

# **URBAN ENVIRONMENTAL EDUCATION REVIEW**

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## ADULT EDUCATION

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### Highlights

- Adult learning theories suggest ways to engage adults in urban environmental education through action-oriented projects and enrichment opportunities.
- Adult urban environmental education includes programs with predetermined outcomes as well as those that enable participants to define their own learning goals.
- Many programs draw on learning theory to integrate both instrumental and emancipatory goals.

### Introduction

“You can’t teach an old dog new tricks.” Though this timeworn adage suggests that adults are incapable of learning, we know this to be false. Most adults continue to learn throughout their lives. Indeed, many individuals seek out new knowledge for personal growth or to transition through life events (Knowles, 1984). Most environmental education—urban and otherwise—focuses on children and young adults, either in a classroom setting or through field trips to nature centers, museums, public gardens, or other similar settings. In this chapter we explore opportunities for developing urban environmental education experiences for adults.

Theories and documented practices of adult education offer rich conceptual and practical frameworks for urban environmental education, extending and in some cases strengthening the work that has been done with children, adolescents, and young adults. Adult education can include teaching and learning in formal settings, such as continuing education offered through colleges and universities, adult literacy and high school equivalency programs, and a variety of workshops, lectures, professional development opportunities, and other one-off learning events sponsored by government agencies, nongovernmental organizations, and even for-profit businesses. It also includes the teaching and learning that happens informally through apprenticeships, community-based activism, and other forms of spontaneous and collaborative learning through doing.

Recognizing that a single chapter cannot account for the diversity of approaches in adult education, we focus on a narrow selection of themes that harmonize with current issues and trends in urban environmental education. We begin with a brief introduction to the core ideas of three influential adult education scholars and go on to briefly describe two cases of adult environmental education in cities. We conclude by exploring both theory and practice through the binary categories of “emancipatory” versus “instrumental” environmental education and consider the implications for urban environmental educators working with adults.

## **Keystone Thinkers in Adult Education: Freire, Knowles, and Vella**

Adult education is a wide-ranging field of theory and practice with no shortage of influential thinkers and doers to call upon. One could go as far back as Plato’s “Dialogues” to find documented evidence of adults struggling to learn from each other. Here we introduce three keystone thinkers in adult education from the second half of the twentieth century: the Brazilian educator Paulo Freire (1921–1997), his North American contemporary Malcolm Knowles (1913–1997), and Jane Vella (born 1931), who synthesized and expanded on Freire’s and Knowles’ work to make it accessible and applicable to a new generation of adult educators.

Paulo Freire’s influence on both the theory and practice of adult education is international in scope. Though Freire’s “Pedagogy of the Oppressed” is nearly fifty years old, his progressive views on teaching and learning in adulthood continue to challenge and inspire adult educators. Freire’s ideas about adult education evolved while he developed literacy programs for working class adults in northeastern Brazil in the 1940s and 1950s. His early writing shed light on what he called “the banking myth of education,” or the notion that teachers can simply “deposit” static information into the minds of passive students. Freire called on

educators to engage students in an active process of “conscientization,” working side by side to critically decode the conditions of oppression in their lives and create useful knowledge to change the world and “regain their humanity” (2005, p. 48). Freire’s pedagogy emphasized learning-in-action, linking theory and practice in an inextricable process he named “praxis.”

Malcolm Knowles also crafted an approach to adult education that urged instructors to put the needs and aspirations of their students first. Knowles’ views on adult education were grounded in his experience leading informal adult learning programs through the Young Men’s Christian Association (YMCA) in the 1940s. Knowles believed the theory and practice of adult education merited its own field of study and he popularized the concept of “andragogy” for adults as a complement to “pedagogy” for children. In his “Andragogy in Action” (1984), Knowles wrote, “Because adults are motivated to learn after they experience a need in their life situation, they enter an educational activity with a life-centered, or problem-centered orientation to learning. For the most part, adults do not learn for the sake of learning; they learn in order to be able to perform a task, solve a problem, or live in a more satisfying way” (p. 11). Like Freire, Knowles believed that adult education should honor the knowledge, skills, and wisdom every adult student brings to the classroom or workshop. His “problem-centered orientation to learning” offered another conceptual route to empowering adult students and incorporating their motivations to learn into the educational experience.

Jane Vella’s “Twelve Principles for Effective Adult Learning” (2002) are inspired, in large part, by her reading of Freire and Knowles and her own formative experience working in education for community development in Tanzania from the mid-1950s to the early 1970s. Vella’s work synthesizes insights from a wide range of thinkers in adult education, as well as from cognitive psychology and community organizing. Her approach is mainly geared toward workshops, training sessions, and courses that allow educators to purposively plan and design a learning experience.

Vella calls on educators to show respect for learners as decision makers by inviting them to participate in a needs assessment that shapes the content of a new course or workshop. Educators, according to Vella, should honor the need for immediacy in adult learning; everything should tie back to the immediate needs and aspirations of the learners. Immediacy, in turn, grows from opportunities for students to experience praxis or hands-on learning by doing through direct engagement with ideas, feelings, and actions. Accountability comes from completing discrete and accomplishable tasks that give students immediate feedback on their accomplishments. Teamwork in small groups fosters relationships among students and between students and teachers, while the concept of role development encourages students to find their own voices

and develop a strong self-awareness of the part they play in dialogue with others. Thoughtful sequencing of content and tasks in a workshop can create a safe environment for adults to propose, discuss, and debate new ideas without risk of embarrassment.

We do not offer Vella's principles and practices as the final word in adult education. Rather her principles offer a window into a set of concepts and concerns that synthesize the work of many adult education theorists. These include not only Freire and Knowles but also the philosopher John Dewey, the psychologist Kurt Lewin, the activist Myles Horton, the sociologist Jack Mezirow, and the cultural critic bell hooks, to name just a few. We turn next to short descriptions of adult urban environmental education programs that reflect the work of Vella and other scholars.

## **Examples of Adult Urban Environmental Education**

Examples of urban environmental education for adults come in a variety of forms, each one shaped by its own implicit and explicit assumptions about effective teaching and learning in adulthood. Here we offer two examples that help illustrate the differences between formally designed learning experiences on the one hand and informal, learn-as-you-go experiences on the other. Keep in mind that this conceptual split is just one of multiple ways to divide up the different cases of urban environmental education under way throughout the world, and some cases will fit within these categories more easily than others. These categories, then, are constructions, thinking tools that help us draw tidy boundaries around phenomena in an untidy world (Lincoln and Guba, 2013), and they shouldn't be confused with normative benchmarks for assessing the value or "fit" of different kinds of real-world cases.

### **Brooklyn Urban Gardener, New York City**

Brooklyn Urban Gardener works with adults who want to become knowledgeable ambassadors for horticultural initiatives throughout Brooklyn, a borough of more than 2.5 million people. The training takes place indoors at the Brooklyn Botanic Garden and outside at nearby community gardens (Figure 18.1). The principles and practices of Vella's dialogue education guide the design of the sessions, which give learners knowledge that is immediately useful and applicable to their gardening and urban horticulture practices. The topics, which are mostly chosen by educators at the botanic garden, include composting, vegetable



**FIGURE 18.1.** Brooklyn Urban Gardener students learn about street trees on the sidewalk outside Brooklyn Botanic Garden. Credit: Nina Browne, courtesy of Brooklyn Botanic Garden.

gardening, urban forestry, pest management, and community organizing. The sessions also invite participants to share their pre-existing knowledge of urban horticulture during small group tasks. Outside the sessions, participants work together on a community volunteer project and perform thirty hours of service before receiving their Brooklyn Urban Gardener certificate.

### **Camley Street Natural Park Volunteers, London**

Camley Street Natural Park is a two-acre green space wedged between a major railway and a former industrial canal in the heart of London. Volunteers created the park in the early 1980s, transforming a former coal dump facility into a tiny patchwork of woodlands, wetlands, and meadows (Figure 18.2). The London Wildlife Trust, a city-wide conservation organization, sponsors a small staff of educators and administrators at the park, but volunteers continue to perform much of the day-to-day labor involved in managing the site. The adult volunteers learn about what does and doesn't work in their ongoing management of the site



**FIGURE 18.2.** Volunteers at Camley Street Natural Park surveying their work to maintain the grounds. Credit: Alex Russ.

through repeated trial and error. For example, as real estate redevelopment along nearby Regent's Canal intensifies, volunteers and park managers are working to adapt the site to meet the changing habitat needs of nearby fauna.

## **Emancipatory and Instrumental Adult Urban Environmental Education**

The New York City and London examples illustrate best practices in that they are distinctively adult urban environmental education experiences that require a working knowledge of adult education theory and practice to successfully implement. While the Brooklyn Urban Gardener program explicitly draws on Vella's approach to craft a sequence of preplanned workshops, the volunteers at Camley Street find more incidental and informal opportunities to learn on the job. Wals et al. (2008) propose three overarching approaches to environmental education that help us interpret these key differences between the Brooklyn Urban Gardener program and the volunteer initiatives at Camley Street: (1) instrumental approaches wherein desired behavioral outcomes of an activity are known



in advance—usually by the teacher or instructor—and designed as a step-by-step experience in a workshop, classroom lesson, or tutorial; (2) emancipatory approaches that are more open-ended and iteratively responsive to the complex and emergent needs of the learners; and (3) approaches that combine instrumental and emancipatory approaches.

According to Wals and colleagues, instrumental environmental education “assumes that a desired behavioral outcome of an [environmental education] activity is known, (more or less) agreed on, and can be influenced by carefully designed interventions” (p. 56). In contrast, emancipatory environmental education tries “to engage citizens in an active dialogue to establish co-owned objectives, shared meanings, and a joint, self-determined plan of action to make changes they themselves consider desirable” (pp. 56–57). The critical distinction between instrumental and emancipatory approaches is whether the learning agenda is mostly prescribed for the learners by an educator ahead of time, or whether the learners actively shape the educational agenda, often in response to a problem they perceive in society or the world at large.

Instrumental approaches to adult urban environmental education can take various forms. Many large urban parks and public gardens offer formal workshops, tours, and multiweek certification programs that invite adults to learn about forest ecology, botany, horticulture, birding, garden design, boating, and other topics; these programs prepare adults to become volunteer urban stewards, much like the Brooklyn Urban Gardener program described above. The “Citizen Pruner” program sponsored by the nonprofit organization Trees New York offers another “instrumental” example (Campbell and Wiesen, 2009). This five-week workshop series trains adults to take care of street trees in the public right-of-way. The workshops include topics such as basic tree botany, soil amendment, watering, and safe limb pruning. The instruction is mostly lecture-based, with some fieldwork for teaching participants to prune dead, diseased, and damaged branches from street trees. Professionals in urban forestry, horticulture, and other branches of urban public space maintenance may avail themselves of continuing education and training opportunities. Whether their aim is recreational or vocational, or a combination of the two, adults enter into these instrumental environmental education experiences knowing that the goals and objectives have been predefined and the outcomes of the process are, for the most part, nonnegotiable.

Emancipatory forms of urban environmental education for adults can emerge from self-organized efforts to manage natural resources in cities (much like the volunteers at Camley Street in London), from social movements advocating policy changes related to environmental injustices, or from participatory action and related research approaches. Krasny and Tidball (2015) label self-organized

environmental stewardship initiatives typically found in cities “civic ecology practices,” noting the collaborative nature of these practices and the opportunities they afford adults to engage in social learning. Civic ecology practices include community gardening, street tree stewardship, urban waterway restoration, trash removal initiatives, and other hands-on efforts to create and maintain social-ecological systems in cities. Participants in civic ecology practices engage in field-based “learning by doing,” developing an understanding of the strengths and weaknesses of adaptations in practice over time.

Adult city dwellers may also encounter opportunities for emancipatory forms of urban environmental education when they band together to address inequities in the spatial distribution of toxic land uses under the broad heading of environmental justice (Sandler and Pezzullo, 2007; Corburn, 2005). Activists fighting the development of power plants, incinerators, landfills, and highways in low-income neighborhoods come to learn about the public health, urban planning, and political dimensions of their struggles. They learn to use technologies in mapping, environmental sensing, and participatory design (Wylie et al., 2014; Al-Kodmany, 2001) to investigate and reveal problems resulting from the siting of undesirable land uses, following which they learn to pose environmentally sustainable and socially equitable alternatives to plans crafted by municipal officials and business leaders.

Emancipatory environmental education for adults in cities also can take the form of original research or investigative journalism. Participants “learn” about the world through a process of experimentation and discovery that leads to novel insights useful for creating change in the world. Examples range from learning how to grow healthier vegetables in a community garden to investigations that lead to preventing the construction of an incinerator in a low-income neighborhood. In these cases, emancipatory adult learning about environmental topics resembles John Dewey’s pragmatism (1927) and the tenets of action research (Lewin, 1946), participatory action research (Fals-Borda, 1991), and community-based participatory research (Bidwell, 2009). In all emancipatory traditions, learning prioritizes creating new and useful knowledge rather than assimilating and reconstructing existing knowledge passed along from other sources.

## Conclusion

Both instrumental and emancipatory forms of urban environmental education geared toward adults have conceptual roots in the work of Paulo Freire, Malcolm Knowles, and Jane Vella, among others. Freire’s work has been particularly influential throughout the world in adult education. Urban environmental

education experiences targeting adults are well-suited to emancipatory education efforts, including with marginalized groups working toward environmental and social justice outcomes. Knowles and Vella have tried to bring the sensibilities of responsible teaching and learning to adult educational experiences, thus adding an instrumental component. These scholars provide basic principles and guidelines to aid urban environmental educators in developing best practices that integrate emancipatory and instrumental approaches.

As urban environmental educators it is essential that we tailor our lessons to meet the needs of our students. In the case of adult learners, we have at our disposal multiple tools to engage, motivate, and enlighten. Through the use of andragogic methods such as relationship building, engagement in action, and a focus on the needs of the learner, adult urban environmental education efforts can help promote environmental literacy and action. Though the education of children today is important to the future, the education of adults can have a more immediate impact on the emergence of sustainable cities around the world.

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