Caring for Our Planet: A World Apart or Same Difference? A Global Music Collaboration

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Abstract

Purpose: The impact and collective threat of climate change is of key concern to all. Music and arts education can play a role by responding to the ongoing climate crisis through the creation of artworks as activism. This paper discusses a collaborative online international music project and its potential contribution to sustainable development education.

Design/methodology/approach: 10,427 miles and 11 hours apart, music education students undertook the project, working in groups with a mix of Aberdeen, Scotland and Melbourne, Australia in each group. Each student collected video footage that captured their experience of climate concerns related to their environment. Students combined and edited the footage then collaboratively composed music to accompany the footage. This research was conceived as a collaborative self-study project undertaken by the authors as music teacher educators.

Findings: The results show a range of musical and extra musical outcomes and challenges. Evidence suggests that a collaborative online international music learning experience may contribute to sustainable development education and regenerative practice more broadly. Students began to develop their practice as educators for school and community contexts embedding learning for sustainability and climate consciousness, thus enabling them to develop as active global citizens.

Originality/value: This paper argues for greater attention to the affordances of digital collaborative music technology tools to facilitate creative projects as well as the need to reimagine musical experience, drawing together strands of music, sustainability education, technology and global citizenship. This paper also argues for the importance of embedding the Sustainable Development Goals in teaching and learning in Higher Education.

Paper type: Research paper

Keywords: music, composing, music education, collaboration, SDGs, climate, sustainability, global, regenerative practice, teacher education, higher education

Introduction

The UN Sustainable Development Goals (SDGs), represent a call to action for educators at all levels and in all areas of education to build climate awareness in young people amongst other areas of responsibility. This is part of education for sustainable development (UNESCO, 2020). For music teacher educators, the 2022 COP27 United Nations (UN) Climate Change conference in Sharm el Sheikh, Egypt provided an opportunity to respond to the ongoing climate crisis using digital collaborative music and video creation as activism.

This article reports on a learning and teaching project undertaken with music education students in Aberdeen, Scotland and Melbourne, Australia in response to the theme: *Caring for Our Planet: A World Apart or Same Difference?* This project was facilitated using the music technology program Soundtrap for Education (www.soundtrap.com/edu/), a cloud-based digital audio workstation (DAW). Digital audio workstations are software applications used to create, record, edit and produce audio and music. As well as providing an opportunity for climate change activism, the purpose of the project was for music education students to explore a real-world online collaborative music and video creation project. The university students could then adapt the project for use with upper primary and secondary school students that they might teach as graduate teachers. The research in this paper was first shared via a spoken presentation at the Higher Education Teaching and Learning (HETL) Conference in Aberdeen, Scotland in June 2023.

Literature

Digital composing in music education

Building student teachers' skills and confidence to undertake more creative music making, rather than replicating the music of others, is a longstanding issues in music education which has been a focus of our teaching. Music education researchers (Fautley, 2015; Georgii-Hemming and Westvall, 2010) argue that the creative act of composing is important for several reasons. For example, it promotes self-expression, developing a personal musical voice, and the development of new music.

Digital technologies are widely recognised as being invaluable when it comes to encouraging musicians of all levels of prior experiences to create and compose their own music (Kuhn and Hein, 2021). Using digital instruments and software means that students are not limited by skills in playing instruments, which takes years to develop fluency. Nor do they need to read and write music notation. In the last 20 years, the rise in popularity and significant lowering of cost of digital music software and hardware has meant that young people can easily create their own music outside school. This reduction in barriers increases access and inclusion and provides opportunities for young people's voices to be heard (Spruce, 2015).

Kuhn and Hein (2021) argue that providing spaces for young people to play and create 'their' music, using a pedagogy that draws on Green's (2008) informal music learning principles, gives young people opportunities to make decisions about curriculum and pedagogy which impact them. Green's (2008) five principles consist of: students having control of the learning process; haphazard or non-linear learning that occurs when students set the direction of learning rather than teachers; students learning aurally by listening and copying rather than using music notation; students working in groups with friends; and creating as an integral part of the music making process along with performing and listening. Now over 20 years old, Green's pedagogy has been revolutionary for school music education practice and research (Mariguddi, 2022) including for pre-service teachers (Kastner, 2014). In particular, the shift in the role of the teacher to a facilitator, locates ownership of learning with the students, thus increasing student engagement (Green, 2008). Kuhn and Hein's (2021) research demonstrates the efficacy of Green's pedagogy for creating using digital technologies. Whereas Marriguddi (2022) highlights the potential for Green's pedagogy to promote criticality and for school students to "question and challenge concepts, values and meanings surrounding them" (450). Originally intended for critical engagement with popular music itself, this criticality can be extended and applied to global challenges such as the climate crisis.

Christopher Small's (1998) concept of musicking has also been influential in music education. Musicking shares some features with Green's approach and also extends it. Small (1998) conceives of musicking as verb and a mode of participation, as he explains:

> Music is not a thing at all but an activity, something that people do (2). To music, is to take part, in any capacity in a musical performance, whether by listening, by rehearsing or practicing, by providing material for performance (what is called composing), or by dancing. We might even at times extend its meaning to what the person is doing who takes tickets at the door (9). Like all human encounters it takes place in a physical and social setting (10).

Small (1998) himself identified connections with the environment, "musicking is an important part of understanding ourselves and our relationships with other people and with other creatures with which we share our planet" (13). Similarly, Odendaal *et al* (2014) emphasise the active, participatory, social-cultural, and situated nature of Small's (1998) musicking arguing that it can be viewed as a way of living.

Music education and sustainability

Music offers the potential to address challenges of a volatile, uncertain, complex and ambiguous (VUCA) world (Stein, 2021) as exemplified in the UN Sustainable Development Goals (UNESCO, 2020). The ongoing climate crisis is one of many global challenges, that global citizenship education specifically for a VUCA world may influence (Prior, 2022; Stein, 2021). The United Nations Educational, Scientific and Cultural Organisation (UNESCO) (2020) conceives sustainable development as balancing environmental, social and economic considerations when pursuing development and an improved quality of life for all.

Sustainability education is concerned with developing students' skills necessary for a sustainable future (Østergaard, 2019). The concept of global citizenship is embedded within UN Sustainable Development Goal Number 4 Ensuring Inclusive and Quality Education for All (Shapiro, 2021). Regenerative practice extends education for sustainability, it shifts from doing less harm to the environment to restoration, flourishing and regeneration (Reed, 2007; Plaut and Amedee, 2021).

Østergard (2019) argues that the three pillars of Small's (1998) concept of *musicking* relate to key sustainability for education competencies. The three pillars consist of performing, composing and listening. These pillars are the foundation of much music curricula worldwide and as mentioned previously, are also found in Green's (2008) informal learning principles. Østergard (2019) explains that performing with others represents active participation in a larger whole which relates to playing in a group in a music setting but also being an active global citizenship in a world sense. Composing relates to creating and expressing musically. Composing can also be thought of as problem solving which is vital to regenerative practice. Deep and attentive listening is a key skill in music that is also useful for greater environmental awareness and it has the potential for those undertaking it to be more open to the world's problems and promote world bonding. Armon (2021) highlights that regenerative practice requires deep listening of many types.

Music has a long tradition in environmental activism and there is a growing body of research in school music education related to music education and climate change activism (Sutela, 2023). For example, Eusterbrock (2022) explains that climate-conscious popular music education has the potential to connect to, and appreciate, nature. Furthermore, music can be used to undertake climate change action via its 'sensory, imaginative, creative, emotional, expressive and communal character' (Eusterbrock, 2022, 385). Similarly, Smith (2021) highlights the role of music education to bring about change and support human flourishing during the climate crisis. She suggests that music educators find ways to support a sense of wonder in nature through music making outdoors. This connects with regenerative practice concepts of participating with the more-than-human world in a holistic, place-based approach (Reed, 2007; Plaut and Amedee, 2018). The place-based aspect of regenerative practice has been developed in music education as eco-literate music pedagogy (Shevock, 2018) which highlights the importance of place and the interrelationships between music and nature. Importantly, Eusterbrock (2022) argues that it is possible to pursue the musical goals of music education such as creating or composing skills while also developing a climate consciousness. This was the case in this project which brought together strands of creating or composing in the classroom, digital tools for creating, and music making as climate change activism.

Methodology

We undertook a case study (Creswell, 2007; Yin, 2009) informed by collaborative self-study (Samaras, 2011) to interrogate our experiences of facilitating a global collaboration with our students. We adopted Creswell's (2007) conception of case study as a methodology to explore an issue within a bounded system. The case comprised the online collaborative composing project undertaken in September and October 2022 including the student participants and teacher educator facilitators. Details of the project which comprises the bounded system of the case are provided in the next section. The goal of the project was to

develop our students' skills and confidence with creating or composing music using digital tools while simultaneously undertaking sustainability education and climate change activism. Yin (2009) argues that case study is useful for discovering more about a little known or understood situation which aligned with the exploratory nature of the research.

We addressed Samaras' (2011) five foci of self-study research in the following manner: firstly, as a personal situated inquiry, we undertook the research as both researchers and teacher-educators and it was situated in our teaching practice. Secondly, we aimed to improve learning as there were clear learning outcomes for students related to developing skills and confidence to undertake digital collaborative composing projects in relation to a particular issue of significance. Thirdly, as a critical and collaborative inquiry, undertaking the self-study research collaboratively from opposite sides of the world was crucial to extend and challenged our individual thinking, provide new perspectives and opportunities to deepen our understanding of the project and critically analyse its outcomes, and generate new insights (Ramirez and Allison, 2022). Fourthly, a systematic research process was employed. Finally, for knowledge contribution and dissemination, we presented our research together at conferences, at which we had productive discussions with a wide range of colleagues which also informed our thinking.

The research involving human participants was designed taking account of the ethical guidelines of the British Educational Research Association (BERA, 2018) and in Australia (NHMRC, 2023) and was approved by the ethics committees of both Universities. Information was shared with participants via a Plain Language Statement who gave informed consent.

Qualitative data were generated from our reflective discussions, undertaken following review of project artefacts such as videos, artist statements and student reflections. Working through an iterative process, through a series of reflective discussions, we spent time questioning, discussing and reframing our interpretations of what had happened. Following a period of immersion in the data, the data were coded and developed into themes, following a process of in-depth reflexive and inductive thematic analysis, following Braun and Clarke's six stage process (2021). Data analysis began with organising the diverse media (written artist statements and reflections, video data). To build familiarity with the data, this was read and viewed several times. Together, we undertook reflective discussions using the data as a prompt. The data were revisited which allowed us to identify patterns of shared meaning. Initial codes were generated and assigned to a single idea, which could vary from a phrase to a sentence or key moment in the video. Initial codes were then combined into larger categories. Then we undertook an iterative process of grouping and reducing categories. These were refined throughout the process until we generated final themes, allowing lived experience to guide the coding. Finally, data was selected to illustrate the themes.

The project

We will now briefly outline the project. We, the music teacher educators, began by identifying the overarching theme *'Caring for our planet: a world apart or same difference?'*. We then devised a more detailed project brief, outlining a suggested process based on how professional film composers work. This was the second iteration of undertaking a

collaborative composing project together, this time with a new student cohort and theme. Finding a time in our respective academic years in Scotland and Australia to undertake the project, and when neither group of students was on a school teaching placement, was challenging.

Following an initial Zoom meeting with 60 students from Scotland and Australia and workshops on how to use the software, we provided a suggested process. We tried to pre-empt problems around organisation and technology. Students had to plan their own group's project and method of communication. The timeline was tight, and the students were very much thrown "in at the deep end" (Green, 2008, 25). As it was the very beginning of the academic year for the Aberdeen students, they were not only working with international peers they didn't know but mostly they had not previously met their local peers either.

A deadline for a sharing celebration was set which became important to support productive groupwork. The sharing celebration was a group viewing or 'watch party' of a YouTube playlist, which is in keeping with digital media culture (Cremata and Powell, 2017). While the students were not involved in conceiving the overall project, they had to plan their own small group's work to complete their music and video creation in time for the sharing celebration. Several of Green's (2008) informal learning principles were evident, for example, the students had control of the learning process, we as the teacher educators set the parameters of the project but were otherwise not involved in the creating process unless explicitly asked to provide guidance. The focus of the project was on creating using Soundtrap, a DAW that works primarily with sound rather than music notation. Students were also given a climate conversation resource pack to use as a stimulus (Netzero Scotland, n.d.).

10,427 miles apart, music education students worked in groups of six with a mix of students from Scotland and Australia in each group. The students were primarily pre-service music teachers undertaking teacher education, however, there were also digital music practitioner students who intend to work as community musicians rather than school-based music teachers. The students gathered video of their local environment that was meaningful to them. As a group, they combined and edited this footage into 1-2 minutes of video to depict their collective experience of caring for the planet and what that meant for them on opposite sides of the world. Then, they collaboratively created music using Soundtrap (a DAW for creating, recording, editing and producing music that is low-cost and easy to use for school students and novice music creators) to accompany their footage in the same way that film composers work, creating music to further convey and underpin moods and feelings captured in the video footage. The collaborative process was such that a student in Australia could record a drum track, save it, then a student in Scotland could listen to the drum recording and record a guitar part on top, another student could then add a vocal part and so on. Students could leave messages about the project for each other within the Soundtrap software and respond when they next logged on.

Soundtrap for Education was chosen for this project because it is cloud-based, allowing students to create music from their browser without needing any additional hardware. As it is cloud-based, it works on any device including mobile phones and is therefore useful when access to devices is limited. For example, during the COVID pandemic, some school students and families only had access to one device such as one mobile phone per household. The

Education version of Soundtrap is the paid version of the software and it has a safe 'walled garden' feature where students are only able to collaborate with other students in their class through an invite-only group created and overseen by the teacher. This addresses the e-safety and safeguarding requirements in schools in Scotland and Australia.

Video Example

Next, we present an example of a music and video creation and accompanying artist statement composed by Holly Brow, Alastair Eddie, Hannah Rundell, Wenqi (Alex) Sun and Ryan Hayward. The example serves to illustrate the themes which will be unpacked in the findings and discussion section that follows.

> Worth Fighting For is inspired by the beauty that surrounds us, in both Aberdeen and Melbourne, that is so often tarnished by the choices we make. The video footage has been collected from various places around the UK, Ireland and Australia, capturing the beauty, and also the signs of devastation. In our collaboration, we have discovered that we each harbour similar feelings towards our failure to care for the environment, as we see the extent of devastation in the world around us. The lyrics in the verses depict the correlation between our selfish actions and the downfall of the environment. The bridge shows the build of environmental problems and the corresponding growth of our stressful emotion. The contrasting chorus reveals there is hope and reminds us of the overwhelming beauty of the world and the opportunity to try and overrule the destruction we have caused.

LINK TO VIDEO FILE

https://youtu.be/O-QcdFaOF9I

Findings and Discussion

From the analysis, four main themes emerged. The first theme relates to the music and video creations that the students produced, in particular realising the music education and raising climate awareness goals of the project. The second theme, knowledge of a particular digital technology emerged as significant for the students and their pedagogical practice with future school-aged students. The third theme consists of the affordances and challenges of collaboration. Finally, developing a climate consciousness through a music and video creation project is discussed.

Realising dual goals: Musical outcomes and developing a climate consciousness

The quality of the music and video creations produced is evident in the video example. This was notable, given the short amount of class time allocated to the project. We were reminded of the power of interdisciplinary arts practices and the affordances of digital tools to facilitate high quality musical outcomes for experienced and inexperienced musicians alike. This confirms the research of Kuhn and Hein (2021) who highlight the power of digital tools for creating music that sounds good in a short timeframe which in turn engages learners and encourages them to continue creating music making thus building skills. Together, the value of the music and video was greater than the sum of the parts. A holistic view of music making and video creation is consistent with Small's (1998) musicking, the video provided a strong connection with the provocation of caring for our planet and this is evident in the students' artist statement.

> Worth Fighting For is inspired by the beauty that surrounds us, in both Aberdeen and Melbourne, that is so often tarnished by the choices we make.

The international dimension of the project was also significant to the place-based response to climate, this is evident in the video which combines footage from Australia and Scotland in Spring and Autumn respectively. For example, 0:00 – 0:23 is footage from Aberdeen, Scotland, juxtaposed with footage from Victoria, Australia from 0:24 – 0:37.

Powerful discussions and messages on climate change concerns were created through the project. An example is the lyrics from the bridge section (0:55 – 1:07) in the video:

> Oceans rising,
> Fires energizing,
> Plastic in the sea,
> Devastating communities,
>
> Earthquakes, hurricanes,
> Hunger, no crops again,
> When will it come to an end?

This theme supports Eusterbrock's (2022) contention that it is possible to pursue the musical goals of music education while simultaneously developing climate consciousness.

Knowledge of digital technology

Through experiencing this project as learners, the students articulated some of the possibilities of DAWs and music and video creation projects for the young people they work with, they commented that this project gave them more confidence to use DAWs in their teaching. The students in Aberdeen who were musicians studying on the digital music practitioner course, and not pre-service music teachers, were particularly enthusiastic about the potential of devising future educational workshops using ideas gained from the project. In a reflective discussion, Emily noted:

> The students found Soundtrap very convenient, they reported that it is much simpler than using a traditional DAW, like the ones they might have used previously in their undergraduate music degrees. They didn't need to worry about file saving and sharing as it was all browser based. They didn't have any significant challenges in using Soundtrap.

As Kuhn and Hein (2021) argue, real-world composing projects are important for music education in schools and can be facilitated effectively with digital technology. This is supported by informal music pedagogy (Green, 2008) and the potential it offers for student ownership of the learning process and musical content, which is evident in this project, exemplified in the video example.

Completing a project using a particular digital platform, Soundtrap, was helpful for our students to have enough time to gain familiarity so that they could confidently use it in their teaching practice. The students generally found Soundtrap straightforward to use and being browser-based and using cloud-storage made the logistics of working internationally much easier. We find that inexperienced music teachers usually underestimate how confident they need to be with technology before using it with their students. In particular, they need to be able to confidently trouble shoot otherwise lessons can get derailed. In our experience the suggestion of digital natives is not actually a reality, and this is particularly relevant to using music technology pedagogically. This is consistent with research by Bannerman and O'Leary (2021) who found that pre-service music teachers use personal technologies but are much less confident using digital music technologies pedagogically. They also highlight that for music education students to develop pedagogical skills with music technologies requires meaningful and intentional inclusion in music teacher education curricula. More broadly, digital technologies have a fundamental role to play in regenerative practice (Plaut and Amedee, 2021), in this project it is primarily the use of digital technologies as a tool for collaboration, and for community engagement, and awareness raising (Armon, 2021).

Collaboration

The project was helpful for our students to develop and practise much needed skills with creating music and video using digital tools. However, what students commented most on was how much they enjoyed connecting with others and making new friends, reflecting clear wellbeing and engagement benefits. There was a feel-good factor that we noticed, the

project supported wellbeing and engagement which was reflected in the student comments. In our discussions we noted:

> We kept hearing over and over again, that coming together as strangers and creating a project collaboratively and making new connections with others from around the world was their favourite part of the project.

While connections and making new friends were the aspects frequently commented upon, the students also enjoyed the video sharing aspect and seeing what each others' lives looked like. As it was the very beginning of the course for some the students, this was helpful for them getting to know other people in their course too. The digital music practitioner students, who were not undertaking initial teacher education, were particularly struck by the concept of being able to connect with fellow students across the globe and they remarked on future possibilities which they had not previously thought possible. The value of collaboration in a creative music making project that draws on informal music learning pedagogy (Green, 2008) confirms the findings of Forbes (2020) who highlights that tertiary music education has been slow to incorporate group projects which represent learners co-constructing knowledge rather than relying on a teacher. Collaboration involves trusting group members, thereby valuing the contributions of everyone, with clear wellbeing benefits. Global creative music making collaborations are rare in the music education literature.

The video aspect was also key for making connections with climate awareness as can be seen in the following quote from the artist statement:

> In our collaboration, we have discovered that we each harbour similar feelings towards our failure to care for the environment, as we see the extent of devastation in the world around us.

The digital music practitioner students, saw great potential for using Soundtrap in their community music making practices which may involve projects that highlight sustainability and climate change issues. This aligns with the connections between music and the environment that Small (1998) and Shevock (2018) highlight and that engendering a sense of wonder with the natural world through music (Smith, 2021) and participating with the more-than-human world in a holistic, place-based, regenerative practice approach (Armon, 2021; Reed, 2007; Plaut and Amedee, 2018) are possible. Armon (2021) highlights that collaboration is essential to regenerative practice.

Collaboration also presented challenges and students had to draw on, or quickly develop, time management, organisation and communication skills. Pauline commented:

> Students seemed to find the most challenging aspect not knowing if anyone was actually going to do anything.

The groups who did this best set up Whatsapp groups and used the chat feature in Soundtrap to communicate rather than trying to set up Zoom meetings which was challenging with the time difference ~~and getting everyone together~~. The groups who were able to divide up the tasks worked efficiently and this helped with the time management

and organisation. As is the case with all group work, there were some groups where some participants contributed more than others. In a reflective discussion Pauline commented:

> There was also lots of learning regarding logistics of managing a project, including reflection on allocation of groups, time management, resources and organisational skills required. The students who were at the beginning of their initial teacher education journey found it more challenging to shift from experiencing the project as learners to seeing its potential for them as a teacher, but it worked well for students who were further along in their teacher education journey.

The challenges of group work and collaboration are widely reported in higher education research. Dowling Long and Long (2023) note that collaborative learning in teacher education is not widely valued, conflicts against individualist assessment practices at all levels of education, and is seen as a hindrance and unnecessary complication to learning. However, it remains vital for 21st century learners and its inclusion in teacher education is essential (Dowling Long and Long, 2023) including for regenerative practice in all higher education disciplines (Armon, 2021). This project is underpinned by strategies that Dowling Long and Long (2023) identify features of effective group projects in initial teacher education include: modelling by teacher educators and developing collaborative learning and teaching projects that feature collaboration.

Climate Consciousness

The students were very invested in devising a project concerning real world environmental issues, this seemed to give a real sense of purpose and depth to the task as can be seen in the lyrics from the chorus in video (1:08-1:37):

> If we all do our best, and care for the rest,
> Show some love to this world, we can make a change,
> From trees to the seas,
> The birds and the bees,
> This beautiful earth's worth fighting for.

This reflects Eusterbrock's (2022) notion that climate-conscious popular music education has the potential to help students connect to, and appreciate, nature. Similarly, Ostergaard (2019) contends that collaborative ~~performing and~~ composing involves participating in a larger whole which is useful for understanding connections to the world and the environment. This is also consistent with Armon's (2021) call for university educators in all disciplines to teach through four regeneration principles: that all forms of life have value and the right to flourish; regenerative collaboration should occur among humans and among humans and the more-than-human world; justice and flourishing for all is the same; and listening is fundamental to regenerative collaboration.

Conclusion

We found in this project that music education and its potential for young people to make a positive contribution to the climate crisis was evident. From our perspective, our students engaged with their local environment in a different way when they were collecting their video footage and sharing this footage with international peers in a completely different

natural environment. Exploring a topic such as climate change can easily feel overwhelming. However, using music and video to approach this issue supported a feeling of positivity. This aligns with researchers such as Ratinen (2021) who found that when discussing climate change with school students, it is important to provide practical strategies and a sense of hope for the future. Going forward, the UN Sustainable development Goals (UNESCO, 2020) and regenerative practice (Plaut and Amedee, 2021; Reed, 2007; Armon, 2021) will be much more prominent in our music education teaching and research and we suggest that these are considered more widely in music education research and practice. It is hoped that by sharing evidence from this project we have shown that working on a global music collaboration using digital technologies can transform the way we learn, teach, research and conceptualise our future. Future research could involve a similar global collaboration undertaken by graduate teachers with school students.

This research suggests that creative collaborative composing projects such as this one have the potential to contribute to the UN Sustainable Development Goals (UNESCO, 2020), education for sustainability (Ostergard, 2019), and beyond into regenerative practice (Armon, 2021). At the same time, realising the musical and pedagogical outcomes of music education and music teacher education is possible (Eusterbrock, 2022). In particular, the following aspects were important: the international collaboration made this a more meaningful experience for the students and connected with place-based music and video creation as activism. Projects such as this one can also be a powerful tool for collaboration, connection with the human and more-than human world (Armon, 2021), and to address ongoing challenges such as the climate crisis. We argue for greater attention to the affordances of digital collaborative music technology tools to facilitate real-world composing projects for students at all levels of education.

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