

Informal learning: A lived experience in a university musicianship class

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This study investigates how a class of university music students who engaged in a 'lived' experience of informal learning adopted methods and strategies to complete a self-learning 'aural copying' performance assignment in a musicianship class in Hong Kong. Data were collected from observations of the performances and the students' written reflections. The findings showed that they used the methods of intensive listening, using technology, and collaborative learning, as well as the strategies of putting their knowledge of music theory into practice, substitution of instruments, and learning a new instrument in order to emulate the sounds of various instruments. They found this an interesting task that gave them opportunities to improve their musicianship, and they became more sensitive to different voice parts.

Introduction

The contradiction that many young people love music yet 'school music' has not seemed to be either successful or welcoming has attracted the attention of music educators for the last decade. Hargreaves and Marshall (2003) state that 'a good deal of lower secondary school music is unimaginative, out of touch with pupils' interests and unsuccessful' (p. 265), while Dillon (2004) goes so far as to claim that 'nobody hates music but an awful lot of people hate school music' (p. 17). The situation in learning the Arts at school has been the same in Hong Kong, as revealed in McPherson's report (2005). It indicates that students' enjoyment of Music and the Visual Arts at school declines over the years of schooling. Green (2002) alerted music educators to the fact that although formal music education with more varied content had been provided in schools, 'it has not managed to stem the ebbing tide of involvement in music-making' (p. 5), especially when people enter their adult lives. At the same time, however, those people who learn music informally outside school, such as popular musicians, enjoy participating actively in music: they have high levels of commitment to and enjoyment of music-making, together with a respectful attitude towards a wide range of music (Green, 2002; 2005). Green (2008) concluded her research with a discussion of popular musicians' informal learning practices and hypothesized that 'such learning practices [informal learning] could possibly enhance motivation and increase a range of musical skills, in ways that were largely missing from pedagogy and from the school curriculum' (p. 4).

Informal music learning in the classroom

In response to this 'missing' pedagogy in schools, Green (2008) launched an empirical study in which she adopted and adapted the informal music learning-practices of young popular

musicians for use in the music classroom to complement the more formal teaching methods. The aim of her study, in which 21 secondary schools with over 1,500 pupils participated, was to apply the popular musicians' informal music learning practices within the formal school classroom in order to evaluate the extent to which this was workable and beneficial. The young popular musicians' learning-practices, according to Green's definition, have five fundamental principles: (1) pupils choosing music for themselves; (2) copying recording by ear; (3) self-directed and peer-directed learning with friends; (4) learning 'real-world' pieces of music in a holistic way, and (5) integrated listening, performing, improvising and composing throughout the learning process. In this sense, through listening and playing by ear in the learning process, the pupils were asked 'to emulate as closely as possible the real-life learning practices of young, beginner popular musicians' (*ibid.*, p. 25). This pedagogical idea has had a far-reaching impact upon the music education practices in schools in England (Gower, 2012; Hallam et al., 2008; Hallam, Creech & McQueen, 2016; Wright & Kanellopoulos, 2010; Sexton, 2012), and 'has become a significant theme in English music education' (Finney & Philpott, 2010, p. 7). Furthermore, this wave of interest in using informal learning-practices as a new music classroom pedagogy has spread to Wales, Europe, North America, Australia and even Asia (see Dyndahl & Nielsen, 2014; Evans, Beauchamp & John, 2015; Feichas, 2010; Ho & Chua, 2013; Jeanneret, 2010; Karlsen, 2010; O'Neill & Besspflug, 2011; Wright, 2011).

Music teacher education

As a result, informal learning-practices have also offered new insights and impetus to the education of music teachers in England, North and South America and Europe (Cain, 2013; Davis & Blair, 2011; Finney & Philpott, 2010; Kastner, 2014; Narita, 2015; Varvarigou, 2014; Williams, 2014; Wright & Kanellopoulos, 2010). In England, Varvarigou's (2014) Ear-Playing project for one-to-one instrumental lessons involving 54 teachers and 340 students aimed to explore students' and teachers' responses to the structured approach to ear-playing developed by Green. The teachers used various strategies in helping their students to learn, such as encouraging students to listen, singing along with or without the recording, giving verbal feedback and asking questions. Positive feedback was given by the teachers, as they could explore a new pedagogy; they also found that the students' confidence in playing had increased and that they showed greater enjoyment during the lesson. In their initial teaching education programme in England, Finney and Philpott (2010) investigated the feasibility of developing a 'meta-pedagogy' in the process of student teachers' learning how to teach. This meta-pedagogy has two characteristics: first, providing student teachers with a 'live' informal learning experience in music gives them a 'real', hands-on experience of learning in an informal way in developing their own musicianship during the course; secondly, they are subsequently able to 'excavate' these 'live' informal moments of musical learning by theorizing and interrogating their experience. Cain (2013) made a comparison between formal and informal pedagogy as proposed by Green (2008) by investigating an in-service secondary teacher's teaching in England. According to the researcher, the results showed that both 'formal' and 'informal' methods actually 'have much in common' (p. 89), including listening to recordings and using technology.

At the University of South Florida in the USA, a pedagogical change was made by including aspects of informal teaching and learning in student teachers' pedagogical curriculum (Williams, 2014). In another study conducted on a secondary general music methods course in America, Davis and Blair (2011), basing their methodology on Green's (2002) work, engaged student teachers in a hands-on experience of covering a popular song aurally by listening to it repeatedly. In order to enable them to 'operate within a familiar comfort zone' (p. 132), after the initial learning stage the researcher guided them to do the music analysis systematically as a way of 'breaking down the barriers' (p. 130). From their classroom discussions and online journaling, it was found that there had been a change in the students' value systems, in that they had come to value popular music and the use of informal music processes. Kastner (2014) investigated the experience of four in-service teachers in implementing informal learning-practices in their music lessons in a professional development community (PDC). After 'trying-out' the informal music activities they had developed on the PDC course, the teachers started to appreciate and value this new classroom pedagogy. In a free improvisation course designed as a part of the teacher education programme at two Greek universities, the student teachers were involved in small and whole group improvisations based on idea and stimuli, e.g., the work of John Paynter (Wright & Kanellopoulos, 2010). Sometimes children were included as participants in the improvisation process as well. Their results suggested that improvisation might be regarded as an informal type of music education and to 'contribute positively to the pedagogic preparation of teachers' (p. 81). In Brazil, Narita (2015) also adopted Green's informal pedagogy for music teachers' education, with student teachers trying out the informal learning model. In analysing the data, she developed three domains of music teaching: student teachers' practical musicianship, their use of authority, and the relationship with the learners' musical worlds; she also formulated seven pedagogic modes. An awareness of the above domains may 'enable us [music teachers] to better position ourselves, and understand our choices in the transformation of ourselves and of our realities' (p. 11).

The above research has contributed to our understanding of how to prepare and equip music teachers with informal learning methods they can use in their teaching. These informal learning practices, however, inevitably were 'learned' by the pre-service and in-service teachers in a method class, professional development course or a course linked to the pedagogy, rather than on a university music course. The exception is Green's study, in which the secondary school pupils applied the informal learning-practices to learn music as subject knowledge in their music lessons.

In light of the above, two concerns arise. When the music teachers 'learn' the informal learning-practices on a method course or teacher development course, they still may not have had the hands-on, direct acquaintance and lived experience of using this approach in their own music learning in the way the above-mentioned secondary pupils did. As Finney and Philpott (2010) point out, 'in parallel to the informal learning of pupils, learning for music teachers is most effective when it is 'lived' as opposed to being 'downloaded' (p. 11). Second, Rodriguez (2009) refers to the dilemma that music teachers face, having themselves learned music in a formal way, but now having to include informal learning-practices as the 'best-practice' in their own teaching. Finney and Philpott (2010) explain that our awareness of informal moments of learning can become deeply buried by our unconscious 'habitus' of formal music learning experience, even for some who have learned as informal pop

musicians. Yet they also state that this habitus can be changed when we have new cultural, educational and social experiences. In view of all the above concerns, the question is: can we provide our future music teachers with opportunities for a direct acquaintance and 'lived' experience of using informal learning-practices to learn music themselves so that they have the habit of learning in an informal way?

The present study

In this regard, the study referred to here investigated how a class of university music students, who engaged in a 'lived' experience of learning their music in an informal way, as the secondary school pupils did in their school music lessons in Green's (2008) research, adopted methods and strategies to complete a self-learning 'aural copying' performance assignment. The study was carried out in a musicianship course, so that the students could enjoy their hands-on music-learning and music-making moments in an informal way, rather than in a pedagogy class, in which the students may have experienced informal learning-practices as a teaching method only. This informal 'lived' learning experience was achieved through a group project which involved the students choosing one piece of music or a song and attempting to copy all the musical details of that piece solely by listening, without referring to the musical score. Finally they would perform it in front of the class in the last lesson and submit their individual written reflections.

The study involved 58 year 1 undergraduate music students in Hong Kong, the course lecturer also being the researcher of this study. It was a mixed class with students from both the Bachelor of Education and Bachelor of Arts programmes. The research project was designed to follow in Green's (2008) footsteps of adopting and adapting the informal music learning-practices of popular musicians for the music classroom, but in this study this was done in the context of a university music course. The informal learning-practices mentioned in Green's project include aural copying of a piece of music through self-regulated learning by listening to recorded music, self-learning by trial and error, and learning from/with peers, all of which are strategies commonly used by popular musicians, especially in the early stage of their learning. Some modifications of Green's approach had to be made, however, and these modifications are explained in the following paragraphs.

To complete this project, the students could choose pieces ranging from local popular songs, to a cappella pieces, to classical music, and including both vocal and instrumental music. Yet they were reminded that they should choose a piece with a variety of instrumental/vocal parts and sounds because each student had to stand for one part. Therefore, the number of students in a group depended on the piece chosen, since each part was performed by one student only. For example, in a cappella pieces, there were various vocal details, such as melody, descant, harmonies, vocal percussion and scat singing. Each student was responsible for one of these aspects. When copying popular music pieces, where there were both vocal and instrumental parts, the students were allowed to use other instruments with similar sound effects as substitutes for the original instruments. With regard to classical pieces, they were only allowed to choose a piece without any written or printed score.

Concerning the above 'requirements', these were set with the constraint that the research was carried out in a credit-bearing course. This group project was actually part

of the course assessments. As in any other courses, clear assessment requirements and descriptions had to be stated. Therefore, some 'requirements' and parameters were spelled out clearly in order to let the students know the level of attainment required of the project and the expectation of the role of each student. Furthermore, it was made clear to them that, as this was an aural *copying* project, they need not to improvise or compose anything of their own. This is where the current study deviates from Green's (2008) approach, where the last fundamental principle was to 'involve a deep integration of listening, performing, improvising and composing throughout the learning process' (p. 10). There were two reasons for this. Firstly, as there was another course, called 'creative musicking', in their first year of study, which focused entirely on improvisation and composition, care had to be taken to avoid any overlap of course content. Secondly, the present course focused on improving the students' aural awareness of various elements of music, such as melody, rhythm, timbre, harmony etc. In order to remain in line with the intended learning outcomes, therefore, a modification inevitably had to be made.

Green emphasizes the importance of students copying music which 'they have chosen *for themselves* from within their own culture' (p. 42). Therefore, not only are the learning-practices themselves important; the content of what is being copied is also a concern. From the requirements stated above, although there was indeed a boundary set for the students' choosing of their pieces of music, yet it was a boundary involving the parameters of the pieces, such as having enough musical parts for each student to copy. With regard to genre, e.g., pop, classical or folk music, all were welcomed. Before the performance, the students were asked to send the original music link to me, the teacher-researcher. This was so I could compare the original music with their performance for assessment purposes, as I may not personally have known or heard the pieces they chose before. Also, there were always different versions of a piece of music, so the link would serve as the guide for the comparison. Assessment criteria were based on their ability to work out the parts (by comparing with the original music), the standard of the performance and the degree of cooperation among them during their live performance.

Furthermore, unlike Green's (2008) study where the teachers were not completely 'absent' from the pupils' learning process, this study involved university music major students who were musically and socially mature enough to complete the project on their own as young popular musicians do. Thus, the students did the project entirely on their own and had to find ways to sort out their problems themselves. Throughout the course, I, the course lecturer as well as the researcher, did not supervise them at all. However, this was a required assignment and inevitably marks would be given. Therefore, the copying activity was not a 'self-motivated' one in nature as in a genuine informal learning situation.

Methodology

As the present study investigated the methods and strategies these students adopted to complete a self-learning 'aural copying' performance assignment, the qualitative method, which can offer 'a holistic, systemic purview, emphasizing inner workings and contexts' (Bresler & Stake, 2006, p. 299), was selected. It was able to offer in-depth, descriptive and detailed data for understanding how the students worked out their music. In this sense, as far as possible, all the data were obtained from what was going on in the research scene

(Glaser, 2002). Therefore, the data were collected through the researcher's observation of the students' final live performances, which were video-recorded, the responses of the audiences, the students' individual written reflections, as well as their choice of music work for copying. The written reflections were about their learning process, such as choice of pieces, methods of preparation for the performance, the difficulties faced, as well as their evaluation of their own performances. As a welcome addition, some of their views and perceptions of this project, which was not originally planned, were offered by them as well. As their reflections were written in English, no translation was needed. However, some minor amendments and corrections of the language were made.

The observations by the researcher during their live performances were made in order to comment on their performance, that is, how well they completed the tasks in terms of their performance level, their emulation of the original work, their cooperation on stage, spirit of participation, the feedback of the audiences, the atmosphere of this mini-concert, and these observations were used to triangulate their written reflections when needed. For example, if they mentioned in their reflections that they had learned a new instrument in order to complete the copying task, the observation of their live performance could support what they said by revealing how they managed to play their new instrument within the group and how well they were able to play it. The videos of the performances were used for repeat watching in order to assess their aural abilities in copying and the standard of their performance, and comparisons were also made with the original music to examine the accuracy of their rendition of the song.

However, most of the data presented below were drawn from the students' written reflections. This is because the data on their learning processes, such as the strategies they used to work out the musical parts, the division of labour and their working relationships were based solely on their written reflections, as the researcher did not engage in any of their practice sections. It should be pointed out that this may be a limitation of the study.

Findings and discussions

The study referred to here investigated the methods and strategies a class of university music students adopted to complete an aural copying task. After the organization of information and data reduction, six major themes emerged from the data: The methods of 'Intensive listening', 'Using technology' and 'Collaborative learning', as well as the strategies of 'Theory put into practice', 'Substitution of instruments' and 'Learning a new performance skill/instrument'. First of all, their decisions regarding the choice of piece are discussed.

Choice of work

Among the 11 groups, three groups played vocal, a cappella pieces, seven groups performed mixed vocal and instrumental pieces of popular music, and there was one pure instrumental music group. With regard to the type of music, one group chose a classical instrumental piece, two groups selected Western folk songs: 'Raindrops Keep Falling on My Head' (A Cantonese singer's version) and 'Windflowers'. The remaining seven groups chose recent Chinese or English popular songs, and one group selected a song that featured in a local cartoon film.

The group who chose the classical piece chose Gordon Jacob's *Threnody* from 'Five Pieces for Harmonica and Strings' performed by harmonica, violin, viola and cello. All four group members were specialists on the instruments they played. Unlike their classmates, who were pianists, and found it difficult to form ensemble groups, this group had few problems in doing so. However, performing a classical piece using an aural method to work out all the parts is not an easy task. The viola player mentioned the difficulties he encountered in working out all the notes:

The sound of violin and viola are similar. Moreover, the recording was not clear enough. It was not easy to recognize which notes were played by the viola (as I am the violist and I was responsible for the viola part) . . . when we practised, the violinist and I got numerous notes the same. What I did was go back and listen again . . . I listened to the recording around 50 times. (Ma E.)

The cellist confirmed that the biggest challenge was in distinguishing between the violin and viola parts. They therefore chose to work out the harmonica and cello parts first (Sa L.) The harmonica player also admitted that it was difficult to listen to the parts, as the tonal colour of the string parts was similar.

The other groups generally chose a piece which they felt most able to handle. They explained that the group chose the work according to the strengths, interests and abilities of the members of the group (Yan C.) They generally chose a familiar piece of music they found interesting so that they would find it easier to copy: 'not too difficult because the song is popular and familiar' (Wai L.) On the other hand, one group mentioned that they were more concerned about the audience's preference (Sum L.) Lastly, the fact they could choose a song they liked also became an impetus for them to learn: 'Owing to the free choice of song, our interest and willingness to listen to the song were increased. We never got bored even though we listened [to it] a million times' (Gal C.)

As the majority of the students were pianists, many of the groups found it difficult to find a suitable instrumental piece, because all the group members had a similar background. They explained that it was 'difficult to find a suitable song for us to play since all members have a similar background specializing in piano' (Vic W.) Therefore, some groups had to select an a cappella piece instead. The group who chose 'Raindrops Keep Falling on My Head' used a version sung by a Cantonese singer which did not include the banjo, since none of them could play it.

Intensive Listening

Since this was a self-learning task which did not involve any supervision by the course lecturer, the students had to develop their own learning strategies in order to complete the task. As with the pupils in Green's (2008) study and the popular musicians in their initial stage whose main method for aural copying was intensive listening in a purposive way (Green, 2002), the findings of the present study also showed that the strategy of listening over and over again was the most popular method. In the early learning stage of the popular musician, copying recordings by intensive listening is the most common and usually predominant learning-practice (Bennett, 1980; Finnegan, 2007; Green, 2002).

Listening to music as a method of learning can be divided into three levels, as specified by Green (2002): purposive, attentive and distracted listening. While listening in a purposive way means that the listening has the 'particular aim, or purpose, of learning something in order to put it to use in some way after the listening experience is over', attentive listening refers to those listening activities which do not have 'any special aim of learning something in order to be able to play, remember, compare or describe it afterward', even if one listens in as much detail as in purposive listening (Green, 2002, pp. 23–24). Therefore, the difference between the two lies in the intention rather than in the amount of music listened to. The third level is distracted listening, in which a listener listens on and off without any specific aim but purely for enjoyment or entertainment.

Having a clear aim of copying the music for the final performance, the students adopted the 'purposive listening' strategy in performing the tasks. As one student said, the most direct method was for them to 'keep listening' (Ma E.) They used phrases like 'Listening to the clip thousands of times' (Yiu L.), and 'Non-stop looping of the piece and getting the notes of the vocal part' (Yan H.) Therefore, words qualifying listening like 'many times', 'loads of times', 'a hundred times' and 'repeatedly' were found in their reflections:

- Listened to the video carefully on Youtube so many times (Sze H.)
- Heard the song loads of times (Yan W.)
- Listened about a hundred times (Win H.)

Some students offered more detailed accounts of how they did their intensive listening in order to get the details of the music and to follow the music to practice it; for example, some students also watched videos of different versions of the music on Youtube (Wai L., Yin L.), listening over and over again to choral versions, solo versions, guitar versions and midi versions in order to divide up the parts among them (Yin C.) Some listened to phrases repeatedly and practised phrase by phrase (Him L.)

The above accounts give rise to an important point. Although these were music major students who had reached a high standard of performance, they still had to listen to a clip 'thousands of times' in order to get the musical details of a particular instrumental/vocal part. This may indicate that their previous instrumental/vocal training was not helpful in training their musical ear. Somehow the formal mode of learning experienced by young musicians, as explained by Green (2008), consists mainly of producing the 'correct' sound by reading from notation, watching and hearing teachers' brief demonstrations and verbal explanations, and thus neglecting the development of their musical ear. Odam (1995) also explained this issue of aural acuity:

At the end of three or four years' intensive higher study their [students] memory can remain largely undeveloped. Their ability to listen to a piece of music rarely developed at all, despite intensive practice during public examination courses and in tertiary and higher education through elements called 'musicianship' or 'aural training'. (p. 26)

Using technology

The Internet has become an important method of self-regulated learning, and so the use of technology in the aural copying process is common. Therefore, another common method

found among these young people was the use of technology. They said they needed 'the assistance of software to slow down the song to hear the melody clearly' (Him L.) Nowadays, with the advances in software, it is possible to download programs that can mute the sound of some instruments so that others can be heard more clearly (Tun K.) The students in this research used QuickTime to divide a song into individual instruments and vocal parts, as well as to slow the music down (Po L.) Po L. also stated that this was a very useful way for them to listen to the song in detail and to write down the score. Media Player also enabled them to increase the volume of an alto part (Lam C.) Lastly, simply using earphones could offer them a helping hand: 'plugged in the earphones to get the clearest channel for the song' (Mil L.) In addition, some of them learned how to use software to record their music:

Although I have played the drums for many years and have already copied many songs, I have not typed a pop song arrangement using software. This time, I listened to the song many times and spent around two hours typing it through the computer. When I finished my work, I felt so relaxed and excited. (Tun K.)

These students learned how to slow down the music in order to listen to the parts carefully. They were also able to use technology to accentuate the parts they wanted to copy. At the time of Green's study, more than a decade ago, the technology for slowing down music and isolating particular parts may not have been available. It appears that the students in the current study were able to make very good use of the technology to help them learn more efficiently. Therefore, the use of technology became an important and powerful, and even essential, technique in helping the students to work out the details of a piece of music, although it does mean that they were not relying solely on their own aural abilities. Also, when they were stuck, the technology played the role of 'scaffolding' in learning, and offered them a helping hand so that they could move on. This finding confirms Partti and Karlsen's (2010) claim that the whole range of technologies and new media that are available nowadays are what enable the 'culture of music making and listening' of teenagers (p. 378). The role and use of the Internet and software have evolved over the past few decades to support the informal music learning of young people and community music (Waldron, 2009; 2011). Therefore, Landy (2011) reminded music educators that the technological revolution will radically influence both music making and music education.

Collaborative learning

This project gave the students the opportunity to work in groups. As Green's project (2008) showed, the students were aware that the make up of personnel in their group work would 'complement of musical ability within the group' (p.125). Since the musical strengths of each group member lay in different aspects of music, as was the case in Green's study, they divided the task accordingly: e.g., if someone was good at listening to the melody, then he or she concentrated on this part while others helped with the rhythm (Yin N.) Their collaboration included helping each other to get the pitch of alto parts (Lam Y.), or they simply 'turned to classmates and friends for help in listening' (Yiu S.) If they really found that they could not complete their own part, then they 'swapped the part with a classmate' (Sum L.) As the most difficult part was often the lower part, they simply 'asked a classmate

for help in working out the lower part' (Lam M.) Also, after they had finished the parts they had copied, the group members would help by checking each other's work (Yee S.) Reid and Duke (2015) explained that formal learning is more likely to emphasize the content of learning, whereas peer-learning discussions 'enabled the students to focus on how they learned rather than what they were learning' (p. 231). In this sense, the students in the current study had learned how to learn through their collaborative efforts in completing the task:

Most of us could only work out the main melody and a little bit of the upper harmony parts. Even if we listened to the song all day, we still could not work out every part in detail. But luckily our group cooperated together to work the score out by ourselves. Some group members who are better at listening to melodies confirmed the melody notes. As for me, I am better at listening to rhythms, so I confirmed the rhythm part. . . . I believe that it would have been impossible to finish the assignment if we had been required to complete the listening and copying on our own [as individuals]. It really requires cooperation between different group members. (Man L.)

They even got to know more about each other from doing this project: 'One interesting thing I found out during the whole process is that our [vocal] sound is different at different times in a day. . . . I found one of our group member's [vocal] sound is softer early in the morning which suits the atmosphere of our song better. . . .' (Yan C.) They were able to develop their friendships after doing this assignment (In P.) This echoes Green's (ibid.) finding that the students had learned the value of cooperation after working together to succeed, rather than competing with each other. One student said that she had learned to appreciate and respect others (Chi L.) This resembles the practices of popular musicians whose learning involves peer-directed learning and group learning (Green, 2002).

However, not all the students enjoyed the group work and not everybody worked well with others. One student complained, 'I got a little bit angry with some of my group members during the process. . . . I was always hearing "I can't sing" or "I can't hear" from one of my irresponsible group mates' (Ki L.) Concerning the problem of 'free riders', as Green (2008) explains, during the learning process, this problem may get worse before it gets better, and therefore some students may need time to adjust to this type of music-making task. One other possible explanation is that the students in the current study were year 1 students who had only known each other for a few months; some misunderstandings were therefore bound to occur and they needed time to develop mutual trust and a good working relationship.

Theory put into practice

Although intensive listening was the main method because this was a purely listening task, the students also applied their musical knowledge to help them: '. . . besides making use of our ears, we helped ourselves with knowledge of music theory' (Yin N.) One aspect of theory they used was chord progressions (Yi F.), as well as chords: 'chords can be recognized and can be proved when you listen to the recording many times' (Wa C.) They worked out individual notes based on the chords and the melody: 'some notes were very difficult

to determine and we worked out those notes by considering the chord and the melodic flow' (Ca T.) It was interesting to find that they even developed a strategy for working out intervals by remembering the same intervals from some famous song:

I also found some ways to remember some difficult intervals such as a perfect fourth. One interesting way was just to remember the [same] interval in some famous song. For example, I remembered the interval 'sol-doh' as the first two notes of the song 'Today'. This method is quite useful and helped me a lot. (Yan H.)

There were some other strategies like giving notes their sol-fa names (Yi N.), and singing along with the videos (Kwa L.) In Varvarigou's (2014) research, the teachers also used similar methods of singing or humming along with the recording in helping their students to copy music by ear. Another direct way of working out notes was to use a piano (Win N.) On the other hand, as one student pointed out, they had to learn some other musical knowledge as well: 'Some sounds, such as the "wood vibrator", challenged us and forced us to do research on the Internet' (Ma L.) This finding seems to be different from the practice of the popular musicians in Green's study who, although their knowledge of music theory was partly acquired from teachers, 'did not necessarily apply the knowledge to their popular music practices', instead they would carry on by 'feel, ear and trial and error' (Green, 2002, p. 93). The differences may be owing to the fact that the only task of the students in the current study was to copy exactly from the music, so they could not, as the popular musicians did, feel the music and express it in their own way. Also, the use of theory to complement or cross-check their findings became an essential helping hand in this task. Nonetheless, it is a good sign that from playing a real piece of music, they could indeed 'enliven' their previous music theory 'paper' knowledge.

Substitution of instruments

As mentioned before, most of the students were piano specialists, therefore, whatever piece they chose, they had to think over how to solve the problem of performing it using other instruments. Some of them used piano and keyboard to imitate the sound of the instruments, while others tried their best to use different instruments to reproduce the sounds of the original instrumental parts. Eventually, three groups found instruments to substitute those used in the original version.

A tenor recorder was used to replace a Chinese instrument called the '*dongxiao*' 洞簫 (a vertical end-blown flute) (see [Figure 1](#)) when the group performed a Chinese Cantopop song called 'Half Moon Serenade' 《月半小夜曲》. The player explained, 'after I tried the tenor recorder for this piece, [I found that] the feeling and expression were near to the original concert version'. In addition, this new attempt also led her to find out more about this Chinese instrument: 'after finishing the performance, I read some books about the *dongxiao*; the most interesting thing is that some of the fingerings of the recorder and the *dongxiao* are almost the same' (In P.)

Another group played a folk song called 'Windflower', and used a Chinese instrument called the '*zhongruan*' 中阮 (tenor lute, a plucked stringed instrument) (see [Figure 2](#)) to replace the mandolin. One member recalled that 'we were very worried about playing



Figure 1. (Colour online) Dongxiao 洞箫

the mandolin part, but luckily someone suggested using a Chinese instrument called the *zhongruan* to replace the mandolin. The tonal colour of the *zhongruan* is extremely similar to that of the mandolin' (You C.)

One group which chose a Cantonese popular song used a Chinese instrument called the '*guzheng*' 古筝 (a plucked zither) (see Figure 3) to replace the guitar sound. A student whose main instrument was the *guzheng* described how she applied the playing techniques of the *guzheng* to the bass guitar part: for instance, she used arpeggios and tremolo to decorate the melody and make it richer (Wai L.) However, she also pointed out that the *guzheng* is a pentatonic scale instrument, but there were 'fa' and 'ti' and some other



Figure 2. (Colour online) Zhongruan 中阮



Figure 3. (Colour online) Guzheng 古筝

accidental notes in the song. She and the other *guzheng* player pressed the strings hard in an effort to get the right pitch but they still had some intonation problems.

In my observation of the performance, I also found that the tenor recorder sound resembled that of the *dongxiao*, although the sound of the *dongxiao* is a bit darker and more sonorous. Nevertheless, the tenor recorder is the best choice to replace it. When the 'Windflower' group stepped onto the stage carrying the *zhongruan* instead of a mandolin, the audience burst out laughing. I was also very surprised and appreciated their imaginative power. And although this was a substitute instrument, it sounded very much like the original mandolin. When you closed your eyes, you did not really notice a very big difference. It fitted well into the overall performance of the song. As mentioned above, there were some minor intonation problems for the group using the *guzheng* to replace the guitar, and it sounded a little strange in some of the musical phrases. However, the use of the technique of arpeggios and tremolo was successful and appropriate.

Learning a new performance skill/instrument

As a result of their limited experience of playing other instruments, in 5 out of the 11 groups members of the group had to start learning a new instrument in order to complete the task. The new instruments the students started to learn included the *guzheng*, drum kit, guitar, harmonica, xylophone and vocal percussion. As mentioned above, the *guzheng* was used to replace the guitar sound. Whilst one of the players in the group specialized in playing the *guzheng*, the other player, who was playing the second guitar part, was new to the instrument. The *guzheng* specialist thus took on the role of teaching her classmate to play it. In one of the Cantopop groups, the music had a drum kit part. The student who opted to play the drums only had two lessons from a friend, but she played so well during the performance that nobody even suspected that she was new to the instrument. In addition to teaching her how to play the drum kit, her friend helped her to work out the notes as well.

I was responsible for the part of jazz drums and it was the first time I had played the drums. Through this experience, I think that the drums are quite easy to pick up. I invited a friend who knows jazz drums quite well to be my coach and he offered me two lessons. First he taught me how to hold the sticks properly and demonstrated the different sounds from various parts of the drums. After that, to be honest, he worked out some difficult parts [of the music] and taught me by demonstration. (Ting Y.)

The guitarist in the 'Windflower' piece admitted that she knew very little about the instrument she played. She therefore had to practise very hard within the limited time and her fingers hurt from pressing the metal strings. The group who played a piece of Cantonese cartoon film music had to solve many problems. For instance, the harmonica player had also only started to learn this new instrument for this project. Also, the group needed to learn a new playing technique on the xylophone:

Another problem was that none of us played percussion . . . we could not create the same sound as we heard in the demo. So we went to ask a percussionist. He told us

that we should play the xylophone with the bottom of the mallet, not the head. After that, we [were able to] make the same sound. (Wing N.)

Besides learning a new instrument, one student from a vocal ensemble group had to learn how to do 'vocal percussion':

The activity gave me an opportunity to try vocal percussion that I had never tried before. As no one in our group knew how to perform vocal percussion, thus I took on the task. Sometimes, when my group mates were practising their parts, I sat alone watching Youtube to learn how to pronounce the bass sound . . . I finally wrote down "boo chi ka chi boo chi ka chi" to help me pronounce it. (Lam Y.)

From my observation of their performance, I could not tell that some students had only just begun to learn a new instrument! I only realized this when I read their reflection reports. I was especially impressed by the student who played the drum kit with such confidence that I would never have imagined that she had just learned this for the performance. With regard to the vocal percussion, as mentioned above, the student had only just learned how to produce the sound, yet it was very successful and she attracted the full attention of the audience. Her voice matched those of her group mates and provided a rich harmonic support for the whole group performance.

Final remarks

As a welcome addition, the students offered some general remarks on this project, especially in the conclusions sections of their journals. They showed that they found this an interesting task that gave them opportunities to improve their musicianship, and they also became more sensitive to different voice parts. They stated that in the future they would not need to depend on musical scores but would be able to work out pieces on their own:

Before this project I had never tried to play a song I liked without a reliable note sheet. I had to wait for someone to post the score on the Internet when I wanted to play a new song. After doing the project I found that I could make it by myself, [so now] I can enjoy music without [that] limitation. (Vic W.)

I also treasured this task because we seldom do this kind of work in our daily life. This was an unforgettable task and I would be happy to work on it [again] if I got a second chance to do it in my second and third years of study. (Sum L.)

I won't always rely on musical scores to rearrange [a song]. What I mean by that is when you find a favourite piece you will naturally find the score through the Internet. But now I will use the listen and copy method to make the score by myself. It also gives me a deeper memory of every part of the songs. (Ma E.)

Moreover, we can choose a song we love to perform; and [the] group mates [we] would like to cooperate with . . . I will continue to copy more songs. (Tun K.)

Since the task, I have become more interested in finding different versions of songs I like. (Yan C.)

Green (2008) also concluded that the pupils in her research enjoyed and were motivated in their music-making processes, as they were allowed to have a relatively high levels of autonomy in selecting both the content and the strategies they used. Although the students in the present project were music major students, the above remarks indicate that they were fascinated to discover that they could have the autonomy to perform music they liked even without a score, which confirms the finding of Varvarigou's (2014) project that it boosted the students' confidence in 'playing things that they wouldn't otherwise be able to play' (p. 479). This experience may thus have been a 'revelation' to them about their untapped musical ability, as well as helping to lead them to the wide open musical world, whether with scores or not.

Conclusion

This study investigated how a class of university music students who engaged in a 'lived' experience of learning their music in an informal way adopted methods and strategies to complete a self-learning 'aural copying' performance assignment.

Informal learning as lived experience

Although there was no intervention by the researcher while the students were engaged in this project, the methods by which they accomplished their tasks were similar to those used in informal ways of learning: intensive listening, collaborative learning, learning from friends and the use of technology. As I was completely absent from their practice and did not ask about their learning strategies until I read their written reflections, the skills and techniques they had been able to acquire were also impressive. They had started to be aware of different voice parts, instrumentation and other musical elements, which is similar to the results of Varvarigou's (2014) Ear-Playing project, where the benefits for students included listening to music with expectations and becoming aware of dynamics and phrasing. Therefore, to say that informal learning is a 'lived experience' in their music learning is not an overstatement. Furthermore, the students found that they enjoyed the task because they could choose music they liked and were able to handle. The genres of music the students chose ranged from classical to Cantopop music and even cartoon film music. This confirms Green's (2002) view that the 'enjoyment of and identity with the music being played are vital' (p.106). As music educators, therefore, it is important for us to be aware of the importance of the issue of the students' identification with the music.

Meta-cognitive skills

This aural task not only enhanced the students' musicianship but also fostered their meta-cognitive skills, as they had to find appropriate strategies like 'Theory put into practice', 'Substitution of instruments' and 'Learning a new performance skill/instrument' to solve their specific problems. Meta-cognitive skills refer to thinking about one's own

thinking (Bathgate, Sims-Knight & Schunn, 2012; Benton, 2014; Georghiadis, 2004), and the learners' knowledge, awareness and control of the processes by which they learn (Georghiadis, 2004). Bauer (2008) explained that this is 'a person's understanding of his or her own learning processes' (p. 50). Therefore, learners with metacognitive skills are able to plan for learning, monitor learning and evaluate learning (Benton, 2014). In this study, when they first took up the task, expressions like 'we don't know how to do it' appeared throughout their reflections. The problems they faced ranged from how to choose the right piece for the group to how to work out the sounds, and even how to reproduce a certain sound, yet eventually they themselves managed to plan, monitor and evaluate their learning. For example, the fact that most of them were pianists created a major problem for them in copying the details of a piece of music. It was nearly impossible to find a popular piece of music based solely around the piano for a group of performers. One way in which they solved this problem was to choose an a cappella piece, which was the case with three of the groups. Whilst some groups solved the problem by using other instruments that had similar sounds to replace the original instruments, some took this opportunity to learn a new instrument. Additional problem-solving tips were articulated clearly and shared as they went through the learning process. Furthermore, it is also noted that through an informal peer-learning environment, students' 'transferable skills and attitudes can be fostered' to help them solve their musical problems (Reid & Duke, 2015, p. 231). As Kastner (2014) concluded, informal music learning can expand students' views of independent musicianship, which was shown by the fact that the students were able to 'solve problems, work collaboratively, and pursue their own musical interests' (p. 86).

Implications for music educators

The current study serves as a starting point for applying informal learning practices in university musicianship learning. Whilst discussions on the use of informal learning practices in the secondary school music classroom are still ongoing, the implementation at university level seems to be effective, as demonstrated by this study. It may be a way forward for informal learning practices to be applied at university level in order to foster the students' passion for music learning and musicianship, and to develop their meta-cognitive skills of learning how to learn.

Second, as this study engaged a mixed class of BEd and BA students, their personal direct acquaintance with an informal learning experience can become a foundation for them to learn an informal learning pedagogy. Kastner's (2014) research showing that those in-service teachers who had been introduced to the idea of informal music learning in their undergraduate programme were more open to using informal learning-practices in their teaching. Finney and Philpott (2010) also concluded that 'the most effective professional development in informal learning and pedagogy is that which employs informal learning itself' (p. 18). It is hoped that this informal learning experience has offered these would-be music teachers or studio teachers a new angle on and first-hand experience of informal music learning, and that they will project this experience onto their own music learning and future teaching.

To conclude, in bringing informal practices to the formal classroom, firstly a teacher 'must be part of the community of learners' (Feichas, 2010, p. 55). It is therefore suggested

that in order to allow teachers-to-be to have a 'live' experience of informal learning practices, these learning practices may be best included in a music or musicianship course while they are still music learners. Therefore, the wave of informal learning in the coming century may need to extend to the realm of performance practices in music. Future research may include a comparison of the effectiveness of using informal and formal learning methods to foster learners' musicianship in higher education. Also, researchers may wish to track the new generation who have experienced informal learning practices in their music learning to see whether this affects their beliefs and practices in music teaching.

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