

# A

## Art-Based Teaching on Sustainable Development



Tony Wall<sup>1</sup>, Eva Österlind<sup>2</sup> and Julia Fries<sup>2</sup>

<sup>1</sup>International Thriving at Work Research Group, University of Chester, Chester, UK

<sup>2</sup>Department of Humanities and Social Sciences Education, Stockholm University, Stockholm, Sweden

### Synonyms

Art for well-being; Art pedagogy for health; Art pedagogy for sustainability; Art therapy; Arts-based teaching; Environmental aesthetics; Environmental art

### Definition

Art-based teaching for sustainable development encompass a range of philosophical stances and practices which are deployed intentionally for educational outcomes relevant to sustainability and sustainability development. Such teaching philosophies and practices are typically deployed because of the form of knowledge and knowing they promote, which can be described as experiential, integrative, holistic, complex, anticipatory, and passionate.

### Introduction

The connections between art, art-making, education, and responsibility in relation to the wider natural and social world have been given increasing attention over the last 30 years. For example, there have been a variety of journal special issues dedicated to art, education, and ecology (Krug 1997), social justice and social change (Bolin 1999), community and responsibility (Carpenter 2004), ecology and responsibility (Stout 2007), health and well-being (Haywood-Rolling 2017), and human rights (Kraehe 2017). Such a rise has been linked to trends in the human search for meaning and significance among (and resistance against) globalization, domination of market forces, and an increasingly complex and chaotic environment (Taylor and Ladkin 2009).

The connections between art, education, and sustainable development have also been recognized in various UNESCO initiatives such as the Road Map for Arts Education (UNESCO 2006) and The Seoul Agenda: Goals for the Development of Arts Education (UNESCO 2010). The Road Map, for example, asserted the role of arts education in (1) upholding the rights of individuals to participate in education and culture; (2) developing a wide range of capabilities including “creativity and initiative, a fertile imagination, emotional intelligence and a moral “compass,” a capacity for critical reflection, a sense of autonomy, and freedom of thought and action”

(UNESCO 2006: 4); (3) enhancing systems of education; and (4) promoting cultural diversity.

Similarly, the Seoul Agenda echoed these sentiments but was perhaps more explicitly linked to sustainable development, articulating a commitment to “apply arts education principles and practices to contribute to resolving the social and cultural challenges facing today’s world” (UNESCO 2010 p. 8). UNESCO’s International Arts Education Week has since explicitly promoted the connectedness of art, education, and sustainable development through the themes of “Arts for Peace” and “Arts Education for Sustainable Development.” The role of art and art-based teaching methods in sustainable development is therefore increasingly recognized as significant and especially so in the influential spaces of higher education.

Within this wider landscape of context, this chapter therefore explores and exemplifies the role of art-based teaching in the context of sustainable development in higher education and maps out some suggested future developments. It does this by articulating the nature of art-based knowledge, knowing and outcomes in the context of higher education, and then exploring the ways in which these aspects manifest and are implemented in higher education practice across the globe.

### **Art-Based Knowledge, Knowing, and Outcomes**

Art-based teaching does not draw solely on the epistemology of logic and rationality, the conceptualization of knowledge, and knowing which has dominated many forms of learning, teaching, and research in the twentieth century (Taylor and Ladkin 2009). Instead, art-based teaching draws from an epistemology where knowledge and knowing are derived from the senses or sensual knowing. This is the realm of *aesthetics* and *aesthetic inquiry*, a realm of inquiry attuned to the reconciliation of the sensual and rational dimensions of human experience (Schiller 1910) or the

integration of thinking, feeling, and doing (Dewey 1934). Within this realm, art “provides a grasp of new affinities and contrasts, cuts across worn categories to yield new organization, new visions of the worlds we live in” (Goodman 1976: p. 5). Or, as Shrivastava et al. (2012, p 28) explain “art yields an opportunity for every individual human being to learn more about their intense emotional life. . . to create a harmonious and balanced life for people”. As such, it is intimately inclusive.

Understood in this way, and within the context of higher education, art – as a particular form of knowledge and knowing – is a highly relevant and generative space for complex, higher-order learning often characterizing sustainable development. Indeed, art has been understood as a counter-response to an overreliance on cognitive understanding, toward a more “holistic, physical and emotional engagement with sustainability issues” (Shrivastava 2010, p 443). As such, art-based teaching can be seen as a pathway to facilitate a reorientation from external spaces to internal spaces of the human mind and emotions (ibid). Specifically, such a reorientation has been described to evoke a more *passionate* (rather than *dispassionate*) relationship with nature, thereby framing any sustainable development (or broader) action-taking. In this way, “art offers an antidote to the mental and emotional pollution of commercialism, which eventually lead to the toxification of air, land, water, and the excessive consumption of carbon” (Shrivastava 2012: 32–33).

From this perspective, it is argued that art can evoke the “intense emotional and practical experiences” which are at the heart of “passion and emotion (and not cognitive understanding alone) that lies at the core of behavioural changes” (Shrivastava et al. 2012: 27). Drawing from such a perspective, art-based teaching engages a wide range of the factors linked to deeper forms of learning relevant to sustainable development. These include, for example, developing conceptual and metaphoric perspectives, visualizing connections within broader conceptual frameworks, and actively reflecting in contexts of experiential learning (Warburton 2003).

Similarly, art and art-making are recognized as having a particularly efficacious role in promoting affective learning outcomes, such as (1) generating personal awareness in relation to sustainable development, (2) promoting sets of values aligned to responsibility and sustainable development, and (3) initiating and mobilizing action in relation to sustainable development (Reid et al. 2006; Shephard 2008; Sauerwein et al. 2017). In this way, approaches to art-based teaching aspire to evoke more holistic and integrated understandings (such as people-planet-prosperity) which lead to action-taking. The next section identifies ways in which such underpinnings manifest in practice.

### Art-Making Approaches and Processes

Art, outside of the context of sustainable development and higher education, has been integrated into educational settings in a diversity of ways, described by Bresler (1995) as four models: *coequal* (where art is *part* of the learning focus, e.g., learning how to draw landscapes as well as learning how to plot maps), *subservient* (where art is positioned as *enabling* the learning of *other* topics, e.g., learning drawing in order to plot maps), *affective* (where art enables learning and self-efficacy, e.g., learning how to draw to build confidence in learning how to plot maps), and *social integration* (where art facilitates the cultural celebration of communities, e.g., holding a community event where the community learn how to draw to map out the design of a new play area). There are subtle differences here, but they illustrate the intentions of the art activity. However, such subtleties are also evident in the context of art-based teaching for sustainable development in higher education, and each of these can be found in practice. To help exemplify such practices in higher education, Taylor and Ladkin's (2009) more contemporary model provides a pragmatic framework to plot the variety of art-based processes which can be adopted in the context of higher education: skills transfer, projective technique, illustration of essence, and making. Each of these is now discussed.

### Skills Transfer

Art-based teaching can facilitate the development of artistic skills which are useful in education for sustainability settings, as the competences developed through art-based teaching reflect future-oriented higher education competencies, including dealing with complexity and ambiguity, systemic thinking, holistic thinking, anticipatory thinking, and for engaging communication and participation (Sandri 2013). Examples of art-based teaching for skills transfer can include (1) the use of art exhibitions coupled with art appreciation to develop the emotional and spiritual skills important for the holistic and interrelated capabilities relevant to sustainable development and (2) the use of art training with medical students to develop their visualization and observational capacities to enhance diagnosis and physical examination processes (Shrivastava 2010). Similarly, van Boeckel (2017) explores "lines on the hand" practices, involving the imaginative task of connecting the wrinkles on one's hands to personal histories of time, place, and people, to support a greater sense of connectedness, thereby enhancing sense of well-being. Such practices have been found to be efficacious in generating new skills, in addition to broader self-awareness and connectedness to land and its coinhabitants.

### Projective Technique

Approaches to art-based teaching which generate artful artefacts encourage and facilitate the accessing and sense-making of inner experience, thoughts, feelings, and actions. Examples of art-based teaching include (1) the use of painting to represent strategic thinking and new concepts in the context of integrated science, technology, and arts programs, (2) the use of painting in order to improve the health and well-being of patients in health and social care settings (Shrivastava et al. 2012), and (3) the use of clay sculptures to explore and represent "little me," or internal representations of self in relation to wider landscapes, as a platform for insight and possibilities of other expressions (van Boeckel 2017). Although such practices may be familiar in some arts-based pedagogical practices, they are still uncommon across

other disciplines and may well be interpreted and unorthodox in some disciplines.

The use of photography has also been used in education for sustainable development in higher education, as it offers an alternative way to access thoughts and feelings that might not be accessible through spoken or written word (Scott 2014). Lin and Li (2017), for example, used photography to help higher education students explicate their conceptions of oceanic sustainability. They identified (1) a continued preoccupation with environmental rather than integrated social, economic and environmental dimensions, (2) ambiguity around who should take responsibility for life-wide issues, and (3) that pedagogical approaches which integrated arts, science, and community, were linked to “a more balanced, action-motivated conception of sustainability” (Lin and Li 2017: 554). Such findings also highlighted the role of art-making practices, such as photography, in “revealing” the aspects of thoughts and feelings which are not necessarily socially desirable, such as own understandings about one’s own positioning or personal responsibility in the world.

### Illustration of Essence

Art-based teaching can promote the drilling to the “core” of “a concept, situation, or tacit knowledge in a particular way, revealing depths and connections that more propositional and linear developmental orientations cannot” (Taylor and Ladkin 2009: 56). Examples include (1) the use of “paintings, drawings and metaphors that bring life to [participants’] vision of sustainability” (Ivanaj et al. 2014: 23) in personal and professional lives, and (2) the use of meaningful metaphors and images to capture the essence of new ways of working which promote health and wellness and how to achieve it (Wall et al. 2017). Such processes help develop new frames (Wall 2016a, b) to help clarify the personal and group vision for their sustainability action and facilitate the sharing of the vision with others, to then, in turn, refine and develop action within a wider community (Wall et al. 2017). Similarly, the use of striking imagery, such as the conditions of battery chickens, has been used to intentionally generate

affective responses in higher education learning settings (Wall et al. 2018, forthcoming).

Disciplinary differences in pedagogical traditions may mean that some of these practices (such as museum visits) are not necessarily adopted widely beyond fields allied to the arts. However, other practices which illustrate an essence of some kind are likely to be much more widely adopted across the fields in higher education practice but may well appear as part of examples, anecdotes, stories, short case studies, dilemmas, or experiments, which are used as pedagogical devices. Such devices embody aesthetic qualities which amplify and highlight certain aspects and dimensions more than others and therefore embody particular perspectives or angles, have boundaries, evoke and provoke affective responses, and are intentionally packaged in ways to make a pedagogical point or series of them.

### Making

The process of creating art and artful artefacts can “foster a deeper experience of personal presence and connection, which can serve as a healing process. . . [for those] who may so often experience their lives as fragmented and disconnected” (Taylor and Ladkin 2009: 66). Indeed, there has been increasing interest in the therapeutic applications of expressive arts (and art therapy in particular) to foster human healing and growth (Shrivastava et al. 2012). These practices can include pedagogic activities, such as “wildpainting” (van Boeckel 2017), located within natural environments coupled with contemplative practices such as meditation to amplify sensory connection beyond the self (Flowers et al. 2014). In articulating how to design such art-based teaching practices, van Boeckel (2017) suggests that the key features of art-based environmental education practices and activities include:

- Bring greater awareness to personal observations – so when students engage in artful activity, such as illustrating land, they are able to notice fine details, for example, the specifics of how grass and rock interrelate in nature.

- Generate greater sensitivity to live processes happening in nature (e.g., growth and decay) – so when students engage in artful activity, such as illustrating ladybirds on strands of grass, they are able to notice the finer details of how, for example, the ladybird rests, slides down, and inhabits a blade of grass.
- Develop alternative ways of viewing the environment – finding new ideas and perspectives from becoming more aware of the minutiae in the environment and the associated patterns of interconnectedness in nature.
- Test the scale of the environment and the limits of humans – where one becomes aware of one’s positions in relation to wider environments, such as a mountain or an ocean, and notices the impacts of that on the nuanced details around them, e.g., how the water touches and forcibly moves the sand, soil, and the blade of grass on which a lady bird sits.

In order to work toward these features, the structure of art-based teaching practices for sustainable development has been described as a “dramatic” process based around insight, and the integration of that insight, into the pedagogical activity and wider learning program. van Boeckel (2017) describes this process as relating to three main stages:

- *Before: exposition* – this stage is about setting of the scene, the context, and the characters, as understood in the learner’s ordinary world. For example, this might include framing the pedagogical activities in relation to the higher education program on which the students are engaged: in relation to a “business planning” course, a visit to the museum might be explained in terms of building appreciation of historical events and emotion. Then the task might be that students adopt a role of a character in one of the pieces of art which embody a conflict.
- *During: rising action/climax/falling action* – this is the process of new awareness, conflicts, tension, and discomfort, as the learner (and facilitator) travels through the art-making

process. In relation to imagining oneself as a character in a painting, the activity might involve appreciating and empathizing with the character in the piece (rising action), and noticing what happens when they become part of a conflict in the piece (climax), followed by a reflective period of noting and making sense of what was noticed (falling action).

- *After: resolution* – this is the final stage where the learner has completed the art-making process and presents (in some way) the outcomes of their art-making, integrating some elements of closure. In the activity above, the final activity might be sharing one’s thoughts as another layer of sensemaking and then consolidating some insights in relation to what one might need to do, which may of course include spending more time in the museum as a source of provocation and insight.

## Participative Art-Based Teaching Approaches and Processes

Within the context of higher education, art and art-making processes have been utilized with multi-stakeholder groupings for the dual political goals of education and change, across a diverse range of sustainable development goals such as promoting health and well-being, gender equality, and environmental impact (Kagan 2011). Such participatory approaches have developed a variety of features and outcomes including (1) prompting and facilitating the exchange of ideas, (2) prompting and facilitating dialogue amongst multiple stakeholders, (3) building awareness and understanding of information and issues, (4) generating dissonance and concern, and (5) building a sense of place (Marks et al. 2016; Rossetti and Wall 2017).

Toward these aspirations and outcomes, participatory art-based teaching in higher education often promotes the capture of, and dialogue around, multiple and diverse personal and disciplinary perspectives through visual imagery (Haley et al. 2017). Although there are potentially various ethical issues involved, such as using one (vulnerable) person’s effort for some other (powerful) person’s benefit, there are many

practices which can enable positive outcomes for those considered to be vulnerable, or for all involved. For example, in relation to critical photographic practices, a number of approaches have been developed (Purcell 2009) such as:

- Photo-elicitation – to capture and then explore particular behaviors in community settings, in relation to identities, ethnicities, or in terms of memory and regaining sense of time and place. For example, the utilization of photographs with older persons or people experiencing dementia, to relocate a more familiar time and place.
- Photo-novella – to “empower” members of the community to capture their own stories which enables them to explore the meaning and significance of their own stories. For example, enabling a deprived community to capture what it means and feels like to live in a particular place or space.
- Photo-voice – where people (who may be considered vulnerable in some way) are given the equipment to record and reflect the day to day experiences, challenges, and tensions to a wider audience. For example, one practice is to give those who are experiencing poverty in some form a camera to capture their experiences from their own lived perspective. This might then be used in a wider setting where community stakeholders such as business owners and government officials respond to what is presented (e.g., The Poverty Commission in Scotland and England).

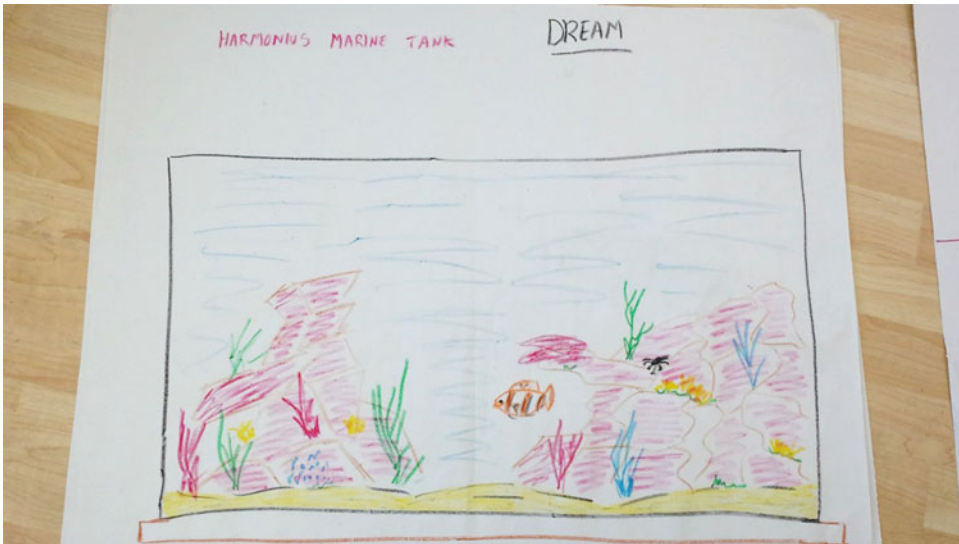
Participatory art-based practices can also be integrated into much larger-scale activities, linked to multiple political outcomes. For example, The Womanifesto Residency Programme in Thailand aimed to connect tradition and natural resources, utilizing art and artists to stimulate dialogue and debate. The program involved a range of art workshops and public art collaborations involving schools, colleges, universities, and a range of communities including farmers and artisans (ASEF 2012). Although the program developed art-making processes, it also tackled gender

inequalities by positioning women as creators and collaborators (ibid). Similarly, the “Art Activism”-based initiative in Singapore brings together artists, activists, scholars, and students as a platform for art collaborations at the grassroots level in relation to sustainability. The format included exhibitions, public dialogue, and publications and involved professionals from various sectors including the arts, media, university, social entrepreneurs, environmentalists, and philanthropists (ibid).

More recently, art-based practices have also been combined with appreciative inquiry processes which aim to establish and maintain a positive psychological state of participants, to facilitate generative change and transition. Through such processes, diverse groups come together and utilize rich visual metaphor and imagery to (1) appreciate current achievements, (2) envision a sustainable and desirable future state, and (3) agree actions to achieve that future state (Wall et al. 2017). For example, participants use visual metaphors and imagery to explore the following questions:

- “Discovery”: *When did we work well together?*
- “Dreaming”: *What would be the ideal of us working well together look like?*
- “Designing”: *What do we need to prioritize to make this happen?*

Wall et al. (2017) found that in exploring these questions, participants envisioned a new organizational culture which prioritized collective well-being and connection to nature. This was captured through imagery including *smiling faces, plants, clouds, sky, sunshine, trees, wind surfing, fish, ducks, sea life, friends/family/community, and house/home*. An example of a participant’s drawing in the “dreaming” stage is depicted in Fig. 1 below. It importantly illustrates the sense of “dreamlike” freedom that such a collaborative task enabled and the embodiment of aesthetic fuzziness, color, and metaphoric meaning-making that is important to the form of aesthetic knowing central to art-based teaching.



**Art-Based Teaching on Sustainable Development, Fig. 1** An example of participant drawing in the “dreaming” phase. (Source: Wall et al. 2017: 138)

## Conclusion and Future Directions

Though the relationship between art, responsibility, and education has developed over the last 30 years, there are still controversial undertones. For example, there are perspectives which want to keep the inherent value of art as sacred (i.e., art for art’s sake) and do not approve of the “subservient” role of art for other functionalities (e.g., “art for earth’s sake,” Reid et al. 2006; Smilan 2016). Similarly, there are ongoing tensions in educational contexts when art and artefacts are subject to any form of assessment (Haanstra and Schönau 2007). Yet it seems, according to the evidence outlined in this chapter, that such controversies are not necessarily stopping the pace at which art-based teaching is being utilizing in the context of sustainable development (Gunn 2016).

Future directions of art-based teaching practice and research will continue to emerge which will explicitly combine and integrate embodied understandings of sustainable development, especially in the context of science, technology, engineering, and mathematics higher education (STEM). There has been a move to integrate art into this STEM agenda, and the new acronym has expanded to include the A of Art, to create the STEAM agenda. These emerging trends will continue to

amplify and expand the STEAM agenda in higher education and will thereby create new and innovative pedagogical forms with sustainable development, change, and transformation as driving principles (Payton et al. 2017).

## Cross-References

- ▶ [Arts Based Approaches to Sustainability](#)
- ▶ [Reflective Practices and Sustainable Development](#)
- ▶ [Story Telling for Sustainable Development](#)

## References

- ASEF (2012) Linking the arts to environment and sustainable development. Asia-Europe Foundation, Singapore
- Bolin PE (1999) Teaching art as if the world mattered. *Art Educ* 52(4):4–5
- Bresler L (1995) The subservient, co-equal, affective, and social integration styles and their implications for the arts. *Arts Educ Policy Rev* 96(3):31–37
- Carpenter BS (2004) An editorial: community, collaboration, culture. *Art Educ* 57(5):4–5
- Dewey J (1934) *Art as experience*. Perigee Books, New York
- Flowers M, Lipsett L, Barrett MJ (2014) *Animism, creativity, and a tree: shifting into nature connection*

- through attention to subtle energies and contemplative art practice. *Can J Environ Educ* 19:111
- Goodman N (1976) *Languages of art: an approach to a theory of symbols*, Indianapolis, Hackett Pub. Co.
- Gunn V (2016) Prophetic nomadism: an art school sustainability-oriented educational aim? *Int J Art Des Educ* 35(3):316–326
- Haanstra F, Schönau DW (2007) *Evaluation research in visual arts education*. Springer, Dordrecht
- Haley D, Vargas VR, Ferrulli P (2017) Weaving the filigree: paradoxes, opposites and diversity for participatory, emergent arts and design curricula on sustainable development. In: Leal Filho W, Brandli L, Castro P, Newman J (eds) *Handbook of theory and practice of sustainable development in higher education*. Springer, Dordrecht
- Haywood-Rolling J (2017) Art as therapy. *Art Educ* 70(5):4–5
- Ivanaj V, Poldner K, Shrivastava P (2014) Hand/heart/head: aesthetic practice pedagogy for deep sustainability learning. *J Corp Citiz* 54:23–46
- Kagan S (2011) Art and sustainability: connecting patterns for a culture of complexity. Verlag, Bielefeld
- Kraehe AM (2017) “For all without distinction”: creative activity as a human right. *Art Educ* 70(4):4–7
- Krug DH (1997) Art & Ecology: an editorial. *Art Educ* 50(6):4–5
- Lin C, Li Y (2017) An auto-photographic study of undergraduate students’ conceptions of ocean sustainability. *Int J Sust High Educ* 18(4):554–575
- Marks M, Chandler L, Baldwin C (2016) Environmental art as an innovative medium for environmental education in biosphere reserves. *Environ Educ Res* 23(9):1307–1321
- Payton FC, White A, Mullins T (2017) STEM majors, art thinkers (STEM + arts) – issues of duality, rigor and inclusion. *J STEM Educ* 18(3):3947
- Purcell R (2009) Images for change: community development, community arts and photography. *Community Dev J* 44(1):111–122
- Reid J, Carpenter D, Meehan B (2006) Art for earth’s sake: creative and interdisciplinary collaborations for sustainability in the tertiary sector. In: Filho Leal W, Carpenter D (eds) *Sustainability in the Australasian university*. Peter Lang, Frankfurt, pp 81–90
- Rossetti L, Wall L (2017) The impact of story: measuring the impact of story for organisational change. *J Work Appl Manag* 9(2):170–184
- Sandri OJ (2013) Exploring the role and value of creativity in education for sustainability. *Environ Educ Res* 19(6):765–778
- Sauerwein M, Karana E, Rognoli V (2017) Revived beauty: research into aesthetic appreciation of materials to valorise materials from waste. *Sustainability* 9(4):529–549
- Schiller F (1910) *Literary and philosophical essays: French, German and Italian*. Collier, New York
- Scott R (2014) Education for sustainability through a photography competition. *Sustainability* 6(2):474–486
- Shephard K (2008) Higher education for sustainability: seeking affective learning outcomes. *Int J Sustain High Educ* 9(1):87–98
- Shrivastava P (2010) Pedagogy of passion for sustainability. *Acad Manag Learn Edu* 9(3):443–455
- Shrivastava P (2012) Enterprise sustainability 2.0: aesthetics of sustainability. In: Hoffman A, Bansal T (eds) *The Oxford handbook of business and the natural environment*. Oxford University Press, Oxford, pp 630–638
- Shrivastava P, Ivanaj V, Ivanaj S (2012) Sustainable development and the arts. *Int J Technol Manag* 60(1/2):23–43
- Smilan C (2016) Developing visual creative literacies through integrating art-based inquiry. *Clear Hous* 89(4–5):167–178
- Stout CJ (2007) Eco-responsibility in art education. *Stud Art Educ* 48(4):331
- Taylor S, Ladkin D (2009) Understanding arts-based methods in managerial development. *Acad Manag Learn Edu* 8(1):55–69
- UNESCO (2006) *Road map for arts education*. UNESCO, Paris
- UNESCO (2010) *Seoul Agenda: goals for the development of arts education*. UNESCO Paris
- van Boeckel J (2017) *At the heart of art and earth: an exploration of practices in arts-based environmental education*, 3rd edn. Aalto University, Helsinki
- Wall T (2016a) Author response: provocative education: from the Dalai Lama’s cat<sup>®</sup> to dismal land<sup>®</sup>. *Stud Philos Educ* 35(6):649–653
- Wall T (2016b) Reviving the Ubuntu spirit in landscapes of practice: evidence from deep within the forest. *J Work Appl Manag* 8(1):95–98
- Wall T, Russell J, Moore N (2017) Positive emotion in workplace impact: the case of a work-based learning project utilising appreciative inquiry. *J Work Appl Manag* 9(2):129–146
- Wall T, Clough D, Österlind E, Hindley A (2018, Forthcoming) Conjuring a spirit for sustainability: a review of the socio-materialist effects of provocative pedagogies. In: Leal Fihlo W (ed) *Sustainability in higher education – world sustainability series*. Springer, Dordrecht
- Warburton K (2003) Deep learning and education for sustainability. *Int J Sustain High Educ* 4(1):44–56