

Plants and Community Building: Why Not Go Out on a Limb

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This paper summarizes the author's contribution to the LLL SIG-sponsored forum "From Burnout to Burning Rubber" that was presented at the JALT PanSIG 2022 Conference at the University of Nagano, co-presented with Catherine Takasugi, Andrew Reimann, Natsuki Suzuki, Paul Nanton, Chiyuki Yanase, Nena Nikolic-Hosonaka, Mitsue Allen-Tamai and David LaHeist.

Connection Between Plants and Academia

Research in both business and academic settings has shown that the presence of plants can reduce stress, lead to better coping mechanisms, and improve concentration (Lohr & Pearson-Mims, 2000; Taylor et al., 2001; Ulrich et al., 1991). An excellent controlled study (Doxey et al., 2009) involving nearly 400 university students, showed that the presence of plants did not lead to higher grades among students, but it did lead them to feel that they learned more and they were more enthusiastic about the subject. They even rated the teacher as being more organized and effective. The author will briefly explain the role that plants have played in his private and professional life, advocating for their increased presence in offices and for the playful introduction of plants in classroom settings to assess their effects on psychosocial and other aspects of learning.

Power to Facilitate and Stimulate Interaction

My interest in the power of plants in stimulating interaction started during a train journey on the Odakyu Line in Kanagawa more than 20 years ago when I was transporting a plant to my office. It is widely

observed that Japanese people, particularly older individuals, frequently avoid sitting next to foreigners on public transportation if they can possibly avoid doing so. Therefore, I was astonished when a woman in her 80s intentionally sat next to me in what was an uncrowded train carriage. Not only did she sit next to me, but she also initiated a conversation by asking questions about the plant I was carrying (a Dutchman's Pipe Cactus, or "gekka bijin" in Japanese), speculating about what might be causing some browning of the leaves, and remarking on the lovely aroma and beautiful appearance of this plant's blossoms. It was a completely unexpected and delightful interaction, one that never would have happened if I had not been in possession of a plant.

Perhaps interactions such as this one should not come as any surprise as they are consistent with the "biophilia hypothesis," which was advanced by the American biologist Edward O. Wilson, although the term "biophilia" itself was coined by the psychoanalyst Erich Fromm, who described it as "the passionate love of life and of all that is alive" (Rogers, 2019). Wilson proposed that the tendency of human beings to be attracted to nature and life-forms is, at least in part, genetic. The natural world is universally appreciated by cultures throughout the world and all languages feature metaphors that reference natural phenomena involving animals:

She's got eagle eyes.
You're a cheeky monkey.
I've been a busy beaver today.
You're a scaredy cat.
He's a bull in a China shop.

And, ones connected to the plant world include such expressions as:

We've gone back to our roots.
Be careful not to go out on a limb in the promises you make.
The politician gave another one of his stump speeches.
They have an inability to see the forest for the trees.
The secret of their success is all the grassroots organizing

they've done.

Since the dawn of the industrial revolution, the divergence of humans from the natural world has been accelerating, causing us to live lives largely separated from nature in enclosed and sterile spaces. From our abodes to our workplaces and preferred methods of transport, we modern humans often avoid contact with nature for long stretches of our day to day, routine lives. The pull of nature is unrelenting and unconsciously guides our choices even when we find ourselves in unnatural settings however. For example, even our choice of computer screen saver tends to favor creatures from the animal and plant kingdoms (Taylor & Spratt, 2008). Animated fractal patterns, selected by many as screen patterns, although they may appear high tech and far from nature, actually have numerous analogues in nature.

Bringing the Natural Into (and Around) our Unnatural Spaces

At the grassroots and municipal levels there have been many efforts to encourage community gardening and urban farming in order to advance agricultural knowledge, bring life into public spaces, and to increase biodiversity (Fredriksson, 2022). It has also been found, as an urban farming initiative in Malmö, Sweden exemplified, that they offer social and psychological benefits by becoming spaces for “people to meet, interact and feel closer to nature.” Guerrilla gardening (GuerrillaGardening.Org, n.d.) involves the raising of decorative plants or food on land where the gardener/farmer does not have the legal right to cultivate. This is a growing trend in places where the formal mechanisms for engaging in urban gardening by individuals who do not possess their own land for such purposes are slow or nonexistent. Although this may appear at first glance to be a lawless and antisocial endeavor, it is often carried out to spur positive social change, promote community building, and possibly contribute to food self-sufficiency. Efforts by groups and individuals in London who take part in guerrilla gardening activities have been shared on a guerrilla gardening blog (GuerrillaGardening.Org, n.d.) since 2004.

Having been engaged in guerrilla gardening in the Shibuya area of Tokyo for the past 10 years, planting avocado, citrus, and loquat trees, in addition to a variety of flowers, I can attest to its power in making a neighborhood more attractive while facilitating positive interactions among people who would not otherwise communicate with each other. For example, when tending to the loquat tree I planted in a guerrilla gardening manner, a fellow occupant of the condominium I reside in sheepishly confessed that she had been harvesting its leaves to make tea and to use as a poultice for her skin. I was overjoyed that she was making good use of this resource and was glad to expand my knowledge for the uses of the tree beyond just providing delicious orange fruits.

The two young daughters of my immediate neighbors recently came to my door proudly displaying caterpillars they found in a citrus tree on the street outside of our condominium. They were going to raise them so they could watch them transform into the Citrus Swallowtail (*Papilio demoleus*) butterfly. Little did they know that I had planted the citrus tree where they found the caterpillars. They inadvertently helped with pest control as it usually fell to me to separate the caterpillars from the trees to avoid having every last leaf devoured.



Image Set 1: A guerilla-gardened Dahlia imperialis in the open space in front of my condominium in Shibuya.

Plants as a Bridge and Social Lubricant Among Faculty Members

Ever since I began teaching at universities in Japan I have made it a point not only to keep plants in my office—because I have long recognized their power to calm nerves and produce positive affect—but also to present off-shoots of my plants (mostly easy-to-care-for succulents) to colleagues, particularly newcomers. This has resulted in ongoing discussions on plant care, the announcement of the appearance of buds and blossoms, and points for discussion outside of professional matters when visiting each other’s offices. It has become a sort of “third space” for communications beyond the areas of teaching or research. To some extent it has cultivated deeper relationships that have made it easier to joyfully cooperate in committee work and other administrative endeavors that can otherwise be stressful and fraught with competing egos.



Image Set 2: The plants in my office and a close up of the gorgeous Dutchman’s Pipe Cactus, or “gekka bijin,” which my colleagues and I have friendly competitions to see who can produce the best and most blooms.

Plants in the Classroom

Inspired by the fascinating controlled study by Doxey, Waliczek and Zajicek (2009) which looked at the effects of plants on course performance, and student perceptions of the course, at a university in Texas, I decided to informally experiment on a small scale during a

few recent lecture classes in intercultural communication that I teach in the English Department at Aoyama Gakuin University.

The Texas study revealed that although significant differences were not found in the grades/student course performance between the control and experimental groups, “statistically significant differences were uncovered in comparisons of overall course and instructor evaluation scores of treatment and control groups...[and] in comparisons of the...the areas of learning, enthusiasm (of instructor), and organization (of instructor)” (p. 384). Interestingly, the greatest positive gains recorded were in classrooms that were windowless, and hence were most lacking in contact with nature.

When deciding which sorts of plants might be the most appropriate for classroom use, there are some useful blogs, such as that of Cassie (2022), which introduce ideal classroom plant candidates and lists those to be avoided due to the danger of causing skin irritation, bringing about allergic reactions by releasing a lot of pollen, or (esp. when young children are involved) poisoning those who might ingest its leaves or flowers. NASA also has produced some excellent reports on plants best suited for cleaning the air in enclosed spaces such as those that might be found in space stations or in shuttle journeys (Wolverton et al., 1989), but which also has relevance to tightly sealed and insulated home, office, or classroom environments.

The plants which I selected to trial in my classroom included some herbs (thyme and basil) and small flowering plants. The plants (6 in total) were brought in 10 minutes before the start of the class (made up of approximately 20 students), when the teacher is usually occupied connecting a laptop to the classroom’s projector and audio system.

The reaction from students entering the classroom was immediate. A rather shy exchange student from Taiwan who had hardly exchanged more than a few sentences with the teacher until then, upon seeing the plants, approached the teacher and engaged in a lengthy, animated discussion about the plants she and her mother raised at their home. A group of students near the front of the classroom almost immediately took the initiative to inquire whether

one of the plants might be placed in the care of their group. Throughout the class students were noticeably brighter and seemed to concentrate on the lecture with greater focus. At the end of class, students in one group lingered in the classroom, gingerly caressing the leaves of one of the flowering plants. The reaction of the students was sufficiently positive to warrant further experimentation (in a more formal and controlled manner) in the subsequent semester. As an Integrated English program in the department offers various sections of the same course, at the same level, taught by the same teachers, it will not be difficult to set up trials in which control and experimental groups can be arranged.



Image Set 3: Students in an intercultural communication lecture course on the day plants were introduced into the classroom.

Since there is already a sufficient body of research showing gains in mental functioning and productivity when plants are introduced (Lohr, 2010), teachers need not wait until the “verdict is in” on whether plants can provide a substantial enhancement to their classroom environment. Teachers might start with the modest introduction of a single air plant into their classroom and proceed from there after observing any changes that might ensue. Perhaps one of the most exciting possibilities is that there might be a disproportionally positive effect on students with ADD (Taylor et al., 2001) and in classrooms most lacking in natural elements, such as many CALL classrooms.

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