

The MacGyver Approach: Teaching economy of availability in tertiary music education during COVID-19

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In this paper, we explore a pragmatic approach to tertiary music education. We propose that the conflation of tool, technique, and technology (Graham 2017: 19-20) has led to a situation where dominant music education models too often focus on teaching what you use to make music with rather than how you make it or why, and as a result are dependent on privilege and access. The COVID-19 pandemic provided a unique situation in which to test these ideas due to the enforced disruption to established ways of teaching and learning, in particular the radical pivot to online-only delivery. We explore our experiences of rethinking tool-based tertiary music education in this context and focus on our MacGyver (1985-1992) approach to music making and communicating information. We argue for the potential of a pragmatic approach in music education as one that follows music industry practice of an economy of availability and takes a step towards addressing inequities and the socialising of music making.

KEY WORDS: music education, COVID-19, higher education, DAW, pedagogy

Introduction

The COVID-19 pandemic provides some unique challenges and opportunities for the education sector generally (Belluigi et al. 2020). Due to lockdowns and physical campus closures, universities were required to pivot courses to an online delivery format, in some cases with minimal lead time, which has come to be known as 'emergency remote teaching' (Hodges et al. 2020). Although the higher education sector has been shifting towards online teaching and learning for years, COVID-19 provided a unique set of circumstances where universities were forced to teach online or not teach at all. This is a particular challenge for disciplines and courses, like music, that typically involve and rely on access to specialist spaces and equipment.

In this paper, we share our experiences of the COVID-19 higher education 'pivot' as the music discipline staff at the University of the Sunshine Coast, Queensland, Australia. We do so in order to highlight a perspective on tertiary music education which the unique circumstances of 2020 helped us clarify and enact. We contextualise this with research in order to explore some of the key themes and argue for the potential of this perspective in contributing to a more industry-reflective and socialised model of practice-based tertiary music education.

The University of the Sunshine Coast is situated in regional Australia with a large geographical footprint

along with students and staff from diverse backgrounds. We are the youngest university music discipline in the country and our courses are nested as a major in the Bachelor of Creative Industries degree, and as university-wide electives. Approximately 75 students make up the 2020 cohort and include some students with little to no prior musical experience in music making and creation.

In 2019, after a review of global tertiary musicianship pedagogy ranging from conservatoire models to contemporary music programs like that of Berkley, the music discipline undertook a complete rewrite of the music curriculum at USC. As teaching staff, we are all primarily industry practitioners who also have decades of teaching experience between us. As industry practitioners, we are guided by our practice in our approach to pedagogy. While we do not seek to legislate creativity (Davis 1989), we place significant importance on providing practical skills for our students to engage with industry.

We acknowledge there is a disconnect between tertiary music study and current commercial and popular industry practices to a level where we see conservative approaches to music pedagogy as a hindrance to students developing meaningful and sustainable careers as creative practitioners (Ewell 2020). In response to this, we argue for a pedagogical model based on the development of

unique intellectual property by way of song writing. In this way, our teaching focus is on building students' agency over their own creative practice through developing the skills associated with the two primary artefacts of the song as defined by industry practice (APRAAMCOS nd): the sound recording, and the performance. As a result, all coursework is embedded in industry level practices of song writing, production, and performance.

This three-pronged model allows us to approach learning design in a pragmatic way that is dictated by the act of making new music rather than by a set curriculum of established tools and techniques. In this paper, we define pragmatic as concerned with action, an approach to problem-solving that is led by practical considerations. While in its elemental stages, this pedagogical methodology has allowed for students of all capacities, and socio-economic backgrounds to engage in music making practices that generate intellectual property for exploitation to market. While some will critique our approach as harshly capital-led, we argue that if we are truly invested in the sustainable career of the student, agency over the means of production (of a song) is essential.

When COVID-19 started to impact our capacity to teach in-person, we were forced to rely on our pragmatic approach to music pedagogy. We, like many universities, were faced with the prospect of having to compromise our learning outcomes in order to maintain the delivery of courses in these new circumstances. This was a compromise we were not willing to make. While instruction of performance, delivery of theory, and song writing practice can all be reasonably taught via virtual classrooms, each of our courses also included a music production element that became challenging to deploy outside of a dedicated studio or lab environment. The question became how can we ethically and equitably teach song writing, production, and performance without the facilities, tools, and learning experiences provided by a university campus?

Nail it in With Whatever You've Got

Since 2015, music streaming is the largest source of music revenue in the United States (Datta et al. 2018). Hip-Hop is the largest streamed genre since 2018 (Stone 2019; Watson 2020), and is predominantly based on the creation of functional music using the tools available to the practitioner. Turntablism, and the second rise of the Roland 808 are just two examples of how Hip-Hop creators used the tools available to them to produce innovative and practical music. This is not unique to Hip Hop, but it is perhaps the most recognisable example of recent years. We use the term *economy of availability* to describe an environment where access to tools is restricted or defined by external circumstances such as

social, cultural, economic, or geographic factors. Herein lies the conceptual overlap with MacGyver (1985-1992).

Whereas the economy of availability describes the limitations of access, 'MacGyvering' foregrounds pragmatism and creativity in the act of selecting and using the tools one has access to, often in a new way, in order to solve a problem or 'do something'. MacGyvering describes an innovation in technique, guided by technology, that is synergistic with the tools in the economy of availability. In this way, MacGyvering is a cultural shorthand for what we might otherwise refer to as *hacking* (Darvasi 2016: 103-104) or *bricolage* (Kincheloe 2001: 680). In this context, we emphasise 'the resources at hand' and 'making do' aspects of bricolage (Lévi-Strauss 1967: 17-18). Conceptually, we are describing the complex interwoven relationship between the things we do, the things we do them with, and for why or what purpose.

It is important to make a distinction between the terms *tool*, *technique*, and *technology* here. Graham (2017: 19) defines the terms as such: 'tool (a thing to be used as part of technique) ... technique (how it is to be used) and technology (literally, the logic of technique; the *reason* for using it)'. For music education purposes, a specific digital audio workstation DAW would be the tool, how you use the DAW is the technique, and song writing and its production would be the technology.¹ Graham goes on to discuss the issues with this conflation of terms:

By using 'technology' to describe tools, techniques, and technologies, the motives for using a given tool or technique are automatically obscured, which means that the elements of choice and ethics are also obscured ... Contemporary usage of the term 'technology' has been removed from its artistic, skilful origins to mean a class of 'things' with which we do work: tools. (Graham 2017: 20)

The impact of conflating these terms in music education, for example viewing the DAW as the technology not the tool, is that we often end up teaching the tool rather than the technique or the technology. In effect, allowing the tool to guide priorities in learning design which may downplay or obscure the how and why. We contextualise our claim with the findings of Klein and Lewandowski-Cox's investigation *Music technology and Future Work Skills 2020: An employability mapping of Australian undergraduate music technology curriculum*:

Australian music technology educators seem to be prioritizing specific (technical and creative) skills over higher-order applications of skills and knowledge which are contextualized in their broader social and cultural contexts (Klein and Lewandowski-Cox 2019: 637).

Despite philosophical arguments over the conflation of terms, learning and creating music relies on having access to certain specific tools (for example equipment including DAWs, microphones, instruments, recording studios). COVID-19 forced an economy of availability in the pivot to students learning from home, therefore the teaching strategy had to adapt techniques and technologies over a wide variety of tools. In other words, we were teaching students to 'hit the nail in with whatever you've got that does the job'.

Music as Tool-Focused Pedagogy

Music making and listening practices are inherently tied to tools (Théberge 2001), often mislabeled as technologies. These range from the more obvious equipment used in studio recording to instruments themselves. However, any physical or conceptual thing that extends human capacity and improves efficacy can be labeled as a tool (Brown 2015: 6-7). For music, this means that things like equal temperament, metric time, Western functional harmony, and notation are also tools. Unfortunately, these conceptual tools are often regarded as exclusive rather than being treated as just one of many available choices of tool when looking to participate in the act of music making or listening. This framing is particularly apparent in conservatoire and error-correction models of music education (Ward and Luttrell Forthcoming).

Error-correction based pedagogy focuses more on the 'correct' use of specific tools and techniques, rather than concepts of technology bound to the action the tool is being used for. We argue the prominence of this approach in tertiary environments is largely due to the ease of assessing the use of a tool or technique, over the higher-level cognition of why they are being used. Specifically, it is easier to correct the angle of a bow, or the deployment of counterpoint than it is to assess what social action the cellist or composer is inherently bound up in whilst making music. In this approach, the emphasis is on learning and developing an approved range of tool-specific techniques, with minimal discussion of the ethical or cultural meaning of the act of using the tool or technique (Ward and Luttrell Forthcoming).

In our approach to pedagogy, we reject error-correction methods of music instruction and like Ewell (2020) argue that Western music theory is only a tool in a larger technical system. The selection of Western music theory, and its error-correction methods, as the predominant tool of music education in the academy is inherently bound to concepts of cultural dominance and white superiority (Ewell 2020). The error-correction method is a way for music educators to maintain this problematic theoretical framing without ever having to address the social and cultural acts surrounding it. In conservatoire models, the

question of how a student gains access to an expensive Western orchestral instrument, or the financial and personal support to develop tool-specific techniques with years of specialist instruction and practice are not significant. Economy of availability in this model takes for granted that access is equal and not a privilege of centuries of white European cultural dominion. Although this example might seem disconnected from the context of COVID-19, it is an important theoretical underpinning to our argument and a clear example of how problems of privilege and access can be exacerbated by tool-focused pedagogy.

Music production is another ingrained example of tool-focused pedagogy. Perhaps because it is still a relatively new field, with the possibility of recording emerging in the late 19th century. At a tool / technique level, it is an area where pedagogy appears to more closely align with music industry practices. This is of particular significance when considering the relationship between technological development and economy of availability. The recording studio is a place that is continually in flux (Slater and Martin 2012). In broad terms, the recording studio has emerged in three distinct temporal phases; the laboratory era; the factory era; and the current domestic (or do it yourself (DIY)) era (Goold and Graham 2018). We argue that the domestic era is most relevant to modern music production pedagogy.

The domestic era is dominated by a democratisation of recording processes that are; portable; utilise autonomous approaches to learning new recording techniques; software-based with considerable manipulation of digital audio; defined by the scarcity (or expense) of purpose-built recording space; and allow for more time to develop a completed production. While MIDI and sample-based recording dominate this era, software-based analogue studio emulations also enable full ensemble recordings providing the appropriate recording space is found. So too, production is often interwoven in the song writing process. The efficacy of the recording studio has often progressed with the increased capacity of recording tools (Anthony 2015; Leyshon 2009) and popular music regularly utilises the affordances of those progressions in the recording process.

Popular music studies in higher education are well established, with many universities and private higher-education facilities offering music technology related courses (see Klein and Lewandowski-Cox 2019). Many of these institutions have constructed elaborate recording facilities to teach music production. Music production is considered a key pillar of popular music pedagogies, particularly where song writing and production merge into a single practice. Tobias (2013: 215) states:

Given the creative processes and decisions involved in producing popular music, and the increasing role that shaping sound through digital means plays in creating a wide range of popular music, producing can be seen as a way of composing or creating music.

Music production pedagogy in higher education appears to centre on 20th century studio recording practices, including the requisite expensive industrialised recording spaces like those of the factory era. In an example of this, Anthony (2015) argues for a recording pedagogy to mirror professional practice through a live full-band recording experience. Factory era style recording spaces incentivise students to complete assessment on campus using expensive equipment they otherwise would not have access to at home. An insidious by-product of these facilities is that they speak to certain genres of music being created in them, particularly those that rely on in-studio and ensemble performance approaches. Unfortunately, many of the 21st century's largest genres, such as Hip-Hop, are more illustrative of domestic era recording practices than factory era.

If music is frequently conceived of and deployed as a tool-focused pedagogy, in a situation like COVID-19 where access to tools changes radically then how do we go about adapting in an ethical, equitable, and useful way? As Belluigi et al. (2020) remark about higher education more generally, 'What the pandemic has made near impossible to ignore, are equity considerations in HE.' We began to realise a great disservice currently occurring in modern music pedagogy, namely: if we have to compromise the learning outcomes of students because they cannot access bespoke tools, then we are not assessing the students' capacity to make music – we are simply assessing the quality of the tools they use. Or in other words, the level of privilege involved in a music student's access to privileged tools. Not only does this prove an issue of ethics and equity, but how useful is it for students to only learn how to make music with a set of bespoke tools that they most likely lose access to after their degree is complete? That is unless they are in a position to purchase, or commercially negotiate access to, these tools in order to allow them to continue to participate in the act of making music.²

Macgyvering During Covid-19

As a result of the impacts of COVID-19, we and our students found ourselves faced with an economy of availability that placed significant limitations on the set of tools with which to teach and make music. There were large variations in access to tools across our student cohort. We found the assumption that every student would have access to personal computers able to run

communication³ and musical software as well as access to reliable internet service⁴, especially when dealing with streaming video, was flawed. During in-person learning this is compensated by providing facilities that are equipped with computers and relevant software, and with the university being responsible for the cost of these purchases and subscriptions. In order to be equitable, we had to be flexible, and not mandate the use of particular tools while providing extra technical support for a multitude of tools. In semester 1, AVID was providing Pro Tools amnesty licenses but this was not continued in semester 2. This resulted in our teacher demonstration pivot towards free or subscription-based tools like BandLab and Hookpad. We encouraged the use of samples and audio instruments, which replicates music industry practice as well as helping to mitigate access issues to microphones and audio interfaces. To record vocals and other acoustic sounds, we developed material for using the types of microphones that students were likely to have access to, such as ones inbuilt in their computers or smart phones. Although students still had some access to campus spaces and the ability to borrow some equipment, many students lived long distances from campus or had travelled interstate or overseas prior to lockdowns and border closures. Our three-pronged approach to curriculum meant that we had to find a way to teach song writing, production, and performance as an act that could be realised in any digital audio workstation (DAW) with any equipment.

As a team, we made a decision to co-teach all of our courses in order to provide students with diverse expertise, a more dynamic and conversational learning experience over Zoom (so we could model the type of dialogic interaction we wanted from the students), and to allow us to manage teaching a diverse cohort of learners in real time. In the initial transition week, we released a set of online learning materials on how to set up and optimise their home computers with Zoom and some audio software. This helped to triage problems for our first online synchronous class the week after. We provided many hours of in-class and additional support to students to customise and troubleshoot their particular set ups, often by remote access to student computers. During classes and additional meetings, we demonstrated the act of using audio software to create new songs, including the unavoidable pragmatic problem-solving when something did not work as planned. We found this to be one of the most valuable parts of the experience in that we as educators were modelling problem-based learning with the students as a community of practice (Sarrazin 2018; Wenger 1998). In the MacGyver problem-solving method/paradigm our song writing decisions were motivated by our creative intentions, rather than starting from the functionality of the software. This approach to music pedagogy has some very meaningful implications

for developing higher-order cognitive skills in students but we want to acknowledge it required us to be much more adaptable and responsive as teachers and facilitators than in tool-focused approaches.

By emphasising the technology, that is the song writing, performing and production, we were able to maintain learning outcomes despite the unprecedented circumstances. Our pre-COVID efforts to design curriculum and assessment focusing on higher-order cognitive skills helped with this. Our assessment of the outcomes put the emphasis on how and why students were using tools and not the tools themselves. Learning experiences were about making the song, with the selection of tools and techniques MacGyvered to achieve the student's artistic intentions. Learning design proceeded from a level of abstraction where standardised techniques were relevant and useful despite the tool used, teaching a concept that could be applied in multiple situations. Teaching the students how to 'make do' in this situation is potentially the most valuable pedagogical outcome. Pre-COVID, the ability to make do and make music was representative of a significant part of music industry practice. Since COVID, MacGyvering in an economy of availability has become the way our industry is surviving.

Conclusion

We acknowledge our specific circumstances meant that we had control and flexibility in our pragmatic response to adapting to the challenges of COVID-19. We are very grateful to our students for trusting our approach and being patient and open-minded in what was a year of radical changes and global trauma. It remains to be seen what kind of lasting impact COVID-19 will have on both the music industry and education sector, but the unique conditions of 2020 have helped to bring to the surface some deep-rooted issues that might have otherwise continued without challenge. Interrogating tertiary music education in terms of tool, technique, and technology helps to highlight some of the issues of access and privilege that are ingrained in many of the prevalent tool-focused models. In our experience, reframing tertiary music pedagogy to be about the technology – the why – is a way to more closely align with music industry practice and teach music making as a social act. We emphasise that there is much more work to do on addressing the inequities in music and music education but we offer our experiences of using a pragmatic approach to music pedagogy as an effective approach to explore this.

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End Notes

1. Another example is functional harmony as the tool, how you use functional harmony as the technique, and songwriting or composition as the technology.
2. We acknowledge that music making tools are much more affordable at this point in history than ever before, but the cumulative cost of multiple tools is still prohibitive to many people. It is problematic when access to certain tools is treated as gatekeeping to the act of 'professional' music making.
3. The university had designated Zoom as the preferred platform for synchronous online delivery. This was to be recorded and made available for asynchronous learners.
4. Something that appeared to impact our students more so than those attending universities in metropolitan centres.

Close to Home

This lake says *oofta*, something my Minnesotan mother might say while walking bent-over uphill or something that I might say while dusting books for years untouched, the ashy stories flying straight into my eyes and blinding me with their language. Mine's a quieter *oofta* than hers, though equally substantial.

Because I want to be in lakes or on them or by them how had I missed this an hour out of the city's symmetry? *Oofta*, a gentle shock gushing forth, the lake like us in our earlier years growing out of desperate sex and swimming deeper, where less words needed saying though when we spoke we saw bubbles.

I love you today, as if you were a lake.

Minnesota is a lakeland where I drank Dr Pepper while drying in the sun, my young body growing and endless, a photograph stored in a shoebox in my parents' closet back in Florida, where children lecture adults through megaphones

guns are bad / guns are bad / guns are bad
and they should know.

The day before we left for the lake I picked up our son at the usual spot, the shade of the gumtree still near the roundabout, the couch still by the crooked mailbox outside the brittle house – not everything had changed in the two hours since I'd heard the news of the school shooting: my son's backpack still like a shell on top of his long and skinny legs, his skin so white, his eyes so large – not everything had changed.

The bottle from the last winery on the way to this lake is still cold as we toast the lake while watching the lake baptise itself again and again. No train schedules here. Here, there are twigs to gather. No local pubs. Only purple swamphens in the reeds.

Tell me you feel the ripple too – a leaf fallen by the breeze, a dog's bark shaking the surface of the lake and the *oofta* vibration that it makes, an oar lifted by our son coaxing out the water's words, like uncovering a memory then stowing it again.

The lake hears our stories too, drowns in every one.

Heather Taylor-Johnson