

Greening the Net Generation: Outdoor Adult Learning in the Digital Age

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Abstract: Adult learning today takes place primarily within walled classrooms or in other indoor settings, and often in front of various types of digital screens. As adults have adopted the digital technologies and indoor lifestyle attributed to the so-called *Net Generation*, we have become detached from contact with the natural world outdoors. As a result, many of us are beginning to experience a variety of often debilitating physical, emotional, and mental health problems. At the same time, recent adult education scholarship shows the benefits of restorative, natural experiences in the outdoors, their contribution to adult learning and positive effects on our emotional, physical, and mental health. This paper identifies two themes in outdoor learning for adults: (a) cultural, spiritual, and transformative learning in natural settings and (b) survival, group, and leadership learning in the wilderness. It then offers suggestions for integrating digital technology into outdoor adult learning and offers conceptual parallels to thinking and activities in the digital world in relation to adult learning.

Keywords: nature deficit disorder, Net Generation, outdoor adult learning, digital technologies

For the most part, adult education takes place indoors—in the walled rooms of university, community college, and adult basic education

classes, in community centers, hotels, and conference centers, libraries, hospitals, corporate training rooms, warehouses and factories, nursing homes, and museums. In the last decade or so, adult education has also increasingly taken place on computers, smartphones, tablets, and video-conferencing screens but, again, mostly inside walled indoor spaces (offices, classrooms, cafes, kitchens, living rooms, airports, trains, etc.). For adult learners roughly age 18 to 35 years, the Internet has always been present and for many the digital world is a naturalized and normal part of daily life. As such, these adults are sometimes referred to as belonging to the *Net Generation*, and are believed to learn best in visual, multimedia, and digitally mediated environments (Worley, 2011).

The notion of a *generation* of people has been critiqued as a stereotype falsely lumping together diverse groups of adults. Nonetheless, the literature on the so-called *Net Generation* is valuable in understanding the learning styles and social practices of adult learners who use digital technology. A growing number of adult educators argue it is our job to adopt the educational power of digital technology to the fullest extent possible for all adult learners, Net Generation or otherwise (e.g., LeNoue, Hall, & Eighmy, 2011). To respond to this demand, we have an unending creative stream of new courseware, learning platforms, web-based training modules, tailored search

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engines, web-based surveys, and reference and assessment software. Online, distance, and blended hybrid adult education programs are popping up everywhere, in part driven by new information and communications technology but also in response to the demands and learning styles of adult learners who prefer to learn within the digital world.

Karen Worley (2011) argues, as adult learners, the Net Generation has a short attention span, is easily bored, visually oriented, accustomed to instant gratification, and possesses a strong sense of entitlement, but is also technologically proficient, self-confident, goal-oriented, multitasking, very social, and good at working in groups. To respond to these learners, Worley recommends we not only create digitally mediated social learning environments but also “shift the focus from teaching to learning, instead of reading about something, have students visit something, [and] incorporate inquiry-based learning; and talk less and do more” (pp. 36-37). In addition, among other things, we should “attempt to slow student faced-paced thinking and working [and] create assignments that provide some focused reflection time” (p. 36). In fact, as this paper will make clear, these are all teaching strategies that can be readily accomplished through outdoor adult learning and education.

Taking a step back from the digital embrace, Australian educator Karen Malone (2007) maintains the Net Generation is the “bubble-wrap generation” (p. 513). As children, they were not only protected from the world of the outdoors by digital technology but also controlled by it. Middle class parents of these children were overly protective and indulgent of them, regulated their play, kept them away from perceived physical risks, and sheltered them from unrestricted exposure to the outdoors and the wild. Children spent long hours in front of digital screens and in cars being driven to and from school, play dates, and soccer games. In the front seat was the GPS; back seat company was often portable DVD players, smartphones, Nintendo DS, iPods, and iPads. In this parenting style, digital technology was used as a substitute for unpredictable real-world social, physical, and educational encounters, and as a means to monitor children’s behavior—through GPS on cell phones, video spy cameras, and so on (Malone, 2007). The result of this parenting style is what Richard Louv

(2008), in his best-selling book *Last Child in the Woods*, terms a *nature-deficit disorder* (p. 10). Louv and others identify this continuing lack of direct exposure to play and learning in nature as a contributing factor to rising rates of obesity, attention deficit disorders, depression, and other physical and mental health problems.

In his most recent book, *The Nature Principle*, Louv (2012) argues that the same negative consequences of a nature deficit are true for adults of any age, not just those of the Net Generation. In fact, the more adults immerse themselves in a life of digital electronics, the greater the need for restorative natural experiences in the outdoors. He gives examples of adults immersing themselves in nature with positive results. Among these are outdoor gyms and natural terrain replacing indoor fitness clubs and exercise machines, healing gardens at hospitals, family and neighborhood nature clubs engaging in regular outdoor activities, and on-site workplace gardens. Louv sees these outdoor activities as restorative therapy or “vitamin n” (p. 48) to nourish the minds, souls, and bodies of adults.

For adult educators concerned with health and wellness, this is not completely new ground but serves as a reminder of the importance of nature and physical, spiritual, intellectual, and emotional contact with the outdoors. Many vibrant forms of adult learning and teaching integrating outdoor learning have been documented in the literature of adult education in recent years (Hill & Clover, 2003; Walter, 2009). Drawing on the adult education literature and other related scholarship from outside the field, this paper identifies two prevalent themes in outdoor learning for adults: (a) cultural, spiritual, and transformative learning in the outdoors and (b) learning of survival, group, and leadership skills in the wilderness. The paper then offers suggestions for incorporating digital technology into these two types of outdoor adult learning and ends with a brief conclusion.

Outdoor Learning for Adults

This section looks at the cultural, spiritual, and transformative dimensions of outdoor adult learning in a variety of restorative natural settings followed by outdoor learning in wilderness settings in particular. Under the first theme, nature itself can be at once the content, setting, and facilitator of learning. This learning process involves immersion in nature, the

practice of mindfulness, and the opening up of the five senses. In settings such as community gardens, learning may be collective and transformative. Under the second theme of learning in the wilderness, learning is more active, experiential, and physically challenging. Learners are motivated by the desire to test their bodies and minds to perform increasingly difficult adventure challenges and wilderness survival tasks. They also learn how to support and nurture relationships with others on whom they depend or for whom they may act as leaders. In these wilderness activities, adult learners develop self-confidence, interpersonal skills, environmental awareness, and leadership skills. Outdoor and wilderness settings are important for how they help strip away layers of urban stress, inhibition, and pretense and breathe new life and motivation into individuals and groups of adult learners who may learn simpler, healthier ways of being and acting together.

Cultural, Spiritual, and Transformative Learning in the Outdoors

Many thousands of years before European colonial settlers populated North America in the 1500s, Native American peoples (known as First Nations or aboriginal people in Canada) developed and perfected complex educational systems in which adult learning took place primarily in the outdoors. This learning was and continues to be vocational, cultural, spiritual, and environmental. Shirley Sterling (2002), member of the Nlakapamux First Nation, for instance, writes about how she learned to build a fish trap from her mother who, as she demonstrated the building of the trap, told the story of how she herself had learned—some 60 years before—from her great aunt, but had not built one since. The process of hands-on learning and accompanying storytelling meant mother and daughter easily learned and remembered how to build the trap and reinforced the relationship with the great aunt and each other. Demonstration combined with storytelling in outdoor settings “provides both method and content” (p. 8) in adult education. As method, storytelling is a mnemonic device that transmits cultural knowledge and values orally across generations. As content, it can include the “natural environment, cultural and

technological knowledge, information, values, and history” (p. 8).

In nonaboriginal settings, where people may not necessarily have a deep cultural and spiritual claim to the land, the natural environment as outdoor classroom for adult education still provides for the (often missing) engagement of the five senses in learning and an educative spiritual, emotional, and therapeutic connection to nature. Gretchen Bersch and Caroline Lund (Bersch & Lund, 2002), for example, write about the importance of the natural setting for adult education programs at the Yukon Island Center for Research and Education in Alaska:

Being in a beautiful place, surrounded by the sights, sounds, and smells of the woods and the sea, heightens the senses and brings one closer to nature and to oneself . . . Without the intrusion of technology, the learners on Yukon Island are able to concentrate on reflection and dialogue. They are free to focus on their learning. (p. 74)

As Ann Wing Quest, one of the participants at the Yukon Center put it,

There is something about being in the out-of-doors that expands my senses and my ability to learn in a more holistic manner. Nature has a kind of wisdom that teaches me to open up to possibilities, to think and feel from a place of inner knowing. I tend to blend and balance the course content with my personal meaning in a much deeper way. (p. 78)

In a similar fashion, Jennifer Grill (2003) argues natural settings are “restorative environments [and] almost any kind of learning can use the natural setting to its advantage” (p. 22). Moreover, she tells us that these settings do not “have to be dramatic to be effective. It is not necessary to seek out pristine wilderness—a basic park or garden seems to suffice” (p. 22). Elizabeth Lange (2009) explains how she uses a range of outdoor learning activities to create a learning sanctuary and promote transformative learning in a continuing studies course on sustainability. These activities may include activities as simple as mindful walking out-of-doors and visits to local experiments in

sustainable living. Benjamin Feinstein (2004) explains how transformative learning and a critical multiculturalism were promoted by immersing adult learners in the natural and cultural environment of native Hawaiians.

Community gardens are emerging as an important site of outdoor cultural and transformative learning for adults, individual and collective (Walter, 2013). Erika Mundel and Gwen Chapman (Mundel & Chapman, 2010), for instance, describe how participants in an aboriginal community garden in Vancouver, Canada learned about food, spirituality, decolonization, and health through culturally appropriate outdoor adult education. In this case, informal learning took place in the act of communal gardening, cultural celebrations, and a holistic understanding of food, ecosystems, health, and culture taught by Elders. Other research, for example, on older Chinese immigrants to New Zealand, shows how people plant themselves and their culture in gardens when they leave their homes (Li, Hodgetts, & Ho, 2010). In the process, they recreate culture, place, and history and teach these to others. The importance of bodily learning in community gardening and learning to be affected by a new physical awareness of climate change through gardening has also been identified (Cameron, Manhood, & Pomfrett, 2011). Finally, looking at the role of a community garden in promoting social movement learning in the food movement, Charles Levkoe (2006) demonstrates how community gardens can be an outdoor site of transformative learning and active learning of democratic citizenship in urban Toronto.

Learning Survival, Group, and Leadership Skills in the Wilderness

Outside of the human world of community gardens, parks, and playing fields, much purposeful adult learning takes place in wilderness settings. Outdoor education in the wilderness has a long history of educational practice in North America, for example signaled by the continuing success of Outward Bound (www.outwardbound.net) and the National Outdoor Leadership School (NOLS; www.nols.edu). These programs take learners (youth and adult) out to wilderness settings and immerse them in experiential learning, environmental and social. The aim of these

programs is to develop individual self-confidence, self-reliance, and leadership skills, as well as interpersonal skills, concern for others, environmental awareness, and wilderness survival skills (McKenzie, 2000). Ideally, participation in wilderness outdoor education leads to transformative learning in which adults challenge and change their meaning perspectives (Mezirow, 2000), learn to be more self-aware, become better leaders of others, and better stewards of the natural environment (Brown, 2009).

Outward Bound (2011) has upward of 250,000 participants in its programs each year, including 37,000 adults; NOLS (2013) enrolls about 16,000 participants a year, many of whom are university students. Both organizations teach wilderness survival skills through a series of individual and group experiential learning challenges. However, the focus of Outward Bound is more on emotional and character development to create more compassionate, socially aware citizens in a variety of wilderness, urban, and school settings, while NOLS emphasizes the technical aspects of wilderness skills and leadership development out in the wild (Goldenberg, Russell, & Soule, 2011). Reflecting a commitment to inclusion and diversity, Outward Bound (2013) programs' core curriculum focuses on learning "responsibilities to self, others and community" (para. 3), "heartfelt caring connection to each other and the world around us" (para. 5.), and "compassionate behaviors and a service ethic" (para. 5) To this end, programs are offered not only to schools, corporations, nonprofit organizations, and the public at large, but also to survivors of violence and abuse, veterans transitioning back to civilian life, and aboriginal, low-income, and immigrant youth (Community Knowledge Centre, 2011).

The literature on adventure and outdoor education identifies numerous factors to promote personal growth and transformation in programs (McKenzie, 2000). These include the suggestion that wilderness environments in particular—in contrast to other natural environments—effectively promote self-awareness and self-responsibility. This is in part because the learning of wilderness survival skills has immediate and direct natural consequences for learners (who may not survive if they do not learn well). Among other factors (group composition, instructors, participant characteristics), the types of learning activities

undertaken in the wilderness are also seen as particularly important to outcomes. Activities such as rock climbing, hiking, zip-lining, kayaking, and mountaineering should be challenging enough to provoke constructive anxiety in learners, but not so challenging that they experience continual failure or are physically endangered. Learning challenges should also be holistic, requiring participants to use their bodies, engage emotions, and draw on mental capacities in combination. Challenges should increase incrementally just above the comfort zone of participants who receive positive reinforcement for their efforts. Learners should experience task mastery and success much of the time but will also learn positively from their failures. Finally, participants should set their own personal goals, have some choice in which activities to pursue, and have opportunities for debriefing and reflection.

Engaging Digital Thinking and Technology in Outdoor Learning

It is not necessary to reject digital learning technologies to promote adult education in the outdoors. On one hand, digital learning technologies can be used to complement and extend real-world outdoor learning—in taking and sharing of photos, videos and audio recordings, using art and design software and Internet searches, creating blogs, and so on. On the other hand, the patterns of thinking, ways of learning, and mindsets of the Net Generation and other digitally inclined learners can be addressed in the ways in which we think about the natural world as a learning resource. In this vein, as explained below, nature might be understood as a giant, multisensory, multimedia, living museum, real-world Wikipedia, dispersed wilds akin to the Internet, or outdoor web of nature. This section of the paper takes the two themes in outdoor learning described above and suggests how (a) digital learning technologies might be incorporated into each theme and (b) each theme might be seen to have parallels in patterns of thinking and activities in the digital world.

Learning About Self and Nature

Under the first theme of cultural, spiritual, and transformative learning in the outdoors, learning in and about nature is a creative, holistic process involving

brain, body, heart, soul, and the five senses. It may incorporate art, poetry, music, dance, meditation, and song. As noted above, immersion in the natural environment can help adults recover spiritually and physically from the effects of computers, cell phones, and the Internet, moving from the stress of constant interface with digital technologies in the virtual world to the quiet calmness and slower pace of the natural world. Learning activities might include digging in the dirt or touching soft green moss, tasting wild fruits or rain on the tongue, smelling pungent leaves or flowers, listening to the gurgle of gushing streams or crashing ocean surf, or simply taking in the sublime visual beauty of forest, prairie, desert, wetlands, arctic, or mountain landscapes.

Outdoor learning involving touch, taste, smell, sound, and sight might make creative use of digital technology. Adult learners may, for example, listen to, dance to, and sing along with digital music outside; create artistic nature photographs or films; write and post art, music, natural sounds, and photographs in reflective digital journals and blogs; or create digital eco-art with art, graphic, multimedia, and music software. In these ways, a healthy balance, creative relationship, and synergy may develop between learning in the digital and natural worlds.

The digital resources of the Internet can be used to learn about the physical world. Web-based reference software, blog sites, videos, and courseware can be used, for example, to look up wildlife behavior and habitat, explore place-based history, urban green planning, or understand particular natural ecosystems and their elements. Likewise, diagrams, photographs, lectures, TEDtalks, and so on can be downloaded to help learners interpret and understand what they encounter in the natural world.

From a digitally minded perspective, nature can be seen as a giant living library or museum filled with an infinite variety of interesting, touchable, see-able, feel-able, smell-able, and hear-able knowledge, facts, and experiences immediately available to learners. In the actual, physical world of nature—just as in natural history museums, aquariums, zoos, or botanical gardens—animals, plants, fish, bugs, soils, marine life, soils, and rocks can be described, categorized, and interpreted for learners. We might think of this outdoor nature museum as a real-world Wikipedia in

which zookeepers, natural interpreters, and guides can be Googled, Skyped, or Face-timed for information simply by asking them questions in person, with real-time answers immediately supplied, and chat functions enabled. Knowledge of the outdoors gained in this way can be shared with others in the digital world through smartphone photographs, videos, blogs, podcasts, Facebook, uploads to Wikipedia, and so on.

Experiential Learning in the Wilderness

Under the second theme of wilderness learning, adult learners can engage in a variety of hands-on activities, observation, and exploration and participate in increasingly challenging outdoor physical learning. Again, this outdoor experiential learning might integrate the use of digital technologies for learning. Learning experiences might be filmed and uploaded to course websites (for example, using GoPro outdoor camcorders for kayaking, canopy walks, and other outdoor adventures), educational GPS geo-caching creatively integrated into the curriculum, and science data uploaded into regional and national Citizen Science databases (Dickinson, Zuckerberg, & Bonter, 2010).

On the conceptual level, for Net Generation-like learners, wilderness activities may provide real-life stimuli and challenges of ever-increasing difficulty akin to those found in simulation, action, and strategy video games. Learning in real outdoor games, however, is complemented by physical activity and living bodies, the unpredictable complexity of nature, and a multiplicity of unexpected tactile and sensual encounters with the physical environment (touch, taste, and smell in addition to sight and sound).

Wilderness learning can be understood as similar to participating in an educational outdoor summer camp focused on experiential learning. Any semiwild outdoor environment can be the classroom—parks vacant lots, urban forests, wetlands, gardens, patches of prairie,

beaches, rivers, lakes, campgrounds, ravines, and other wild natural areas. From a digital learner's perspective, the outdoors can be likened to the disorganized, dispersed wilds of the Internet, akin to thousands of independent, physical websites in a vast outdoor web of nature. Although some sites are partly built environments (like parks and gardens), many are not colonized, ordered, or defined by the commercial or public software of ownership and permitted uses. In these wild spaces, adult learners can conduct wide-ranging learning and research within the net of nature. They can design and conduct experiments in the science of urban ecology, wildlife biology, water chemistry, or land conservation, study the social roots and environmental consequences of pollution, or

engage in cross-cultural outdoor learning in ecotourism. In fact, the sites and subjects of adult learning are as varied and as complex as the natural environment itself.

Conclusion

Outdoor adult learning can be an antidote and complement to the digital world, not only soothing tired computer eyes, aching backs and wrists, short attention spans and nervous bodies, but also offering holistic, mentally and physically challenging learning experiences.

This outdoor learning prescription implies a certain amount of weaning adult learners off of addictive technology and habits and slowly replacing these with healthier outdoor learning activities. To do this, it is not necessary to abandon digital technology, only to balance it more sensibly with active learning in nature, away from walled classrooms and sedentary computer screens. The outdoors might well replicate and appeal to digital patterns of thinking and learning. Moreover, as argued above, the rich array of creative digital learning resources might be integrated into outdoor learning. At the very least, this technology provides a bridge to the natural world for adult learners in the so-called *Net Generation*, who may otherwise have little real-world exposure to nature and outdoor learning. Returning to Karen Worley's (2011) call to

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cater to the learning styles of the Net Generation, it is clear we should create visual, multimedia, and social learning environments for these and other digitally oriented adult learners, incorporate inquiry-based and experiential learning in our curriculum, and provide slower paced learning experiences that involve time for reflection. As we have seen, this can all be accomplished in outdoor adult learning without the need to confine ourselves to the walled classroom. In other words, whatever your educational practice, whatever your digital learning and teaching style, get outdoors!

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