

Chapter 2

2.1 Origin of gardening

The history of gardening in the nineteenth century prompted educators to promote gardening as the instrument of a play area for children. The promoters of gardening in the early eras were Rousseau, Gandhi, Montessori, and Dewey (Subramaniam, 2002). Gardens first emerge as human ideas which were implemented in a myriad of culturally coined ways. The Korean, Japanese, and Chinese cultures have developed a special idea of miniaturizing personal expressions of garden interests. In Europe and North America, Greek and Roman, urban garden culture may serve as reference of creating civilization (Groening, 2006).

A German educator, Friedrich Froebel's passion for experiential learning made him coined the term "kindergarten" in 1837. He used the word kindergarten as "Garden for children". It was in 1905 that gardening actually spread in European schools. Educators such as Dewey (1916) Lancelot (1944) Rousseau (1979) have once pointed out that when students see the importance of a subject or feel the need for, or have a heightened interest in it, they develop interest in the participation. The goal of school gardens is pragmatic and normative. The essence of school gardening was to teach through experience, to connect children to pastoral nature, and to shape their moral outlook (Bundschu-Mooney, 2003 & Subramaniam, 2002). In 1905, Europe already had 100.000 school gardens (Shair, 1999). In Germany, community gardens were common in urban areas, particularly in Berlin. Gardening in Germany has always been considered as an integral part of centre cities and has largely been protected through local land use plans and federal legislation (Zimbler, 2001). Much as gardens refer to privacy and seclusion, garden culture communicates to a variety of people around the world. People who garden communicate with those who breed seeds, those who grow vegetables, those who grow annual crops, perennial crops, shrubs and trees. Gardening also communicates with people that produce fertilizers and means for soil improvement, with those who manage water provision, and those who forecast weather. Europe especially, has established and cultivated schools and

universities, and other opportunities for studies in garden culture, as part of a universal civilization.

For over 20 years, Texas and California state departments of education and university extension programs have actively encouraged school gardening through the provision of curricula and evaluative research (Dirks & Orvis, 2005; Ozer, 2007). Research finding revealed that learning style in school gardens, using direct contact with natural phenomena, is seen as experiential, inquiry - based learning grounded in concrete experience (Corson, 2003; Kellert, 2002; Mabie & Baker, 1996; Rahm, 2002).

Gardens as elements of an urbanizing world indicate progress on the long and arduous path to civilized conditions of life (Groening, 2006). School gardens come in all shapes and sizes. Some schools have enough space to give each child their own plot or row and others have little or no space and instead use buckets for container gardens. School gardening may be created and maintained by one grade level or used by multiple grade levels. Gardening is a flexible teaching tools meant to improve students' knowledge. Schools and youths' gardens are ideal vehicles for teaching across the curriculum, enlivening learning, and helping young people develop lifelong social skills. Garden classes teach the principles of ecology, the origins of food, and respect for all living things. Students work together to shape and plant beds, amend soil, turn compost, and harvest flowers, fruit, and vegetables. In the kitchen classroom, students prepare and eat seasonal fruit from produce they have grown in the garden. Students and teachers can gather at the table to share food and converse during each class. Students need to be encouraged to learn the environment in which they live, in order to explore their world through discovering of knowledge and reflection for a critical thinking (Brooks & Brooks, 2001).

A report presented by the United States Department of Agriculture in 2007 states that millions of people in the United States remain food insecure despite the country's relative prosperity and strong economy (Sullivan, 1999). 36.2 million

Americans are faced with food insecurity problems (FRAC 2008). It was estimated that 23.8 million of these people are adults (10.6 percent of all adults) and 12.4 million are children (16.9 percent of all are children). Ten states recognized to be highly affected by food shortage in 2007 were Mississippi, New Mexico, Texas, Arkansas, Maine, South Carolina, Georgia, Kansas, Oklahoma, and Missouri (FRAC, 2008). The continuous decline of food requires people to look for alternative means from private and governmental institutions in helping to increase food production. In order to meet this demand, it was recommended by USDA and PESA to increase community and school gardening project.

According to FRAC (2008), the U.S. Census Bureau has been conducting annual survey on food security among a nationally representative sample of people living in the U.S. using the food security module in the current population survey (CPS) since 1995. The questions asked were about anxiety that the household budget is inadequate to buy enough food; inadequacy in the quantity or quality of food eaten by adults and children in the household; and instances of reduced food intake or consequences of reduced food intake for adults and for children.

2.2 The development of school gardening in Germany

More than 150 years ago, a special garden arrived in many European cities, the community garden or as it is also called the allotment garden, the *jardin ouvrier*, the *volkstuin*, the *Kleingarten*, and so on (Gröning, 1996). From a few hundred lots in early nineteenth century, the number of allotment gardens in Germany rose to about 450.000 in the early 1930s (Gröning, 1996). Gröning reported that in 1949, four years after the end of World War II, the number of allotment gardens in Germany was about 800.000.

However, practical demonstration of school gardening value for educational instruction has long been recognized in Germany by Schleswig-Holstein in 1814, Nassau in 1817, and Prussia in 1819 (Greene, 2008). At the beginning of 19th century in Germany, some municipalities gave the poorest a piece of land for vegetable production which they could manage independently. The first attempt

was made in northern Germany in the city of Kiel (Greene, 2008). These gardens were seen as an eradicated measure against poverty and riot. Today, there are more than 1.4 Million organized allotment gardens that exist in Germany. Allotments garden has played an important role for the production of fresh fruit and vegetables and help in recreation and conservation of nature in many German cities. The idea of Friedrich Froebel was that spreading gardening to schools will promote outdoor learning (Figure 2.1).



Figure 2.1: A site seen of a school garden project in Germany

Literature revealed that the first countries to promote school gardening in the nineteenth century were Germany, Austria, and Sweden (Tims, 2003). Literature also revealed that children in the urban areas were believed to suffer both physically and mentally due to lack of exposure to the riches of the outdoor and country life (Tims, 2003). According to Zimbler (2001), Germany is recognized to

be respected in the world for the integration of community gardens into land use policy and planning as the first country that enacted legislation at the federal level in support of community gardens.

School gardening activities contribute to increase of students' knowledge in agriculture and other subjects. Research has shown that experiential learning promotes increase knowledge of subjects that require technical skills (Boone, 1988; Chuatong, 1986; Dewey, 1916; Fleming & Malone, 1983; Freedman, 1997; Gunsch, 1972; Lancelot, 1944; Newcomb et al., 1993; Osborne & Hamzah, 1989; Rothenberger & Stewart, 1995; Rousseau, 1979; Thompson & Balschweid, (2000).

Collins (1991) indicated that whether it is hands-on learning, problem solving, contextual teaching and learning, inquiry centered learning, authentic learning or constructivism, students benefit from learning as they learn to apply knowledge. An environment where learning is taking place determines what the pupils or students will gain. Environment can stimulate students' interest and passion for the subject matter (Dewey, 1916).

Positive attitude of student towards school subjects can lead to better results in their educational performance. School garden projects nurture parents, community members' spirit and provide numerous opportunities to build bridges among students, school teachers, families, local businesses, and community based organizations. Links with school gardens, school food service programs (SFSP), and local farms can ensure a fresh nutritious diet for children while teaching about sustainable food programs (Desmond et al., 2004).

2.3 The development of school gardening in Nigeria

Education in agriculture is not totally new to the Nigerian culture, neither is it new to the age group between 11 and 17 years in the secondary schools (Oluwole, n.d.). Gardening in Nigeria dates back to pre-colonial times when people planted

trees and shrubs for food, curative medicines and also for religious worship (Anonymous, n.d). In Nigeria, agriculture provided the source of livelihood to over 70% of the population. In the 1800s, children in boarding schools did some gardening and occasional farming in some cities like Abeokuta where rice, maize, and yams were planted (Taiwo, 1982). The produce from the school gardens and farms were used in the provision of food to those in the boarding schools. It became expanded with the advent of white people in Nigeria for the purpose of beautification of homes and schools' environment, this expansion of gardening for beautification of environments later spread to the elitist Nigerians (Anonymous, n.d). The spread of gardening in Nigeria came into place in the 1970s and by 1980s, the advent of horticultural societies in many states awareness became very high (Anonymous, n.d). The culture of gardening in Nigeria became booming in the 1990 when many road-sides gardeners sprung up in many cities and towns. It was reported that in the year 2000, the culture of gardening and gardens grew to a very high degree in which the desire for the revival of the lost culture of gardens became practicalized by Jhalobia, pioneering the establishment of the Jhalobia Recreation Park and Gardens on Murtala Muhammed International Airport Road in Lagos (Anonymous, n.d.).

Despite the current numerous agricultural products in Nigeria, agriculture and school gardens still lacks sufficient support by Government and Non-Governmental Organisations (Akinyemi et al., 2008). Studies have shown that healthy, active, and well-nourished children are more likely to attend schools and are more prepared and motivated to learn (Tufts University, 1994). Gardening serves as the phase of manual training for children, teach them how to prepare the soil and carefully cultivate plants. The Centre on Hunger, Poverty and Nutrition Policy indicates that schools with gardens provide healthy nutritional environments, dynamic settings and improve students' health. The cultivation of plants and keeping animals requires constant attention, forethought, intelligence and self-reliance (Beach & McMurry, 1911).

Figure 2.2 is a farm in one of the schools in Nigeria, in this school; different crops such as cassava, egg plants and pumpkin grown were used to provide food for the

school and the community members. The participation of students in the school farm activities created healthy school environment for both the students and the teachers.



Figure 2.2: A school farm in Nigeria

However, school gardening programs in Nigeria are hindered by a variety of factors. Some of these problems might be attributed to the long bureaucratic procedures in the ministries and corresponding delays in funding from government and non-governmental organisations (Akinyemi et al., 2008). However, despite the National Policy on Education (NPE) of 1981, 1999 and 2000 that was introduced to channel education for the development of its economic, political structure, sociological and human resources Ezeudu (2005), teachers still could not define the most suitable skills that would motivate students in developing interest in gardening programs, instead they stick to the syllabus set by the West African Examination Council (WAEC).