



Teachers and Curriculum

Journal website: <http://tandc.ac.nz>

ISSN 2382-0349

Published by the [Wilf Malcolm Institute of Educational Research](#)



Wilf Malcolm Institute
of Educational Research
Te Pūtahi Rangahau Mātauranga o Wilf Malcolm
THE UNIVERSITY OF WAIKATO

Volume 22 Issue 2, 2022.

Special Issue: *The Arts in the classroom: Advocacy, theory and practice*

Manakitia a papatuanuku: Eco-literate pedagogy and music education

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Special Issue Editors: Millie Locke, Robyn Ewing and Terry Locke

To cite this article: Locke, M. (2022). Manakitia a papatuanuku: Eco-literate pedagogy and music education. *Teachers and Curriculum*, 22(2), 113–125. <https://doi.org/10.15663/tandc.v22i2.411>

To link to this volume: <https://doi.org/10.15663/tandc.v22i2>

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MANAKITIA A PAPATUANUKU: ECO-LITERATE PEDAGOGY AND MUSIC EDUCATION

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Abstract

As we enter the third decade of the 21st century, the much-heralded threat of climate change has become a reality whose effects we not only read and hear about daily but also experience in a raft of seen and unseen ways in our local communities. Morton (2012) called unequivocally for a broader vision of music education that includes and embraces a cross-curricular emphasis on ecological and social justice. In particular, she challenges music education (and the arts in general) to participate in the provision of eco-aesthetic experiences and activities, which foster participation in and reflection upon human inter-dependency. In this article, I will reflect on my experience as a music teacher in a West Auckland enviroschool and the lessons I learned from the children that influenced and supported the development of music-making activities connected with their environmental concerns. Then, taking into account the work of relevant contemporary musicians/composers and music educators, I will offer some suggestions for eco-literate pedagogical practices (Shevock, 2018) for music teachers in 21st century Aotearoa New Zealand.

Keywords

Climate crisis; music education; environmental education; eco-literacy

Introduction

We are not alone as we fight for this place. We sing all together with the soil and trees and sky and the whole material world. (Madeleine Jubilee Saito, 2022, illustration 13)

As we enter the third decade of the 21st century, the much-heralded threat of climate change has become a reality, effects of which we not only read and hear about daily but also experience in a raft of seen and unseen ways in our local communities.

A decade ago, Morton (2012) called unequivocally for a broader vision of music education that includes and embraces a cross-curricular emphasis on ecological and social justice. In particular, she challenged music education (and the arts in general) to participate in the provision of eco-aesthetic experiences and activities, which foster participation in and reflection upon human inter-dependency.

This article will reflect on my experience as a music teacher in a West Auckland enviroschool and how the school's participation in this programme influenced and supported the development of music-making activities connected with environmental concerns.

Then, considering the work of relevant contemporary musicians/composers and music educators, I will offer some suggestions for eco-literate pedagogical practices (Shevock, 2018) for music teachers in 21st century Aotearoa New Zealand.

Facing the climate crisis: A contemporary vision of socially engaged music education

The consistent call, in the last couple of decades, for a broader vision of music education (Jorgensen, 2021; Koza, 2006; Morton, 2012) invites us to consider how music education might engage with a wide range of socio-political issues. At this moment in anthropocentric time no contemporary issue is more critical to human life on earth than the climate crisis. Attenborough (2020) argues that we have only a

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ISSN: 2382-0349

Pages. 113–125

few more decades to use our human intelligence and wisdom to restore the earth to health because “our future on the planet, the only place as far as we know where life of any kind exists, is at stake” (p. 221). In the Anthropocene, the current geological period in which human activity has been and continues to be the dominant influence on climate and the environment, we must learn to work with nature rather than against it and become stewards of the earth lest this period “proves to be a uniquely brief period in geological history and one that ends in the ultimate disappearance of human civilisation” (Attenborough, 2020, p. 216).

Thirty years ago, the 1992 Earth Summit at Rio de Janeiro envisaged an educational focus on sustainability which seeded, among other initiatives, the now, well established, nation-wide Enviroschool programme in Aotearoa New Zealand (Williams, 2012). Williams noted the international recognition of the critical role of education in moving towards sustainable ways of living that was evidenced in the United Nations resolution 57/254ⁱ in 2002 for a decade of Education for Sustainable Development (UNESD). At the present time, education for sustainability in Aotearoa New Zealand has become a focus across a wide range of local and national, community, governance, institutional and community settings. This article considers the role music education might play in education for sustainability in the Aotearoa New Zealand Primary School.

The term *eco-literacy* was coined by Orr (1992) and Capra (1995) in the 90s and refers to the ability to understand the principles of ecological organisation and to use these principles for creating sustainable human communities. To be eco-literate is to be concerned with the well-being of the earth. Goleman et al. (2012) define eco-literacy as the integration of “emotional, social, and ecological intelligence” (p. 10) and identify five practices that nurture learners’ eco-literacy:

- developing empathy for all forms of life;
- embracing sustainability as a community practice;
- making the invisible visible;
- anticipating unintended consequences; and
- understanding how nature sustains life.

For Orr (1992), eco-literacy begins with “an uncompromising commitment to life and its preservation” (p. 133). An eco-literate pedagogy embracing such a commitment seeks to design and provide learning experiences which cultivate knowledge about eco-systems, and creatively engage with practices that promote ecological health and well-being.

Shevock (2018) advocates for an eco-literate pedagogy in which music education orients itself to the pressing issue of climate change. In his view an interdisciplinary approach which recognises the connectedness of knowledge, issues and problems is essential to an eco-literate music pedagogy. In the primary school setting, adopting an integrated approach to curriculum has the potential to support collaborative sustainability projects in which musicking becomes a vehicle “to open up consciousness and develop deeper understanding of the relationships between sustainability (of the planet) and our survival as humans” (Vaugeois, 2019, p. 609).

In the next section, I reflect on a series of music composition projects undertaken at Henderson Valley School, that were inspired and informed by the schools’ focus on education for sustainability.

Henderson Valley School

Henderson Valley School is situated in the foothills of the Waitakere Ranges in West Auckland. Although only 20 km from inner-city Auckland, the school, with its generous grounds set among rolling pastures and nearby stands of native bush, contrasts sharply with nearby, ever-encroaching city housing developments.

When I began teaching at Henderson Valley School in 2001, I noted looks of gentle sympathy from the students when I mentioned that I lived “in the city”. It became apparent that, in the main, these students identified as country kids, who enjoyed a high degree of freedom, enabling regular interaction with the natural environment, such as walking to and from school, climbing trees in the school playground and exploring the nearby Opanuku Stream, as part of their everyday lives. They displayed an impressive knowledge and curiosity about local flora, fauna and geographical characteristics of their environment. Wendell Berry’s description (Leonard, 2012) of wonder as attention to landscape in which one lives “from one revelation to another” and in which one experiences place as “essentially interesting, inexhaustibly beautiful and wonderful” (p. 47) seems an apt description of a quality I observed in these students. The students, and the staff, many of whom lived locally, impressed as having a sense of place in which knowledge of the local geographic and social environment informed the informal and formal learning programme at the school.

Unsurprisingly, Henderson Valley School became one of the first schools to become an affiliated member of the Enviroschools programme. This programme, seeded in 1993 as a collaboration between the Hamilton City Council in collaboration with University of Waikato in response to the challenges provided at the 1992 Earth Summit is now firmly established in New Zealand schools (Eames & Mardon, 2020). Enviroschools is a nationwide action-based programme offering the opportunity to early childhood centres and schools “to commit to a long-term sustainability journey, where students connect with and explore the environment, then plan, design and take action in their local places in collaboration with their communities” (Toimata Foundation 1, n.d. para 1). The programme draws on connection to place, and challenges students and staff to “become life-long change-makers” in a process of “co-creation between people and all of the elements and energies around us. Caring for our place and the whole planet becomes a living curriculum where skills and competencies are gained through experience and mahi within meaningful community settings” (Toimata Foundation 2, n.d. para 1).



Figure 1: Mural at Henderson Valley School inspired by a collaboratively composed waiata ‘Manākitia a Papatūanuku: Care for the earth’. (McCormack & Zeeman, 2009)

Music at Henderson Primary School

My professional life at Henderson Valley School began with my appointment to the role of music specialist in 2001. Earlier in my career, in my years as a generalist teacher, I had discovered the joy of working creatively with students. However, I had been frustrated by the lack of customised space, quality resources, or access to the know-how needed to enable schools to offer all students the opportunity to be regularly and meaningfully engaged in an authentic, music learning journey. This frustration, alongside a deep engagement with music in my own life, had led me to transition, gradually to the role of music specialist in the primary setting.

In making this transition, I had come to recognise that neither my long apprenticeship in the private piano studio as a learner and later as a teacher had equipped me with the theoretical or practical skills that I needed to teach music to children in the school context. The New Zealand Arts Curriculum and my educational philosophy demanded that a music programme be firmly grounded in the Aotearoa New Zealand context, be responsive to the needs, talents and interests of one's students, and encompass all aspects of music-making: listening, responding, creating, performing, contextualizing and evaluating music.

Henderson Valley School was unusual in having had since the 1990s a well-established and highly-valued specialist music programme with a well-equipped and well-resourced music room. Although the music programme's overall design and delivery was the music specialist's responsibility, many classroom teachers and ancillary staff were keen to be involved in it. This involvement included active participation alongside students in music class and collaboration to integrate classroom and music programme themes and content.

Central to my development as a music teacher of children in the Aotearoa New Zealand school context was my engagement with the Orff approach. This pedagogical approach, usually disseminated in interactive workshops led by contemporary "master-teachers", developed out of the compositional and pedagogical work of Carl Orff and Gunild Keetman between 1925 and 1970 (Locke, 2016). It is an approach to learning in, about, and through music informed by early 20th century European and New World intellectual currents that impacted upon a wide range of educational ideas and particular approaches to teaching the arts. The Orff approach advocates strongly for the entitlement of every child to enjoy meaningful participation and engagement with music. Every child *is* an artist, and every child *is* a musician. Music education is viewed simultaneously as an investment in the future development of students and a highly beneficial "in-the-present-moment" activity that engages students intellectually, physically, emotionally and spiritually.

The approach can be described as a unity of music, speech and movement in which learning experiences typically begin with the natural faculties of breathing, moving and speaking, and build upon themes and content relevant to the students' experiences, interests and cultural knowledge. Such learning experiences in music do not rely on the availability of sophisticated instruments but instead explore sound sources such as: the voice (speaking and singing); the body (body percussion); the environment (natural and found sounds); readily available untuned percussion (classroom and readily available "ethnic" instruments) and tuned percussion such as marimba, xylophones and glockenspiel. Although originating a century ago in a geographical, social and cultural milieu very different to 21st century Aotearoa New Zealand, its emphasis on holism, responsiveness to local context and the spiritual health of human beings makes this approach potentially complementary to an eco-literate approach to music education.

In developing a music programme at Henderson Valley, I drew on the pedagogical principles of the Orff approach, my theoretical knowledge as a musician, and my commitment to the centrality of local (nationally and at the micro-level) cultural knowledge and practices. Inevitably I was drawn into the Enviroschool learning journey, which involved the development of student-led and teacher-supported initiatives with ecological sustainability as their core value. This was truly an experience of learning

from the children, particularly in terms of their willingness and commitment to new ways of being, and the diligence with which they undertook tasks such a recycling, gardening and a multitude of other practical projects related to this mission. These children motivated *me* through their demonstrable desire to embrace the role of kaitiaki of the local environment, and to seek ways in which the music programme could play a role in education for a sustainable and ecologically responsible future.

Over time, through a sustained process of action and reflection I was enabled to develop a structured, year-by-year, 6-year programme of learning in music. The programme documentation detailed general aims and specific objectives for skill, concept and attitude/disposition development which elaborated upon the Level 1–4 Achievement Objectives of the New Zealand Curriculum (Ministry of Education, 2007). Repertoire and thematic focus were not specified. Rather these were informed and inspired by the classroom programmes, the enthusiasms of students and staff and, where possible, in collaboration with teachers. Themes related to “sense of place” emerged frequently and were further developed through the Enviroschool programme’s range of school-wide projects.

In the next section I share a trilogy of composition projects that were undertaken with Year 6 students. Although each project was undertaken with a self-selected group of highly motivated students, each had its genesis in classroom practice, i.e., both the content and musical activities were explored and “piloted” in many different ways in the music classroom context. Two of the three projects were associated with a formal research project (see below).

Project 1: Group improvised/composed soundscape inspired by Waitakere art works

This project was undertaken with a group of accomplished and enthusiastic elementary recorder players, i.e., students who regularly participated in recorder ensembles and indicated an interest in participating in a group composition project.

The aim of this project was to use conventional and unconventional ways of playing the recorder, and found sounds (objects from the natural environment such as stones, driftwood, seed-pods, etc) to compose a piece of music which drew upon the student’s rootedness in place. The stimuli for the composition were some reproductions of artworks that represented West Auckland landscapes (in Harvey & Harvey, 2006).

The projectⁱⁱ took place over a series of weekly sessions as follows:

1. Students were invited to freely explore the available sound sources and share ideas with the whole group.
2. Students were then invited to view a selection of images, thinking about questions such as: What might have inspired this painting? Who produced it? Are there recognisable places, landscapes, creatures etc.? As teacher, I modelled ways of engaging with one of the artworks, inviting the students to contribute ideas and responses. Close attention was paid to shape, line, light, colour, contrast and mood.
3. In groups, students chose an artwork that would be the inspiration for their group composition. Time was taken to discuss and negotiate a final choice.
4. In groups, students engaged deeply with their artwork, paying close attention to shape, line, light, colour, contrast, mood. A handout (see Appendix 1) supported this discussion and students were asked to note their ideas.
5. Students considered possible musical equivalences for each visual feature they identified and began to explore sound representation using sound sources as described above.
6. Students explored and refined their group compositions, shared them with the group and further refined them for performance.

Project 2: Collaborative composition: Prologue for annual school show Mokoroa Guardian of the Valley

This composition project arose out of an extended focus on the Māori creation myth of Papatūānuku and Ranginui as a starting point for music-making. This myth offers the opportunity for students to engage with the concept of whakapapa, which highlights the interconnectedness of all features and processes of the natural world. The availability of a range of child-friendly illustrated versions of this myth made accessible concepts central to the Māori world view, such as the inherent vitality and interconnectedness of the natural world.

Before this specific project began, a variety of classroom music activities associated with this story was undertaken. Students had become familiar with taonga pūoro through listening and demonstration, waiata featuring Māori atua were learnt, and selected text extracts from the story (Bishop, 2009) had been used to create speech patterns that became the basis for layered rhythmic patterns played on the body and untuned percussion. These rhythmic patterns were also used as starting points for improvisation in a variety of scale sets (limited range, pentatonic, modes). Students had also been engaged with retellings of the story in which key narrative events and/or themes of the story (darkness/light, stillness/action, conflict/resolution, connection/separation) were identified and explored through representation in sound.

A group of these students elected to participate in the collaborative composition project of a piece that would become the prologue for the annual school show. These students were familiar with the story and had spent time in class engaged in the activities described above. The themes of the school show, entitled *Mokoroa Guardian of the Valley*, were closely connected to the goals of the Enviroschool programme, and integrated the social and natural history of the local area with themes that emphasised sense of place and environmental stewardship.

The preparation and performance of the show was designed as a senior school (Year 5 & 6) collaborative creative project, which integrated a number of curriculum areas and gave all classes and their teachers the opportunity to be meaningfully involved (Aitken & Locke, 2013). The involvement of an APO (Auckland Philharmonic Orchestra) musician as a musical mentor further enriched the learning experience for the students involved.

The composition project collaboratively designed by the mentor and myself had the following brief: Compose a piece set in the Dorian mode for an ensemble including barred instruments and recorders. The project followed the following sequence of broad steps.ⁱⁱⁱ

1. Explore the tonality of the Dorian mode through exploration and improvisation on barred instruments and recorders.
2. Reread and discuss the story, identifying elements that inspire musical ideas, e.g., characters being represented through layered entries, dynamic contrasts to highlight contrasting events, including the use of dramatic pauses.
3. Individual and group work with support from mentor and teacher to explore melodic fragments/motifs in the Dorian mode.
4. Sharing of ideas.
5. Settling on key ideas/themes sections.
6. Repetition of steps 4 and 5 as necessary.
7. Collaborative process of notating recording (teacher on Sibelius,) discussing and refining

Project 3: Improvisation and composition project based on Opanuku Stream

This project integrated environmental education, creative writing and music-making and led to a performance in a regional music festival. The project was a response to the active engagement that students enjoyed with Opanuku Stream. Through a regular water-testing project, the students had become knowledgeable about the life and health of the stream and were committed to protecting its ecological well-being. In addition, the mythology associated with its being the home of the Henderson Valley taniwha Mokoroa, had been refashioned to firmly establish Mokoroa as kaitiaki.

This project was a classroom music-based project and was a collaboration between myself as music teacher, the classroom teacher and a number of staff who were associated with the Enviroschools programme. It followed these broad steps:

Phase 1

- Stream visit for a series of facilitated sensory experiences:
 - In pairs, turn-taking as human cameras taking a close-up, mid-distance and panoramic shot and recording observations as “notes” on visual images captured.
 - Ten minutes of silence to listen to sounds, very near, further away and far away and recording these as symbols and/or descriptions on a sound map.
- Haiku writing:
 - Drawing on notes taken on visit to stream draft, review and “publish” haiku.

Examples

Distant green meadows	Criss-cross leaves on tree
Murky mud-filled waters	Curling ferns fan upwards
Small insects working	Sly singing waters

Phase 2

- Create/compose soundscape to accompany/express haiku choosing from a wide range of sound sources (previously introduced).
- Become musical director to rehearse and conduct a performance of soundscape performed and recorded.
- Record performance of soundscapes.

Phase 3

- Working with Waitakere musician and composer David Parker, collaboratively compose piece for ensemble, which includes tuned and untuned percussion, ukuleles and recorder.
 - Choose words or phrases from haiku to form a rhythmic basis for melodic ostinato.
 - Create melodic ostinati and share with the group.
 - Collaboratively create a structure for this piece, drawing and developing students’ knowledge of musical form.
- Seek performance opportunities as desired and available.

Looking back, looking forward

Ostergaard (2019) advocates for the role of music in sustainability education but identifies a tension between an approach which advocates for the use of music as a means for teaching about sustainability and an approach which views music as a particular mode of knowledge which can enhance sustainability education. Attentive listening, he points out, is a key skill in all musicking practices. In an inter-disciplinary approach to sustainability education, attentive listening as “being- in-the-world” can foster “sensibility toward the environment and strengthen embeddedness in the world” (Ostergaard, 2019, p. 9).

Looking back on the trilogy of composition projects above, it is clear to me that the music programme did not take a leading didactic role in environmental issues. Instead, the thematic content provided by the ecological focus was a starting point for music-making that celebrated and explored a range of ways of expressing the knowledge and values that the students were embracing as a result of the impact of the Enviroschool programme. However, it did become clear during the project that music’s capacity to engage children’s attention deeply through active listening and participation supported the development of “mind as care, in the sense of solicitude … the active looking after of things that need to be tended” (Dewey, 1958, p. 263).

Consistent with the Enviroschool emphasis on participants as both learners and teachers, it is important to acknowledge the opportunity for learning provided by the students to myself and other musicians and artists involved in the projects described above. Not only were we given access to the students’ knowledge about local flora, fauna and geography, but we were also given opportunities to learn from and adopt the practices of environmental care that the students were so eagerly embracing. Williams (2012), in discussing the challenges of offering programmes which develop eco-literacy, noted a lack of eco-literacy in teachers. She argues, therefore, for the need for teachers “to become continual learners and active collaborators in this rapidly expanding arena of complex and connected sustainability issues and impacts” (p. 42). In my own experience, the expert leadership provided to the school by the Enviroschool programme offered rich reciprocal learning opportunities, where the music programme moved beyond its traditional disciplinary boundaries.

The May Day group in response to the climate crisis signalled its recognition of the importance of ecological literacy in music education by the adoption of Ideal IX in 2020:

Music education practices are inescapably bound within ecology—interactions among organisms and physical environments. Diverse cultures and species can be sustained by environmentally regenerative music education attuned to cultural and physical commons, pollution-free soundscapes, the inherent value of non-human being, and people musicking for environmental activism. (Mayday Group, 2022)

Taking into account the pressing need to adopt sustainability practices to protect the planet, my experiences at Henderson Valley School, and some of the principles gleaned from the literature advocating an eco-literate pedagogy, I now offer some suggestions for music educators working in the Aotearoa New Zealand school context.

Musicking and the sound environment

The broadening of a vision for music education involves a willingness to reconsider our construction of what we (individually and collectively) consider music to *be*. Small’s (1998) term “musicking” is now widely used and has changed a perception of music as an autonomous “thing” to music as a kind of “doing”. Musicking occurs in a huge range of contexts and encompasses all of the activities potentially associated with music (moving, listening, enabling performance and so on).

The addition of the term “Sound Arts” to the music strand of the New Zealand Arts curriculum also challenges us to broaden the way we conceive of music.

Drawing on soundscape ecology, which explores the interaction between organisms and their environment through acoustic composition, Smith (2021) argues for a widening of our concept of music from one which is limited to *anthrophony* (sound created by human beings) to one which also includes the *biophony* (sound generated by flora and fauna) and *geophony* (sound generated by weather and/geological features). Such a definition invites us to attend to the soundscape of our environment, offering the opportunity for critical interrogation and appreciation of sounds and their sources. This broadened definition of music brings to mind Schafer's (2012) engagement with "soundscape" in the 1970s and the ongoing relevance of his *A sound education: 101 exercises in listening and sound-making* (Schafer, 1992).

A closer attuning to sound in the natural world through attentive listening may, as well as enhancing knowledge and skills associated with sustainability education, also open the door to compositional and performance musicking practices that, in turn, challenge and inform an audience's perceptions of and knowledge about the natural world.

Aotearoa New Zealand Sonic Art compositions/realisations provide a rich source of material for attentive listening as part of eco-literate music pedagogy. For example, Lilburn's early electro-acoustic composition, *Soundscape for lake and river* (1979), is described as signalling a new attitude to landscape in the way he "collaborated with the landscape" (Johnstone, 2021) through the process of recording sounds live and manipulating them through electronic means. Jonathan Besser and Ross Harris composed *Water music* in 1983 using pre-recorded water sounds and electronic imitations of water as a homage to Lilburn's environmentally influenced electronic works. Elizabeth Kerr wrote about the piece in *Our music* (1989), a resource widely distributed to primary schools and which remains a valuable source of pedagogical material based on a wide range of Aotearoa New Zealand Music.

In a recent interview (Radich, 2021), composer John Coulter said,

I've always been deeply fascinated by nature. A major driver in my practice has been an attempt to capture or recreate that sense of awe and beauty I feel when I'm out in the bush or watching a sunset or watching waves crashing on the beach. [25.20ff]

His composition *Green* (2015^{iv}) for fabricated, electronic wind instrument fashioned from a manuka branch is evocative of the Māori concept of *mauri* which loosely translated refers to the energy that binds and animates all things in the physical world.

Contemporary Kai Tahu musician Ruby Solly describes her work as weaving together a range of musicking traditions: taonga pūoro, Western art through her learning of the cello and the digital, noting that she "finds her own whakapapa of sound going back to nature" (Radich, 2021, 8.51). Her album *Pōneke*, released in 2020, features works composed through a process which Solly describes as a conversation with the environment in [those] places. She listened to sounds in several different environments in Pōneke (Wellington), responded to them with tāonga pūoro in real time, recording on her iPhone as she went. She then worked with the recordings in her studio, layering in a cello in response to the environmental sounds. For her "the environment comes first; there would not be anything without it" (Crump, 2020, 7.34). Solly describes the album as a "love letter not only to our city but to all those who have lived here, have shaped this place, and have been kaitiaki of all the facets and layered histories of Wellington herself" (Solly, n.d., para 3).

Such local compositions are a great example of how sounds from the natural world can be integrated into composition using digital recording devices and other software. In an eco-literate pedagogy, attentive listening to these compositions offers students the opportunity for enhanced appreciation of the beauty of the soundscape as well as the chance to explore themes related to ecological literacy. In turn, engagement with such pieces can stimulate creative music-making based on locally relevant ecological themes.

Sense of place

Developing ecological literacy begins with the cultivation of ecological consciousness in *local* places (Shevock, 2018). As Wendell Berry points out (Petrusich, 2019), a place is a *somewhere* in particular and it is the *particularity* of our relationship to that place that becomes the stimulus and motivation for our curiosity about and engagement with local knowledge, culture and ecological systems. Eco-literacy is for people living in both urban suburban and rural places, since all places offer a stimulus for attachment and can become more ecologically sustainable.

A sense of place may include a parochial pride in place, but an eco-literate sense of place at this moment in history with its “uncompromising commitment to life and its preservation” (Orr, 1992 p. 133) must also engage with the pressing and ubiquitous issues related to ecological health, waste management, carbon emissions, food production and so on. Cross curricula projects in which a key goal is eco-literacy can be enhanced through music’s capacity to engage attention, stir the emotions and offer alternative modes of meaning-making. Embracing soundscape as well as landscape provides an immediate focus for attentive listening (Ostergaard, 2019; Schafer, 2012) and develops valuable transferable skills involving multi-modal attention to detail, spatial awareness, and aural and visual memory.

Mātauranga Māori

Eames and Mardon (2020) draw attention to the crucially important role a Māori worldview has played in the evolution of the Enviroschools programme. Recognising the *mana* (authority) of the indigenous people is the first step. *Whakapapa* recognises the inter-connectedness of people and all living things and *tikanga* embodies protocols for living in harmony with the local eco-systems.

Music programmes informed by eco-literate pedagogy must actively embrace mātauranga Māori. In the first instance, building relationships with Māori students and their whānau recognises the mana of local indigenous knowledge. Material which draws on indigenous perspectives is readily accessible to the Aotearoa New Zealand classroom teacher. The challenge to the music teacher who seeks to embrace eco-literate pedagogy is to find ways of using such material in integrated programmes of learning in which musicking is oriented to goals for sustainability education. Sarah Dunn’s research, included in this issue of *Teachers and Curriculum*, provides an example of the way music educators might position themselves in relationship to the inclusion of mātauranga Māori in the primary school music programme.

Critical inclusive pedagogy

A critically inclusive pedagogy is one that responds to the call for music educators to “envision and act for a more equitable and just world” (Smith, 2021, p. 9). Vaugeois (2019) endorses the value of Shevock’s (2018) call for music education to embrace eco-literate pedagogy but reminds us of the importance of *critical* pedagogy, where “the music classroom becomes a place to explore the full range of musics of resistance” (p. 609). Greene’s (1995) concept of wide-awakeness, “an awareness of what it is to be in the world” (p. 35), asks us to be mindful of how knowledge, power and inequality sustain gender, race and class oppression. This, in Vaugeois’ view, cannot be separated from the climate crisis.

Central to critical pedagogy is recognising the value of human life, the rights of *all*, and the importance of interrogating power that dominates and oppresses. An eco-literate pedagogy asks us to extend a critically inclusive pedagogy to non-human forms of life. Mātauranga Maori has a central role to play in this change of consciousness. (The status of legal personhood given to the Whanganui River in 2017, whereby it can now be represented in court by two guardians who speak on its behalf, is a powerful testament to the change that is possible when an indigenous worldview is given its rightful place.)

Conclusion

An eco-literate pedagogy asks us to interrogate music education practices that sustain any form of alienation, justice and oppression. It calls for collaborative, musicking practices that recognise life in all its forms. It asks us to become fully aware of our socio-cultural and ecological environment as we *think globally and act locally*. To play our part as critically aware music educators, we need to offer students musicking opportunities which enable recognition of the interconnectedness of all living beings and the ecological realities that threaten or more hopefully sustain life in all its forms.

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Appendix 1

Name of painting	
<i>Look for colour line, shape, contrasts, materials, design, that you can interpret in musical terms as below</i>	
DURATION Beat	
Rhythm	
PITCH Melody	
Harmony	
Tonality	

EXPRESSIVE ELEMENTS	
Articulation	
Dynamics	
Tempo	
Tone Colour	
TEXTURE	
DESIGN/FORM	
STYLE/MOOD	
CONTEXT	

ⁱ See <http://www.un-documents.net/a57r254.htm>

ⁱⁱ A detailed account of this project can be found in L. Locke and T. Locke (2011).

ⁱⁱⁱ For more detail on this project see M. Locke and T. Locke (2012). The first performance of the piece may be viewed at https://youtu.be/ndPEL_i77I4.

^{iv} To view a performance go to

<https://www.rnz.co.nz/concert/programmes/musicalive/audio/201773007/john-coulter-green>