COMMUNITY GARDENING

skills for building community and working within environmental limits

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The challenges of a changing climate and a peaking oil supply are an opportunity for educators to rethink the kind of community and world we would like to live in. As oil peaks, intensive farming becomes less economical, since it depends on oil and natural gas for pesticides, fertilizers and farm machinery. At the same time, climate change, ecosystem degradation, the demand for biofuels, an increasing population and increasing demand for milk and meat in developing countries, is putting further pressure on food supplies. For many communities, particularly those hardest hit by economic turbulence and extreme weather events, high food prices will present a challenge for survival, and even in rich countries it will become increasingly difficult for many to afford a varied and healthy diet. The ability to work with communities and design and implement gardens that can provide organic produce from minimal resources is therefore an important sustainability literacy skill, for both sustainability in the sense of surviving in the face of the challenging conditions of the twenty first century, and the efficient use of resources so as not to contribute to making those conditions even worse. Developing skills in designing and implementing community gardens requires active engagement in real projects. This chapter describes how the form of active learning involved in community gardening helps learners gain skills not only in garden design but also a wide range of other sustainability literacy skills that are useful in other contexts.

Community gardens are urban plots of land which provide opportunities for learners and educators to work together with the local community to design spaces according to goals, such as creating an attractive space, demonstrating permaculture principles, building resilient communities, providing food, health, and environmental education. Community gardens can be sited on derelict urban brownfield sites, on allotments, or on the grounds of educational institutions themselves. Within community gardens, learning is a social process: learners, educators and members of the local community all learn from each other and from interaction with the built and natural environment (see *A Learning Society,* this volume). Working with nature and a local community in establishing and maintaining a community garden can enable learners to gain sustainability literacy skills in ways which would not be possible in a regulated classroom environment. This is a form of 'experiential learning' (Orr, 1992), providing a direct participatory learning experience through active engagement.

The activities involved in designing, implementing and maintaining a community garden contribute to both environmental sustainability and the health and wellbeing of the learners. A wellbeing approach encourages the learner to think positively about sustainability since they have something to gain directly for themselves, while at the

same time they can learn how environmental impacts are related to everyday choices and values. The approach demonstrates that the health of the environment and the wellbeing of the learner are interlinked - our natural environment generates the conditions for organic life, of which human life is one form, existing only in interdependence with other forms of life.

The sites are ecologically designed contained spaces. Energy and waste inputs and outputs are minimised by natural and designed-in cyclical processes, of organic food growing, natural seasonal growth, composting, rainwater harvesting, use of solar energy and reusing and recycling of waste materials generated on site. In this way, activities within the sites enable the learner to become aware of environmental limits and ways of living within those limits. The sites also facilitate connection with the knowledge and skills for sustainable living that are imbedded in local communities.

Table 1 summarizes just some of the sustainability literacy skills that can be gained directly through the activities involved in designing, implementing and maintaining a community garden.

Table 1 – skills and activities in community garden projects

Skills	Activities
Community building	➢Designing, planning and implementing a project collectively brings people from different ages and walks of life together ➢Social events such as cooking with food grown in the garden, eating and working together help to develop social skills for bonding with others.
Ecological design and observation	➢Participating in maintaining a non-rigid design and natural evolution of site. ➢Learning about the natural history of the site; ➢Working within the existing natural features of site: soil testing, aspect, shading, seasons, microclimates etc. ➢Seeing the consequences of one's actions within the site; ➢Caring for plants; growing food organically; recycling; reusing; encouraging wildlife
Appropriate technology	➢Designing, building and using rainwater harvesting systems, compost toilets, cold frames, wormeries etc.
Holistic health	➢Working physically outdoors, being able to choose activities to match body limits. Eating organic, locally grown vegetables and fruit, becoming aware of interrelationships between a healthy body and healthy environment
Communication skills and stakeholder engagement	➢Talking with others within and about the local natural environment, solving problems together, consulting people when making decisions, overcoming disagreements and working with people who have different agendas.

Because sites tend to be compact in size, learners can readily see the negative consequences of wasted resources, or the positive impacts of recycling and reusing

the site's resources. Ecological design principles can be employed within the site in order to integrate natural processes with learning activities. Examples of this include using coppice willow in building structures, composting with organic waste from the site, using harvested rainwater to water crops during the summer months, eating food produced on the site and using a compost toilet. Such activities demonstrate how individual choices made within the site can enable or undermine conditions for other choices to be made in the future.

Since each learner is actively involved in the evolving design process, they can develop the important quality of *mindfulness*, becoming aware of how their actions affect and are constrained by the natural processes around them across the changing seasons (see *Permaculture Design,* this volume). This can lead to the emergence of what E. O Wilson (1984) calls 'biophilia', as learners begin to love the site and the unfolding structures, plants and wildlife within it. Since learners have a stake in the success of site activities such as growing food, participating in community events, building structures such as teaching rooms, digging ponds and making compost bins from natural and recycled materials, the activities are purposeful and meaningful.

The sites are embedded in place and community, and solutions to design problems are worked out within the site. Learning is through experiencing the success or failure of food crops, different composting techniques, methods of mulching and natural pest control. Diverse groups work together, learn from each other, eat food produced on site together, and gain observation skills through learning about the natural history, soil type, aspect and shading within the space. The informal and sometimes contested nature of reclaiming a public space for group activity gives those involved a sense of ownership, empowerment and community. The design evolves as the site evolves with the seasons, food grown, with changing types and numbers of people and groups involved. In this way participants learn to deal with uncertainty, design for the future where appropriate and 'let what happens happen' where appropriate.

Because of the informal structure of community gardens, the learner has a choice in what activities/tasks to participate in. If they are not interested in being involved in a high level of physical activity such as digging or building on a particular day, they are free to choose a less strenuous activity such as weeding or harvesting. In this way, they can test and realise their own bodily limits, gaining intuitive knowledge of themselves as embodied beings acting within an environment. Since taking on tasks is voluntary and there are no deadlines, learners can focus on achieving tasks slowly using simple technology such as hand tools to allow mindful attention to the task at hand. Such choices and experiences are in contrast to a usually hi-tech and regulated urban educational setting. Activities such as planting and harvesting in natural surroundings while chatting with others absorbed in the same activities, provides sensory stimulation and can lead to a highly enjoyable learning experience.

By thinking holistically, learners realise their role as active *agents* of change both within the site and in their daily lives. Agency is the ability to exercise choice and live according to deeply held values and is enabled or constrained by physical health, social structure and environmental limits. Through being an active participant within a community garden, learners can become free from the artificial and often rigid constraints of disciplinary-based education and instead, exercise their agency within the very different constraints of community and environment.

In everyday activities, the concept of sustainability may be perceived as restricting choices. People may be "locked-in" to unsustainable behaviors; for example, recycling opportunities may be limited, local organic food too expensive, or greywater systems impractical given constraints on building alteration. There may, therefore, be many instances where actions which contribute to sustainability are desirable but cannot proceed because there are no enabling structures. Community gardens provide learners with such enabling structures by allowing access to skills, knowledge and support to grow food organically and be creative in the reuse of waste materials. They provide a space for active sociable participation in a natural environment which can fulfill human needs for belonging, community, physical exercise, healthy food and entertainment in ways which do not demand high consumption of resources. Because taking part provides so many enjoyable experiences, community garden projects can bridge the gap between valuing a sustainable life and having the enabling skills to act on such values.

The environment provides the resources we require for human life, and the activities and experiences within the site help learners understand the natural processes that make life possible for all life-forms. Goodin (1992) describes how these larger ecological cycles and processes provide a continuity and context in which humans understand their own individual plans and projects, and hence shape their own well-being. However, in a built up urban environment, learners may not be aware of such cycles of activity. Community gardens enable such a realisation by creating a self-contained, ecologically designed space, within which the learner plays an integral part. In this way, they are transformative spaces in which the learner realizes both human and environmental limits, and the intrinsic value of the natural environment.

Summary

The ability to design and create community gardens is a skill of considerable importance for surviving and thriving in the twenty first century. It is not a skill that could be learned merely in the classroom, but one which requires learners to become actively engaged with educators and the local community in creating working community gardens for themselves. The sustainability literacy skills involved in participation in community garden projects reach far beyond gardening, and include a wide range of skills, from community-building to ecological design, which may be transferred to other spheres of life.

Within a community garden project there is a positive focus on both the health of the environment and the well-being of the learner. Education for sustainability within the sites is based on the premise that simply accumulating knowledge about problems such as climate change, pollution or threats of a peaking oil supply, is ineffective and may be disempowering. Including community gardens into learning programmes provides a resource hub for learning about the processes of nature and gaining a range of sustainability literacy skills. It is a transformative environment which enables a holistic way of thinking and of making choices about resources in everyday environments. Gaining skills in community gardening can help learners shift from thinking about sustainability literacy as being about self-restraint, to conceptualising it as a route to personal well-being, community resilience and the health of the systems that support life.

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