Horticulture in education

By Michael Casey and Dr Kate Neale

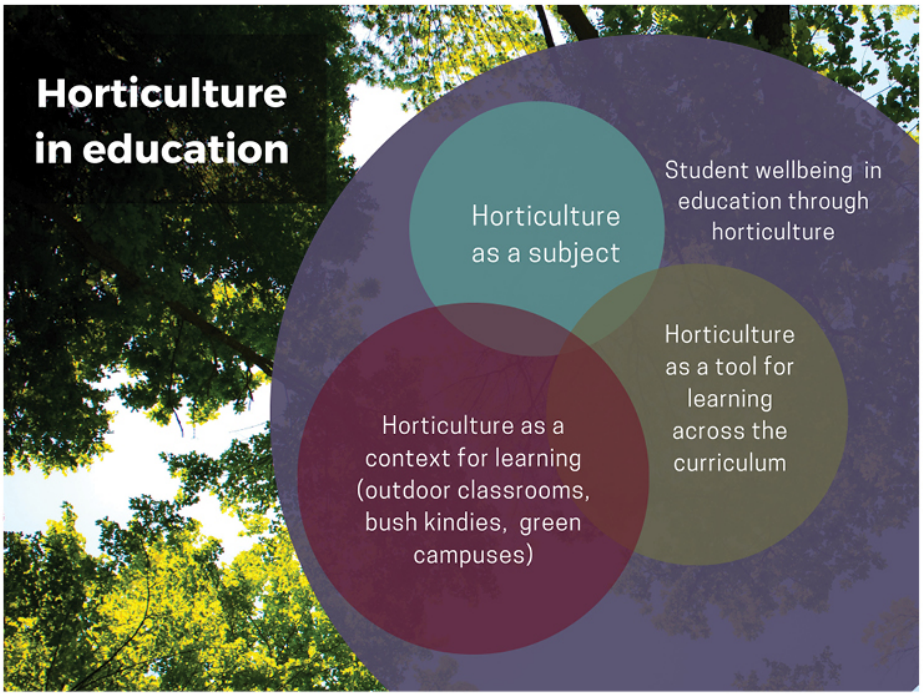
Horticulture has had a long history as a subject in education across all cohorts in one form or another. Watching seeds sprout and grow to seedlings has always been a popular activity within early years education. Primary schools enjoyed a boom in interest in horticulture through such programs as the highly successful Stephanie Alexander Kitchen Garden that educated children about healthy food whilst teaching them how to grow their own.

Many high school students continue to have some form of "Ag classes" in their subject offerings, and tertiary and vocational learning providers provide the necessary training and education for people to pursue careers in horticulture.

Whilst all these opportunities encourage students of all ages to engage with horticulture as a subject in itself, this article illustrates other ways horticulture has become a tool for learning across many subjects within the curriculum, is shaping integrated learning environments in educational spaces, and having an impact on student wellbeing and belonging.

Traditionally the study of horticulture within education would have included landscape, gardening and nursery related topics. Topics have since evolved to demonstrate horticulture's ability to respond to persistent or emerging social and environmental issues through innovative approaches to climate mitigation, urban greening, nursing/ horticulture infrastructure technologies, and urban farming and food production.

These emerging areas of interest in the subject of horticulture also allow for innovation for educators to use horticulture as a tool for learning too. At Kyogle Early Learning (a long day care centre for children aged 0-5 years), horticultural technologies such as green walls have enabled the youngest children in the 'babies' room, safe access to real vegetation in limited spaces where traditional garden beds would not have worked. Educators at the Centre have also incorporated horticultural activities in delivering the key learning outcomes across their entire day program. Mutual care and attention for the garden in these settings creates and realises shared goals that build confidence in children's own abilities and their relationships with others. These are important transferable skills for children, not only as they develop but also able to carry through their entire lives. Activities have included intentional learning activities for pre-schoolers, using horticulture as a basis to learn about their environment, to help them develop communication and problem-solving skills, as a part of their school readiness programs, healthy food education, helping children develop stewardship of place and nature more generally, and practicing communication skills through shared experiences in the garden.



Conceptualising horticulture in education as a subject, tool, context and benefit (Image: Kate Neale)

Currently, at Catholic Regional College (CRC) Sydenham, horticulture students are working with the business studies class to have them apply a business model for the horticulture team for the soon-to-be-launched CRC Farmers Market. Here the business studies students have a real-life project, where they work alongside their fellow students and friends in creating a business that has emerged on the back of this horticultural project. This business concept will then be taken up by the media studies students who will use their skills to capture the project and market it to the broader community. The signage students will work alongside the horticulture team to create information boards and relevant signage.

At CRC Sydenham, horticulture was initially introduced as a tool to teach

students subjects about 'Construction', 'Project Management' and 'Enhanced Employment Opportunities' as a part of their VCAL studies. Once the school began to see the increased interest in horticulture and benefits of its inclusion, it was offered as a stand-alone subject. Now the relationship between horticulture as a subject for horticulture students, and a tool for others such as the culinary students who use the produce grown from the horticulture students in their own classes, is a stand-out feature of the highly successful program of study at the college. The availability of organically grown fresh produce onsite has enriched the culinary students' curriculum by being able to bring real life examples of paddock to plate principles into the classroom. Conversely, the horticulture students are able to see the importance of organic growing techniques and value of growing good quality produce.

Plants are excellent learning tools to help students understand abstract concepts. Many are easy to grow and offer multiple learning opportunities across subjects (for example combining lessons in maths, science, biology and health). Plants can also offer interesting features which are used in imaginative play and creative-based art classes. Kitchen gardens in particular, are reward-driven by offering milestones of success during growing cycles. The ever-changing garden also offers evolving opportunities to use horticulture as a tool, providing change and choice which students enjoy when learning.

Unsurprisingly, these classes often take place outside and doing so provides a whole new emphasis on the role of horticulture in education as a context for learning. Outdoor classrooms are often perfect integrated learning environments. The presence of nature and the proximity to engage with it makes them typically inviting, relaxing and comfortable places for both staff and students. Although the outdoors can offer a different set of distractions, well designed outdoor spaces can actually lack the visual busyness of typical classrooms. They use foliage and natural textures to ground and focus students instead. Such spaces maximise the innate desire of humans to be connected to nature and the sense of wellbeing that arises from time spent in it. Bush kindergartens provide safe places for risky play and learning that artificially hardscaped grounds have failed to do.

Educational providers are also seeing the benefits of good horticultural design more generally in their campuses. Greenspaces are being designed to offer natural solutions to weather exposure, nature play, statements about the value of education and those studying on their campuses, the creation of places of retreat, and improving access to food grown on site for the broader school community. Thoroughfares become more than a route from A to B, and instead aim to focus attention, temper the speed in which they move within the space, and increase their readiness for learning. This also has a positive impact on student wellbeing and their connection to place.

Seeing horticulture's relevance throughout education as described above, reveals the different possibilities for horticulturists to collaborate with educational providers in reconceptualising curriculum teaching, influence teaching methods, incorporate new technologies and influence contexts for learning through good horticultural design. It also creates cohorts of students who are used to incorporating horticulture in their broader studies and therefore are more likely to embrace horticulture as a tool or context for their own professional practices, reiterating the usefulness of horticulture across so many disciplines and professions.

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