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Authentic learning in senior secondary music pedagogy: an examination of teaching practice in high-achieving school music programmes

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Abstract

Authentic learning approaches are designed to immerse students in contexts that promote real-life applications of knowledge, and provide meaningful learning experiences beyond the abstract instruction of the classroom. In a grounded theory study of music teaching practice in high-achieving schools, 50 teachers from 23 schools across New South Wales (NSW), Australia, were asked to describe how they taught their senior secondary students and the musical environment they curated within their school. Through examination of the interview data, authentic learning exposed itself as uniquely situated in classroom music teaching of high-achieving music programmes for senior secondary students in NSW. This is shown through the use of thorough inquiry-based and student-centred learning tasks like video journals, the use of professional resources and expertise and collaborative learning in authentic contexts, in and outside of the classroom.

Keywords: authentic learning; senior secondary; collaborative; grounded theory; student centred

Introduction

Authentic learning is a pedagogy that has its roots in situated cognition (Wilson & Myers, 2000; Wilson & Clark, 2009) and situated learning (Clancey, 1995). In its early iterations, situated cognition was developed as a means of exploring 'cognitive extensions' (Wilson & Clark, 2009) – essentially, what the brain is doing during the learning process. This, therefore, become less about pedagogy and more about neuroscience. Situated learning is also inherently theoretical, but is more logically connected with contemporary conceptions of authentic learning. According to Clancey (1995), situated learning proposes that knowledge is constantly being constructed all day, every day and how we understand and behave in situations is controlled by our perceived roles within a community. It is a reaction against the perception of learners as information processors and instead facilitates learning to be inclusive, contextual and communal. Teachers should focus on cultivating learning processes, and design tasks and activities that enable skill and knowledge transfer (Choi & Hannafin, 1995).

This notion that students should apply transferable knowledge and skills to learning in authentic 'real world' contexts is what forms the fundamental premise of authentic learning. This article aims to explore the ways in which authentic learning is described in the literature, how it could be applied to a music education context and provide descriptions of how music teachers in high-achieving school music programmes in Australia are using authentic learning strategies and techniques as important elements of their pedagogy.

Definitions of authentic learning

Authentic learning has been explored and defined in relation to various contexts, tertiary education (Roach, Tilley, & Mitchell, 2018), library science (Callison & Lamb, 2004), anatomy science (Pawlina & Drake, 2016), mathematics (Herrington & Oliver, 2000; Herrington, Reeves, & Oliver, 2014) and constructivism (Wiggins, 2007). It can be linked with the theory of experiential learning (Kolb, 2015) and problem-based learning (Radinsky et al., 2001; Roach et al., 2018). The following is a brief review of the relevant literature, framed by the key characteristics as outlined in Rule (2006).

Learning should take place in an authentic context and utilise authentic procedures and resources

The authentic context is the basis of authentic learning. However, this does not necessarily mean that authentic learning can only occur in a literally authentic environment like a professional science lab, or a working music studio, or a government cabinet meeting. It means that teachers should utilise procedures and examine issues that closely align with those inherent in professional practice and make use of real-world relevant resources, knowledge and procedures (Rule, 2006; O'Connor, Jeanes, & Alfrey, 2016).

Effective implementation of authentic procedures within a classroom should improve engagement and enable knowledge and skill transfer and application (Choi & Hannafin, 1995). This can be achieved by offering students opportunities to explore multiple perspectives and roles (Herrington & Oliver, 2000) and make informed decisions that have a real impact (Callison & Lamb, 2004). Ideally, students should also have opportunities to explore and utilise real-world tools, a technique termed 'occupational realism' (Pawlina & Drake, 2016) as a means of making learning relevant and useful.

The application of this in a music classroom would involve consideration of the type of music learning taking place. Different musical genres (rock, orchestral, electronic, choral) would elicit different resource and process requirements, and the concept of authentically reproducing traditional and cultural music can be fraught with difficulty (Folkestad, 2005). Classroom musical learning should connect with how the learners experience music (Wiggins & Espeland, 2012), and facilitate collaborative working towards realistic and culturally relevant goals (Evelein, 2006).

Learning should focus on inquiry and metacognition, and the process of learning, rather than the product

A key purpose of authentic learning is to design and sequence activities in ways that enable students to explore ideas, define and solve problems and utilise and apply knowledge and skills from a variety of subject areas (Herrington & Oliver, 2000; Pawlina & Drake, 2016). In professional contexts, people use multiple sets of skills and knowledge to solve problems and work creatively. Authentic learning tasks should be designed to enable this multidisciplinary application.

Inquiry-based learning strategies are strongly connected to the scientific method, in that students are encouraged to investigate ideas and processes, with expert guidance (Lazonder & Harmsen, 2016). According to Bianchi and Bell (2008), as students become accustomed to inquiry learning processes, they gradually become more involved in the facilitation of these processes, until they are actively devising and guiding their own research. The latter stages of inquiry learning are therefore much more suitable for more experienced and knowledgeable students (Barron & Darling-Hammond, 2008). More experienced students would be more familiar with the activities, materials, context and research skills required (Colburn, 2000), as well as being able to devise 'driving questions' and evaluate the relevance of the questions to the overall research (Barron & Darling-Hammond, 2008). Through inquiry-based learning, students also develop skills such as informed judgement, patience, commitment, pattern recognition and flexibility (Lombardi, 2007).

In the secondary school music classroom, inquiry-based learning involves using musical processes to solve musical problems (Wiggins, 2007) for a range of musical ability levels (Evelein, 2006). It means designing tasks that utilise student musical abilities in creative ways, enabling high-level application of complex compositional and performance techniques in contemporary music processes. While music educators would not necessarily use the scientific method as a means of teaching and learning about music, students would certainly be capable of learning how to experiment with music through compositional processes, explore ideas about how sound changes, how sounds are made and why music is effective in various contexts.

Learning should be social and collaborative, and incorporate the knowledge and skills of students and professionals.

Collaborative learning can be broadly defined as a situation where learners collaborate with 'inter-activity, synchronicity and negotiability' (Dillenbourg, 1999, p. 8). According to Rule (2006), using groups of learners to solve a problem provides them with experience in how to work with a broad community of knowledge, experience, culture and expertise, particularly if student groups are able to call on professionals in the area to assist. Working collaboratively allows for multiple roles and perspectives from those within the group (Herrington & Oliver, 2000; Herrington et al., 2014), and by engaging with professionals in the field, students are able to better understand the learning process (Campbell, Faulkner, & Pridham, 2010).

In the music education context, much collaborative learning could be considered 'legitimate peripheral participation' (Lave & Wenger, 1991; Herrington & Oliver, 2000) where learners are able to observe a community of practice as a means of gaining an understanding of the professional community and its particular terminology and culture, before moving in to participate fully. This is effectively what is taking place when students participate in the school co-curricular ensemble programmes, or engage in informal classroom pedagogies such as the model utilised by Green (2008), and the Musical Futures structure (Jeanneret, McLennan, & Stevens-Ballenger, 2011). Students are able to experience how to make music in legitimate, collaborative ways that are also appropriate for their knowledge and skill levels. Particularly in the co-curricular context, students are also learning from the more experienced players in the ensemble, and from the expert conductor leading the ensemble. In this way, students can collaboratively and interactively learn in an authentic musical context.

Learning should be student centred

Student-centred learning occurs when students are empowered and motivated to make their own choices and decisions about their learning pathways (Rule, 2006). Student-centred approaches to learning are already inherent in the first three outlined components of authentic learning. Focusing on student-centred learning means defining the role the teacher plays in the authentic classroom. The importance of consultation with professionals indicates that having a music teacher who is also a working musician would mean students benefit from the combined expertise of the music professional and educator (White, 2019). The language used to define the teacher's role in the literature is often akin to facilitation and design of learning and assessment – as an enabler of meaningful, real-world experiences or as a mentor and model for students (Callison & Lamb, 2004; Abrahamson et al., 2006; Quigley, 2014; Pearce, 2016). Teachers taking on the role of a facilitator can lead students to self-reflect and peer evaluate, and aim for mature levels of independence and resilience (Hansen & Imse, 2016).

Method

A grounded theory, mixed-methods study was implemented to investigate consistently high-achieving senior secondary school music programmes in New South Wales (NSW), Australia. The purpose of a grounded theory study is to 'develop a conceptual theory that explains participants' behaviour' (Breckenridge, 2014) by continuously analysing data throughout the collection process, and examining patterns of interaction and influence between 'actors' in a given context (Strauss & Corbin, 1994). This was achieved by identifying schools in NSW with consistent high achievement in Higher School Certificate (HSC) Music courses over a period of 10 years through quantitative analysis of data provided by the New South Wales Education Standards Authority (NESA). Semi-structured interviews were then conducted with teachers at these schools examining their teaching approaches, perceptions and attitudes.

Participants

Participants recruited for this study were teachers at schools that had been identified as consistent high achievers in the HSC Music courses – Music 1, Music 2 and Music Extension. Through an analysis of HSC Music results data, schools with consistently high percentages of student results equating to 90/100 or higher throughout the period of 2007–2016 were considered to demonstrate consistent high achievement.

Teachers at schools within the top 10% of all schools offering HSC Music during this period were contacted via email throughout 2018, with those agreeing to participate then going through to interview. Fifty teachers from 23 different schools across NSW were asked about their teaching strategies, how they worked with musically gifted students, their personal attitudes towards music teaching and how music was perceived and valued at their schools. Table 1 provides a summary of information about the participants – their pseudonym, gender, school pseudonym, NSW region, school type and school cohort type, each participant's number of years teaching at the school and their total years teaching overall.

Interviews

The initial interview questions were determined by a broad review of the extant research regarding high achievement (Cooper et al., 2005; Homel & Ryan, 2014; Karadağ et al., 2017; Wai & Rindermann, 2017), musical giftedness (Haroutounian, 2008; Lancaster, 2003; McPherson & Williamon, 2015; Subotnik, 2004) and teacher efficacy (Bandura, 1997; Caprara et al., 2006; Goddard, Hoy, & Hoy, 2000; Wagoner, 2015), as well as knowledge of teaching in the NSW HSC context, giving the interviews a clear focus without overly contaminating the nature of the responses (Thornberg, 2012). More nuanced components of these programmes began to emerge through coding and analysis of the transcribed interview data (Creswell, 2009).

The importance of professional expertise, co-curricular programmes, performance opportunities and quality pedagogy and resources became apparent during the selective coding process, which led to a critical examination of literature concerning authentic learning strategies. Though 'authentic learning' was not a term used by the teachers, the way in which participants described their senior secondary classroom teaching and learning, and their curation of the broader school musical environment, all featured key elements of authentic pedagogy (White, 2019).

Results and discussion

Examination and coding of the interview data through an axial coding process (Creswell, 2009), then positioning the data within the four components of authentic learning as outlined in Rule (2006), made it evident that many teachers in these high-achieving schools were utilising teaching strategies that aligned with authentic learning approaches.

Table 1. Table of Participants

Participant/Gender	School	Region	Type	Cohort	Years at school	Years teaching total
MS/M	A	Sydney	Independent	Coed	20	33
AC/M	A	Sydney	Independent	Coed	13	13
GS/F	A	Sydney	Independent	Coed	17	30
HW/M	A	Sydney	Independent	Coed	19	25
BB/M	B	Sydney	Government	Coed	10	30
TB/M	B	Sydney	Government	Coed	1	1
KW/F	B	Sydney	Government	Coed	4	22
LC/M	C	Sydney	Independent	Coed	12	17
AT/F	C	Sydney	Independent	Coed	5	27
CO/F	D	Sydney	Selective	Coed	3	4
JH/M	D	Sydney	Selective	Coed	17	35
HS/M	D	Sydney	Selective	Coed	6	16
CC/F	E	Country	Independent	Girls	0.25	5
BC/M	E	Country	Independent	Girls	17	30
AS/F	E	Country	Independent	Girls	12	14
FL/M	F	Sydney	Selective	Coed	12	15
ILM/M	G	Sydney	Independent	Girls	25	28
FS/M	G	Sydney	Independent	Girls	18	25
DW/F	G	Sydney	Independent	Girls	22	30
GG/M	H	Sydney	Independent	Boys	14	30
BJ/M	H	Sydney	Independent	Boys	12	22
EF/F	I	Sydney	Catholic	Girls	6	28
BM/F	I	Sydney	Catholic	Girls	10	31
NK/F	J	Sydney	Selective	Coed	10	13
JJ/F	J	Sydney	Selective	Coed	4	4
DD/F	J	Sydney	Selective	Coed	6	39
GH/F	K	Country	Selective	Coed	18	25
IM/F	K	Country	Selective	Coed	6.5	37
AB/F	L	Sydney	Independent	Girls	7	23
SS/F	M	Country	Independent	Coed	8	12
LB/F	M	Country	Independent	Coed	17	30
BK/F	N	Sydney	Government	Coed	27	30
NP/F	N	Sydney	Government	Coed	3	18
JS/F	O	Sydney	Selective	Boys	30	30
TTE/M	O	Sydney	Selective	Boys	7	7
OT/F	P	Sydney	Independent	Coed	1.5	

(Continued)

Table 1. (*Continued*)

Participant/Gender	School	Region	Type	Cohort	Years at school	Years teaching total
MD/M	P	Sydney	Independent	Coed	4	5
GM/M	P	Sydney	Independent	Coed	7	23
AA/F	Q	Country	Independent	Coed	14	27
TS/F	W	Sydney	Independent	Boys	10	20
PT/F	W	Sydney	Independent	Boys	8	25
KH/F	S	Country	Selective	Coed	12	18
BA/M	S	Country	Selective	Coed	2	4.5
RS/M	T	Sydney	Independent	Boys	0.5	25
EJ/F	V	Country	Catholic	Coed	14	47
YM/M	V	Country	Catholic	Coed	25	30
PF/M	V	Country	Catholic	Coed	16	22
FC/F	R	Country	Government	Girls	11	18
EE/M	R	Country	Government	Girls	9	17
HF/F	U	Country	Catholic	Coed	15	26

Utilisation of authentic procedures, contexts and resources

The way in which the music teachers in this study approached their senior secondary teaching varied, but there was a consistent theme of utilising procedures, resources and contexts to make music learning in the classroom as authentic and realistic as possible. As one teacher (PT) said, 'I think [it's about] making potential limitless, and making them realise that there's way more than the classroom. Everything is beyond the classroom at Year 12 level'. Teachers spoke about encouraging students to understand that performing, composing and listening to music are components of musical learning that inform each other, and that even if you are engaged as a professional in one specific area, all aspects of the musical experience are important and valuable.

For some teachers, this meant approaching music from a holistic perspective. MS said, 'It can't just be a bunch of content, it's got to be connected to real experiences'. KW agreed with this perspective, saying that she wanted her students 'to become real and holistic musicians, understanding the music from many different angles, including theory, including history, the context of the piece, and also the performance, supported by all of these aspects'. The idea of students becoming 'holistic musicians' was also important to BB, who believed having a broad education reflective of historical, scientific and artistic contexts enhances the musicianship students could demonstrate in their performances. BB reflected,

> Because otherwise, if they're performing a piece, what are they expressing? Do they have an opinion? If the composer expected something to come out of this, and [the student has] no idea of the politics of the time and the oppression that that person suffered or whatever, how are they going to give any voice to that expression?

CO described how she would talk to her students about how they were 'the next step', and that it was important that her senior students start to 'integrate content and composition, and then think about themselves as an artist and as a musician'. AT described how holistic teaching could work in a classroom context to create a more compelling and meaningful learning experience:

If they're going to be studying canons I would like them to play or sing them and then compose one. A double period is long enough to do some singing of a canon, some score reading of simple canons and to discuss theoretically how they work, and to compose one. So, that's a nice lesson plan because, for a start, you are practicing sight singing and in order to sight sing you have to analyse properly, so there's some musicology. And then in order to musically understand you have to imagine what the chords might be because that'll help you with composing later and it'll help you with sight singing because of realising the cadence points.

Other teachers spoke more specifically about how they try to utilise authentic procedures and contexts when it came to developing the performance abilities of their students. Often, this involved utilising resources outside of the classroom – anything from professional theatres, to the elite performing ensembles within the school, in an effort to immerse students into the real world of music making and performance. High-performing students at HW's school had the opportunity to participate in their concerto competition, the winner of which 'then goes on to play a concerto with the symphony orchestra at our big concert at the performing arts centre in the city'. CC believed it was important for her music students to be performing as much as possible in front of real audiences, and their daily whole school morning prayer offered that opportunity. 'Students who are ready with repertoire can be put in that performance environment, however often they want'. At GM's school, they didn't have the physical space for a requisite venue on-site, so their students would perform in local theatres:

The performing arts here are such a part of the school that the students actually can have that sense that their lives are not just about what's in the classroom. They work in real life, real world environments, engaging with professionals that aren't part of the school, so there's a whole other level of co-operation and skills they're learning.

HS was the head of the co-curricular music programme at his school. He spoke at length about how his focus, particularly for the higher level, more elite ensembles, was to treat them as professionals. This included setting high expectations for rehearsals – 'I expect them to know their music and sight read pretty much perfectly. I give them gig instructions and call times, and they're expected to just jump on board the train and work as if they're in the real scene'. As a result, he was also able to provide opportunities for students in these ensembles to play at professional gigs and events:

Often, we'll send a jazz ensemble or a string quartet or something like that to do a professional function gig, or a large event gig. All sort of those sort of things you would find in the real world of music making, we try to send out our elite ensembles. The elite ensembles really are treated as pros and expected to play really well. We do a recording every couple of years, so they experience what it's like to have to put down a track under pressure in a studio situation.

With regard to authentic resources, several teachers mentioned using professional-level music technology and software in the classroom, particularly for their senior secondary students. This could include resources like ProTools, Sibelius, recording studios and music computer labs. PF saw the use of modern music technology in the classroom as a way to both make learning more authentic and engaging, but also as a means to extend their compositional and aural capabilities. 'Through using technology, they can hear something more complex. They might build around a basic ensemble, but then start putting in string layers and wind layers, and then they can convert that to another program and have success'. Part of this utilisation of authentic music technology resources was to enable students to engage with professional software, but as BA says, 'Keeping resources up to scratch, keeping up to date with technology, and making sure all our school

instruments aren't dilapidated... Having good quality stuff sends [the message that] 'we're serious' to the students as well'.

Other teachers also spoke about the way they curated their resources for use in the classroom, homework or for student general interest. While various textbooks were mentioned by teachers, generally teachers did not follow a textbook as a programme. They preferred to select specific high-quality resources, from a range of sources, that were appropriate and relevant to the cohort, or topic of study. For example, CO described her resources for a unit on *Compassions* by Nigel Westlake and Lior, which included,

> ... the Australian Music Centre [resource] kit, but also there's a TED talk on it online. There's an ABC documentary, which does all of the behind-the-scenes rehearsal and filming of the first concert, [and] they just did an arrangement of it for the Melbourne Symphony Orchestra, for piano reduction.

For every piece her students studied, GS would have 'the historical background, a Youtube clip, the score and a little quiz for the students to answer which is usually based on the musical concepts as they're used in that piece'. These were not teachers who taught the same thing, year in and year out. As HW said, 'I think, if we can forget about these textbooks, we've got enough knowledge on our own to really come up with something really engaging for the kids'.

Inquiry, metacognitive and process-driven learning

Of all the components of authentic learning, this aspect seemed the least evident in the responses of the teacher's interview. However, this may be due to the nature of the original questions asked, as teachers were asked to broadly describe their approaches, rather than specifically articulate lesson plan and activity structures. The nature of inquiry learning, in particular, requires students to follow procedures akin to the scientific method, which itself is not intuitive to music pedagogy. Despite this, various teachers did comment on the way they used questioning to guide student learning, and the strategies and resources they used to encourage reflection on content and processes.

The use of process diaries (logbooks detailing the progress made in a composition) and other means of gradually recording and reflecting on individual progress and learning was mentioned as a key teaching strategy by several teachers. The teachers at School A, in particular, talked about performance journals, composition portfolios and listening logs as a means for students to record their progress and process. These could then be used to reflect on their learning and the way in which they developed throughout the music courses. The listening logs were actually part of the students' composition portfolios – students would keep a log of the different music they listened to throughout the composition process. AC said,

> [The logs] make for some interesting reading sometimes, because it's... it's music that doesn't relate to anything that we're doing in class, it's popular music and I think, well, if that's all you're getting then we need to augment that a little bit in class and listen to some really good pieces that I hand pick in the hope that they'll grab a hold of those ideas and try and incorporate some of that in their own writing.

In this way, the listening logs helped to shape the classroom content learning, as the teacher was able to supplement and broaden students' listening experiences.

HW, also at School A, went into detail about the 'prac journal' the students kept. This was a means for being accountable for their progress during their practical lessons where they would focus on individual performance work, and practice sessions outside of school. They were video journals, uploaded to the school's internal learning management system, that would show their

progress on a particular piece. He acknowledged that recording yourself in this way is something that now, thanks to platforms like Youtube, Instagram and Facebook Live, is a very normal way for students to express themselves and explore ideas:

> There's more of that electronic journal entry, keeping records of themselves playing and looking back on them, reflecting on what they've done, thinking about their learning, being accountable for their learning . . . It helps them look back and go, well that's what I did and this is what I'm heading towards.

Teachers also spoke about the kinds of questions they use to drive their learning, both generally and specific to certain circumstances, as well as the importance of skill development. MS's focus was on the broader questions to ask, in helping a student find their individual purpose,

> I'm big on goals. Where do you want to take this? What's your purpose? Why . . . big on the why, all the time, not just what you do and how you do, why are you doing it? Because if you understand the why, that's everything.

AT instead described how she would use questions to both develop a student's conceptual knowledge, and help guide them in their individual composition development,

> It's more about asking them questions – usually in the syllabus language because it helps them learn – but asking them questions that relate . . . what seems to be missing, what effect of the piece seems to be missing and scaffold the question [to be about] how they can improve it.

LC's questioning approach was centred on developing each student's intrinsic motivation and capability, through exploring foundational and complex ideas about music and allowing students to explore and develop procedural skills and knowledge. In this way, students could develop the capacity to examine what is valuable and relevant for their own contemporary learning and practice, and construct their own meaning and understanding:

> There is some value in knowing when Vivaldi was born and when he died. There's more value in getting inside a composer's process. How did they create their music? How did they communicate their ideas? How did they play with instruments and combinations of sounds? How can I then take all of my understanding that I've gleaned from getting inside music, and apply that to my own creative output? I certainly gravitate closer to the idea of saying, let's just create an environment where there's rich conversation going on about musical composition, performance, all of these things, and that the kids are able to make their own meaning from that.

Collaborative learning, supported by professional expertise

Of all the key tenets of authentic learning, this aspect was the most apparent, and has been explored further in other publications (White, 2019). Teachers spoke about utilising collaborative learning approaches with their students at all secondary school levels, but this approach was most evident in the co-curricular programmes. The use of professionals, inside and outside of school, was also a key part of their teaching, specifically with senior secondary students.

The importance of ensemble playing and student participation in school co-curricular programmes was emphasised by several of the participants. Most schools had extensive co-curricular music programmes, although approaches varied from school to school. NP saw the benefit for HSC-level students, in particular, to develop ensemble skills and individual performance skills.

'If we can keep students involved in the co-curricular program as much as possible, it always supports their ability to deliver a strong HSC program or performance. Just keeps their playing relevant'. To TS, the co-curricular programme and the classroom programme were both important to student musical development, particularly in performance. 'The skills you learn [in the co-curricular program] are going to help you. Our directors of those ensembles try and connect what happens in the classroom to what's happening in co-curricular, but performing . . . look how much fun it is!' EE agreed with this perspective: 'If they're doing music outside the classroom, then they're more likely to be succeeding in the classroom as well. The regular performance and just regular playing has also helped'.

ILM encouraged collaborative learning in both classroom and the co-curricular programme, and described how the junior school instrumental programme fed into the secondary school chamber ensembles programme. 'You might have a mixed string group and wind quintet, or a brass ensemble, or a rock band, right? They're learning about the concepts of music, and they present a performance once per semester'. One of the main purposes of this programme was to work towards student autonomy or, as ILM put it, 'lengthen the leash',

> We can eventually say, okay, you rehearse this for the next 15 minutes, and you make the decision about who's primary, who's secondary, what is the right tempo, how do you modulate your dynamics to support the structure. Start making interpretive decisions, and listen to each other and talk it through and thrash it out! In other words, be a chamber ensemble, and that's what they do, astonishingly well.

Some teachers described the different ways they would utilise professional expertise for their senior classes, to either supplement their classroom teaching, or provide students with external experiences. GG described a whole school incursion he had organised with Taikoz, an Australian taiko drumming group, and how important experiences like this were for his students,

> They'll do a 50 minute concert, demonstration, it's interactive. And then there's 1200 students, Years 7–12 sitting there, involved in it. These are the formative things that if you can't offer this at the school level, the students may never get.

Teachers at three different schools said they had a composer-in-residence at their school, a specialist whose job was to create works as commissioned by the school, but to also be an expert teacher of composition for the senior classes. These composers could work one on one with individual, gifted HSC-level composers, or teach composition classes like at AB's school, '[Our composer-in-residence] comes in once a fortnight, mainly helping the students with technology and developing more ongoing skills in composition'. And other teachers, like LB, would use professional musicians, on and off staff, to supplement student's HSC performances. 'If they need strings, we can get string players, if they need a rhythm section, one of my colleagues plays bass, and we get our percussion teacher. They've got professional people that will assist them through their whole HSC process'.

Student-centred and student-directed learning

For all of the teachers who participated in this study, the students were at the heart of their teaching. Teachers spoke about knowing students on several levels – individually, as a class, as a year group. This knowledge of students came from an average of 22 years teaching across all participants, and manifested as a willingness to constantly consider student needs, interests and abilities in all aspects of their teaching. To HF, this meant, 'Forming the individual person and holistic belief in what they can do as a person'. JH put this as, 'We stand them at the door, we just open the door. They are the ones that step through it, in their own way'. BC's philosophy also centred on

the individual student – 'Wherever you are at the beginning, to as far as you want to go'. For LC, the ultimate goal by the end of Year 12 was 'to create people that are able to be practitioners of a discipline as opposed to students of a discipline'.

Some teachers spoke about how student interest and ability shaped the way they designed their programmes in Years 11 and 12. The topics for study in the HSC Music courses can range from Baroque to Rock Music. Several teachers found it most logical to consider student needs and musical capabilities when it came to programme design. EF said that 'every cohort is different', and so she would give her Year 12 students some leeway regarding their topics for individual research. 'There's a lot of independent ownership'. MS would have an overarching structure to his curriculum design, but then would consider the characteristics of a cohort regarding which topics he would choose for study, making it 'more bespoke or differentiated for their needs'. GS would try to use her students as the source of music for study in class, and would often ask them, 'Do your family listen to any different music at home? Are there some things that you could suggest we can listen to that are a good example of different instruments?' And LC saw the elective topics in Year 12 as an opportunity for students to pursue their own interests and areas of expertise, although it did make it more complicated for him as a teacher:

> Each kid is doing their own thing, which means that you're sort of master of puppets, navigating a whole lot of different things going on in the classroom at the same time. It's just creating space for them to explore the area that's of more interest and relevance to them.

Other teachers described how they would encourage students within and beyond the classroom to help them reach their potential and develop autonomy as a learner and musician. FS saw this as a natural part of the senior secondary music learning process and experience, especially in their development as a performer: 'Students are becoming more comfortable performing, more self-directed and autonomous in the choices they make about the music they play and the way they rehearse. We try to become a little less hands-on as they get older and more experienced'. This acknowledgement of student autonomy influenced the way in which BA designed his assessments. Before, he would set a task that was inflexible and absolute, but now,

> I go, here's 10 different types of compositions that you can do that have the same skill set. You can do it on Garageband, you can do it here, you have to notate it, can you please do it as a theme, or a soundscape, I want you to only use your own recording samples. As long as they've found their own track and their own desire and want to do it, that's my job done.

Development of self-regulation and self-determination skills was important to PF in particular, and he was constantly asking himself, 'How can I give them the space for them to be, or to do what they want to do?' This didn't mean letting the students run roughshod, but allowing them to guide him as a teacher, 'Trying to follow their lead. Really listen to where the students' strengths are and where their voice is and where they want to go, as best we can'.

Conclusion

Authentic learning is a student-centred mode of classroom instruction and design that should mirror professional practice, and utilise authentic contexts, procedures, resources and expertise. As is evidenced from the responses of teachers involved in this study, authentic learning approaches are a valuable component of pedagogy for students in senior secondary music, where students have the requisite skills, knowledge and experience to explore musical ideas collaboratively, autonomously and within the realm of expertise. Given the initial grounded theory study was not focused on authentic learning pedagogy from the outset, the results from this study

indicate there is a relationship between high-achieving senior secondary music programmes and authentic learning approaches, but not necessarily a direct correlation. These results provide a catalyst for further, focused investigation in this area, and to examine if the seemingly intuitive implementation of authentic learning in senior secondary school music pedagogy can be applied to education more broadly.

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