Adult education has a significant role to play in creating a just and sustainable world. This chapter explores a continuum of perspectives related to the environment and education and highlights sustainability and ecojustice education theory and practices in this volume.

Sustainability, Ecojustice, and Adult Education

Wendy Griswold

Our environment and human impact upon it is a growing concern. Sustainability and sustainable development have been advanced as a response to this increasingly pressing global issue. The term *sustainable development* (World Commission on Environment, 1987) entered our vocabulary in the 1980s and has been contested, politically charged, and evolving ever since. Conceptions of sustainability have been delineated into two philosophical camps, radical and conservative. Radicals view sustainability as focused on environmental protection, equity, local knowledge, and the intersections of environmental, social, and economic issues. The conservative view is focused on environmental conservation, downplays the importance of equity, emphasizes expert knowledge, and views sustainability largely as an environmental problem, not an economic and social one (Jacobs, 1999). Regardless of one's philosophical view on sustainability, education is recognized as a key factor in moving toward sustainability.

The radical perspective on sustainability education is largely transformative in nature, while the conservative perspective is transmissive (Jickling & Wals, 2008). Within the field of adult education, sustainability is viewed from a more radical perspective. As the field of adult education expands, the inclusion of sustainability education under its umbrella can enhance the scholarly contributions to the research necessary for positive change.

Sustainability Overview

There is no singular definition or agreed-on meaning for the concept of sustainability (Jickling & Wals, 2008). One of the earliest and most widely accepted definitions of sustainability emerged from the Brundtland Commission: "sustainable development is development that meets the needs of the present

without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p. 43).

The major tension within sustainability discourse and practice is the tension between maintaining the status quo and changing our existing power structures and relationships. The contested issues center on four main concepts: environment, equity, participation, and quality of life (Jacobs, 1999). A conservative sustainability perspective views the environment solely as an unlimited resource for human consumption and only seeks to protect the environment as long as that protection does not impede economic growth. The more radical approaches to sustainability have a tendency toward deeper respect for the natural environment and thus seek to encourage stronger protections for its preservation. Equity is ignored or de-emphasized on the conservative platform, particularly in the northern hemisphere, creating tensions at the global level (e.g., Davenport, 2015). Toward the more radical stance, advocating resource redistribution and raising global living standards are key concerns. In this volume, we address educational sustainability in a focused way from the radical perspective as we advocate the creation of a new paradigm in human connection to the environment and to one another.

Sustainability Education Overview

McKeown (2006) views sustainability education as an evolution of environmental education, which involves "improving basic education, reorienting existing education to address sustainable development, developing public understanding and awareness, and training" (p. 15). Jaimie Cloud of the Cloud Institute for Sustainability Education defines it as "an education that prepares people to be far-seeing enough, flexible enough, and wise enough to contribute to the regenerative capacity of the physical and social systems upon which they depend" (Cloud Institute for Sustainability Education, 2009, p. 4). These differing definitions highlight the opposing philosophical viewpoints that underlie educational approaches and the overall discourse on sustainability itself.

Opposing perspectives exist in that in an anthropocentric perspective, human existence is paramount and the environment is viewed as a natural resource focused solely on humanity, whereas an ecocentric approach extends this concern to nonhuman species and views the environment as its own entity (Kopnina, 2012). The concepts of environmental and ecological justice are examples of the difference in perspectives. Environmental justice is "the distribution of environmental benefits and burdens among human beings" (Kopnina, 2012, p. 703). Ecological justice and ecojustice education are centrally about "justice between human beings and the rest of the natural world" (Low & Gleeson, 1988, as cited in Kopnina, 2012, p. 703).

In general, approaches used in sustainability education tend to be transmissive (shallow) or transformative (deeper). Transmissive education involves curricula created and controlled by a few and either re-creates the accepted social order or a new order determined by its creators (generally government

and industry). In a transmissive approach to sustainability education, the environment is a problem to be solved (Stevenson, 2006). It also positions the environment, economics, and social issues as separate spheres, which places them in opposition to each other, and leads us to deal with them as problems within separate arenas instead of part of the same whole (Rathzel & Uzell, 2009). Transformative education is co-created knowledge that has been socially constructed by a broad base of participants and has the capacity to move us beyond sustainable development (Jickling & Wals, 2008). A transformative approach claims the focus on environmental problems doesn't allow for a healthy environment to be the norm and leads to oversimplification of environmental issues on the part of educators in their curricula (Stevenson, 2006). It also seeks to illuminate the interrelation among the environment, economics, and social issues (Rathzel & Uzell, 2009). Transmissive education, in a sustainability context, focuses on individual behaviors and concerns, consists of discrete facts about the environment, and relies on rational ways of knowing (Stevenson, 2006). Transformative curricula emphasizes community or society, places environmental concerns in the context of local issues, and incorporates emotions, values and spirituality as ways of knowing (Stevenson, 2006). Transformative approaches are heavily incorporated into ecojustice and radical sustainability adult education (Clover, 2003; Dentith & Thompson, Chapter 6, this volume; Walter, 2009).

Adult Education and Sustainability

In order to facilitate transformative learning and positive change, the field of adult education can serve as a catalyst for sustainability and ecojustice education. Tension between maintaining the status quo and creating social change is evident in both fields of adult education and sustainability education. Ostrom, Martin, and Zacharakis (2008) identified this tension as a "divide between those for whom adult education is a tool for social progress, and those who view it as a means for individual human development" (p. 306).

Radical environmental adult education has been influenced by the demand created through the sustainability movement (Walter, 2009). Clover (2003) outlined the common conceptual frameworks and strategies of radical environmental adult education, which include:

- making explicit the links between the environment, society, economics, politics, and culture;
- utilizing engaged and participatory learning process not limited to individual behavior change and information transmission;
- focusing on root causes and critical questioning of market/consumer driven capitalism and globalization; and
- learning that is community oriented and contextually shaped.

Within the sustainability and environmental adult education literature (a relatively small, but growing body of work), much of the scholarship is rooted in

nonformal, informal, and community learning contexts (Bell & Clover, Chapter 2, this volume). An emerging perspective is ecojustice adult education, which incorporates many of the principles of radical environmental adult education, with a strong emphasis on the role of the cultural commons in restoring and sustaining healthy ecosystems. Two areas of theory and practice that inform ecojustice and radical environmental adult education are transformative and situated learning.

Transformative Learning. Transformative learning from a planetary perspective or ecological consciousness "recognizes the interconnectedness among universe, planet, natural environment, human community, and personal world. Most significant is recognizing the individual not just from a social-political dimension but also from an ecological and planetary one" (Taylor, 2008, pp. 9–10). Major tenets of ecological consciousness include relationships and reciprocity, especially concerning the co-creation of knowledge. The physical environment helps to shape and inform social constructs. In this volume (Chapter 6), Dentith and Thompson describe their work as indicative of transformational learning among adults engaged in a seminar on ecojustice education.

Recent research exploring sustainability adult education in a variety of contexts using the lens of transformative learning indicate an important role for instrumental learning (Moyer & Sinclair, 2016; Quinn & Sinclair, 2016; Sims & Sinclair, 2008). This holds true in ecojustice education, as well, given its emphasis on relearning the cultural skills that support sustainable ecosystems (Bowers, Chapter 5, this volume). Instrumental learning is about the technical and the rational, while communicative learning helps us understand and develop skills about human communication and make meaning of social experiences (Mezirow, 2003). Devising new ways of being in the world requires a certain amount of instrumental learning and behavioral change.

Situated Learning. Lave and Wegner (1991) explored situated learning in communities with an emphasis on engagement and relationship as the site of learning. Situated learning involves "the whole person rather than 'receiving' a body of factual knowledge about the world; an activity in and with the world, and on the view that agent, activity, and the world mutually constitute each other" (Lave & Wegner, 1991, p. 33). According to their theory of legitimate peripheral participation, participation (or engagement) in relation to "old-timers" is the process by which newcomers form their identities in respective communities of practice (Lave & Wegner, 1991). Learning communities can serve as sites for introducing newcomers into more encompassing communities of practice. The capacity of situated learning to facilitate social reconstruction is of particular relevance to ecojustice and sustainability education. Situated learning may be an appropriate tool for the creation of sustainable societies, where "old" ways of acting and thinking may be problematic. While new members of a community need to learn from the previous generation, they may also need to transform the perspectives and practices in their communities in order to develop a distinct identity focused on

ecojustice and sustainability and move toward the future (Lave & Wegner, 1991). Situated learning in environmental adult education is detailed in the essays by Kearns Burke in Chapter 8 and Winfrey in Chapter 7. To address the current ecological crisis, communities of practice focused on facilitating learning utilize situated learning to connect those with cultural skills aligned with sustainable practices with those who want to learn them. One example is the Transition Movement, a grassroots effort to develop community resilience to contemporary challenges such as climate change and the economic crisis discussed by Kearns Burke in Chapter 8.

The research and practices described in this volume are examples of contributions to adult learning theory and ecojustice and sustainability adult education that reflect the potential impact adult education can make toward achieving global justice. There is much more to explore and learn as humanity prepares to undertake its most serious challenge yet.

Moving Toward (and Beyond) Sustainability Adult Education

The goal of radical/strong/deep sustainability and ecojustice adult education is to develop a citizenry capable of re-creating the world to ensure a healthy and equitable existence for all. Although this chapter has focused largely on sustainability education, the chapters ahead demonstrate the close alignment between radical sustainability adult education and ecojustice adult education. It is evident that both speak from the position that cultural change is necessary to address our ecological crisis. The current pervasive world view is not one in which environmental, social, or economic justice is possible. This volume contains examples of efforts to facilitate cultural change from both radical sustainability and ecojustice adult educators. Their examples provide guidance on how to facilitate adult learning free from prescribed outcomes, the type of learning necessary for recreating the world.

The first step in facilitating ecojustice or radical sustainability education is to clarify our worldviews about the environment and develop our own visions of what a sustainable society looks like (Stevenson, 2006). Then we need to consciously find ways to communicate our worldview and vision through our teaching. Chet Bowers (Chapter 5, this volume) highlights how our language reveals and frames our values and world views. If our language is devoid of words that convey respect and connection to nature, what does that communicate about our worldview?

Once we have clarified our own perspectives and visions, we can create space for our learners to do the same. We can begin by simply making space in our curricula for exploring the connections between ourselves and the environment. Many chapters in this volume detail the authors' experiences with this process. Groen's essay on the role of spirituality in cultivating ecological consciousness offers an internal and personal view of this journey. Making space in our curricula requires us to reflect critically on our own teaching and look for opportunities to help our learners critically reflect their role in

contributing to our current situation and develop new perspectives to "help ameliorate the crisis and live sustainable lives" (Dentith & Thompson, Chapter 6, this volume). These opportunities need to be rooted in local issues of relevance and concern to learners. As we well know:

Adults tend to be more motivated to learn and to act by things they care about rather than by abstract concerns, and one critical role of educators is to show people why they should care about the environment before expecting them to acknowledge its importance and begin to build environmental literacy. (St. Clair, 2003, p. 74)

In their chapter on teaching ecojustice education, Dentith and Thompson provide a concrete example of facilitating student caring and connection to content. For too long, the ecological dimension has been missing from learning and education. We are disconnected from the fact that we are dependent on the earth for our own survival. The job of sustainability, ecojustice adult education, and environmental adult education is to address this deficiency. In fact, any adult educator concerned about or working in the areas of social and/or economic justice must broaden their theory and practice to include the environment. These issues are too inextricably linked to address piecemeal. Our attitudes and worldviews toward the environment are bound up in our current system, which perpetuates the injustice we seek to end. If we stubbornly continue this disconnect, our efforts toward justice will fail in the long term.

This volume is an introduction to the theory and practice of adult education intended to support the development of sustainable cultures. Two branches of this type of adult education are discussed: radical sustainability or environmental education and ecojustice education. Radical sustainability and environmental adult education have been emerging over the past few decades. The ecojustice perspective in adult education is even more nascent. The chapters in this volume highlight theory and practice in each respective sphere of inquiry. The common threads uniting them are the linkages between environmental, social, and economic issues; an insistence that the relationship between nature and humanity must change; and the role of adult education in facilitating this change.

There are three chapters that can be categorized as radical sustainability adult education. Each focuses on established cultural institutions as change agents. Janet Groen details her experience of cultivating ecological awareness during a Jesuit retreat focused on eco-spirituality. She describes how the tradition of the Ignatian Spiritual Exercises, originally developed by St. Ignatius to help deepen one's relationship with God, has been expanded to "emphasize our connection to nature and the underlying reasons for our ecological crisis" (Groen, Chapter 3, this volume). Key elements of the practice is for participants to come to terms with their roles in the current crisis and to develop a future vision. Lorraine Bell and Darlene Clover discuss the role of museums as facilitators of public dialog and exploration of environmental issues. Rather

than reflecting and reinforcing existing perspectives about the relationship of humans and the environment, their work points to how public cultural institutions can challenge this relationship. Key elements are making space for critical questioning to occur and for other ways of knowing to emerge in public spaces. Catherine Etmanski and Ingrid Kajzer-Mitchell explore how one of the world's oldest professions serves as a catalyst for transforming consumers into activists and learners. Their case study demonstrates the roles of small scale farmers as educators and leaders in cultivating change in food systems. Key elements are informal, self-directed, and action learning.

Although the chapters on radical sustainability education provide examples of cultural institutions as change agents, the chapters on ecojustice education are directly embedded in community efforts. Bowers describes the principles of ecojustice education and introduces the concept of the cultural commons, a key concept in the area of adult ecojustice education. The cultural commons include "non-monetized and non-privately owned knowledge, skills and mentoring relationships that have been handed down over the generations" (Bowers, Chapter 5, this volume). An ecojustice adult education perspective asserts that redirecting humanity's focus to the cultural commons will produce the cultural perspective shift needed to alter our current course. In their chapter, Dentith and Thompson provide a practical example of putting the principles of ecojustice adult education into action within the context of formal educational settings. They describe a workshop for educational leaders designed to help them identify their role in the current environmental crisis and devise ways they could facilitate change in their personal and professional lives. Emily Kearns Burke provides an example of community efforts to revitalize the cultural commons in her chapter on the Transition Movement. The Transition Movement is a grassroots initiative that is responding to the current environmental crisis by fostering community resilience efforts, seeking to teach the skills of the cultural commons to address food and energy issues. Key elements are the use of situated learning, mentoring, and cognitive apprenticeships to connect intergenerational learners in teaching and learning. Nancy Winfrey provides a second example of grassroots initiatives to promote ecojustice education in her study of the Pittsboro Plenty, an initiative to launch a community currency system. Through the use of local currency systems, control of the economic development is retained at the community level. Key elements in creating successful systems include participatory decision-making processes, human rights, social justice, and sustainability.

Conclusion

This volume offers a path forward for adult educators concerned with facilitating the conditions within which justice can emerge. Adult education has a significant role to play in creating a just and sustainable world. Every adult educator has a worldview that includes perspectives, attitudes, and values about the environment and education. These worldviews fall somewhere

along the continuums described earlier. Responsible practitioners will engage in critical reflection to uncover and make explicit their assumptions about the environment and their role as educators in the movement beyond sustainability.

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Wendy Griswold is an assistant professor in the Department of Leadership at the University of Memphis in Memphis, Tennessee.