Collaborative playful experimentation in higher education: a group ear playing study

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Introduction

Music educators recognise that playing by ear is a fundamental musical skill. Playing by ear refers to the processes of playing music 'without the aid of notation, without the visual stimulus of watching a live instrumental model, without verbal hints such as solfege' (Musco, 2010, p. 49) and, in this paper in particular, to playing back from recordings. Mainwaring (1951) and Priest (1985, 1989) have stressed that playing by ear contributes to the development of musical literacy and creative musicianship. McPherson (1995) has shown that playing by ear supported the development of upper primary and high school western classical instrumentalists' improvising, performing rehearsed music, playing from memory and sight-reading skills. Green's study (2008) highlighted that listening to and copying recordings by ear within a classroom context developed high school students' listening skills, critical musicianship and changed their perceptions of unfamiliar music repertoire, especially classical music. Instrumental teachers have also reported that when playing by ear from recordings was utilised as a regular component of one-to-one instrumental lessons, with learners from Grades One to Eight, the learners became more autonomous and confident in instrumental playing, they exhibited a greater sense of enjoyment during the lessons, they listened to the music with expectation and more awareness of dynamics and phrasing and they began to improvise once they had got going with finding the riffs (Varvarigou, 2014).

Copying music by ear from recordings is a common learning practice amongst jazz musicians (Johansen, 2013) and so-called 'vernacular' (O'Flynn, 2006) musicians, i.e. popular, folk, and traditional musicians (Green, 2001; Lilliestam, 1996). Firstly, through listening to recorded music these musicians source repertoire for their performances. Secondly, through listening and copying the music by ear, the musicians familiarise themselves with the musical genre: its melodic, rhythmic and structural formulae, and the recorded models that they wish

to emulate. Lilliestam (1996, p. 204) explains that vernacular musicians learn whole songs by ear, with riffs, solo phrases, chord sequences and rhythms as 'building blocks that can be used in various contexts'. They then use these 'building blocks' to alternate between an accurate imitation of a memorised piece and a freer rendition of this piece by omitting notes or changing the rhythmic patterns in melodies, by adding ornaments, changing modes or keys, changing dynamics or even the structure of the piece, and by shortening or prolonging phrases by adding new material. Revisiting material and changing it in a process of 'messing around' offers these musicians the opportunity to develop aural awareness and a creative attitude towards making and using mistakes (Kenny & Gellrich, 2002).

Playing by ear and improvisation in Higher Education

Woody and Lehmann (2010) explored the differences in ear playing ability between twenty-four undergraduate music majors. Some were identified as formal classical musicians with vernacular music experience (i.e. playing songs from recordings, playing chord progressions on the piano, collaborating in groups to 'work up a song' (p. 111), improvising and composing music, 'mess[ing] around', improvising in a group, improvising solos to recorded accompaniments and composing original music) and some as classical musicians with no vernacular music experience. All musicians were asked to listen and copy (by singing back and playing back on instruments) two melodies that were equivalent in length, compositional makeup and technical difficulty. The findings showed that the musicians with vernacular experience outperformed the formal musicians with no such experience in both tasks, and that there was a strong association between musicians' performance in the ear playing tasks and their prior experience. Whilst musicians with vernacular experience had engaged in a variety of collaborative, exploratory and creative music-making throughout their instrumental tuition, musicians with no vernacular experience had limited or non-existent prior exposure to such creative musical activities during their musical development. The

authors concluded that playing by ear is a foundational musical skill so closely linked with improvising and composing/ arranging and also a skill that can promote lifelong music participation that it should not be absent from music education curricula, both in one-to-one instrumental settings and in group settings.

Exploring how western classical musicians could develop their aural, improvisatory and creative musicianship skills through playing by ear is an area that has recently received noteworthy attention within Higher Education. Ilomäki (2011) advocates that ear playing and the 'reproductive nature of aural skills' (p. 26) allows HE students to focus not only on melody and rhythm – the traditional foci of aural training - but also on harmony and other elements of music such as tessitura and register, timbre, texture, tempo, dynamics and articulation. This argument is supported by Reitan (2015) who adds that a narrow approach to aural skills training does not develop the musical ear that the musicians need in professional performance practice. Ilomäki (2011) also reflects on the close links between playing by ear and elements of improvisation: the musicians who engage in playing by ear listen for and explore harmonic or melodic outlines as opposed to single pitches. Being immersed into this sonic exploration promotes musical risk-taking often experienced with a sense of flow (Czikszentmihalyi & Rich, 1998). According to Kenny and Gellrich (2002, p. 120) both risk-taking and a sense of flow 'hold the key to achieving optimal levels of musical communication'. Lastly, Ilomäki articulated a second key role that playing by ear can offer in aural training curricula, namely that it encourages and acknowledges the learners' personal musical contribution. The twelve pianists in her study (2011, 2013b) listened to and discussed recorded musical examples together and then individually transcribed and played by ear some elements of the pieces, such as the outer voices or their harmonic structure; they also harmonised folk songs and brought pieces in popular styles into the classroom. Ilomäki thus identified playing by ear as significant in contributing to the pianists' development of improvisation, aural and social interactions skills.

Benedek (2015) used playing by ear as part of an HE programme that explored improvisation as a tool in teaching harmony. The students in her study recognized that aural training and learning by ear in both classical and jazz styles were beneficial and motivating elements of the programme that scaffolded their learning of harmony.

In brief, the studies presented in this section and other developmental initiatives such as the Erasmus Intensive programme *Improvisation in European Higher Music Education: Improving Artistic Development and Professional Integration* (Prchal, 2013), signify a recognised need for integrating playing by ear and improvisation into the curriculum of western classical performers. As reported in these studies playing by ear encourages risk-taking, and facilitates a sense of flow and musical communication, which support the development of skills such as listening, improvisation and creative musicianship.

Learning strategies in ear-playing from recordings

The term 'strategy' is used in this article to describe a set of responses to copying music by ear from recordings that developed as a result of the learners gaining greater experience of attempting the task through practice and through observing others engage in the task (Varvarigou & Green, 2014). This definition is in line with Oxford's (1990, p. 8) conception of learning strategies in the context of language learning as the 'operations employed by the learner to aid the acquisition, storage, retrieval, and use of information'. Blix (2013) analysed students' strategies on aural learning in HE using the lens of Oxford's sexpartite model as a starting point, then adapted and developed. For Blix (2013, p. 98) 'learning strategies' refer to 'the thoughts and actions that students undertake to achieve a specific learning goal' and she identified seven such strategies during ear training in HE. *Cognitive strategies* relate to analysing musical sounds – 'chord names, musical form, rhythm structures and scale degrees' (2013, p. 108), focusing on intonation and the thought process that led to improvisation. *Auditory strategies* revolve around the ways that the learners 'strategically approach music by

listening' and the actions that they take when dealing with an aural task. *Metacognitive strategies* refer to strategies identified by the students as salient in order for them to improve their practice and performance of aural tasks. *Memory strategies* focus on ways of memorising music. *Social strategies* describe ways that collaborative interactions and experimentation support aural training. *Compensatory strategies* refer to strategies such as guessing, which is often adopted by learners to enable them to 'compensate for limitations in knowledge' (p. 111). Finally, *affective strategies* describe the ways that the students 'project positive feelings of musical flow or actively using music one likes in ear training practice' (p. 111). Affective strategies are important because they bring to the surface 'positive experiences with musical achievement', as opposed to negative experiences such as 'stress connected to tests, other students' opinion and own musicality' (p.111). Blix (2013) argues that positive experiences with musical achievement support the acquisition of a good ear.

How to play by ear from recordings is, unfortunately, not a skill that classically trained musicians are exposed to from the beginning of their instrumental tuition. The strategies that young instrumentalists adopt when they are asked to tackle the task are predominantly cognitive and involve limited or no exploratory playing and risk taking. Two studies by McPherson support this claim. The first study (McPherson, 1997) was undertaken with western classical high school instrumentalists (trumpeters and clarinettists, aged twelve to eighteen). The findings in relation to playing by ear from taped tests revealed that the learners reported adopting three learning strategies: (i) a 'visual' approach characterised by thinking of the direction of the melody, independent of their instrument[i]; (ii) chanting the rhythm or singing the melody, again independent of the instrument, whilst deciding what the pitches were[ii]; and (iii) a 'kinaesthetic' approach where some learners tried to think how the notes they heard might be related to fingerings on their instrument[iii]. In a later study with 157 less experienced western classical musicians aged seven to nine[iv], McPherson (2005) identified two additional learning strategies[v]: (iv) fingering through 'a rough contour of the

actual sound of the melody' whilst chanting the rhythm or pitch, which was termed '*Kinaesthetic: Mental strategy 4'* (2005, p. 23); and (v) coordinating ear and hand by playing along with the recording or in the gaps between performances ('*Musical: Mental strategy 5',* 2005, p. 23*)*. The results from both studies suggested that better players combined kinaesthetic and musical strategies such as playing along with the recording or in the gaps between performances very early in their development and these players went on to achieve at the highest level.

However, a study by Varvarigou and Green (2014) indicated that when western classical instrumentalists (most of them at a beginner or intermediate level) were encouraged to play by ear from recordings during their one-to-one lessons whilst their teacher stepped back and allowed the student time to work out the task for themselves, they used a variety of strategies akin to the ones adopted by vernacular musicians. These included listening and playing along with the recordings, listening for the 'whole' (a 'concept-oriented' mode) before tackling details (a 'detail-oriented' mode) (also see Johansen, 2013), and some students engaged in spontaneous and creative exploration of musical ideas.

Contrary to previous studies on playing by ear where the learners engaged in the task alone or with some input from their instrumental teacher, this study explored the strategies adopted during Group Ear Playing (GEP). This paper specifically focuses on the strategies used during improvisation and collaborative playful experimentation. The participant students (n=46; 63% n=29/46 Females and n=17/46 Males) had a Grade Eight[vi] or equivalent in their principal instrument, which is a pre-requisite for entrance to the Music Department where the study took place. The programme was part of a Practical Musicianship module. The students were randomly placed in eight groups of maximum six or seven students with at least one pianist in each group. The students could choose between their principal instrument, or their second or other instruments. The students played: violin, cello, double bass, flute, clarinet, oboe, trumpet, saxophone, piano, marimba, xylophone, glockenspiel,

acoustic guitar, electric guitar, bass, recorder and euphonium. The majority (28/46, 61%) chose their principal instrument and the singers (14/46, 30%) played the piano, xylophone, glockenspiel or their second instrument (also see Varvarigou, forthcoming). The learning strategies adopted by these musicians were analysed against the framework of the seven learning strategies in aural training developed by Blix (2013).

GEP Procedure

Each group engaged in GEP for five weeks. The audio material that was used can be found in the book 'Hear, Listen, Play' (Green, 2014). The material was uploaded on Blackboard, the university's Virtual Learning Environment, and all students had access to it before the sessions. For the first two stages of the programme (weeks one to three) the students were asked to copy *Link Up*, a pop-funk piece and one of six classical pieces by ear. For the third stage of the programme each group could select a piece of their choice and, by following the same approach as in stages one and two, copy it by ear. Similarly to the Varvarigou and Green (2014) study, the tutor explained to the students that the aim of the activity was to create freer renditions rather accurate imitations of the original pieces copied. The students were hence encouraged to experiment with the musical material by omitting notes or changing the dynamics, tempo, rhythm and harmony as long as they kept the flow of the music. What is more, the role of the tutor was to facilitate the module and not to 'teach' playing by ear: the tutor organised the groups, provided the audio material for the first two stages of the programme, explained the task, stood back and observed a small part of each session but then disappeared for forty minutes and returned at the end of the session to informally record each group performance. These informal recordings were taken so that each group could track their progress over the five weeks of the programme.

Data collection and analysis processes

Data were collected through reflective logs that each student filled in after each session. The logs were identified as a useful documental form of collecting detailed descriptions of individual and GEP processes (also suggested by Johnston, 2013). At the end of the programme each student filled in a short feedback form that sought their level of agreement (from strongly disagree to strongly agree) with a list of statements regarding

- prior experience of group playing by ear
- the impact of the programme on their confidence about playing by ear; about improvising; their overall confidence as musicians and,
- the extent to which the programme improved their musical skills, in general.

They were also asked to respond to the open questions 'I most enjoyed…', 'I least enjoyed…' and 'Overall, what if anything (musical or other skills), do you think you might have learnt from doing the ear-playing task'. Space was also available for the students to add any further comments. The students could choose not to fill in the feedback form. If they chose to fill it in, they could indicate whether the information provided could be used for research and programme development. Finally, four students (two males and two females) were invited for an interview after they completed the module. Three out of the four students selected received high marks for GEP but had reported in their forms that they had never engaged in group playing by ear before. The fourth student indicated in her logs and feedback form that she found the programme 'out of her comfort zone' and non-enjoyable, but valuable for the development of musicianship skills. Each participant gave informed consent before the interview commenced. The interviews were audio-recorded and transcribed verbatim for analysis.

The analysis of the data focused on thematic discovery from the transcripts and was achieved through open, axial and selective coding (Creswell, 2007). During open coding categories were identified by a constant examination of the transcripts (236 sources, including 194 individual reflective logs, 46 feedback forms and four interview transcripts)

and by repeated codings and comparisons. Axial coding, where blocks of categories grouped together to describe core themes related to GEP, followed open coding. Lastly, selective coding allowed for key concepts that were closely entwined to emerge and validate the interrelationship of categories in the analysis. This process of analysis allowed the researcher to shift concepts around until relations of the categories with each other and with the collective dataset were achieved.

From Playing by Ear to Improvising within the group

At an individual level the students adopted various learning strategies during the process of creating improvised sections including adding ornaments based on scales, changing the rhythm *'for variety'*, incorporating other melodies, missing notes out, and experimenting with the key and instrumental techniques, for example plucking and strumming for guitarists or broken chords for keyboard players. Listening to each other was a key component of the process of improvising.

Group improvisation was instigated by the group members to *'make the pieces sound more interesting'*. The musicians in the different groups reported two routes to progressing from GEP to group improvisation (See Figure 1). What is particularly interesting is that three groups used both routes whilst creatively experimenting with the pieces. To begin with, four groups started improvising by altering the structure of the pieces and through switching different melodic lines around, what appeared to be a 'cognitive' strategy to group improvisation. Jonathan explained during his final log how altering the pieces' structure was part of the group's creative experimentation with the given material, which made the pieces their own:

> *'As we knew our parts we decided to improvise our piece to make it sound different. We improvised the structure making it into ternary form. We started with the bass on its own, then added piano chords. I then came in with the melody A, then we all dropped out*

and bass B and melody B played once they finished A came in again. In Link Up we came in one by one then split off into our groups in the form of ABA, we all then improvised on our parts' (Jonathan, clarinet, Log Five).

An alternative, 'auditory', route to group improvisation, which explored harmonising, was reportedly taken by two groups. Lucy, a pianist described how during the first week of GEP the group members used improvisation in order not only to play together but also to complement each other:

'After we played through the piece a few times, we then started to play around with our own parts, improvising our melodic lines, whilst still harmonising our parts and keeping in time with each other. This gave the piece a feeling of freedom and more of a swing to it…It was important to listen to each others' different parts, so we could keep time with each other and know when to come in with our own parts. And also to make sure every part could be heard individually during the piece, whilst keeping together and complementing each other' (Lucy, piano, Log One).

Freya offered an interesting narrative about how her improvised melody was included in the performance of the piece although it harmonically sounded *'quite dissonant'*. Having her 'creative mistake' accepted by the group increased Freya's confidence:

'…when I played my part with the bass and piano it seemed to be quite dissonant and to not fit together but we decided that it sounded good that way. We then did our own structure and went onto improvising. My improvising got better as the time and my confidence went on and by the end I was much more fluent and improvising singly and also with fitting with the other members of our group' (Freya, recorder, Log Three).

These two routes, the 'cognitive' and the 'auditory', enabled the groups to progress from making alterations and additions to the melodies and the structures of the pieces played, to adding different sections to these pieces. Ross described how joining together the different sections of a piece led the group to improvise whilst Nick emphasised that by adding different sections to the pieces his group made them their own:

- *'This week we were playing Concerning Hobbits' with two new members to the group. In the short practice period we had to try and communicate the structure and individual parts. This was very hard to do in such a short time, which meant that when we went to record it, part of it was improvised adding a whole new element of playing by ear' (Ross, acoustic guitar, Log Four).*
- *'This week we did the Mozart [Eine Kleine Nachtmusik] piece and it was a lot more challenging due to more texture. I mainly took the tune with Kate. It took a while to work out the notes but turned out fine. We made it our own with a little intro and recap at the end' (Nick, flute, Log Two).*

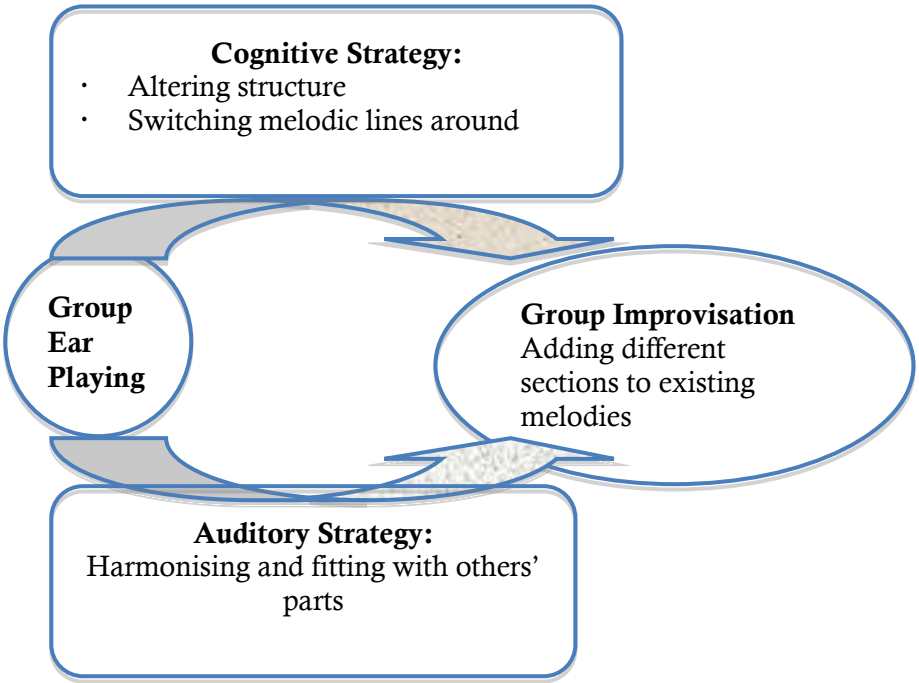

Figure 1. From Group Ear Playing to Group Improvisation.

Overall, responses from the 46 feedback forms that were collected indicated that GEP helped the students develop strategies on how to learn to play by ear; it made them more confident about improvising and more confident musicians. Thirty-seven students (80%) reported that the programme improved their musical skills in general and 72% (33/46) acknowledged that the programme helped them develop improvisation strategies at an individual level and as a collective. For example Max, a piano player, stressed that through GEP he '*learnt to improvise in a more classical style, which put [him] out of [his] comfort zone but has also helped [him] get a better understanding of certain classical structures*'. Whilst Max talked about improvising in different styles, Dylan, a euphonium player, highlighted that GEP helped him engage in improvisation by using her theory skills.

> *'I think [GEP] helped with my improvisation skills, regarding improvising on a piece already learnt. I also think it helped me to be able to identify the chords within a piece'*

Above all, several western classical musicians reported finding both playing by ear and improvising enjoyable, not very difficult and not very scary. Megan, a violin player who felt *'like a fish out of water'* stressed that playing by ear and improvising should start *'at the earliest stage [of one's tuition] possible'*. Miriam, also a violin player, emphasised that she would recommend GEP to everyone:

> *'Improvising is less scary than I have found it previously, which is a relief, and it is more fun. Though I do find that I don't necessarily remember my previous improvisation so it's all a bit different each time. I would recommend this type of practice to everyone – no matter ability or confident level'.*

Discussion

The participants in this GEP programme reported adopting a variety of learning strategies when they copied music by ear in their groups and particularly when they experimented with

the musical material and improvised together. These strategies enhance our understanding of how playing by ear from recordings within a group setting could promote collaborative and playful exploration and experimentation and develop western classical musicians' aural and improvisatory skills, enabling a lifelong creative practitioner.

To begin with, listening to and copying music by ear in a group through peer support facilitated the parallel development of aural and social skills, such as communication within a group and hearing others' opinions when working together. It also enhanced the students' social awareness on how to contribute to group music making. Three musicians recognized that GEP helped them develop leadership skills, which they identified as being decisive about group choices, and motivating the other group members by providing encouragement and guidance. These skills need to be utilised by all musicians during ensemble activity. Ilomäki (2011; 2013) reported similar findings on the development in interpersonal skills when playing by ear was used for aural skills development with pianists. Davidson and King (2004, p. 105) emphasise that 'within ensembles, it is vital that each person not only exploit his or her own individual skills, but to think beyond them for the sake of the group's musical and interpersonal cohesion' (also see Hallam & Gaunt, 2012). Social interaction is part of the skill of being a musician; playing by ear within a group seems to have contributed to the development of individual aural skills but also to have enabled groups with diverse skills to learn how to work together.

Secondly, it is not surprising that the musicians in this study adopted more sophisticated and varied strategies to copying music by ear compared to the participants in the studies undertaken by McPherson (1997, 2005) and Varvarigou and Green (2014). Apart from having an advantage in technical competence, these students engaged in problem solving as a collective and through playful experimentation, which allowed them to take risks within a safe environment. The salience of group problem solving in promoting learning has been recognised by Bueher (2000) who highlights that aural skills education leaves the

student to solve aural tasks in isolation, when they could benefit from collaborative learning and the reciprocal sharing of views. This GEP programme not only encouraged group problem solving but also gave the musicians autonomy and independence to take decisions as a group about the creative uses of their 'mistakes' (Kenny & Gellrich, 2002).

Thirdly, whilst GEP had copying music by ear from recordings as its main focus, it nonetheless supported the growth of a range of musical skills such as improvising, playing from memory, and performing rehearsed music (also see McPherson, 1995; McPherson et al., 1997). GEP also drew attention to how important playing by ear was as a prerequisite to being able to improvise. In our rapidly changing cultural world musicians are expected to respond to new types of professional demands by having an awareness of stylistic diversity across different musical genres, being confident improvisers (Prchal, 2013; Ramael, 2015), playing by ear and engaging in creative activities in education and health settings (Creech, Hallam, Varvarigou & McQueen, 2014; Smilde, 2009).

An example that demonstrates the versatility and creativity that orchestral musicians need to possess in order to respond to the ever-changing challenges of the music profession is the audition process for the BOHO Players orchestra, introduced by its director David Ramael. During the audition process the musicians were not only evaluated on technical competence of rehearsed music but also on 'creative spontaneity' (Ramael, 2015, p. 9). Improvisation featured as a central ingredient of the process where the candidates were asked to play a short improvisation after viewing a visual work of art. The director used improvisation as a way to identify 'open-minded, adventurous classical musicians' and to evaluate their 'spur-of-the-moment music making and their listening habits' (p. 10). Unsurprisingly, improvisation was the least preferred element of the entire audition and 60% of the musicians reported not receiving training in improvisation during their studies. The nature of this changing professional landscape therefore provides a powerful rationale for playing by ear to be

introduced early in instrumentalists' education and treated by teachers and learners alike as a skill worthwhile advancing.

In summary, group ear playing could be used within HE institutions as one way of initiating western classical musicians into playful experimentation and improvisation. Two key features of the programme in focus have facilitated a smooth introduction. Firstly, the initial material provided comprised real musical examples and from a variety of musical genres as opposed to short exercises often utilised in aural skills, harmony and improvisation skills' classes. The importance of using real music for aural training and improvisation has also been recognised by Benedek (2015) and Reitan (2015). Real music acted as a scaffold for experimentation, which inspired the groups to alter the pieces' structure, switch different melodic lines around amongst the group members, harmonise against the different riffs or melodies and add different sections to the piece. These processes were supported by a variety of learning strategies used when applying playing by ear. Secondly, the students were given full autonomy in choice of instrument, music repertoire for the third stage and the process of engaging with others. The students reported that having autonomy played a critical role in motivating them to engage in the playing by ear tasks and in experimenting with the musical material alone and with others.

The challenges that the students of this GEP programme experienced, which might also appear to be challenges is other GEP programmes in HE, were related to having a self-conscious feeling about engaging in collaborative experimentation and improvisation, not remembering the pieces in between the sessions, getting the group to focus and putting together different transposing instruments. Facilitating peer learning and interaction, encouraging risk-taking and focusing on the flow of the music instead of an accurate imitation of the piece copied has reportedly helped with overcoming these challenges.

Ways forward

Ilomäki (2013a, p. 118) emphasises that 'to meet the challenges of future musicianship the students should learn to develop their aural awareness themselves … [and] to share their learning process with others'. Playing by ear from recordings within groups could support the growth of both skills and should, therefore, become a regular component of ensemble activity within Higher Education as well as music education and pedagogy, composition, music history, and practical musicianship modules.

Playing by ear in small groups when embedded in history, aural, analysis and harmony training classes could extend students' comprehensive musicianship by encouraging them to identify and notate – as a group – the chords and melodies that they hear on recordings as well as the individual improvised sections. This could lead to an exploration of historical (i.e. medieval, baroque, 21st century) and cultural (i.e. European, American, Middle-eastern) styles that engages the instrumentalists in discovery learning and group problem-solving.

Within the existing programme reported in this paper, the structure of five weeks could be extended to seven or eight weeks as most students found it quite short. After passing through the three stages of copying popular, classical and free choice pieces by ear, the students could be asked to prepare, in pairs, a four- or eight-bar improvisation section related to or as part of, or inspired by the piece that they are rehearsing. This could form material towards a group composition in a selected musical genre. Compositional techniques such as inversion, rhythmic displacement, ornamentation, counterpoint and repetition, to mention a few, would then also be explored.

Group ear playing with its emphasis on peer learning and interaction, risk-taking, and making and using mistakes could also create a bridge into the more experimental world of free improvisation based on literary or art stimuli, as in the case of the BOHO orchestra audition. Community musicians and music animateurs include such creative activities in their practice, so building up the experience and confidence to do them through group support and interaction would be an advantage when seeking employment in school and community

settings. Furthermore, copying a melody by ear from recordings or YouTube and harmonising along melodies are extremely useful skills for musicians who work with older learners. Research suggests the older people have preference for music that dates from early periods in their lives (Creech, Hallam, Varvarigou, & McQueen, 2014), so musicians who can effectively listen to, copy, memorise and arrange music from other genres and periods would be more employable and successful entrepreneurs. Above all, group ear playing when adopted regularly as part of ensemble activity could not only support creativity, interpersonal and improvisation skills, enabling a lifelong creative practitioner but essentially enhance lifelong enjoyment in group music making.

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[i] The approach was later termed '*Conceptual: Mental strategy 1' (McPherson, 2005, 22)*.
[ii] The approach was later termed '*Conceptual: Mental strategy 2'* (McPherson, 2005, p. 22).
[iii] The approach was later termed '*Kinaesthetic: Mental strategy 3*' (McPherson, 2005, p. 23).
[iv] The participants in this study played the clarinet, trumpet, flute, saxophone, baritone and French horn, drums and percussion, trombone, and tuba (2005, p. 8).
[v] Here, the children were told the starting note of a melody they heard performed four times from a CD recording. The task required the children to perform the piece twice exactly as sounded on the recording (2005, p. 12).
[vi] In the UK, the music exam boards tend to adopt a system of eight grades, with Grade 8 being the most advanced and a typical standard for admission of specialist music students in Higher education.