximately 1300 pupils on roll, 636 of whom were in Key Stage 3 (ages 11-14). The most recent Ofsted report recorded the proportion of students with learning difficulties and receiving free school meals as significantly lower than the national average.

Having worked in the Music departments of several secondary schools as a trainee teacher, I found that the approach and response to Key Stage 3, classroom performance could differ. Observing a variety of solo and ensemble performances in my placement school, I was aware that some students had a negative response to performance opportunities. Since it could be argued that higher levels of self-efficacy are likely to lead to enhanced musical performance and sense of achievement, the study investigated the possibility of building self-efficacy through student participation in structured, practical activities. Components of performance efficacy were investigated during a series of five lessons, taught to a research group comprising six, 12-year-old girls. The investigation involved analysis of how a teacher could plan to increase self-efficacy through music improvisation; how students respond to the social constructivist approach used; and lastly, to what extent, if at all, can students' self-efficacy be improved by adopting this approach.

In order to form a strong conceptual basis for my research, I explored other similar studies including 'Self-efficacy' (Bandura, 1994); 'The effects of group free improvisation instruction on

improvisation achievement and improvisation confidence' (Hickey, Ankney, Healy & Gallo, 2016); and 'Exploration instrumental practice: An expansive approach to the development of improvisation competence' (Johansen, 2017).

Literature Review

What is improvisation?

Musical improvisation is an exploration of learnt and new material; it can involve experimentation or the spontaneous exploitation of prior musical knowledge. However, some theorists argue that, if a musician must first learn the building blocks of improvisation, it is largely impossible to distinguish improvisation from composition as both are predetermined.

In a study of improvisation competence, Norwegian educator and music therapist, Johansen (2017), suggests that the pinnacle of improvisation performance is for the performer to imply musical independence whilst conforming to structural and stylistic boundaries. However, in performing improvisation, a conflict exists between 'striving for musical freedom and maintaining a musical structure' (p.57). Exploring how a musician might work towards achieving both freedom and structure within improvisation, Johansen draws on the 1996 work of Slobada, Davidson, Howe and Moore to describe 'formal' and 'informal practice' (as cited in Johansen, 2017, p.50). Formal practice is the organised and efficient rehearsal of technique, with the ambition of furthering instrumental or vocal skill. This type of practice would benefit the structural and technical aspects of improvisation. In contrast, informal practice comprises exploration and the development of interpretive abilities and expressivity. This leads to musical freedom in improvisation; gives music character; and improves communication between the performer and audience. However, Johansen's study does not clarify how, or at what stage of one's musical development, the musical results of formal and informal practice combine to form 'improvisation competence' (ibid., p.52).

Structured and free improvisation

Though 'improvisation competence' appears the ultimate goal, prior to a musician's ability to combine formal and informal practice to achieve this, there are two forms of improvisation which could perhaps be individually defined. Improvisation which results from formal practice could be

termed 'structured improvisation'; and improvisation resulting from informal practice might be more accurately described as 'free improvisation.' Structured improvisation is made up of 'intellectually learned material' (ibid., p.57) such as technical exercises which are rehearsed through formal practice. These isolated motifs are spontaneously performed in a combination, order or key appropriate to the context, but the resulting improvisation comprises only pre-learnt material. Considering this, structured improvisation might be viewed as composition. In contrast, free improvisation is without parameters and does not require prior musical training: experimentation and creativity determine the structure, timbre and style. Practising free and structured improvisation can involve spontaneous creativity; experimentation within existing musical conventions; and aid the development of a personal improvisatory style. Fluency in improvisation is dependent on a number of key skills.

Skills involved in improvisation

In a study of the effects of free improvisation on improvisation achievement, Hickey et al. (2016) draw upon an 'improvisation curriculum', listing activities and skills which benefit group improvisation (p.132). Effective practice activities include layered pieces, music based on soundscapes, 'initiating structural changes' and 'building pieces with form.' Though Hickey et al. present a varied and comprehensive 'curriculum', no explanation is given as to how the activities mentioned would be implemented within the classroom, or what the teaching of each activity would involve. For teaching purposes, it would be beneficial to subcategorise the authors' other suggestions which are general musicianship skills: building leadership, accompaniment skills, imitation and responding musically to others. These skills are beneficial in all musical contexts; not solely limited to improvisation. Leadership in Music involves both verbal and non-verbal communication. Among other skills, learning how to use body language and eye contact effectively is particularly important in leadership development. Accompaniment skills involve an aural and visual awareness of others and a musical understanding of that which is being improvised. Imitation in instrumental practice requires the development of aural and, particularly in younger children, motor skills. Collectively, these skills form the basis of musicality and so the development of these would likely impact self-efficacy for performance-based tasks.

What is self-efficacy?

Bandura (1994, p.72) defines self-efficacy as 'people's beliefs about their capabilities to produce effects'. A student with strong self-efficacy would feel optimistic that they could complete a task. They would likely set personal goals and commit to challenges, becoming engrossed in an activity. Such a student is more likely to view failure as 'insufficient effort' or 'lack of knowledge' rather than lack of capability (ibid.). In contrast, a student displaying weak self-efficacy may view tasks as threatening and focus on that which they are unable to complete or achieve. The student may show less commitment to goals, have low aspirations and show little perseverance in the face of difficulties.

Bandura describes four sources of self-efficacy: mastery experiences, vicarious experiences, social persuasion and altering negative proclivities. Mastery experiences involve scenarios in which a student succeeds. The more regularly a student encounters mastery experiences, the more they will believe that they can achieve and thus their self-efficacy will increase. Bandura describes guided mastery experiences as 'a powerful vehicle for instilling a robust sense of coping efficacy' (ibid., p.76) but cautions that if only 'easy successes' are accomplished, students will 'come to expect quick results and [will be] easily discouraged by failure' (ibid., p.72).

Vicarious experiences consist of observing someone of similar capability attempting and ultimately succeeding at a task. Bandura comments that observing a social model 'succeed by sustained effort raises observers' beliefs' that they, too, are capable of mastering 'comparable activities' (ibid., p.73). Predictably, watching someone of perceived equal competence fail has a negative impact on self-efficacy.

Social persuasion can also affect self-efficacy. Bandura argues that if a teacher or peer draws attention to a student's successes or self-improvement, the student is more likely to expect successful performances. Many performers attempt to persuade themselves of their own capability. However, self-efficacy is more likely to increase if others adopt a persuasive role.

Reducing negative proclivities is Bandura's final source of self-efficacy. Stress reactions can be misinterpreted as a sign of 'vulnerability to poor performance' (ibid.). It is important that students are able to react constructively when problem-solving, and focus on altering negative emotional tendencies in both pressured and less stressful situations. The optimistic mind-set which may

develop from this will potentially contribute to an increase in self-efficacy. It is important to note, however, that this type of analytic thinking is more possible for people with higher self-efficacy.

Self-efficacy and self-concept

Quoting Bandura, McPherson and McCormick (2006) comment that 'students who develop a strong sense of self-efficacy are well equipped to educate themselves when they have to rely on their own initiative' (p.417). Having resilient self-efficacy is vital for a musician. Musicians are required to dedicate hours of practice to instrumental or vocal technique and need to be self-motivating and constructively self-critical. These attributes are equally important in a performance situation. It is important, here, to note the difference between self-efficacy and self-concept. Whereas self-efficacy is almost indistinguishable from self-confidence, self-concept is more closely tied to capability. McPherson and McCormick describe self-concept as how someone perceives their own competence - how capable they believe they are - and draw on Green's Inner Game of Music (Green & Gallwey, 1986) to further examine how one can possess high self-concept and weak self-efficacy. A musician of a high calibre knows that they are capable by comparison with other musicians. However, in a situation in which risks must be taken, it would be unusual if a performance did not involve some element of self-doubt. In a study of secondary school students taking music examinations, McPherson and McCormick (2003) identified a strong correlation between self-efficacy and actual performance. The extent to which a student feels a performance will be successful will often bear a strong resemblance to the resulting success of the performance. Avoiding self-doubt allows a performance to reflect more accurately a musician's capabilities and, therefore, Pintrich and Schunk (as cited in McPherson & McCormick, 2003, p.40) suggest that 'the optimum level for self-efficacy is to have slightly higher perceptions of efficacy than is justified by one's actual real ability'.

The 'Dunning-Kruger Effect', coined in 1999 by David Dunning and Justin Kruger, is a theory which reflects an inability to accurately evaluate one's own performance. With limited knowledge of the heights that can be achieved, a less accomplished musician may perform confidently, believing they are giving an excellent performance. A more capable musician will give a better performance but their increased expectations and awareness may lead them to believe the performance is of poor quality. The musician's self-efficacy may reflect this by measuring lower than predicted. This phenomenon, to which Kruger and Dunning (1999, p.1131) refer as the 'burden of expertise', can impact a musician's motivation.

What the role of motivation in the development of self-efficacy?

Among other theorists, Bandura (1994), comments on the correlation between self-efficacy and motivation, stating that 'motivation is regulated by expectation', which itself is governed by self-efficacy (p.74). People anticipate probable outcomes of their actions; their level of motivation for a task is governed by what they believe will be the likely outcome. A student who has strong self-efficacy is likely to believe they can accomplish a task, and so, working towards a positive outcome, is more likely to be motivated and persist in the face of difficulties. The motivated student is likely to focus on achieving short or long-term goals, working to overcome any obstacles. The reward of attaining these goals is often sufficient for the student to continue working towards higher ambitions. In contrast, an equally capable student who has weak self-efficacy may be reluctant to work towards a goal they feel they are unlikely to achieve. Bandura (1997) comments that 'insidious self-doubts can easily overrule the best of skills' (p.35). Such an observation would be evident in the student who, in spite of their ability, may lack motivation as a result of weak self-efficacy. This has led some theorists to suggest strategies for reducing self-doubt.

Strengthening self-efficacy

The process of modelling activities of gradually increasing challenge is referred to by Bandura (1994, p.76) as 'Social Cognitive Theory'. In line with Bandura's 'social cognitive theory', there are several approaches that strengthen self-efficacy: creating an environment in which someone feels able to perform; gradually increasing the time for which someone is under pressure; and providing 'mastery aids' (ibid.) such as giving encouragement and providing scaffolded activities which can gradually be decreased with the development of a more resilient coping mechanism. This corresponds with Vygotsky's 'Zone of Proximal Development' and concept of a 'More Knowledgeable Other' as described by Galloway (2010, p.48): two theories which are concerned with assimilating and internalizing knowledge. It is clear that, in providing gradually more challenging activities, using pupils' current knowledge or ability as a starting point is of benefit to building self-efficacy. However, Bandura advises against such small increments on the grounds that pupils will too readily expect good results. While it may be true that students will come to expect quick successes, if steps are not scaffolded appropriately and challenges are too difficult, motivation may begin to wane. It is the nature of learning a musical instrument that challenge increases and results come more infrequently as a pupil progresses. Therefore, providing small steps and

guidance, particularly in the early stages of development, is the most effective teaching style. Pupils can then apply similar 'scaffolding' techniques in their own practice.

Through my research I examined the extent to which Bandura's theory is valid. Specifically, I investigated two research questions:

> RQ1. How can a teacher plan to increase self-efficacy through teaching improvisation skills?

> RQ2. How do students respond to the planned activities and to what extent, if at all, does a constructivist teaching approach affect students' self-efficacy?

Methodology and research design

Educational research is the 'application of the principles of a science of behaviour' to the 'problems of teaching and learning within the formal educational framework' (Cohen, Manion & Morrison, 2007, p.48). In social science, a case study is an in-depth and analytical investigation of a bounded system, for example, an event, process, activity or individuals. The research approach is determined by the resources and time-frame available. Typically, case study research is informed by data collected from several sources to ensure validity of information, which is known as triangulation. Within a case study, research may be quantitative or qualitative. Quantitative research relies on statistical and analytic techniques to formulate or test hypotheses. Qualitative research attempts to 'gain an understanding of the underlying reasons and motivations for actions and establish how people interpret their experiences and the world around them' (MacDonald & Headlam, 2008, p.8).

This small-scale case study informed my teaching by deepening my understanding of self-efficacy in the secondary school Music classroom. Qualitative research methods informed whether, and to what extent, scaffolded improvisation activities could affect girls' self-efficacy in performance. The findings were not conclusive but informed my own, and potentially other teachers', understanding of this area of study. The research focused on six Key Stage 3 students from a single-sex, 11-18 school in the East of England. The Year 7 classes studied a scheme of work on African Music which included elements of singing, dancing and instrumental work. I took the opportunity to teach small-group, practical lessons involving improvisation on African drums, whilst working closely with the Head of Music to ensure that the lessons interlinked with the topics covered by the whole

year-group. Data obtained through 1:1 and group interviews, surveys and audio recordings of classroom practical activities were analysed throughout the research.

Reflexivity

Positivistic research involves definitive outcomes, whereas interpretivistic research requires subjectivity in order to draw tentative conclusions. As an interpretive researcher, I was aware that my own musical background would affect my preconceptions and assumptions and that this may affect any conclusions drawn. My own experience as an instrumentalist has shown that self-efficacy for completing simple tasks tends to improve in correlation to the standard of playing. However, in a performance situation, self-efficacy can be counterbalanced by expectations. Musicians develop an acute awareness of what exceptional performance involves and therefore aim to meet an increasingly high standard. I was interested to see whether this would be noticeable in my research group and if this would have implications for the conclusions of the research. However, self-efficacy is of a complex nature and, being a small case-study, I acknowledged that there might be limitations to the reliability of my findings. Bernstein (as cited in Cohen et al., 2007, p.25) suggests that 'subjective reports may be incomplete and misleading'. However, I hoped to minimise bias by triangulating my results.

Questionnaire

I designed a 5-minute questionnaire about musical experience. In analysing the most relevant questioning styles to provide optimum feedback, I anticipated 'the type and range of responses' that different topics were 'likely to elicit' (Cohen et al., 2007, p.318). It was essential to be able to compare students' responses but also gain a clear understanding of each pupil's musical background. Wilson and Fox (2013, p.115) remind researchers that while open questions can 'generate rich and candid data, …this can be difficult to code and analyse.' Therefore, factual questions on my survey, such as 'does anyone in your family play a musical instrument?', were followed with an option to circle 'yes' or 'no' and gave opportunity for students to elaborate. For other questions, it was more appropriate to use a unipolar Likert Scale. Following Bandura's example, I chose to include only positive numbers on the scale; a person's self-efficacy cannot be less than non-existent (i.e. negative numbers). I used a forced choice method of questioning; for example, 'on a scale of 1 to 4, how good do you think you are at Music?' Students were unable to

circle a neutral option, encouraging them to think carefully about their response. Although questions about improvisation and confidence were included, I did not want bias to affect the results of the study, and so, throughout the research, pupils remained unaware of the exact focus of the study and the ways in which data would be analysed.

The questionnaire was completed by a class of thirty Year 7 students, individually, during a Music lesson. It was essential that the respondents' answers were not influenced by other sources and so, when clarifying questions, I ensured that I remained completely objective. After consulting the data, I selected ten pupils with varying musical experience and confidence.

Ethics

The research undertaken followed the ethical guidelines provided by the British Educational Research Association (BERA) (2018). Having outlined my research proposal at the Faculty of Education, Cambridge, and completed the Faculty's Ethics Form, I discussed my proposition with the Head of Music at my placement school. Upon agreement, I followed the school and ethical guidelines by explaining, in writing, the nature of the study to the parents of the ten pupils. They were notified of ways in which I would collect data and how this information would inform my research. Six pupils returned permission slips. To ensure quality of information, I conducted short, 1:1 interviews with these pupils, aiming to clarify student responses from the questionnaire. Using a semi-structured interview technique allowed me to follow a framework of pre-written questions to address key themes raised by each of the questionnaires. I was careful to avoid influencing student responses: pre-writing a selection of questions for each interview ensured careful wording but provided flexibility to address any additional themes which arose in conversation.

I acquired further student data from the school which advised that the six pupils did not receive free school meals or pupil premium, nor were they recorded as having special educational needs. Over a period of four weeks, Music lessons were audio recorded and students' names were consequently deleted from the recordings for purposes of data protection. In order to further preserve anonymity, the pupils included in the data presented here were given pseudonyms.

Exploring the research

In preparation for planning the lessons, I read Hickey et al.'s 2016 study of 'The effects of group free improvisation achievement and improvisation confidence.' The study examines 'the impact of teaching improvisation to students' and is concerned with whether 'providing instruction for free improvisation [can] help college students become better and more confident improvisers' (p.128). For my study, I adapted the list of improvisation activities provided by Hickey et al. by subdividing chosen techniques into more specific skills. For example, 'imitation' is reliant on the group feeling a pulse, and 'building leadership' involves using body language and eye contact (ibid., p.132). I then planned a variety of drumming activities which would enable the development of these skills. Table 1 presents the musical activities undertaken and skills developed during each lesson.

	Musical activity	**Skills developed**
Lesson 1 28/02/18	Repeat basic rhythmic patterns, played as a group. Learn group rhythm: 'In the Jungle.' Explore rhythms based on syllables and stresses in students' names. 'Don't clap this one back': imitation game on African drums.	Establishing pulse Motor skills Aural skills Structured improvisation Rhythmic recognition Imitation Leadership
Lesson 2 07/03/18	Recap 'In the Jungle.' Explore rhythms based on syllables from animal names. Learn 'bridge section' to transition between sections of music.	Ensemble Structured improvisation Verbal leadership: Initiating structural changes
Lesson 3 14/03/18	'Don't clap this one back': imitation game on African drums. Students lead individual beats by showing clear upbeats. Animal-rhythm improvisations. 'Pass the rhythm' game (students play one-beat improvisations before passing the leadership to a person of choice.	Rhythmic recognition Imitation Non-verbal leadership Structured improvisation Applying pre-learnt skills Developing a fast mind-set
Lesson 4 21/03/18	'In the Jungle' and 'bridge section.' Soundscapes: using landscape photos as a stimulus for music-making.	Verbal leadership Ensemble Free improvisation Developing accompaniment skills Eye contact Body language Responding to each other, musically.
Lesson 5 22/03/18	Rehearsal. Formal performance comprising 'In the Jungle', free and structured improvisation.	Ensemble Performance presentation

Table 1: Skills developed through participation in musical activities

Having read extensively about the ways in which self-efficacy can be strengthened, I decided to employ a constructivist teaching approach. This was achieved in lessons by modelling tasks, organising learning activities that were of suitable difficulty for all students and gradually removing guidance as students became more capable. Hickey et al. comment that, in order to develop self-efficacy, students also require adequate time on improvisatory tasks. In my scheme of learning, I allowed flexibility to re-design lesson plans, based on the 'improvisational needs of the children' (ibid., p.137). Following Johansen's reference to Slobada et al. (1996), opportunities for both 'formal and informal practice' were also provided (Johansen, 2017, p.50). Formal practice consisted of the repetition of practical activities involved in structured improvisation. This was contrasted by free improvisation practice, involving opportunities for the development of personal expressivity and interpretation.

I observed music classes focusing on how students and staff approach practical learning. Insufficient guidance for small-group tasks led to a lack of focus and inefficient practice which was reflected in the quality of performance. As performance was of considerable importance to my research, it was necessary for students to gain positive performance experience. I worked with the research group in preparation towards two performances: an informal performance at the beginning of lesson 1, which involved the six drummers accompanying class-singing and African dancing; and an assessed, formal performance in lesson 5, in which the research group played a semi-structured composition comprising pre-learnt rhythmic patterns, as well as structured and free improvisation.

Equally important as the development of African drumming and an improvisatory style, was the development of students' 'cognitive processes of…improvisation': risk-taking; making and accepting mistakes; adopting the ideas of others; self-assessment; motivation and performance anxiety (Hickey et al., 2016, p.129). The lesson activities allowed frequent opportunities for these to be explored in an environment where the children felt safe.

Research participants

Gabby (all names used are pseudonyms) was a high achieving student who had passed her ABRSM (the examination board of the Royal Schools of Music) Grade 4 on flute and recorder but had never previously attempted improvisation. Describing the quality of her daily practice, she explained how she would "take out [a] section [of the piece] and do that section and…do the hard bits and practise

it so [that she could] get it better." She would try to play each passage "three times even if it did not work." Gabby explained that her friends saw little value in performance opportunities and, though she would not judge others on their performance, worried that they would be judgmental of her work. This affected her performance confidence. She commented that she would feel more confident playing solo as, in group work, "if [others] go wrong they would make [her] go wrong; there's no control."

Hayley was attentive throughout lessons. She appeared more hard-working than other students but, despite this, her grades were below average in most subjects. In Science, however, she excelled, working at two grade boundaries above her peers. She was talkative and enthusiastic in the 1:1 interview though in a group dynamic, she generally spoke very little. Working towards her ABRSM Grade 2 piano, Hayley did 'formal practice' every day, consisting of scales, sight-reading and pieces. She appeared the most persistent student in the group, trying "between 5 and 10 times to get something right." She did not always feel confident in group performance because of the risks of making mistakes, explaining that she was "depending on [her] friends not to mess up". However, she was worried that she would "mess up rather than them." Asked how she would feel watching the successful performance of a friend, she replied that she would "feel proud" but "sort of jealous too" as she would want her own group to be equally successful. She occasionally improvised with her piano teacher in lessons and understood about the notes and style needing to "fit the piece."

Josie was a quiet student who worked in the top percentage of the class, achieving consistently across subjects. Unlike her closest friends, she did not have 1:1 instrumental tuition which led to insecurities about her musical ability. In discussion about classroom music-making, Josie commented, "I don't have any [1:1] music lessons so I don't know what [sounds right] with what tunes. I feel more confident with friends as they can put my ideas to the chords: if I was trying to sing along to a beat, I wouldn't know if I'm meant to sing it high or low. ...If I did [attend 1:1 lessons] then I think I'd be more confident to share my ideas because I [would] have had the lessons where I've been told 'yeah, that does fit together' instead of just trying to do it by myself." She also felt that having 1:1 lessons would bring opportunities to play instruments during group activities instead of being labelled as a non-instrumentalist.

According to school data, Kate was the most academically able of the students in the research group. Working towards Grade 6 in Musical Theatre Singing, she received weekly 1:1 tuition. In

her practice, she would retry problematic phrases several times, returning to a phrase later if there was no apparent improvement. She commented that her teacher would encourage her to persevere, advising to "go back and give that [section] another go."

Kate was confident performing alongside friends, feeling that there was safety in numbers. She commented that in group performance, she felt less likely to be "picked on" by peers whom she felt "scared to stand up to." In improvised performance, she would worry about others' negative opinions: "I hate it…when you're trying to make a piece of music and somebody goes like (Kate demonstrates) with their hands over their ears; I just feel so bad…I'd be so embarrassed." Having had substantial performance experience, compared to others in the research group, she felt that it was admirable to "just have the courage to [perform]." She viewed others' performances as a learning experience. Asked how she would feel when watching a highly successful performance of a friend, she remarked, "I'd want some tips from them!"

Emma achieved average grades. She liked performing because she was "confident with [her] own skills" on the piano, ukulele and in singing. Though her parents played instruments, she practised only "a couple of times a month." If she was faced with a difficult passage of music, she would "usually try it one time and, if it [did not] go well, …try it a second time and then …move on from there." Asked why she felt more confident performing individually than with friends, Emma replied, "I quite like choosing my friends that I work with because I know who is confident with music and who focuses on music and doesn't mess around. I don't want to be blamed for getting a bad result when I tried my hardest." She was not critical of others' performances, usually "just listen[ing] and think[ing] about the things that are good" but could become frustrated by her own mistakes in music lessons. Emma had little experience with improvisation other than playing on the ukulele with friends, for fun.

Abigail struggled to focus in class and, according to school data, was working below average although she was on track to receive Grades 7-8 at GCSE. She passed her ABRSM Grade 2 Piano during Key Stage 2 but no longer received 1:1 tuition. Abigail felt confident in group performance, although several of those observed were abandoned as a result of poor attitude. Recognising that performances do not always go to plan, Abigail commented, "I feel like if you make a mistake the first time, you can get it better the next time. I don't know why I laugh - it's just something in my body that finds it funny that I've made a mistake …It's like a laugh that just brushes it off. It makes

me just forget about it, I guess." She felt less confident improvising, expressing concern that she would struggle to invent a melody.

A high proportion of students in my research group received instrumental or vocal 1:1 tuition. To ensure that this reflected the experience of the wider class, I consulted the results of the whole-class questionnaire. Excluding the pupils in my research group, I found that ten students were receiving 1:1 tuition, eight pupils had previously benefited from 1:1 tuition and only six pupils had not had the opportunity (though four of these expressed an interest in doing so), thus confirming that my research group was, in this respect, a reliable sample.

Research Question 1:

How can a teacher plan to increase self-efficacy through group improvisation?

McPherson and McCormick (2006, p.333) advise teachers to 'provide an environment in which candidates are given the best possible chance to perform at their best'. Bandura (1994, p.76) states that an environment must be created in which even someone with no self-esteem feels able to perform. I drew attention to the fact that the only expectation, musically, was for every student to try their best and improve at their own pace. In the questionnaires, many students expressed concern about negative audience response and how they were perceived by peers and so, in response, I designated a 'safe space' in which the lessons (see Table 2 below summarising activities) would take place. Pupils understood that they could take musical risks without fear of negative reactions.

21.02.18	26.02.18	28.02.18 Lesson 1	07.03.18 Lesson 2	14.03.18 Lesson 3	21.03.18 Lesson 4	22.03.18 Lesson 5
	Semi-structured 1:1 interviews with 6 students	Setting up a safe space Imitation Structured improvisation	Developing a fast mind-set Leadership skills (verbal)	Discussion: *What is improvisation?* Imitation Applying knowledge to similar musical activities	Free improvisation Leadership skills (non-verbal)	Rehearsal
Questionnaire (completed by 30 Year 7 students)					**Questionnaire** (completed by 6 students)	**Questionnaire** (completed by 6 students)
		Informal performance				**Formal performance**

Table 2: Lesson activities

I intended to support students' self-efficacy by applying the theories of Bandura and Hickey et al. within the classroom. A variety of scaffolded activities helped the development of improvisation skills (see Table 2). These were necessary for a performance of a semi-composed and semi-improvised drumming piece which took place with an audience and outside the 'safe-space.' The repetition and development of activities throughout the study offered opportunities for pupils to experience Bandura's four sources of self-efficacy:

Mastery Experiences

Every activity was carefully scaffolded to guide students toward mastery experiences. Burnard (2000) comments that children will improvise if musical activities are 'not too far removed from the child's immediate experience' (p.21). For each task, I chose a starting point which was within the capabilities of every child; for example, playing a steady minim pulse in the centre of the drum. I increased the challenge of the activity when appropriate, introducing a hand clap between the two minims. It was important for students to recognise the similarities between the two exercises and so we changed from one to the next without interruption. I used a similar approach when introducing structured improvisation, asking the group to count the syllables in their names and inviting students to play their drum once for each syllable. I then re-initiated the original rhythm with the group, giving instructions for students to mime drumming their name in the one-beat rest. This was a low-risk activity; no one was under pressure to immediately play their name correctly on the drum and all students had the opportunity to assess how their name would fit into the silence. We then discussed and drummed each other's names as a group, before completing the same exercise individually, using the simple group-rhythm to provide an ongoing, steady pulse. Similar activities were used throughout the research.

Vicarious experiences

According to Bandura (1994, p.73), 'vicarious experiences' (observing the learning process and ultimate achievement of someone of similar ability) are influential on pupil self-efficacy. The more similar the person modelling to the observer, the more positive the effect on the observer's self-efficacy. Regular leadership and improvisation activities offered opportunities to strengthen self-efficacy through vicarious experiences. Activities were planned to discuss and develop both verbal and non-verbal leadership skills. From experience of teaching the research participants in the wider

class, I predicted that one or two natural leaders would stand out within the research group. My hope was that their confidence in volunteering for roles within the group might encourage those less likely to immediately volunteer. Corresponding with the scaffolded teaching of other musical skills, the opportunities to lead group activities were challenging, and potentially a new experience, but within the capabilities of all students.

Social persuasion

Though the lessons were predominantly led by music-making, using Bandura's 'social persuasion' as a starting point, I ensured there was opportunity to discuss the music itself, the students' roles within the music and about how confident they felt being placed in leadership and non-leadership roles. Suggestions from Hickey et al. (2016) for skill-development, as discussed earlier, formed the foundation of the lessons and these provided opportunities for encouragement and immediate teacher feedback. Undertaking such activities within a 'safe space' was intended to help reduce students' stress reactions (Bandura's fourth source of self-efficacy).

Reducing stress reactions

The spontaneity of improvisation requires performers to be able to reduce their stress reactions. The most effective way of developing this within the classroom was to present an unfamiliar musical activity which required the students to recognise and apply skills learned during previous improvisation tasks. However, I added the disclaimer that if students felt uncomfortable, they could revert to using a choice of pre-rehearsed rhythms. The activity would also take place in the group's safe-space in order for a more gradual increase in pressure between tasks. Planning two performances for the students – one formal and one informal – allowed for a more gradual transition between classroom activities and a more stressful performance situation.

Research Question 2:
How do students respond to the planned activities and to what extent, if at all, does a constructivist teaching approach affect students' self-efficacy?

Mastery experiences

The students learned a rhythmic pattern called 'In the Jungle' and were keen to extend this by

including an additional 'bridge passage.' This was learned one section at a time, using nonsense words as a rhythmic aid. Once fluent, the group repeated 'In the Jungle' with the new section continuously for three minutes. As soon as we had finished, Emma remarked:

Emma	*"That was good! It was just like accomplishment!"*
Miss Morgan:	[Turning to the other students] *"How do you feel about it?"*
Kate:	*"Proud! I actually remembered it!"*
Abigail:	*"I didn't go wrong. It sounded good!"* [Her voice suggested disbelief]

The students clearly enjoyed the task and Abigail's comment suggested that she had perhaps not expected herself to be capable of the activity. With this in mind, it is possible that such an activity would have increased her self-efficacy. Bandura's theory that mastery experiences build self-efficacy also appeared to be true of Emma and Kate, who both successfully led the imitation game in lesson 1 and were keen to lead again. The following time, Emma's rhythms were more varied than in lesson 1; her playing was more experimental, using hand-claps as well as drum sounds. Kate's playing was more rhythmically advanced and demanded focus from the group to imitate rhythms accurately. Both students appeared more willing to take musical risks. By presenting the students with an exercise which gave them control of the duration and complexity, they appeared to 'scaffold' their own learning. It was apparent that this, alongside their success, had a positive effect on their self-efficacy.

After the informal performance, speaking to the group highlighted additional mastery experiences. The group had the option to challenge themselves as they felt appropriate during a four-beat solo improvisation.

Josie:	*"It was really fun to do but also when [the solo improvisation] was coming up, I was really excited to do my own bit instead of just doing the same as everyone else…but then I would try and concentrate on the rhythm when it was coming up…and I would forget the rhythm and what I was meant to do. But it was really fun and, after, I was really proud of myself but also relieved 'cause I could just do the [In the Jungle] rhythm again."*
Gabby:	*"Well, I thought I was adding a bit of personalisation to the piece and I didn't really feel nervous. I just felt like I would just 'do it'…*

Hayley:	*"Well, before, I was nervous and excited because I knew the people that I was performing with, like Kate. ...I felt that I could have added a bit more improvisation; not just one note."*
Miss Morgan:	*"but it went well, didn't it?"*
Hayley:	*"Yeah."*
Emma:	*"I wasn't that nervous but I got it wrong once so I was sort of a bit nervous to do it the next time."*
Miss Morgan:	*"but you know how many times I got it wrong!"*
Emma:	[laughs] *"Yeah!"*

Emma's comment highlighted the importance of mastery experiences. She had only 'got it wrong' once during the lesson but this had a slight negative impact on her self-efficacy. Interestingly, prior to the performance, Hayley felt that she would only feel comfortable to improvise for one beat of the solo improvisation section. However, having mastered this in the performance, she realised that she would be capable of performing a more complex, extended rhythm next time.

Using suggestions of improvisation activities from Hickey et al. (2016), my teaching focused on the importance of leadership skills. This was broken into the smaller components of eye contact and body language. Various leadership exercises led to a conversation about how to lead and about the importance of trust within the group. I set the group a challenge: free, group-improvisation without talking, using a picture as a stimulus. The pupils remarked on the success of the activity:

Emma:	*"That was fun! When I saw the photo I knew what I was going to be – I thought I was the wind because I was like this* [demonstrates on drum] *and I had to listen and then when I saw Josie doing* [demonstrates gently drumming her fingers on the drum skin]*, it was sort of like rain. Kate was obviously doing the lightening* [demonstrates clapping]*. The beginning was a lot more tense."*
Abigail:	*"The beginning was like the start of the storm."*
Emma:	*"There were so many different layers of different tunes and different beats and stuff. It just made it really good!"*
Miss Morgan:	*"Were you responding to each other at all?"*
Gabby:	*"At the end, we had to look at each other."*

Josie:	*"When everyone started clapping, it's like that was the sound that told us it was going to end; we knew something was changing."*
Emma:	*"I started to make it quieter and then Kate was nodding, and then we came up with the beat at the end."*
Kate:	*"When Gabby was clapping at the start, I thought it was a really good idea."*
Annie:	[sounding very fond of the piece] *"I liked it! At the start, it was as if it was your bit; the bit that you do, instead of other people."*
Emma:	*"It's definitely been my favourite thing we've done so far. It was really difficult and I really liked it – not talking as much [meant] we had to connect. It was cool that we all found a different 'beat' for each picture."*

The group had been allowed to discuss the structure and musical content of other free-improvisation tasks and so had already practised the necessary skills. Had the activity been set earlier in the research, it is doubtful that students' responses would have been so optimistic. The scaffolding ensured that the students were capable of connecting musically rather than verbally and their positive comments confirmed that the task provided a suitable level of challenge.

Vicarious experiences

Emma was keen to lead the changes between sections of 'In the Jungle' and asked for advice about the best way to do so. This led to a discussion about verbal leadership and Emma practised leading the group. After struggling several times to shout 'bridge' in a suitable place, Emma corrected herself. Upon witnessing this, Kate and Abigail both volunteered to lead the group. In the performance, all students were keen to lead, even Hayley and Josie who had not practised.

Rhythmic imitation proved useful for introducing the concepts of musical response, listening and leadership skills, to which Hickey et al. (2016) refer. Following a demonstration of each activity, Kate, Abigail and Emma volunteered to lead.

Miss Morgan:	*"How did it feel when you were leading those?"*
Emma:	*"I felt powerful!"*

Kate:	*"I felt a bit nervous because everyone was watching me but I was*
	quite excited because everyone was copying what I was doing and,
	because it's a safe space, it feels a lot better than it would have done
	if I was doing it with a load of random people."

When we repeated the game in the third lesson, Hayley, who had previously been reluctant to lead, volunteered to go first. It was likely that, having observed Kate and Emma succeed at the same activity, she compared her skills with her peers' and, on reflection, realised that she was capable. Therefore, in relation to the task, her self-efficacy had increased. Bandura's 'Social Cognitive Theory' suggests that people will more willingly put themselves under pressure if it is for a short amount of time. Gabby and Josie opted to lead though they chose to drum very few rhythms before passing leadership to the next student. Bandura (1994, p.76) describes how 'using graduated time' can be used to develop 'coping efficacy'. Usually, in a teacher-led situation, the time for which a student is under pressure is determined by the teacher. However, this approach gave the children control to choose the amount of time for which they felt comfortable leading. The example above also draws attention to the value of creating a safe space.

Social persuasion

Bandura draws attention to the influences of 'social persuasion' on self-efficacy. Having one's thoughts validated contributes to social persuasion. During one lesson, Gabby invented a new game based on creating polyrhythm through structured improvisation. It was important that the group tried the game to increase Gabby's self-efficacy, though I subtly adapted her version to increase the likelihood of mastery experiences. It was gratifying for Gabby that the game was successful and that, in response, Emma enthusiastically commented, "I think that worked!"

Prior to the formal performance, the group ran through the piece twice. Both renditions were flawless and the students seemed happy with the product. Before heading to the classroom to perform the piece to the class, I explained to the group how fantastic they had been to work with and how pleased I was with everyone's progress. I mentioned that it did not matter if something did not go quite as rehearsed. I showed the students the photo stimulus for the free-improvisation before they headed to the classroom for the performance and there was a chatter of excitement on their way through the corridor. Positive teacher feedback helps to divert students' thoughts from any negative aspects of their performance (Bandura 1994). Both performances were applauded by peers

and praised by staff. In demonstrating rhythm and pulse, the Head of Music referenced the research group's piece as an excellent model.

Reducing stress reactions

The supportive atmosphere within the group allowed students to feel less inhibited and various comments highlighted how valuable creating the 'safe space' had been to the group's self-efficacy. For the informal performance, while the Year 7 class was performing African singing and dancing, the research group played improvisatory music, each student having the option to play a four-beat solo improvisation in addition to the 'In the Jungle' rhythm. Following the performance, I gathered thoughts from the group:

> Miss Morgan: *"How did it feel during your improvisation and afterwards?"*
>
> Abigail: *"I felt excited…well first I was quite stunned because I didn't realise we were [playing] here. I thought we were just doing it in the safe room. Then, while I was playing, I thought… 'It's not that bad!' I was happy to be part of it."*

Abigail's comment draws attention to how effective creating a safe space can be in strengthening self-efficacy. I had not considered that the performance area was outside of the 'safe space' or the effect of this on the children's self-efficacy. It was encouraging that the idea of having a safe-space had reduced Abigail's stress reactions. She was able to recognise that the musical process was the same as in the safe-space and enjoyed the performance as a result. It would be useful to consider how this may have affected the self-efficacy and performance of others in the group.

A social constructivist approach

The social constructivist, Vygotsky, terms someone or something with a higher level of cognitive development than the learner as a 'more knowledgeable other'. In a school environment, children are likely to be guided by a teacher or peers. Burnard (2000, p.22) also advises that learning is enhanced by giving students the opportunity to explain their understanding of a concept.

Providing an opportunity for students to learn from each other through discussion, I asked the students about their understanding of improvisation.

Josie:	*"So if you were…baking a cake, if you didn't have any normal sugar, you might have to use things like castor sugar. You might have to use a different type of sugar so you'd be improvising. You're not doing it exactly as it was."*
Miss Morgan:	*"Is there a rule there that you'd still have to use sugar?"*
Jess:	*"Yeah."*
Gabby:	*"You'd have to use the same amount as well."*
Miss Morgan:	*"So you can improvise by using something but we've got two rules: it needs to be a type of sugar and it has to be the right amount."*
Gabby:	*"But if you're doing music, you need to improvise for the right amount of time, 'cause you can improvise and then go back into the music."*
Kate:	*"I think improvising is when you're making something up. You're doing what you think."*
Gabby:	*"It's a bit like when we thought of the animals yesterday and we had to put them in [to the rhythm], like improvising.*
Hayley:	*"It's also testing your imagination."*

Gabby's analogy allowed the group to reflect on the rules of improvisation, which led a conversation about the differences between free improvisation - about which the students were particularly enthusiastic - and structured improvisation.

The group rhythm, 'In the Jungle,' was set to a mnemonic to make it more accessible. The teaching strategy, of playing on each syllable, corresponded with the way I had taught basic rhythms in preparation for improvisation. I repeated the rhythm three times before adding four silent beats, in which the children had the option to improvise. Students had the choice of using pre-learned rhythms in their improvisation or drumming their own alternative. This catered for those who wanted to be challenged, and those for whom playing a solo was already enough pressure. Initially, four students opted to take part but, on seeing their friends volunteer, the others followed. Despite my efforts to begin with a task suitable for all abilities, Hayley struggled at first with basic rhythms. I ensured that I gave plenty of encouragement to all students, both verbally and through body language and, after several minutes of rehearsal, all students could play the rhythm fluently. The same rhythm was used as a basis for several introductory games, one of which was an improvisation game which involved students drumming individually for one beat of the music

while others in the group kept a steady pulse. I asked the group to describe their feelings about the activity:

Emma:	*"Exciting! I look forward to when I get to play my…*
Abigail:	[interrupting] *"Yeah"*
Miss Morgan:	*"Hands up if you didn't find it so exciting."* Hayley raises her hand. *"How would you describe it, Hayley?"*
Hayley:	Hayley stammers the first part of her answer. *"I would describe it as scary 'cause you're on your own and no one else is playing with you."*
Miss Morgan:	*"Yes, there's a little moment when you're by yourself."*

Though, from a teacher's perspective, it was clear that Hayley was capable of succeeding in the improvisation activity, it is likely that she did not recognise this. Describing her self-confidence as lower than others in the group, her initial struggle with many of the activities may, to some extent, have been psychological. The discrepancy between Hayley's ability, her perceived ability and her performance aligns with McPherson and McCormick's theory about a strong correlation existing between self-efficacy and actual performance. In Hayley's case, her weak self-efficacy may have had a negative impact on her performance quality.

Using a social constructivist teaching approach had a positive effect on students' motivation throughout the research. Motivation is a seemingly effortless focus which comes most easily when a person has access to high quality experiences. Csikszentmihalyi (1997) explains how motivation, or 'flow' can be achieved through undertaking activities which require a balance of skill and challenge (p.113). Mastery experiences motivated students to continue practising the rhythms outside of music lessons and students would spontaneously play 'In the Jungle' at the start of Music lessons:

Miss Morgan:	*"Have you practised that?"*
Hayley:	*"Yeah!"*
Miss Morgan:	*"How did you practise it? Have you got a drum at home?"*
Hayley:	*"No, I practised on my piano stool!"* [Hayley laughs]
Josie:	*"I was trying to [drum 'In the Jungle'] on the school table, earlier!"*

Motivation was visible in other ways during the research. It was important for the students to be able to apply their knowledge to a variety of musical tasks and so I created a new game which featured aspects of previous activities. As I described the game, there were audible gasps from the group but I was confident that it was within their capabilities and so, to convey this, I reiterated the activities of which the group had proven they were capable. The game was noticeably more challenging:

Kate: *"That was hard. I had to practise the rhythm. I had to listen to my name being called; think about the next animal I was going to play; and think about the next person I was going to pick!"*

Miss Morgan: *"I completely agree with you – but – did we get it right?"*

Group: *"Yes!"*

The group enjoyed the game and all students were keen to share ideas about how to extend the activity. Interestingly, their ideas were for activities beyond their capabilities, demonstrating a high level of motivation within the group.

Survey results: self-efficacy and self-concept

In lesson 4, the students completed a second questionnaire. In addition to questions relating to lesson activities, the survey repeated several questions from the original. A month had passed since completing this, so it was unlikely that students would remember their previous answers. Table 3 illustrates the participants' records of their self-concept, provided by the pupils in the questionnaires at the start and end of the project.

Four students marked their self-concept as having improved. In two cases, the students' self-concept was recorded as consistent with their previous observation, and no student recorded their self-concept as having decreased.

On a scale of 1 - 4 (1 = not very good, 4 = very good), how good do you think you are at music?	
Questionnaire 1: 21/02/18	**Questionnaire 2: 21/03/18**
Josie: 2	Josie: 3
Hayley: 3	Hayley: 4
Kate: 3	Kate: 3
Emma: 3	Emma: 3
Abigail: 2	Abigail: 3
Gabby: 3	Gabby: 4

Table 3: Students' recordings of their self-concept

At three points during the study, the students were asked about their confidence when performing with friends: prior to the African drumming lessons; in lesson 4; and immediately before the formal performance. The results are shown in Table 4.

On a scale of 1 - 4 (1 = not very, 4 = very), how confident do you feel when you perform with friends?
This question was altered slightly for the second questionnaire: how confident will you feel, tomorrow, [performing with friends]?

Questionnaire 1: 21/02/18	Questionnaire 2: 21/03/18	Questionnaire 3: 22/03/18
Josie: 3	Josie: 4	Josie: 4
Hayley: 2	Hayley: 1	Hayley: 1
Kate: 3	Kate: 3	Kate: 4
Emma: 2	Emma: 3	Emma: 3
Abigail: 4	Abigail: 4	Abigail: 4
Gabby: 2	Gabby: 3	Gabby: 4

Table 4: Students' recordings of their self-confidence during group-performance

Table 4 highlights that Hayley became less confident when performing alongside her peers; Josie, Kate, Gabby and Emma increased in confidence during the project, with Gabby and Kate feeling particularly confident immediately prior to the performance; and Abigail marked herself as being very confident throughout.

Table 5 below illustrates how the students responded to a question about how confident they felt performing by themselves. Kate and Josie became more confident in their solo performances during the project but the results show that they were even more confident when surrounded by their peers. Hayley's self-confidence decreased and, similarly, Emma became less confident performing by herself (in contrast to the increase in her confidence when performing with friends). Abigail's confidence increased, matching her confidence in group-performance, and Gabby remained confident during solo-performance throughout.

On a scale of 1 - 4 (1 = not very, 4 = very), how confident [would] you feel when you perform by yourself?

Questionnaire 1: 21/02/18	Questionnaire 2: 21/03/18
Josie: 2	Josie: 3
Hayley: 2	Hayley: 1
Kate: 2	Kate: 3
Emma: 4	Emma: 2
Abigail: 3	Abigail: 4
Gabby: 4	Gabby: 4

Table 5. Students' recordings of their self-confidence during solo-performance

Data limitations

In the original questionnaire, the 6 students had responded stating they had some degree of performance confidence, as shown in Tables 4 and 5. However, they would have answered this question with regard to previous experience. A person who has strong self-efficacy for a familiar task (e.g. a violin performance) would not be in a position to know whether they would be confident to perform on an unfamiliar instrument (e.g. African drums). If a longer period of research had been conducted, it would also have been beneficial to implement a more extensive period of learning before the informal performance. Additional data, relating to confidence immediately prior to the informal performance, could then have been collected which may have allowed a more accurate comparison to be drawn between the two performances, with regard to changes in self-efficacy.

Data analysis

To analyse the collected data, in addition to classroom observation, I listened to audio recordings of the Music lessons and interviews. It was necessary to hold further conversations with several students to clarify unclear responses on the questionnaires.

Kate's self-concept remained constant but her self-efficacy for both solo and group performance increased. Gabby's self-concept increased, as did her self-efficacy for group performance. Her efficacy for solo performance remained high. Abigail's self-concept increased. Her self-efficacy for group performance remained high while her efficacy for solo performance increased. This data implies that the social constructivist approach was successful. The development of improvisation skills appeared to have positively impacted the girls' performance-efficacy.

Josie commented in her initial interview that she felt disadvantaged in practical music activities as a result of not receiving 1:1 instrumental tuition. However, playing the djembe (an instrument on which only one research participant had previously received tuition), her abilities matched those of her peers. This, in addition to the scaffolded teaching approach, may have contributed to the increase in her self-efficacy.

According to the survey results, Emma's self-concept, regarding perceived ability in Music, remained constant. Her self-efficacy for group performance increased, while her efficacy for solo

performance decreased. Emma's comment about her improvisation solo, "I got it wrong once, so I was…a bit nervous," draws attention to the fragility of self-efficacy and highlights the importance of mastery experiences. McPherson and McCormick (2006, p.332) draw on Bandura's 1997 view that 'the speed of bounce-back after difficulties and failure is an important factor' in distinguishing between those with high or low self-efficacy. To increase Emma's self-efficacy, perhaps scaffolded solo activities could have been repeated or, to ensure optimum motivation, different activities of similar challenge could have been undertaken. It is often difficult for students to recognise the value of making mistakes during learning and, for some, drawing comparisons with friends' progress means that mistakes can be difficult to accept. As a short-term solution, I modelled how this should be done by mentioning light-heartedly my own drumming mistakes.

Self-differentiating activities were valuable for students to challenge themselves as they felt appropriate. The informal performance, in which students could opt to play an improvisation of flexible duration, was a point of realisation for Hayley. Her comment, "I felt that I could have added a bit more improvisation, …not just one note," showed that she recognised that she was capable of a more complicated improvisation. This realisation may have contributed to her increase in self-concept.

Vygotsky recommends a 'More Knowledgeable Other' to provide 'modelling' of activities (Galloway, 2010, p.48). As practical-based research, this featured heavily in lessons; every drumming activity was modelled for the students and regular and immediate feedback provided. Hayley became reliant on following my drumming patterns because of her own insecurities. This presented a problem when I wanted her to play independent rhythms. To maximise her independence, once the activities were fluent, I swapped to a different rhythm, encouraging Hayley to trust her own judgement. McPherson and McCormick (2003) comment that children who practise are more likely to make critical judgements about their own success and efforts. Hayley appeared the most self-critical in the group, reporting that she regularly practised 'In the Jungle outside of lessons. Originally, I assumed that she was inspired by the lessons and was eager to share her experiences at home. However, accounting for the answers in her final questionnaire, there is a possibility that Hayley felt she needed to practise the rhythms further in order to keep pace with the steadily increasing challenges.

How do these findings inform future teaching?

McPherson and McCormick (2006, p.333) raise a question about 'what teachers might do to help prepare their students for…performances'. During my research, the provision of scaffolded activities ensured that students were well prepared, musically; the African drumming lessons provided enjoyable and exciting activities which challenged the students' musicality and creativity. Some might argue that both musical and mental preparation are of equal importance prior to performance. However, during the study, little time had been devoted to focusing on performance psychology. Quieter activities, such as envisaging the performance beforehand, require great concentration. This would have been difficult to achieve in a busy Music department but may have benefited Kate, who became distracted by friends in the formal performance and consequently made unnecessary errors. Another activity to aid psychological preparation would be to ensure that the final rehearsal takes place in the performance space, therefore providing greater similarity between rehearsals and the concert. Towards the end of the project, the Head of Music confirmed that Hayley was likely to have autism but was undiagnosed; a rehearsal in the concert space would have been particularly beneficial to her performance psychology which, in turn, could have had a positive impact on self-efficacy. Verbal leadership had been well-rehearsed, with every student leading effectively during previous lessons. Interestingly, during the final rehearsal, just prior to the formal concert, Hayley's self-doubt was affecting her performance. On the questionnaire that she completed at this time, she described her self-efficacy as very low. McPherson and McCormick (2006, p.332) allude to psychologists, Graham and Weiner's, view that measuring self-efficacy can be the most accurate prediction of student achievement. Furthermore, Bandura comments that measuring self-efficacy immediately prior to a performance is most likely to give a reliable result. In the concert, Hayley panicked and shouted 'bridge' too late for the group to transition to the next section of the piece, causing the rhythm to falter. Hayley's ability was on a par with the rest of the group but, as Bandura (1994, p.75) states, 'such inefficacious thinking' causes people to 'distress themselves and impair their level of functioning'. During the research, Hayley's self-concept increased (as shown in Table 3). However, this was counteracted by a decrease in self-efficacy. As Hayley's musical ability improved, it is possible that she became more aware of her own limitations as a musician but had higher expectations of herself as an instrumentalist. This concept, known as the Dunning-Kruger Effect exists within all areas of learning, though it is particularly visible in music and sports.

Recognizing that all students were motivated and activities were being completed successfully, I increased the level of challenge accordingly. My aim was to retain the balance of challenge and students' ability, as discussed by Csikszentmihalyi (1997) in order to maintain students' enthusiasm and focused work ethic. With regard to increasing students' self-efficacy, my teaching would have been improved if I had spent longer on each activity and included more activities at the same difficulty level. This would have allowed students to become more comfortable with new skills before progressing to more challenging tasks. In future teaching, however, I would need to consider whether this approach would be most appropriate for all students and consider whether, and how, this might affect motivation.

Conclusion

The aim of my research was to explore how the development of musical improvisation skills impacts girls' self-efficacy as performers in the Year 7, sub-Saharan African, Music classroom. With the ambition of raising students' self-efficacy, I used a social constructivist approach to develop the students' improvisation and general musicianship skills. Suggestions of an improvisation curriculum, by Hickey et al. (2016), formed the basis of a series of African drumming lessons. Further scaffolded activities stemmed from these which gave students opportunities to develop their improvisation, musicianship and knowledge. Bandura's four sources of self-efficacy were apparent: there were numerous examples of pupils demonstrating mastery and vicarious experiences, in line with Bandura's hypothesis. Similarly, social persuasion was evident from teacher and student comments; and measures were put in place to reduce negative proclivities.

The study highlighted the difference between self-concept and self-efficacy. Parajes (as cited by McPherson & McCormick, 2006, p.334) comments that 'teachers can influence their [students'] self-beliefs about their own ability if they provide them with challenging tasks and meaningful activities to master, actively support and encourage them along the way [and] teach in ways that demonstrate that they believe in their students' [abilities]'. However, my study suggests that an increase in self-concept does not necessarily guarantee an increase in self-efficacy. While the social constructivist approach appeared to positively impact all students' self-concept, the data presented more varied results regarding self-efficacy. Although five students experienced an increase in self-efficacy relating to group performance, the data presented an outlier: one student experienced an increase in self-concept but a drop in self-efficacy. For the student concerned, there is a possibility

that the level of musical challenge increased too steeply; more time could have been dedicated to the repetition of activities, or spent undertaking more tasks of similar difficulty before increasing the level of challenge. It is also possible that the student's response was influenced by the Dunning-Kruger Effect. While her self-concept increased due to her recognition of her musical development, it is possible that she felt less able to meet her increasing performance expectations. This would account for the apparent decrease in her self-efficacy. Few studies with a focus on the Dunning-Kruger Effect have been conducted within a school environment. Further research would therefore be needed to be able to hypothesise about the correlation between this and self-efficacy in the Music classroom.

Overall, the social constructivist approach has highlighted that the development of musical improvisation skills can impact girls' self-efficacy as performers. The study has also drawn attention to the link between self-concept and self-efficacy, into which further investigation is necessary.

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