

## Unconventional Educational Approaches: An Eco-pedagogy to Address Our Transformative Challenges



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### Synonyms

Critical learning; Socratic dialogue; Unorthodox methods

### Definition

Unconventional educational approaches are diverse methods of learning that are not normally included in formal or traditional education settings (Dewey 2015, 17). Because of this, they may enable learners to generate emergent forms of knowledge for themselves (Ingold 2013, 1). Such approaches offer critical means to address transformative challenges such as the climate crisis and may generate “in vivo knowledge” or “transdisciplinary knowledge” that include cultural, philosophical, and spiritual dimensions (Nicolescu 2008, 3). Although unconventional educational approaches may, therefore, produce knowledge between, across, and beyond all

disciplines, the creative arts offer a means to explore them (Nicolescu 2008, 15).

### Introduction

The text critically reflects on the UN Sustainable Development Goals (United Nations 2015) and focuses on *SDG4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all* in particular. In pursuit of an unconventional education that addresses our transformative challenges, four key terms are considered: art, ecology, pedagogy, and dialogue (Bohm et al. 1991). Interdependently, these concepts offer systems for learning that may be valued and practiced as unconventional education. As there are no definitive formulas for art, there are no definitive formulas for teaching and learning either. However, there are some conceptual, performative, and practical things that may be done to potentially affect ecological transformation through learning. In this case, these forms of dialogue are integral to some arts practices, and they include actions and understandings that may be considered unconventional approaches to education. Ultimately, they reference Robert Pirsig’s claim that “the most moral act of all is the creation of space for life to move onwards” (Pirsig 1993, 407). This act of learning, in concert with evolution, may be termed “metapoiesis” (Haley 2018, 36).

But first, within the context of this encyclopedia, we must ask some fundamental questions:

- How does conventional education support and promote future needs?
- How might unconventional education support and promote our transformative challenges?
- How does Education for Sustainable Development (UNESCO 2017) meet the needs of our transformative challenges?
- How may we *ensure inclusive and equitable quality education*?
- How may we *promote lifelong learning opportunities for all*?

## Conventional Educational Approaches and the Knowledge Industry

Socially acceptable by many as the normal, standard approach to education, conventional methods may, also, be regarded as orthodoxy, dogma, or even stasis. US philosopher John Dewey describes this as “traditional”:

The traditional scheme is, in essence, one of imposition from above and from outside. It imposes adult standards, subject-matter, and methods upon those who are only growing slowly towards maturity. The gap is so great that the required subject-matter, the methods of learning and of behaving are so foreign to the existing capacities of the young. They are beyond the reach of the experience the young learners already possess. Consequently, they must be imposed; even though good teachers will use devices of art to cover up the imposition so as to relieve it of obviously brutal features. (Dewey 2015, 18)

The basic or conventional approach to education extends beyond the curriculum, as the means of delivery is a vital element. Conventional teaching methods are based on maintaining order, discipline, and power; the teacher is the expert, in control of delivering knowledge to the students, who need to be controlled to receive knowledge. The students are thought to be empty and, therefore, ignorant of their educational needs (Feire 2017, 45). Representing the institution of school, college, or university, the teacher fills the students with knowledge from the curricula of the disciplinary silos. Examination conventions support

this specific way of knowing and expressions of understanding that promote specific ways of thinking and doing. Learning criteria, outcomes, and notions of success are measured to further enforce the idea that the role of education is to train students to be useful and employable members of a particular kind of society. The political philosophy of the dominant culture decides what that society should be and how it wants it to operate in the future. Critical and even creative thinking may be considered, by the establishment, to be dangerous challenges to the policies and philosophies of conventional education, as they question authority and the establishment.

Dewey further questions the viability of conventional learning methods, elucidating the conundrum of their wish to retain perceived traditional standards while pushing for constant development. Here, knowledge itself becomes industrialized:

Learning here means acquisition of what is already incorporated into books and in the heads of the elders. Moreover, that which is taught is thought of as essentially static. It is taught as a finished product, with little regard either to ways in which it was originally built up or to changes that will surely occur in the future. It is to a large extent the cultural product of societies that assumed the future would be like the past, and yet it is used as educational food in a society where change is the rule, not the exception. (Dewey 2015, 19)

## The Knowledge Industry

Originating in the 1950s, the term “knowledge industry” emphasizes the production and distribution of knowledge within the context of international monetary economics. This concept equates to the instrumental, neoliberal values of private education, reaffirming the instrumental functionality of training for service to industrial purpose, entrepreneurship, and the commercial economic activity derived from research. Information technologies and economic development are the primary tools and goal with knowledge (often confused with information) perceived as a practical commodity. Such “transferable knowledge” represents the primary value of education to

industry and commerce. Now, widely considered as conventional education in many developed countries, the quantifiable factors of success are measured with metrics by financial institutions to comply with particular fiscal and political policies.

## The Digital Age: New Conventions

It is then necessary to consider some of the impacts of ITC on contemporary educational systems. Few challenge the seemingly inevitable adoption of this ubiquitous educational revolution. In approximately 30 years, most developed countries have installed and/or provided for computers in every classroom, lecture theater, and meeting area of all educational establishments, from preschool to university. Access to the Internet is now considered to be a prerequisite for obtaining information and as a means of both disseminating that knowledge and communicating it to others. It is inconceivable for any “Millennial” to engage in an educational activity without access to an online computer, smartphone, or tablet. The consequences of this cultural shift are enormous in terms of the perceived benefits and the potential harm. There are, also, many unexpected and unknown consequences to the digitization of education.

The exponential growth of the worldwide web has impacted way beyond its origins as an educational tool to simply connect academics with each other, to touching and influencing all aspects of life. In some quarters, however, concerns are growing that while digital technologies are increasing human skills in particular ways, they are reducing capabilities in other ways. Indeed, like humanity’s increasing dependence on urban infrastructures, our dependence on digital technology in some respects makes us more vulnerable to withstanding the shocks of transformative challenges. It is similar to the difference between “engineered resilience” and “ecosystem resilience” (Gundersen and Holling 2002, 28).

The first definition, and the more traditional, concentrates on stability near an equilibrium steady state, where resistance to disturbance

and speed of return to the equilibrium are used to measure the property (Pimm 1984; Tilman and Downing 1994). We term this *engineering resilience* (Holling 1995; Holling Meffe 1996).

The second definition emphasizes conditions far from any equilibrium steady state, where instabilities can flip a system into another regime of behavior – i.e., to another stability domain (Holling 1973b). In this case resilience is measured by the magnitude of disturbance that can be absorbed before the system changes its structure by changing the variables and processes that control behavior. This we term *ecosystem resilience* (Gunderson and Holling 2002, 22).

The delivery of SDG4 places great importance on underdeveloped populations emulating those in the developed world by acquiring the hardware and software of development, thereby rendering them dependent on and undermined by the conventions of another culture. The notion of “wroughting” for industrial-scale manufacturing becomes superseded by service to digital technologies. As the dystopian foresight of 1984 (Orwell 2004) becomes reality, we see the prospect of a compliant workforce being managed as a human resource, conditioned and controlled by digital cognition. The myths of truth, evidence, and meaningless metrics replace reality and experiential knowledge (Lakoff and Johnson 1980, 228).

But what if the learners want a different form of society, or imagine an alternative future from that chosen for them? Might this situation imply the need for a different form of pedagogy; what might that be, and how might it be delivered? Many different, untraditional, or unconventional forms of education have been designed to challenge the status quo, to consider alternative values, and to imagine different diverse futures. Notable proponents include philosophers John Dewey, Paulo Freire, Ivan Illich, and Maria Montessori and artists Paul Klee and Joseph Beuys.

## Some Shortcomings of SDG4

The “Key business themes addressed by this SDG” in the *SDG Compass* (2015), developed by the Global Reporting Initiative (GRI), United Nations Global Compact, and World Business Council for Sustainable Development (WBCSD), are:

- Education for sustainable development
- Availability of a skilled workforce
- Capacity building
- Indirect impact on job creation
- Youth employment

It seems that SDG4 is the means for business to:

- Establish relationships with government entities and higher education institutions to improve education curricula to better align with business needs including responsible management
- Create programs (e.g., internships, work-study programs, traineeships, etc.) that give students earlier access to the corporate environment
- Provide employees with continuous opportunities to improve their (job) skills for their current and future employment
- Develop cost-effective education products and services that eliminate barriers to access and improve the quality of learning (e.g., ICT solutions to improve the delivery of education, innovative measurement tools, etc.)
- Ensure learning environments are clean and safe for children by mitigating business-related environmental hazards, like pollution and limited water access (Global Reporting Initiative et al. 2015, 1)

Given the WBCSD membership of exclusively invited CEOs from global corporations like DuPont, 3M, Nestlé, BP, Danone, and Royal Dutch Shell, it is hardly surprising that their interests in the SDGs and SDG4, in particular, are based on the business models and ethics that have caused the environmental, human rights,

and transformative challenges we face. The paradox of affecting systemic sustainable development transformation with the support of such powerful corporations means that the “leverage point” can be turned back on itself (Meadows 1999).

## Unconventional Approaches to Education

This section initially draws on four lessons or contemporary parables that may be learned to convey some different aspects of the diverse potential for unconventional education. They deal with social and cultural perceptions, understandings, and realities, rather than measurable truths. Such thinking is rarely considered in traditional or conventional education, but intuitive, “common sense,” and systems of belief are the basis of most human decisions.

### Learning Systems and Empathy

A student worked on Saturdays, as a kitchen porter in one of London’s largest department stores. Enjoying the physical work and camaraderie, he improved the process of crockery and cutlery collection, washing-up, and redistribution to such an extent that the waitresses passed on some of their tips to him. Management were delighted with his added systemic changes. Then, one Saturday before lunch, the head cook took him to one side and sat him at a small, well-laid table behind the scenes. She sat opposite him and the head chef brought a plate of well-presented steak and chips. The head cook said: “Eat and listen, my Dear. You are a good worker and you have made many improvements, but you need to understand that as a student, you only work here on Saturdays. We have to work here as our full-time job and we can’t keep up with your pace. You must learn to slow down.” The student welled up. She hugged him, smiled, and said: “Eat my Dear; take your time.”

To understand the context of others requires empathy. To affect social, political, and systems transformation, the “world views of all concerned” must be understood and respected, if

they are to join you (Freire 2017, 153). Empathy and humility are not things that can be taught through conventional education. They may be conceptually addressed through literature and the humanities, but can only be learned through experience. Such nondeterministic approaches are not, as yet, included in SDG4, probably because they are not easy to quantify. However, recent developments, like the Global Commission for Adaptation's report, *Adapt Now: A Global Call for Leadership on Climate Resilience* (2019), are recognizing these needs: "Solutions to these climate-related inequities must address underlying power structures and dynamics. We will not accept a world where only some can adapt, and others cannot" (Global Commission for Adaptation 2019).

### Learning Oppression

Outside a London Underground station, a well-spoken and not too disheveled beggar greets a man who is waiting for his girlfriend. The man gives the beggar some money, as he learned from his father that anyone who needs to beg should receive our unconditional charity – how they spend that *gift* is their business. The beggar thanks the man and they chat about the people passing by. The beggar notes that "the biggest problem in the world is snobbery"; the assertion that one person is necessarily superior to another. At first, the man doesn't believe this apparently simplistic idea, but the more he challenges it, the more he understands the reality of oppression. Like a *koan*, set by a Zen master, the beggar helped the man to see for himself a deep reality.

Seeing and naming oppression for oneself are important steps in personal realization and social liberation. As Paulo Freire writes:

I cannot think *for others or without others*, nor can others think for me. Even if the people's thinking is superstitious or naïve, it is only as they rethink their assumptions in action that they can change. Producing and acting upon their own ideas – not consuming those of others – must constitute that process. (Freire 2017, 81)

Of course, the values of egalitarianism could be equally learned. Although we may think we already know and practice such values, it is,

however, necessary to have them reflected back to ourselves, so that we can experience and thereby embody them. Such experiences may place the teacher and learner on the same co-learning level, something that conventional education finds difficult to accept. This ability to recognize, adopt, and adapt to the needs of the learner, rather than the will of the teacher, is a quality that could be included in SDG4 as a means of educating those in authority before they assume and impose their value systems on others.

### Trust and "The Unruly Protagonist"

A performer may discover at a particular moment that their performance has not only broken out of the conventions of the genre in which they perform but has as a result captured the audience. For this moment, neither performer nor audience know what may be the outcome of their deviation from convention. It could go either way. However, the performer may be able to take the audience with them to "another place." From that electrifying frisson, the performer learns that they have gained the trust of their audience and the audience have reciprocated by gaining the performer's trust to continue.

Breaking with convention renders the performer or protagonist is vulnerable, but on occasion this vulnerability can strengthen and enhance that person's resilience and may even transform a situation or state of being. The German artist Joseph Beuys noted that "to provoke is to evoke" (Beuys 1990, 86). Challenging the status quo, however, can also incite revolution and in this way may be considered dangerous by those who hold the power of convention.

In his Preface, *The Unruly Protagonist*, to the 2000 edition of *Theatre of the Oppressed*, Brazilian theater practitioner, drama theorist, and political activist Augusto Boal captures this moment in classical Greek theater, when Thespis broke ranks from the chorus to rage directly at Solon the Great (Mayor of Athens) about the state of the city, politics, and laws. In so doing, Thespis became the first "protagonist" – one who may speak directly to their audience. Solon declared that this *ad lib* was dangerous, as it could influence

the people, but through subsequent turbulent developments, Thespiis developed his art to become a dialogue or dynamic equilibrium between him, his audience, and Solon, based on truth.

Dialogue is always dangerous, because it creates discontinuity between one thought and another, between two opinions, or two possibilities – and between them infinity installs itself; so that all opinions are possible, all thoughts permitted. When Two have ceased to exist and only Sole Absolute Thought remains, creation becomes impossible, Dialogue is Democracy. (Boal 2008, xvi)

Thespiis then found his place as the archetypical trickster (Hyde 2008), the jester, clown, or Lord of Misrule, permitted by society to not just think critically but speak out critically and even create entertainment from the process. Such a break with convention may have its price, as Socrates discovered through the practice of dialogue, when he was forced to commit suicide as a punishment for challenging the state. This may, therefore, seem like a strange thing to advocate, but it reinforces the need for society to understand the place of such dissent. The role of the *agent provocateur* is an essential catalyst in political evolution, affording the antithesis to transform thesis into synthesis; and in complexity theory, it is the disorder that is needed for a system to pass from order to organization (Haley 2018, 34). While the SDG4 accounts for conventional approaches to education, becoming climate savvy may require such a counterintuitive approach to promote ecological resilience. Society and the SDGs need to create a space of mutual trust for a shared program of learning.

### Thinking Differently

Approximately 60% of university students and members of staff, in the creative arts, are dyslexic. Some need more support than others to cope with what conventional education considers to be a “disability.” Autism, at different parts of the “spectrum,” or when identified in students in non-science disciplines, may also be regarded as a “learning disability” within conventional education. However, such diverse ways of learning may be the source of creativity or profound

understanding. Such cases reflect society’s inability to recognize diverse thinking processes. Indeed, for many high achieving students, it is their unconventional learning processes that are the key to their success.

For some of these students, their education trajectory has been highly fraught as they meet with traditional educational dogma, but learning to manage such challenges can increase their capacity and capability for learning. Such diverse and unconventional approaches to education may provide the creative processes necessary to resolve the “wicked problems” that the SDGs wish to address.

These four examples of unconventional approaches point to curricula and learning outcomes that are not normally included in conventional forms of education. Indeed, they are either ignored or denied within traditional disciplinary subject matter and methods of learning, but they are essential to:

- Gaining and valuing experiential knowledge of practicable systems and the empathy needed to deploy them
- Generating the capacity and capabilities to recognize, adopt, and adapt to the needs of the learner, thereby not perpetuating the abuse of colonialism
- Becoming climate savvy through counterintuitive approaches that promote ecological resilience
- Providing the creative processes necessary to resolve the transformative challenges and wicked problems that require diverse thinking

These unconventional approaches may be considered fundamental qualities to “(e)nsure inclusive and equitable quality education and promote lifelong learning opportunities for all,” but they break from traditional educational paradigms, making them un-assessable, unaccountable, and therefore currently nonexistent (United Nations 2017). To make transition from academia to praxis, SDG4 could consider adopting such approaches.

## Sustainable Development Goal 4 (SDG#4) Quality Education

UNESCO produced the Education 2030 Framework for Action that “provides guidance for the implementation of this ambitious goal and commitments” (UNESCO 2017) and provides a set of “Learning Objectives” to achieve each of the 17 SDGs. Implementation of the SDGs through Education for Sustainable Development (ESD) is envisioned by integrating ESD “in policies, strategies and programmes,” “in curricula and textbooks,” “in teacher education,” and “in the classroom and other learning settings.” Guidance is, also, provided on “(h)ow to assess ESD learning outcomes and the quality of ESD programmes?” (UNESCO 2017). In other words, SDG4 becomes embedded in conventional education.

The premise of an “inclusive and equitable quality education” presupposes a set of values for this program, predicated on the concept of sustainable development (United Nations 2015), the cultural assumption of the UN and UNESCO being that their values are just and correct for everyone. Again, this conventional approach to education holds that sustainable development is the fundamental learning outcome. Few will doubt the well-meaning assertion of this program, but some may critique and contest the semantics of this oxymoron that literally promotes the very values and systems that created the problems the SDGs wish to resolve – enduring status quo and unremitting growth (Haley 2017, 2). When we then consider the “global indicator framework” of the Inter-agency and Expert Group on SDG Indicators (IAEG SDGs), we may find some further anomalies (United Nations 2017).

### Targets and Indicators

According to the SDG Indicators: Metadata repository, “(t)he metadata available in this repository is a work in progress,” so a process of ongoing evaluation is in place (United Nations 2019, 1). However, certain phrases in the Target Indicators are somewhat vague. For instance, what is

meant by “relevant and effective learning outcomes” (United Nations 2017, 4.1) and “psychological well-being” (United Nations 2017, 4.2.1)? Some indicators seem to promote specific values, like ensuring equal access to “... affordable and quality technical, vocational and tertiary education, including university” (United Nations 2017, 4.3), to substantially increasing those “... who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship” (United Nations 2017, 4.4) and the proportion of youths and adults with “... information and communication technology (ICT) skills, by type of skill” (United Nations 2017, 4.4.1). This ubiquitous set of unchallenged values presupposes the aspirations of a dominant Western, Capitalist elite wanting to do good, but also wanting to instill their beliefs in others. Indeed, in its will to “... ensure equal access to all levels of education and vocational training for the vulnerable...” they include “... persons with disabilities, indigenous peoples and children in vulnerable situations” (United Nations 2017, 4.5). How are indigenous peoples necessarily vulnerable, and why is vocational training constantly proposed? This form of conventional educational indoctrination is well described by Paulo Freire as “banking education”; that is, the oppressors assume that the oppressed are educationally empty and therefore need to be filled with education so they may aspire to become like the oppressors (Freire 2017, 45).

Furthermore, the SDG Fund asserts that “(d)igital education technologies improves fundamental skills such as collaboration, problem solving and global awareness” and can “... open future job opportunities” (UNESCO 2017). Again, this presupposes capitalist economic values based on particular industrial technologies.

SDG successes claimed by this program include a “youth access to quality professional training” (United Nations 2017) in Mozambique, where “(y)oung women and men in remote areas are increasing their prospects to find decent job opportunities within the extractive industries...” (United Nations 2017). The SDG4’s “pattern of organization” (Dewey 2015, 18), therefore, is designed to train indigenous people to become a

compliant workforce for multinational corporations to extract minerals, including oil, coal, and natural gas! An education program that funds such “cultural invasion” (Freire 2017, 133) to perpetuate the carbon industries in pursuit of corporate profit is tantamount to “ecocide” (Higgins 2010), although this has not yet been accepted as an international crime by the UN.

Little has changed since Sir William Curtis introduced the “3Rs,” “reading, wroughting and arithmetic” in 1795, that were intended to provide basic educational skills for workers to meet the needs of the emerging Industrial Revolution and British Empire. This approach to education – the dominant culture training the “undeveloped” to accept their values and comply with their needs – may be considered conventional or “traditional” (Dewey 2015, 17) forms of education.

It would seem that despite SDG4’s aim to prepare future generations to meet climate change and the other transformative challenges, it needs to adopt unconventional education approaches if it is to shift the paradigm from the economic and industrial status quo that sustains carbon industries and colonial forms of development to “integral critical futures” (Slaughter 2004, 12). The SDGs currently present a paradoxical situation: providing both the problem and the solution. They are to “Ensure inclusive and equitable quality **education** and promote lifelong **learning** opportunities for all” (United Nations 2017).

## Making Our Futures

This section describes an example of unconventional learning, developed by the author that was integral to his ecological arts practice, research, and pedagogy. It evolved through working with communities and students across Europe, the USA, and Southeast Asia. The main focus of this educational approach was to determine how the creative arts might address climate change, the Sixth Extinction, and the other transformative challenges. “It means the necessity of the introduction of a new order of conceptions leading to new modes of practice” (Dewey 2015, 5). Rather than being a devised vision of education for

sustainable development to achieve predetermined outcomes, it was an approach that “emerged” (Ingold 2013, 2) through arts-led, practice-based research into what students might want and need to learn for their futures?

The program varied according to the particular place and culture of the people, but the following nine elements below give a broad outline of this approach. Within this program, [Approach 6: “Undisciplinarity” and “Eco-pedagogy”](#) is the point of antithesis that marks the shift from conventional education to unconventionality. It may be aligned in many ways to Paulo Freire’s development of “eco-pedagogy” that emerged from his theory and practice of critical pedagogy. As a response to education that is often tied to state- and corporate-sponsored interests and becomes part of the problem, eco-pedagogy strategically tries to enhance the United Nations Education for Sustainable Development, making it relevant to marginalized and excluded communities. Richard Kahn describes the three main goals of the eco-pedagogy movement to be:

1. Creating opportunities for the proliferation of ecoliteracy programs, both within schools and society
2. Bridging the gap of praxis between scholars and the public (especially activists) on eco-pedagogical interests
3. Instigating dialogue and self-reflective solidarity across the many groups among educational left, particularly in light of the existing planetary crisis (Kahn 2010, 8)

### Approach 1: “The Pattern That Connects” (Bateson 2000, 7)

To contextualize (Morin 2008, 14) the program and provide an introduction, *A Brief History of Art and Ecology: from the Neolithic to the Anthropocene* was provided. This questioned the concepts of ecology and art to arrive at working definitions through some literature research and, importantly, conversation. Meaning became important as ubiquitous terms like “greening” were set aside and differences established between the vague interchangeable use of “environment” and “ecology.” Working through and

with language and cultural differences played an important part in interpretation (as opposed to attempts at translation), to establish synergies of mutual understanding and relevance. This approach established the means for evolving an agreed lexicon for the students own narratives to emerge, rather than being given information to learn by rote.

### Approach 2: The Art of . . .

The etymological definition of **art** originates in the Sanskrit word, *Rta* from the *Rigveda* (1700–1100 BC approx.). In contemporary Hindi, *Rta* still means “the dynamic process by which the whole cosmos continues to be created, virtuously” (Haley 2001, 102). It also alludes to the “right way of doing” anything and carries a moral imperative to act correctly, in accord with evolution. The process and the pattern are the ecology. For those with whom we learn, this may be an essential point of information and provocation for dialogue, for it opens up the possibilities of what art might be, how it is connected to all other subjects, and how we might engage with it. The significance of arts-led practice-based research then finds its place. Indeed, the idea that art is doing something with excellence carries through to contemporary English in “the art of. . .,” “motorcycle maintenance” (Pirsig 1991), cooking, football, gardening, and even “war” (Tzu 2008). Education is no exception, and excellence need not necessarily concern “art.” However, “the art of education” does set it aside from “the science of education.” The latter could be conducted with excellence as a conventional approach, while the former may afford the potential to include unconventional approaches. Herein lies the potential to reconcile the differences without loss of either approach.

### Approach 3: Dialogue – “Learning from the Learners What the Learners Need to Learn”

The elements of the program became laid out:

- Formal education – lectures for personal and group inquiry
- Informal education – seminars of group dialogue

- Nonformal education – project-based, self-led group development

This led onto teaching and group research as art in action and deep listening as a form of transition and learning for transformation. This process, as a form of Socratic dialogue, involved critical exchange from which the poetic may emerge, before delivery or engagement with the rest of the program.

We need to know who we are teaching and what *their* needs are. Then we can start an empathetic, reciprocal process of learning. This process continued throughout the program as a systematic form of reflection and critical evaluation, shared between teacher and students. Above all, it permitted the students to learn for themselves; they owned their learning and seemed to delight in their own rigor.

### Approach 4: “Capable Futures” (Haley 2008b) and the Wider Context – “Being Present in the World”

Having established the tools and form of the approach with the students, this element started by sharing data on climate change, the Sixth Extinction, and related issues to contextualize the students’ possible futures. It opened out to include Education for Sustainable Development and the UN Sustainable Development Goals. At this point, “sustainable development” and its concept and historic context were critically reflected upon to find meaning in this ubiquitous term. Gender, culture, uncertainty, indeterminacy, unintended consequences, power relations, “global citizenship” (Andreotti and de Souza 2012), and whole systems ecology were considered. The Scottish artist Eduardo Paolozzi wrote: “What is needed is a new culture in which way problems give way to capabilities” (Paolozzi 1985, 158); and so in this situation, “the face of disaster turned to the face of opportunity” (Harrison and Harrison 2008, 12) for the students.

### Approach 5: “Making Our Futures”

The project assignment takes its name from the program and “makes time a matter of urgency”

(Haley 2008c, 15), as it asks the participants to “make something for our futures.” This was a self-led project, to work collaboratively as teams. Team organization and dynamics were central considerations, as were walking and talking as dialogical action-based research methods. Importantly, “question-based learning” (Haley 2008b, 202) and “inquiry-based learning” are offered as alternatives to solution-led, problem-based learning, as unlike the latter, they open up a situation for to consider “are we asking the right question,” before trying to answer it. Some potential questions were introduced as starting points for the project: “How big is here?” (Harrison and Harrison 2008, 5), “How long is now?” (Brand 1999, 29), and “Who is here now?” (Haley 2008b, 206). This approach is, also, similar to Freire’s “concept of ‘problem-posing’”:

In problem-posing education, people develop their power to perceive critically *the way they exist* in the world *with which* and *in which* they find themselves; they come to see the world not as a static reality, but as a reality in process, in transition. (Freire 2017, 56)

### Approach 6: “Undisciplinarity” and “Eco-pedagogy”

The term “undisciplinarity” (Haley 2017) challenges the misunderstandings and appropriation of “transdisciplinarity” (Nicolescu 2002, 1) that turns the potential for emergent knowledge into conventional, predetermined learning outcomes, learning into training, and knowledge into indoctrination. Undisciplinarity, however, may be used as a provocation, a disruptor, and a catalyst to shift stagnant ways of thinking into creative awareness. While the aim is reconciliation, it can sometimes cause shock and discomfort, as it may upset the existing societal paradigm. In tandem with Donella Meadows’ *Leverage Points: places to intervene in the system* (Meadows 1999), it may open up alternative ways of thinking, including systems thinking, and give permission to play:

There are no cheap tricks to mastery. You have to work at it, whether that means rigorously analyzing a system or rigorously casting off your own paradigms and throwing yourself into the humility of Not Knowing. In the end, it seems that power has

less to do with pushing leverage points than it does with strategically, profoundly, madly letting go. (Meadows 1999, 19)

Having introduced undisciplinarity to open the way to unconventional education approaches, the idea of “eco-pedagogy” (Haley 2017, 9) integrates an approach to learning within and with its context. It was adopted as a creative arts practice. Two ancient Greek words and concepts converge to provide a starting point to explore their meanings:

- Ecology or *oikos* concerns the design of a house to harmoniously integrate the family members within their civic and cosmological context. Living in one’s right place did not necessarily preclude a person from changing their place, providing this was done within the mores of the culture.
- A *pedagogue* was a trusted slave who led a child by the hand from their house to the teacher’s house. Before the teacher imparted formal knowledge, the child learned from walking and talking with the slave – a dynamic process of seeing the world from diverse perspectives. Other artists and thinkers who have coined the word pedagogy include Paul Klee’s *Pedagogical Sketchbook* (Klee 1989) and Paulo Freire’s *Pedagogy of the Oppressed* (Freire 2017). Augusto Boal’s Forum Theatre and *Theatre of the Oppressed* (Boal 2008) and Joseph Beuys’ practice of social sculpture (Beuys 1990) expand on the idea.

Together, *eco-pedagogy* may, therefore, mean the process of connecting formal, informal, and non-formal ways of learning about our interconnectedness with the world. It may provide a necessary form of unconventional education; but to reiterate, *we need to learn from the learners what the learners need to learn*. As Freire points out:

Education which is able to resolve the contradiction between teacher and student takes place in a situation in which both address their act of cognition to the object by which they are mediated. Thus the dialogical character of education as the practice of freedom does not begin when the teacher-student meets with the students-teachers in a pedagogical situation, but rather when the former first asks herself or himself *what* she or he will dialogue with the latter *about*. (Freire 2017, 66)

### Approach 7: The Beauty of Complex (Systems) Thinking

Learning to live well in a complex world requires diverse forms of thinking. Systems thinking enables established and novel modes to work in harmony and dream in concert. Paradox, absurdity, unknown consequences (Morin 2006, 15), and wicked problems, the resolution of opposites, creation, and destruction, all have their part to play in how we engage with our futures. The emergence of transdisciplinary knowledge (Nicolescu 2002, 153) extends this method of learning beyond predetermined, conventional learning objectives, outputs, and outcomes: “As the prefix ‘trans’ indicates, *transdisciplinarity concerns that which is at once between the disciplines, across the different disciplines, and beyond all disciplines*” (Nicolescu 2008, 2).

### Approach 8: The Six Elements of Research

All research is concerned with finding something out, but what do we want to find out and how may we do this? These questions offer an approach that may be adopted or discarded by the researcher/learner:

1. What do I want to find out?
2. Why is this important?
3. How will I find out, and why is this the best possible way?
4. What resources do I need to find out – collaborators, financial needs, equipment requirements, and above all the schedule?
5. Who will I tell what I found out; how will I tell them, and how may that affect them?
6. Do stages 2, 3, and 4 correspond to each other?

Neither “tool kit” nor set of instructions, these questions offer a way into a process of exploration and possible discovery. They are deceptively simple, and if they are answered fully, they can provide to foundation of a thesis.

### Approach 9: Five Possible Ways to Reconcile Resilience

With regard to foresight planning and management – sustainable development – the word “resilience” has to some extent become another

meaningless term. While science literature differentiates between engineered and ecological resilience (Gunderson and Holing 2002, 28), we may add a further three transformative ways of reconciling resilience:

- Engineered – techno-sustainability and resistance to vulnerability
- Ecological – creation and destruction, emergent, evolutionary regeneration
- Avoidance – absence from potential danger and the precautionary principle
- Yielding – give way to gain, improvising with change
- Vigilance – continued preparedness and training to maintain readiness

Offering creative modes of adaptation to survival and evolution is essential to both reduce and understand vulnerability, thus providing realistic hope and reason for meaningful learning. Vulnerability then offered the students strength in knowing. The narrative of invulnerability, still peddled by many institutions in their assurance of a certain future, may then be dismissed as dangerous misinformation. Climate change and species extinction need to be acknowledged, with urgency, across all curricula for students to address these challenges confidently. It may seem strange to still refer to this approach as “unconventional.”

## Conclusion: Transformative Pedagogies

Academia has developed many useful approaches to learning, but none will ever tell the whole story, so there is a need for diverse forms of education that can enable learners and teachers to adapt to the dynamic indeterminant future needs. Over time however, each discipline has jealously refined, defined, and institutionalized its precise area of knowledge and expertise. There have been attempts in recent years to upturn the pyramid of reductionist education by joining up, sharing, or combining disciplinary practices, including multidisciplinary and interdisciplinary types of knowledge generation. Transdisciplinary knowledge, in

the form described by Basarab Nicolescu and Edgar Morin, however, suggests a paradigm shift that creates the space for knowledge to emerge “across, between, and above all disciplines” (Nicolescu 2008, 2). George Lakoff and Mark Johnson suggest a third approach that goes beyond the “myth of objective knowledge” and the “myth of subjective knowledge”: that of “experiential knowledge” (Lakoff and Johnson 1980). Again, neither of these approaches will ever tell the whole story but expand our capabilities to survive.

Despite the paradoxical situation regarding SDG4 and perhaps the SDGs as a whole, they do offer opportunities to pose 17 problems, rather than solutions. Here the paradox may be viewed positively, as each goal, in identifying the reality of a problem, also raises questions to be addressed in dialogue. Freire asserts the essential nature of that dialogue:

In the antidialogical theory of action, cultural invasion serves the ends of manipulation, which in turn serves the ends of conquest, and conquest the ends of domination. Cultural synthesis serves the ends of organization; organization serves the ends of liberation. (Freire 2017, 156)

Rather than being the solution(s), the sum and the value of the SDGs are to potentially liberate us from conventional education. The art of unconventional educational approaches then becomes the process of our transformation to ecological resilience through “eco-pedagogy” and as Gregory Bateson suggests:

The question is not only ethical in the conventional sense, it is also an ecological question. The means by which one man influences another are a part of the ecology of ideas in their relationship, and part of the larger ecological system within which that relationship exists. (Bateson 2000, 512)

The unconventional approach to education offered here is neither a formula nor a model, but a way of learning how to learn and help others to learn for themselves the importance of meeting our transformative challenges. We may create the space for this through any discipline, education, and research as a system of learning continuum. The potential emergence of novelty, diversity, and life is all we have. How we *ensure inclusive and*

*equitable quality education to promote lifelong learning opportunities for all* is how we may learn to do this, albeit unconventionally.

## Cross-References

- Critical Pedagogy
- Eco-Literacy
- Transdisciplinary Knowledge

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