

IMPROVISING TO A COVID TUNE: REDESIGNING A BEGINNING JAZZ IMPROVISATION COURSE FOR INSTRUMENTALISTS TRAINED IN OTHER STYLES FOR FULLY ONLINE DELIVERY

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The teaching of improvisation at tertiary institutions has primarily been through face-to-face methods in jazz education contexts and music education more widely. Jazz is a music that is performed with others in shared spaces and is similarly learned in social contexts. It is because of these social learning dynamics that pedagogy often relies on social constructivism. The social constructivism and inter-corporeal nature of jazz education has led to specific challenges during the COVID-19 pandemic. However, it has also allowed for experimentation with teaching practice and rethinking of how improvisation can be taught, particularly to novices. As Australian universities transitioned to fully online learning rapidly in March, questions quickly arose about how curriculum, learning activities, and assessment could be delivered in compliance with social distancing requirements. In this article, we discuss the transitioning of a beginner improvisation class of 21 students at a tertiary institution, primarily in their first or second year of university, to fully online delivery using a flexible research design that embraces a self-reflexive and peer dialogue approach to researching and redesigning the course. In reviewing previous research literature, we have identified the reliance on pedagogical approaches previously deemed questionable by many jazz educators and the affordances and limitations of utilizing technology to teach music online. We outline the adaptations to teaching improvisation for beginners, which use a more structured and evidence-based informed pedagogical approach in contrast to most tertiary jazz education. Subsequently, we conclude the article by offering a prospective model to advance the teaching of improvisation online to novices based on evidence-based learning and teaching strategies.

KEY WORDS: online music education, improvisation, jazz education, jazz pedagogy

1. SCOPE AND LIMITATIONS

Twenty-one students participated in the course during the trimester. Most were recent high school graduates in their first or second year of university. A small number of mature aged students were also involved. Each student had a substantial degree of proficiency in musical performance on his/her instrument. However, they had not been significantly involved in learning improvisation before enrolling in Fundamentals of Improvisation at The University of New South Wales (UNSW). The present study focuses on novice improvisers. We refer specifically to music students trained in a musical instrument who are new to studying improvisation, and therefore are novices in this specific context. For the purposes of this study, we define improvisation as a contextually dependent musical practice (in this case, jazz), which refers to the spontaneous creation of musical material in relation to stylistic principles that influence how rhythm and melody are treated in the moment of performance (Nooshin, 2003; Nettl, 1998). We identify the reliance on pedagogical approaches previously deemed questionable by many jazz educators and the unexpected affordances and limitations of both technology and pedagogical approaches that arose. The focus was placed on documenting a local approach using the available resources grounded in addressing the challenges of a real, small scale scenario in which other improvisation educators may find themselves teaching (Carey et al., 2013, p. 151).

2. INTRODUCTION

Teaching improvisation has relied on face-to-face methods in jazz education contexts and music education more widely. The often-communal apprentice-like relationships of students and musicians that characterized jazz education practices on the bandstands of the swing and big band eras helped shape its institutionalization into the tertiary sector (Prouty, 2008). The social contexts of ensemble-based study and the importance of entrainment to the style means certain skills such as learning to make the rhythm section swing can only be learned by musicians working together to create a jazz aesthetic (Berliner, 1994; Monson, 1996). Since institutional jazz education has often resisted the adoption of technology due to the perceived benefits of face-to-face teaching (Grau, 2020), this has led to challenges when transitioning to online teaching in response to the 2020 COVID-19 pandemic. However, the context also allowed for experimentation with teaching practice and rethinking of how improvisation can be taught, particularly to novices.

As Australian universities transitioned to fully online learning rapidly in March, questions quickly arose as to how curriculum, learning activities, and assessment could be delivered in compliance with social distancing requirements. In this article, we examine how the affordances and limitations of technology and the needs of students were combined in the design of an approach to teaching a beginner improvisation class fully online. We discuss

the use of pedagogical approaches connected to the history and politics of teaching jazz and explore the relationship between jazz improvisation instruction and models for teaching music online. In light of the affordances and limitations of both technology and pedagogical approaches that arose in reviewing the research literature, we explore the redesign of the fundamentals of improvisation and suggest implications and broader application of these strategies to tertiary teaching. These implications are particularly pertinent given that opportunities for tertiary music students to learn to improvise (if they have not already begun doing so) are limited. This situation prompted Snell & Azzara (2015) to call for greater inclusion of these opportunities to support prospective music educators teach their future students and Després et al. (2017) to identify a need for more improvisation activities in classical music study programs at a tertiary level to enable higher-order creativity associated with elite performance.

3. JAZZ AND IMPROVISATION TEACHING AND LEARNING SCHOLARSHIP

The pedagogy of teaching jazz in tertiary institutions had been initially characterized by attempts to establish it as comparable to Western classical music pedagogy (Prouty, 2008). Pedagogues often attempted to differentiate jazz education practice as traditionally an oral form of learning and teaching while adding perceived legitimacy by utilizing notated forms in instructional models similar to their classical counterparts. However, as Prouty noted, this represents an idealization of jazz as oral and diminishes the training of many early jazz musicians in Western traditions, perpetuating some of the tropes of the primitivist myth (Prouty, 2008; Gioia, 1989).

Significantly little attention was given in jazz education scholarship to the pedagogical practices used by jazz musicians both inside and outside the academy and their impact on student learning (Prouty, 2005, p. 86). In fact, the master-apprentice model dominant in classical music education was almost entirely replicated by jazz faculties (Burwell, 2005; Blackburn, 2017). This included some of the issues identified by Persson (1994), where teachers were in a significantly more powerful position and controlled learning opportunities. Like their classical counterparts, jazz musicians teaching in tertiary institutions have also been dealing with the challenge to create a distinction between the expertise of performance and composition and the expertise of teaching jazz (Carey et al., 2013, p. 151).

Didactic control over the aesthetic of jazz created an archetypal model of jazz creativity and improvisation around musicians such as Charlie Parker from the bebop era used extensively by jazz educators (Prouty, 2005, p. 95). The influence of Parker and bebop on curriculum content persists, and the transcriptions of solos and instructional books produced have contributed to the growing integration of jazz studies within tertiary

institutions. A more theoretical model for understanding jazz came from George Russell's Lydian Chromatic concept, which Prouty argues formalized the music in a Western sense and challenged prevailing musical thinking of improvisation as esoteric through what is often called chord-scale theory (Prouty, 2005, p. 96). Chord scale theory blends the previously separated conceptions of “harmonic or vertical, structures to melodic, or horizontal ones” and differentiates the study of the music from classical harmony (Prouty 2005, p. 96; Penttinen & Huovinen, 2011).

In response to control over what constitutes jazz, a more recent movement has aimed to place constructivist notions of play and experimentation at the center of jazz and improvisation education rather than the content-focused curriculums that have predominated (Borgo, 2007; Hickey, 2009; Biasutti, 2017). Borgo (2007) criticized how notation and transcription have led to uniformity in musicians' improvisation and advocated for adopting a free improvisation-driven curriculum embedded in a social constructivist approach. Similarly, Biasutti (2017) advocated the adoption of a social constructivist approach to teaching jazz improvisation, but differentiated when play or experimentation and scaffolded instruction should occur. Biasutti (2017, p. 3) discussed how a purer form of improvisation can be used appropriately to teach improvisational processes such as listening and the expressive elements of jazz, while learning improvisational vocabulary, repertoire, and models require more directed instruction. In justifying his approach, Biasutti (2017) pointed to how Vygotsky's zone of proximal development requires the teacher to assess the students' levels and design learning experiences that will challenge them to a reasonable degree in the right area of learning (Vygotsky, 1978; Biasutti, 2017, p. 5). Both approaches are timely in highlighting the importance of social constructivist approaches to developing a deeper understanding of jazz. However, the largely unstructured environments of improvisation instruction for which Borgo (2007) and Hickey (2009) argued have been connected to the limited and marginalized participation of female students (May, 2003; Wehr-Flowers 2006) and students without an existing background in jazz or improvisation performance (Snell & Azzara, 2015). For instance, Wehr-Flowers (2006), noted that the common model of having students improvise in front of each other is a major cause of anxiety that limits participation.

As a result, a learning design approach that incorporates greater use of modeling, scaffolding, and direct instruction is necessary to accommodate the learning needs of novices alongside opportunities to experiment with more unrestricted approaches to improvisation. Consideration of the contextual learning needs of students, specifically concerning timing and expertise development, are very important to maintaining student engagement and addressing anxiety (May, 2003; Wehr-Flowers, 2006). Therefore, asking novice students to attempt to play in free improvisation style or a specific jazz style without

knowledge of the aesthetic and musical practices would have questionable learning benefits. Addressing these concerns when teaching novices to improvise is a serious challenge for a teacher because of the difficulty in establishing clear criteria for success and the widespread belief among novices that studying improvisation requires risk taking with minimal support (May, 2003; Wehr-Flowers, 2006; Snell & Azzara, 2015; Prouty, 2008).

Pedagogical strategies to teach novices are well known among teachers, but their documentation is lacking. In reality, the first aspect of teaching improvisation usually begins with building fundamental skills, knowledge, and behaviors across several musical domains. May (2003) argued that theoretical and aural skills, aural imitation, and formal instruction on improvisation, as well as the ability of students to reflect on their abilities, are necessary for success. In their study into teaching experienced musicians who are novice improvisers, Snell & Azzara (2015, p. 79) demonstrated that such students prefer a “sequential process for learning to improvise.” They reminded educators that when foundational skills are being acquired, a “scaffolded, developmental approach for learning to improvise may provide those with limited experience a point of access to develop this skill consistent with the skill acquisition model” (Snell & Azzara, 2015, p. 80). We would also suggest there is a need in this teaching context to build a sense of connection with musical peers in ensemble environments and practice deploying improvisational vocabulary to encourage safe experimentation with peer feedback opportunities.

4. MODELS FOR TEACHING MUSIC ONLINE

Since the emergence of e-learning platforms and video-conferencing as viable ways of delivering learning at scale in the early 2000s, music educators and researchers have been investigating how technology can be leveraged to provide effective access to music education. Technology offers opportunities to overcome issues such as geographic distance and social isolation due to unforeseen circumstances, and in some cases can reduce costs due to the ability to reach a wider audience (Dammers, 2009; Blackburn, 2017). When teaching foundational musical aural and theoretical skills, Horspool & Yang (2010) suggested there is no significant difference in outcomes compared to face-to-face teaching. Along with Blackburn (2017), they argued that the ability to review materials online at will could, in fact, enhance the learning process, allowing for deeper engagement and opportunities to return and evaluate. However, whether performance and group performance can be learned as effectively online has received a variety of findings in the research literature (Dammers, 2009). Dammers (2009) explored instrumental music lessons using video-conferencing and the affordance and limitations of designing programs using technology to bridge distance. The approach in this video-conference research followed the general one-to-one of instrumental music education in

conservatories (Burwell, 2005). Dammers (2009) highlighted the negative impacts of latency on teaching duet performance and the impact of poorer audio quality, particularly regarding volume. He also suggested that visual limitations impact instrumental teaching of posture, embouchure, bow hold, and other physical movements that are not easy to observe. Dammers (2009, p. 22) argued that the nature of video-conferencing has led to “more preparation and planning” and an increase in the use of questioning techniques to elicit understanding. It also offered no hindrance to feedback on pitch and rhythm issues in solo performance.

Blackburn (2017) advocated adopting a constructivist paradigm to transform tertiary music education using online affordances to develop more independent learners. Blackburn (2017) discussed how the demands of the contemporary university place emphasis on developing self-reflective learners; ensuring constructive alignment of assessment, learning activities, and outcomes (Biggs & Tang, 2011); and increasing graduate employability. To do this, she proposed adopting a constructivist paradigm focused on preparing students for a career in music that “shift[s] instruction from teacher-focused coaching to a student-centred learning environment” (Blackburn 2017, p. 65). Blackburn's vision is interesting in that it highlights the tension between the master-apprentice paradigm that dominates conservatory teaching and the direction of university policy and funding structures. Blackburn & Hewitt (2020) used the works of Siminović Schiff (2011) and Bowman (2014) as the basis for designing a planned response to teaching music online during the COVID-19 pandemic. While both of these authors argued that online content can achieve relatively the same result as face-to-face interaction, the existing literature addressing teaching improvisation online is more skeptical, perhaps due to its focus on real-time spontaneity (Grau, 2020). The broader literature on teaching practical or demonstrable activities online also qualifies that the success of online teaching is contingent on a range of factors, not least of which is access to specific and contingent feedback (Fiorella & Mayer, 2018).

Group performance in online learning environments often faces issues around a lack of interaction. As a result, the Blackburn & Hewitt (2020) approach was to create a collaborative environment using a community of practice model. They discussed the availability of a range of technological programs that could enable synchronous performance online under ideal circumstances and conducted tests using university locations with superior Internet access; however, they determined that this approach was not replicable across the student body (Blackburn & Hewitt, 2020). Internet bandwidth to individual homes cannot achieve the capacities of university institutions in Australia, making latency issues similar to normal meeting software. Blackburn & Hewitt (2020) advocated for students sourcing group performance opportunities among their immediate

community performing in the same location to an online audience to build skills in creative collaboration and entrepreneurialism (Blackburn & Hewitt, 2020; Bartleet et al., 2012). They also suggested the use of editing equipment to pre-record remote collaborators and perform along with them. However, it is important to note that the student group here is focused on performing original music in their own chosen style rather than a specific process or skill such as improvisation, which would make some of these strategies challenging for novices. Increased efficiency in the hardware and software and improved Internet networks would improve the ability of online music education to bridge distances while avoiding factors of latency that make the online improvisation teaching of performance challenging (Dammers, 2009).

Carol Johnson's model for online music teaching recognizes the limitations of any model in creating restrictions and suggests that certain design principles would help develop an online course (Johnson, 2020). Johnson discussed how determining whether the teaching approach will be student, subject, or teacher centered is an important aspect along with determining the way of learning as either behaviorist or cognitivist. Determining this approach is significant because studies have shown teacher talk time often dominates lessons (Dammers, 2009; Burwell, 2005). While behaviorism has largely been rejected as a classroom approach based on empirical research, Johnson's argument can be translated effectively for improvisation learning in contemporary discussions about the importance of embodied cognition in determining how people improvise in performance (McClean, 2018; Perlovsky, 2015). A significant issue raised by Johnson (2020) is whether or not asynchronous or synchronous tools are used. Musicians have tended to favor synchronous learning contexts due to the temporal nature of music. However, this is problematic due to the latency experienced playing, listening to, and learning music online. Instead, we must consider whether the desired learning outcome requires the student and teacher to be co-present. Can a presentation or demonstration be pre-recorded by a teacher, and then can a student's response similarly be uploaded to a central repository or learning management system for feedback? Certain elements of knowledge and skills needed to take part in group improvisation must be learned collaboratively as students co-create knowledge in line with social-constructivist thinking often connected to scholar Lev Vygotsky (Derry, 2013). However, Vygotsky's emphasis on scaffolding is often forgotten and students are asked to integrate knowledge of their individual role together quickly, if not immediately. To address this may require a shift in thinking about whether the strategies used in scaffolding skills and knowledge used in group performance may not necessarily need to be or can successfully be taught in a group context. In fact, certain elements of learning to play in a group depend significantly on one-to-one teaching and

personal practice routines ranging from intonation, scales, and rhythmic phrasing to listening and reflection on timbre and aesthetics.

In this regard, Derry (2013) suggested that elements of Vygotsky's model focus on more knowledgeable other (MKO) mentoring, and that guiding the development of improvisation knowledge and skills of the student can be modeled through human interactions and at times through digital asynchronous learning activities. One such example in a jazz style is the Seddon & Biasutti (2010) experiment with student keyboard learning of 12-bar blues asynchronously. Students were given a series of resources, including audio, text description, and illustration using technology facilitated learning by ear in a digital version of the MKO (Seddon & Biasutti, 2010). Other disciplines have successfully implemented peer interaction scenarios that also fulfill the MKO role using discussion forums that can be adapted for music learning (Sentance et al., 2019; Blackburn, 2017). However, this approach is recommended for more experienced students rather than for novices. For novice improvisers facing issues of increased anxiety associated with learning to improvise such an approach may prove challenging (Snell & Azzara, 2015; May, 2003).

The Johnson (2020) model puts forward three considerations that shape the design of the learning and teaching sequence of music online. These include content, assessment, and apprenticeship. Content refers to the knowledge body the students interact with and how it is presented. Assessment refers to how understanding is checked by both formal and informal strategies ranging from discussion to a recital. Apprenticeship in Johnson's model refers to the most common model of instructional relationship in music: master and apprentice (see Burwell, 2005). This relationship has the potential to be motivational for student learning and the most significant force in this regard; however, much recent research suggests these relationships have often been problematic (Johnson, 2020; Burwell, 2019). Indeed, music students can often perceive teachers as being either controlling or unable to challenge them, thereby negatively affecting motivation (Burwell, 2019). Burwell (2019) argued that the one-to-one relationship can also foster student independence, and by the tertiary level most students have taken some form of lead in their instrumental learning. She highlights the tension at play in music instruction at the tertiary level, in which the students both require instruction but also have responsibility and need guidance on their own musical development. The increase of student questions as they go through their university studies and a greater need for control over their studies develops over time. Burwell (2005, p. 213) suggested that using exploratory questions, disguised instruction, and rhetorical questions may assist in developing more reflexive students and higher-order thinking about music performance; the latter of which she argues is the most effective because it demands that students make what they are thinking about performance visible, moving beyond imitation and mastery.

The model developed by Johnson (2020), while a welcome heuristic, requires augmentation for the online teaching and learning of improvisation to flourish. The first of these is the role of autonomy supportive teaching and the support and structures teachers need to provide at the appropriate time to support students' psychological needs of autonomy, competence, and relatedness (Black & Deci, 2000; Freer & Evans, 2018). Respectively, these include appropriate scaffolding and then fading of support as students' progress; the development of metacognitive skills for self-regulation and assessment of learning through feedback processes and the building of a sense of connection within the learning community not just with the master (Freer & Evans, 2018; Jang et al., 2010). As a result, the concepts of feedback and building a community of learning would augment Johnson's model effectively.

In response to the COVID-19 pandemic, Merrick (2020) proposed the use of the adaptive teaching framework (ATF), building on the work of Zimmerman (2008) to structure the design or redesign of curriculum and assessment. Merrick's approach builds upon the literature discussed previously by embedding elements of self-regulated learning in the curriculum design using three phases: a "performance phase, the self-reflection phase (review, judgement, and adaptation) and the forethought phase (planning, self-efficacy and strategy)" (Merrick, 2020, p. 10). The ATF approach Merrick uses addresses the needs of postgraduate music education students and allows them to explore various resources—including video presentations, texts, and literature—while having opportunities to interact with their lecturer, who takes a guidance role. This is an effective approach for student motivation and engagement but has less structure than is required to teach a skill like improvisation to novices. In this regard, teaching how to practice improvisation strategies becomes important to the later development of more independent self-regulated behaviors (Johansen, 2018). However, a structured e-portfolio approach may help build these skills with appropriate scaffolding. For instance, Brook & Uptis (2015) explored the use of iScore as an e-portfolio documenting students' learning and practice. Students can document their practice and engage with structured activities that might have otherwise been delivered by the teacher, thus developing their abilities to regulate their own learning (Brook & Uptis, 2015).

Cognitive load theory's focus on intrinsic or germane content to limit the burden placed on cognitive load can be of assistance in teaching novices improvisation online, which often requires more explicit direction (Sweller et al., 2011). Owens & Sweller (2008) demonstrated how the effects of cognitive load—and, in particular, the element interactivity effect—are important principles to consider when designing music instruction. They also demonstrated that when a student's attention is split across multiple sources of information (for instance, notation, text, audio, and video), an extraneous cognitive load can be placed

on students; they advised incorporating resources that are mutually referring (Owens & Sweller, 2008, p. 31). There are different impacts on extraneous cognitive load in the process of music performance depending on its context. Johnson-Laird (2002) argued that improvisation itself places no extraneous load on the working memory of professional jazz musicians, while learning jazz improvisation is believed to place a much heavier cognitive load on students (Pressing, 1988; Snell & Azzara, 2015). In the domain of classical music performance, Çorlu et al. (2015) found that creative aspects such as expressiveness are undermined when an external cognitive load is placed on a performer. In the teaching of classical music to wind instrument students, Stambaugh (2016) found that external structuring of novices' practice can lead to faster retention and performance of melodic passages.

The interactivity effect essentially posits that “material that is high in element interactivity and intrinsic cognitive load includes elements that interact and must be processed simultaneously as they cannot be understood and learned as single elements” (Sweller et al., 2011, p. 202). This is an effect that describes many elements of music teaching from reading and hearing music at the same time to improvising a solo while keeping track of a form either from music or memory, which is the goal of the course being discussed here (Owens & Sweller, 2008). Sweller et al. (2011) recommended the following strategies to reduce intrinsic load and help students manage the learning of complex, interrelated material:

- Pre-training elements of the material separately;
- Cuing of possible connections between material in chunked sub-goals rather than all elements together;
- Teaching declarative or reasoned knowledge about the problem or task being learned and how to solve it separately from procedural knowledge, which is used to practice the solving of the problem;
- Reducing cognitive load in worked samples using a modular structure allows for better categorization and accessing effective schemas for problem solving by limiting the elements being addressed by the students (for instance, a teacher might focus on only the first part of a composition before adding the rest of the form);
- The isolated elements effect: this involves isolating interactive elements (for instance, the melody separated from the chords), such that it can be learned before gradually adding in more interactive elements;
- Presentation of part tasks in preparation of whole tasks or the C/ID model for complex learning: in this type of instruction van Merriënboer et al. (2006) group learning tasks

into supportive information, procedural information, and part-task practice (Sweller et al., 2011); and

- Variability effect: varying contexts in which the task is done to develop long-term understanding and application of the knowledge (Sweller et al., 2011). Such as a new piece of repertoire to improvise on or different ensemble instrumentation to improvise with.

5. TEACHING FUNDAMENTALS OF IMPROVISATION BEFORE COVID-19

Previously, the fundamentals of improvisation were taught in an ensemble approach, where students performed in a relatively traditional band setting of a rhythm section (bass, drums, piano, and guitar) and horns (trumpets, trombone, and saxophones). The ensemble would learn a certain jazz standard and blues repertoire and try improvising, going around the room while the rhythm section accompanied with walking bass line, chords, and swing drum set. The approach had already been evolving with larger more diverse student cohorts, requiring the introduction of a range of strategies to address different needs. One of the problems that needed to be addressed was that everyone might be present in the room but not necessarily engaged in active participation.

The approach was developed using a workshop format, where the instructor would present musical concepts such as the blues scale, bebop scale, call and response, and two-five chord progressions. Students would then, in turn, practice using these ideas and then discuss and apply them in a song format—a task that has high element interactivity. The students would then receive verbal feedback and guidance in class. The centrality of performance involving each class member helped make the classes learning audible for both students and teachers. Before COVID-19, the course centered on presenting a smaller amount of improvisation concepts, and students learned from hearing each other's improvised performances on the repertoire. The formative assessment of student learning involved weekly class work using different song forms and applying foundational concepts for improvising, such as licks and scales. The summative end of term assessment was a performance that incorporated key concepts explored throughout the term on a set piece of music.

6. ADAPTING FUNDAMENTALS OF IMPROVISATION FOR FULLY ONLINE

To adapt the course for the online environment required a much more structured and supportive model of learning design to teach improvisation that the teacher usually guides in a face-to-face context. In the orthodox master–apprentice model, a student would improvise over a jazz standard or blues repertoire, or by using particular scales, and then receive immediate feedback from the teacher. Teachers can quickly suggest phrases,

rhythms, and note choices and demonstrate them in real time. This process online was adapted to submitting a recording to the teacher for effective feedback to accommodate the class size and latency issues on online video-conferencing platforms. According to Grau (2020), few universities globally had adopted online teaching for jazz improvisation prior to the COVID-19 pandemic, and little research into its effectiveness currently exists (Kruse & Veblen, 2012). As such, along with our colleagues teaching jazz and improvisation globally, we were faced with a situation that required experimentation with tools that were new to us. A group of music faculty members tested a range of video-conferencing platforms and attempted a range of group improvisation performances that would be taught across different levels of jazz ensemble at the university. This included duo performance, large ensemble performance, and smaller ensembles. Based on the need to utilize a platform easily available to students, without cost to them or need for additional hardware to participate, it was not possible to use a bespoke music collaboration program such as JamKazam, requiring hardware and modifications. We also noted that based on current Internet speeds in suburban Australia, such programs have a limited success rate. Creating an effective learning experience online required a focus on what was best for students at a novice level, and on what skills they could develop apart that would be beneficial when face-to-face classes resumed.

7. STRUCTURE OF LEARNING ACTIVITIES

Weeks one to eight of the 10-week course involved creating notation sheets on Sibelius and backing tracks with the iReal book application, which were uploaded on a Microsoft Teams class notebook with written direction on the page instructing students to focus on specific elements of performing. Students were provided with resources that reduced cognitive load by centralizing sound, notation, and instructions in one location to complete the task. Pre-recorded demonstration videos and check-ins supplemented this on specific improvisation strategies such as chord scale relationships. At a structural level, the learning activities for each week were the following: a technical passage; specific jazz patterns derived from scales, phrases, and rhythms; and a progression to improvise on and incorporate these ideas. This structure made clearer what skills were being developed in the courses' learning activities. The reflection on these structures helped to hasten a process already underway and created better curriculum alignment with the recently revised UNSW Jazz Syllabus (Evans & Spence, 2019).

While the aforementioned learning design strategies stayed relatively consistent each week and content built upon the previous week's work in a natural progression, there was alteration to the teaching approach used as students developed. In weeks one to five, more scaffolded instruction was used to help students explore foundational concepts of improvisation and establish knowledge of the repertoire. During the second half of the

trimester, supports were reduced. The teaching approach focused on the guidance of students as they used their approach to create a melody and a solo, demonstrating their understanding of jazz improvisation concepts creatively. Following that, students were given feedback to edit and rework their approach to improvisation to be both authentic and representative of the styles of music being taught.

8. SUPPORT FOR STUDENTS

Communication and instruction relied heavily on the Microsoft Teams platform and the class notebook app within it. The platform provided a direct message function through its app and video chat, and the channels acted as a hub with weekly postings and a workbook shared between the teacher and student, allowing for private submission of learning activities. This made student communications and follow up on the learning activities more efficient than email or Moodle. Students could message non-urgent questions and receive a reply anytime through the week. An hour a week was also dedicated to being available for video chat online to offer individualized instruction for the work, guidance, demonstration, and workshopping. While this was elective, almost all of the students chose to spend at least 15–30 minutes each week getting personalized instruction, feedback, and advice. The student workbook served as a central place to upload resources and submit work through a direct file and video upload and receive feedback from the instructor. The centralization of communications, workspace, and documentation of student work and staff feedback increased efficiencies needed to engage a relatively large performance class of 21 students. It eliminated the need to trawl through emails and download files, leading to more specific feedback and guidance of student learning than was possible in the previous iteration of the course in a classroom environment.

A variety of adjustments were needed since this class is for novices and the skill levels in improvisation and instrumental ability varied. These included using different tempos for different students and variations on the goal for students each week. To address students' needs adequately, faster or slower tempos were set depending on where they were in their journey of learning to improvise. In particular, since this is an introductory course, much of the difficulty in improvising is dependent on how long a student has to think and apply strategies fluently in real time, much like speaking on a topic. Setting differentiated metronome goals for their performances depending on ability helped set manageable levels of challenge while also avoiding an open-ended definition of success that can sometimes occur in improvisation courses with diverse skill levels. It also helped develop skills in timekeeping that allowed students to evaluate their performance better and prepare them for a future goal of working collaboratively with appropriate ensemble skills

such as timekeeping, phrasing placement over chord changes, and temporal aural awareness.

9. CONCLUSION: DISTILLING PRACTICAL CONSIDERATIONS FOR LEARNING DESIGN TO TEACH NOVICES MUSICAL IMPROVISATION ONLINE

As a result of this experience delivering a foundational improvisation course fully online and subsequent reflection in preparation to deliver the course online again, we have developed a practical model for teaching musical improvisation online. We have distilled it into five relatively memorable principles; the first four are based on successful use in 2020. The last principle is an aspirational design element we feel would improve the course by better addressing students' needs to feel connected to each other as they learn. The principles are the following:

1. Clear instructional design:
 - That combines audio recordings, notation, and instruction in one place;
 - That provides a short, targeted presentation of information—presentation of music via notation and recording; and
 - That gives students the tools to take charge of their learning (both learning strategies and practice resources).
2. Communication and expectations:
 - Centralization of communication about expectations and learning activity/upload within the learning platform; and
 - Clear procedural language.
3. Opportunities for guided practice:
 - Regular opportunity for formative assessment and delivery of feedback in the same location with easy access and upload.
4. Student support:
 - Opportunities for one-on-one instruction and guidance; and
 - Differentiation that makes sure tasks are manageable for different learner levels.
5. Establishing a learning community online:
 - Students experience learning online differently, and opportunities to share experience are important; and

- Opportunities to discuss synchronously as a cohort.

The aforementioned principles present an overview of the issues that we believe should be considered when designing a program to teach novices improvisation online. The teaching and learning of improvisation online pose significant challenges for both students and teachers and require us to rethink the orthodox approaches that have characterized the educational context. There are distinct limitations to teaching improvisation online due to latency preventing real-time ensemble performance. However, this same limitation has led to a renewed focus on novices' skills when first learning to improvise and how best to focus on building these for future student success as improvisers. The teaching of improvisation online during COVID has shown that it could be designed to support student learning needs and reach students from a wider range of backgrounds and locations, which is a distinctive advantage. Future programs and research into this type of instruction could prove fruitful for disrupting how novice improvisers have been previously approached, adding levels of efficiency at a larger scale. This is a possible way of addressing the issues facing the discipline of the low student-to-teacher ratios, minimized funding, and the limited take-up by those not already involved in improvisation before tertiary education, which has structurally compounded the male and middle-class nature of the field.

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