Visits to Public Gardens: Their Meaning for Avid Gardeners

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SUMMARY. This study examined how avid gardeners experience a public garden. Phenomenological interviewing was used to collect data from six avid gardeners who frequently visited a public garden. Data about the gardeners' beliefs and actions regarding gardening history, gardening practices, and involvement with public gardens were gathered. From inductive analysis, a model of a gardener's world composed of four conceptual themes: 1) personal history, 2) social connections, 3) human well-being, and 4) learning experiences was delineated. The conceptual themes of a gardener's world are the personal learning constructs through which gardeners experience the plant world. Each of the four conceptual themes influenced how participants in this study experienced a public garden. Participants used a public garden to socially interact with others, enhance their human well-being, strengthen their gardening background, and extend their gardening knowledge and skill. Several subthemes emerged within the four conceptual themes of an avid gardener's world to inform us how gardening plays an integral role in gardeners' lives.

Gardening is one of America's most popular activities. The National Gardening Association (1999) reports that 80% of Americans participate in some type of gardening activity. They also report that the number of gardeners under the age of 50 who purchase gardening products is increasing at a rate of 11% per year. In addition to these consumer activities, gardeners pursue activities to enhance their gardening proficiency. Subscribing to gardening magazines, reading books, studying catalogs, taking educational courses, talking with agriculture extension agents and consulting with other gardeners are various methods used by gardeners to enhance their interests. In addition, many individuals visit public gardens. Research indicates that 80% of visitors to botanical gardens come not only for entertainment and diversion, but also for education (Lewis, 1991).

A public garden provides a variety of educational opportunities, both of formal and nonformal character. "A [public] garden should be beautiful, but it must also be useful and provide services. Providing extensive educational and informational opportunities is one way to be relevant and useful to a community" (Smith, 1989). Exploring the educational role of public gardens has received little attention in the research literature. What literature does exist is primarily anecdotal. A great deal of descriptive information exists about attendance and participation in formal gardening education classes and seminars offered by botanical gardens, continuing education programs, colleges and universities and the agriculture extension service, however, previous research on learning and gardening has not focused on the meanings visitors have attached to their experiences (Albrecht and Hamilton, 1998; Conley, 1999; Schulhof, 1990;

Walker, 1999). Such information would further our understanding of education and learning in public gardens and could enhance the work of horticulture educators.

The objective of this study was to examine the meaningful learning experiences of adult visitors to a public garden. The specific questions of this study asked 1) how adults experienced a public garden, 2) how they described their gardening involvement, 3) how they perceived their visit to a public garden to influence their gardening, and 4) how they described their experiences as a learner in a public garden.

Materials and methods

A qualitative approach was selected for this study to allow for the collection of detailed descriptive data which, according to Merriam (1988), allows investigators to "gain an in-depth understanding of the situation and its meaning for those involved". According to Patton (1990), qualitative data allows investigators to "understand and capture the points of view of others without predetermining those points of view through prior selection of questionnaire categories".

IDENTIFICATION AND SAMPLE SELECTION:

The research sample for the study was a purposeful selection of six adults who met the following criteria.

1. Each was an avid gardener. For this study, an avid gardener was defined as someone who claimed they regularly worked in their landscape or garden, purchased plants, read catalogs, magazines and books, and visited other gardens.
2. Each was a member of the University of Tennessee Institute of Agriculture (UTIA) Friends of the Gardens.
3. Each had visited the UTIA gardens at least three times in the past year.

To keep the study gender balanced, an equal number of men and women

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Table 1. Gender, age, education, and occupational characteristics of study participants.

Gender	Age (years)	Education	Master Gardener	Occupation
Female	58	Bachelors degree	Yes	Professional horticulturist
Female	44	Bachelors degree	Yes	Certified public accountant
Male	70	Masters degree	Yes	Retired school administrator
Female	46	Masters degree	No	Professional horticulturist
Male	34	Bachelors degree	No	Professional horticulturist
Male	72	Bachelors degree	No	Retired engineer

Table 2. Interview guide used for study at the University of Tennessee Institute of Agriculture (UTIA) gardens, Knoxville.

1. Tell me about your experience with the UTIA gardens over time.
2. Think of another time when you visited the UTIA gardens and tell me about your experience.
3. Tell me about your experience as a learner in the UTIA gardens.
4. Tell me about your experience as a gardener.
5. Demographic Questions:
 - a. How often do you visit the UTIA gardens?
 - b. Gender
 - c. Age
 - d. Education
 - e. Profession or occupation

were selected. Contacts were made until three men and three women met the study criteria and had agreed to participate. Table 1 presents the demographic data of each study participant.

DEVELOPMENT OF THE INTERVIEW GUIDE:

An open-ended interview guide was designed to guide the participants in discussing their experiences in visiting the UTIA gardens (Table 2). This is similar to a phenomenological interview guide (LeCompte and Preissle, 1993) that uses the same questions and probes for all participants, but the order can be changed for each participant. This flexibility allows the interview to proceed more naturally. The interviewer can use a response from one question to move to the most appropriate probe or next question. The interviewer checks that each question is answered during the interview, assuring that all participants are asked each question.

The interview guide for this study was developed through a series of steps. Using the personal work experience of this author and the literature on public gardens and adult education, a series of open-ended questions related to the study objectives were developed. The initial interview guide was then revised by members of the University of Tennessee College of Education Qualitative Research Support Group (QRSG) after discussion of the purpose of the study. A pilot study was then conducted in the fall of 1992. Six individuals who had visited the UTIA gardens participated in 1-h audio taped interviews. The pilot study allowed the interview guide as well as interview techniques and strategies to be improved.

DATA COLLECTION STRATEGIES: Two interviews, done by this author, of each of the six participants were conducted within 3 months and each interview lasted between 1 and 2 h. Interviews were conducted at settings selected by the participants. (The names of all par-

ticipants and locations involved in the study were changed to ensure confidentiality). During the interview, this author concentrated on listening to interviewee responses so that appropriate probes could be generated and no comments were made and facial expressions were controlled so not to reveal an attitude toward a response.

Transcripts of each participant's first interview were mailed to them and they were asked to read and reflect upon its contents. About 1 to 2 weeks later, the second interview was conducted. Participants discussed their thoughts and feelings about their first interview and what, if anything, they would like to add regarding their experience at the UTIA gardens. The focus of the second interview was to gain a better understanding of the participant and his/her experience at the UTIA gardens and to gain insight into any underlying beliefs, assumptions or actions by the participant.

DATA ANALYSIS: The method for

analysis of the interview transcripts followed suggestions by several qualitative design sources (Bogdan and Biklen, 1992; Glesne and Peshkin, 1992; LeCompte and Preissle, 1993; McCracken, 1988; and Spradley, 1980). After the tapes were transcribed by a transcriptionist, written notes were made to identify possible categories of data. During second reading of the transcripts, the author color-coded different categories of topics which emerged repeatedly. The color-coded categories allowed for easier sorting of the data among the six interview transcripts. Computer word processing software (WordPerfect 5.1) was used to manage the volume of data sorted from the transcripts for further analysis.

After preliminary analysis of both the first and second interview of all participants, the data was presented to the QRSG which provided multiple sources to examine the data and strengthen the internal reliability of the study (Goetz and LeCompte,

Fig 1. A model of the conceptual themes of an avid gardener's world within their environmental, psychological, and cultural contexts.

1984). Each member of the group read through all of the transcripts for each participant and suggested themes of data they identified. The themes were then evaluated by searching for patterns and meanings and the procedure was repeated two additional times.

The resulting dominant themes, themes that all or most of the participants discussed in their interviews, were then clustered together creating conceptual themes, themes which reflected key actions and beliefs in making meaning and sense of an avid gardener's gardening

world. Grouped subthemes within each theme were also identified.

Results and discussion

From an inductive analysis of the interview data, this study identified

Table 3. The conceptual themes of an avid gardener including subthemes and key characteristics.

Conceptual theme	
Personal history	
Subthemes	
Introduction to gardening	
Key life role and learning role in gardening	
Gardening interests	
Key indicators/characteristics	
During childhood; introduced by significant person (e.g., parent); positive experience	
Gardening a dominant hobby; participated in horticulture continuing education; gardening education was important	
Studied new cultivars and varieties; had a specific plant passion; had a gardening focus	
Conceptual theme	
Social connections	
Subthemes	
Volunteer work	
Educating others	
Visiting a garden	
Interactions with others who shared similar gardening beliefs	
Interaction through plant societies	
Key indicators/characteristics	
Volunteered at a public garden for the people they could meet, particularly other gardeners with similar interests	
Became a public garden docent for the enjoyment of meeting and informing others about the garden	
Regularly visited a public garden with family or friends as a social event	
Chose to be a professional horticulturist for the social connections to similar people	
Joined several plant societies for social connections	
Conceptual theme	
Human well-being	
Subthemes	
Gardening and its emotions	
Gardening and artistic expression	
Gardening and its connection to other interests	
Key indicators/characteristics	
Renewed mental outlook; was a mental escape; had a spiritual meaning; built confidence and self-esteem	
Gave a sense of creating beauty and having control over environment	
Enjoyed physical exercise; gave a connection to nature; enjoyed garden photography, botanical illustration, and selling cut flowers for profit	
Conceptual theme	
Learning experiences	
Subthemes	
Gardens	
Books and magazines	
Agricultural extension service	
Plant societies	
Volunteer work	
Career	
Veteran gardeners	
Key indicators/characteristics	
Used gardens to study plants, garden design, and maintenance techniques	
Regularly used such resources; collected gardening books; budgeted for such resources	
Consulted with county agents and specialists; read publications; participated in Master Gardener program	
Joined for new and progressive information	
Volunteer activities extended gardening education (e.g., learned plant names and gardening techniques)	
Professional horticulturists cited work experience as learning tool	
Such gardeners were a rich source of regional gardening information	

four conceptual themes through which adults experience and make meaning of a public garden and of their gardening world (Fig. 1 and Table 3). The conceptual themes of an avid gardener included 1) personal history, 2) social connections, 3) human well-being, and 4) learning experiences. Several subthemes emerged within each of the four conceptual themes of an avid gardener.

FINDINGS-RELATED-TO-PERSONAL-HISTORY:

The first conceptual theme of how gardeners made meaning of their gardening world and a public garden focused on their personal history (Table 3). This theme reflected participants' past experiences and meanings, from childhood gardening through their continued personal involvement in gardening. This theme influenced how individuals evolved as a gardener.

Three subthemes emerged within the personal history conceptual theme which related to participants' gardening background. The first was how the participants were introduced to gardening. All participants were introduced to gardening during childhood by their parents except for one who grew up in an orphanage. Participants recalled fond memories of their introduction to gardening and acknowledged it as a motivation for gardening as an adult. This finding is similar to a study of independent learners by Brookfield (1984). He found that key individuals, particularly parents, were instrumental in awakening the learning interests of his study participants. A study by Dwyer et al. (1991), who looked at the values people place upon trees and forests, supports this notion. They found that people can form strong people-tree bonds, particularly when children, parents, and grandparents participate together in tree planting efforts.

The second subtheme within the personal history conceptual theme was key life role and learning role in gardening. The avid gardeners in this study had acquired some formal gardening education. Three had taken horticulture courses in college and three had participated in the agriculture extension service Master Gardener program. They expressed an interest in continuing their gardening education to improve their gardening success. Membership in more than one plant society for the continuing education they provided was a shared component of participants' learning role in gardening. Another aspect participants shared was the degree to which

gardening dominated their lives. Participants engaged daily in some form of gardening such as reading a garden book or magazine, weeding, visiting a garden, or attending a plant association meeting. Claire's words best summarize this category: "I know a day doesn't go by where I don't read something or at least think about my garden and what I want to do next."

The third subtheme, participants' gardening interests, was an important aspect of the personal history conceptual theme. All participants had plant passions where they were interested in learning as much as possible about a specific group of plants. Their interest in visiting a public garden many times revolved around seeking information regarding their plant passions. The existence of hundreds of specific plant societies reflects the diversity of plant passions of gardeners and the desire of gardeners to share their plant interests.

FINDINGS-RELATED-TO-SOCIAL-CONNECTIONS:

Although visiting a public garden was seen as a solitary activity for the avid gardeners in this study, it was also a place where social connections were created and supported (Table 3). Social interaction through gardening was a way for participants to associate with others who shared their interests and values. Five subthemes related to the social connection conceptual theme emerged from the interview data.

The first subtheme in the social connection conceptual theme was connection through volunteer work such as helping in the UTIA gardens. In addition to gaining hands-on experience, participants noted the people they were able to meet through their volunteer efforts. One participant acknowledged his volunteer work as the vehicle which enabled him to network through others and obtain a part-time gardening job. Colleen's words summarize this category: "I keep volunteering in the gardens because of the people I meet."

This finding was consistent with the gardening volunteer literature that indicates that social interactions are one of the rewards of volunteering (Hobson, 1991; Stouse and Marr, 1992).

The second subtheme in the social connection conceptual theme was educating others. Several of the participants found social interaction by educating and sharing their knowledge of the UTIA gardens with others. These participants had a strong desire to inform and tell others of the gardens. One participant

educated others about the UTIA gardens by volunteering to give tours and lectures and interacting with others who shared her interests. Thus, gardening was a means to initiate social interactions. Avid gardeners who enjoy the educative role have tremendous value to a public garden. Gardeners with such social interaction needs can satisfy their interests and at the same time act as an ambassador for a gardening organization, strengthening its awareness within the community. Plant societies and public gardens stand to benefit immensely through the involvement of such gardeners with their organization.

The third subtheme of the social connection conceptual theme was visiting a garden. In discussing their experiences at the UTIA gardens, participants spoke about sharing their visits with family and friends. Visiting the gardens was a constructive way for participants to connect with others and strengthen their family and friendship bonds. Claire found the UTIA gardens a valuable place to share gardening with her friends: "I can't tell you how many of my out-of-town friends I have taken there and we always have a good time walking through and looking at everything. There is always something new to see."

Identifying that such a theme exists and that it can be an important part of a garden visitor's experience is important in understanding avid gardeners. Learning occurs through social interactions as well as pointed out by Candy (1991) and sharing a garden can be a meaningful way for avid gardeners to learn. He reports that personal constructs are influenced and restructured through the social interactions in which adults engage. This finding supports the contention of many, (e.g., Knowles, 1975) that self-directed learning does not necessarily take place in isolation.

The significance of the social connection conceptual theme was also evident in the day-to-day gardening practices of a subgroup; the three participants who were professional horticulturists. Being a professional horticulturist provided a special avenue to identify and interact with others who shared similar gardening beliefs. In dealing with different clients and customers, the professional horticulturist participants were able to have meaningful social interactions. One participant mentioned the value of his job for the contact he was able to have with serious gardeners; gardeners like himself. This finding ex-

tends our understanding of professional horticulturists and the nature of their work.

The last subtheme in the social connection conceptual theme was involvement in plant societies. Participants found meaningful social interactions through their involvement with plant societies because of fellowship with other like-minded gardeners. William's own words reflect the value of plant societies as a means for social connection: "I belong to Friends of the UTIA gardens because I believe in what they are about and I just like being with people who value the same things I do."

A search of the gardening literature did not find a report of the role plant societies play in a gardener's social development. Recognizing plant societies as a meaningful way for gardeners to socially connect will help adult educators and horticulturists facilitate the social connections of gardeners which, in turn, enhances learning.

This abundance of social interaction in a variety of contexts emphasizes that humans are social beings. This study supports that gardening can be the vehicle for social connections. Though the contexts used by avid gardeners in this research may differ from other studies, this idea is consistent with other findings in the gardening literature. Studies of community gardens, neighborhood landscaping, and tree planting programs have documented the benefits of social interactions through gardening (Lewis, 1992).

FINDINGS RELATED TO HUMAN WELL-BEING: There is an affective interaction between avid gardeners and plants adding depth and meaning to their gardening. The third conceptual theme of a gardener's world represents these emotional benefits. Three subthemes related to the human well-being and gardening theme emerged from the interview data (Table 3).

The first subtheme in this conceptual theme is gardening and its emotions. Participants discussed the emotional benefits they experienced as a result of their gardening. Emotional benefits from gardening are consistent with a report by Relf (1992) that gardening acts as a source of spiritual renewal by entwining with the subconscious mind which is outside the awareness and control of the conscious mind. Participants in this study experienced an uplifting emotional interaction with plants through a public garden visit. It

was a place where they experienced mental escape and relaxation as well as an emotional rejuvenation. Colleen's words reflect a common emotional experience participants would have when visiting the UTIA gardens: "I can remember in particular one spring walking along in the gardens and it was just real pleasurable and relaxing for me. It was colorful too and it got me all pumped up and made me want to go home and go out and buy some new plants and flowers and garden."

This finding is consistent with other studies (Bennett and Swasey, 1996; Dunnett and Qasim, 2000) which found that urban residents visit public gardens as a means of coping with the stresses of city life. A study by Dwyer et al. (1991) found that urban trees and forests were valued by urban residents for similar reasons.

Feelings of increased self-confidence and self-esteem were emotional benefits that study participants experienced as well as a result of their gardening. As participants felt successful with their gardening, their confidence and self-worth grew. Maddie expressed her emotions associated with her gardening success: "So I keep gardening and learning as much as I can about it to just keep getting more and more successful. I feel confident in myself now with all that I've learned and what I have done in my garden, but I still want to keep learning more so I can be even better."

These findings support the concept that there is an affective theme to gardening which attracts individuals to the activity and aids in sustaining their interests (Relf, 1992).

Gardening and its artistic expression was the second subtheme in the human well-being and gardening conceptual theme. This category represented the role gardening and public gardens played in fulfilling participants' desire for beauty in their lives. Gardening as a means for creatively expressing their selves was an important reason cited by participants. Maddie's own words best describe this use of gardening in participants' lives: "The part of gardening that appeals to me, is that artistic expression level that you finally get to in creating beauty in your life."

This notion is consistent with studies by Dunnett and Qasim (2000) and Kaplan (1973) where surveyed gardeners identified this aspect of gardening as being an important factor in their overall gardening satisfaction.

The third subtheme in the human well-being conceptual theme was labeled gardening and its connection to other interests. This category represented the role gardening played in enabling participants to integrate their love of plants with other interests and activities. Photography, physical exercise, being outdoors, artistic expression, and earning income were interests participants found they could enjoy through their gardening activities. This is similar to studies by Dunnett and Qasim (2000) and Kaplan (1973) who found that gardeners enjoy gardening for both tangible rewards, such as fresh vegetables, as well as for intangible rewards, such as aesthetic pleasure. A study by Dwyer et al. (1991) also supports this notion. They found that urban residents planted trees for benefits beyond the expected benefits of the resulting trees (i.e., demonstrating a commitment to the future; a means of improving the environment).

FINDINGS RELATED TO LEARNING EXPERIENCES: The last conceptual theme of a gardener's world (Fig. 1) is the learning experiences of participants through their gardening. Gardeners chose to expand their gardening knowledge through a variety of sources and strategies (Table 3). Seven subthemes emerged within this conceptual theme of learning experiences. This conceptual theme not only spoke to how adults experienced and made meaning of public gardens and gardening, but it also reflected their beliefs of how a public garden affected their gardening practices.

The first subtheme in the learning experiences theme was the activity of visiting gardens. For the participants in this study, visiting a garden was an important way to broaden their gardening education. Participants identified the UTIA gardens as an important learning resource in their non-formal gardening education. Most gardens offer no implied path or direction of inquiry so visitors must be self-directed, as were the participants in this study. How a garden is experienced differs among individuals since each person brings their accumulated knowledge and history to the perception of the environment. Though experiences were individual, participants shared common interests for visiting gardens. Common information participants were interested in learning through their garden visits were broken into three topics: 1) plant study, 2) garden design, and 3) garden maintenance techniques. Through their ob-

servations and study of these three topics, participants were able to make meaning from their visits. Regarding plant study, participants expressed the greatest interest in learning about plants which were new to them. Participants also used a public garden to determine plant performance for gardens in the southern United States; determine their plant preferences and what plants they would like to incorporate into their own garden; learn plant botanical names and sources; and finally, to identify plants they had grown but never knew their common or botanical names. In relation to garden design, participants found public gardens to be a valuable resource in studying plant use, visualizing ideas, and observing design elements such as ground contours, bed outlines, and use of mulch. The use of visualization in learning in this study is similar to a finding by Lekan and Sisco (Tough, 1981) who studied rural adults with non-formal education and found the process of visualization to aid in guiding and motivating their self-directed learning. In relation to garden maintenance, participants used public gardens to study transplanting practices, labor requirements, soil preparation, and garden aesthetics such as weeding, edging and mowing. Maddie's words reflect a common feeling among participants in their use of public gardens in their gardening education: "If I am to have a garden that I absolutely love then I'm going to have to see how other people created their gardens. Visiting different gardens has been a good way for me to learn and get ideas."

The gardening literature supports that garden visits can be a meaningful way to learn, particularly when visitors are directed through planned exhibits with labels and literature (Singer, 1997; Skye, 1997). However, much of the information reported does not provide insight into how nondirected visitors learn in a garden. The participants in this study validated the notion that when no direction is provided, learning does occur within a garden context. It confirms that visiting a garden can be an important self-learning resource and strategy for gardeners.

The second subtheme in the learning experiences conceptual theme was the use of gardening books and magazines. As participants spoke about their gardening learning experiences, books and magazines emerged as important learning resources. Participants spent a

great deal of time and money on such reading sources. The library and garden book clubs were valuable outlets for gaining access to such materials as well as bookstores and garden centers. The use of these learning resources is not surprising. Visiting any bookstore illustrates that the gardening section tends to be a prominent area. What was surprising in this study was the size of the personal gardening library of three of the participants as well as the substantial amount of money they spent each year for such learning resources. Spending close to \$1000/year was not uncommon. This indicates the significance of books and magazines as learning resources for self-directed avid gardeners.

The avid gardener's interaction with the agricultural extension service was the third subtheme in the learning experiences conceptual theme. Participants found Extension personnel (county agents and state specialists), extension publications and extension programs (the Master Gardener program) to be instrumental in their learning. Three of the participants had graduated from the Master Gardener program and credited it as the backbone of their gardening education. One professional horticulturist participant made extensive use of the extension state specialist in his work of identifying and controlling insects and plant diseases. These gardeners sought help from the extension service through their agents and publications because of their relevance to their gardening and for the expertise they readily shared. This finding supports the extension service mission; to be an educational resource for the public.

The fourth subtheme in the learning experience conceptual theme is involvement in plant societies. In addition to their use for social connections, plant societies were identified by participants to be an important resource for learning. Through guest lectures, educational seminars, workshops and conferences, participants felt plant societies were a meaningful place to learn. Participants identified the most important educational use of plant societies as being a source of the latest gardening information. For the new and progressive information provided, Steven attended the Native Plants in the Landscape (Cullowhee, N.C.) annual conference each year. His words best reflect the role plant societies played in participants' gardening education: "At the Native

Plants in the Landscape conference, I go there faithfully every year because there are things that are new and progressive and exciting and they are at all levels where everybody can learn something."

This identifies that up-to-date, current information is extremely important to gardeners and that plant societies play an important role in the learning experiences of avid gardeners.

The fifth subtheme in the learning experience conceptual theme is volunteer work. In addition to identifying their volunteer work as a meaningful avenue for social connections, participants reported it as an important learning resource. Participants spoke about their volunteer work in the UTIA gardens. Through their interactions with garden personnel and their hands-on experiences, volunteer work for participants in this study was a beneficial learning resource. Jonathan tells of the important role volunteer work in the UTIA gardens played in his gardening education: "I can't tell you how much I have learned from volunteering in the gardens. It's where I have learned all about plants and the soil and mulch too. I never really knew how to take care of flowers in my garden and now because of my work in the gardens, I do, and my gardens show it".

Public gardens regularly engage volunteers in their work. The public garden volunteer literature is dominated by perspectives from the public garden administration and how volunteers are useful to their work and should be managed (Doede, 1991; Socolofsky, 1991). Little attention is paid to the experiences of the volunteers themselves. Knowing the value volunteer work can have in a gardener's learning can facilitate adult educators and public garden administrators in making volunteer activities more meaningful.

Work experience is the sixth subtheme in the learning experiences conceptual theme. Hands-on education was noted by participants as being a valuable teacher. Not only did it provide opportunities to learn from doing, but it allowed participants to put into practice what they had learned through other educational resources. It was a way for participants to evaluate and compare the relevance of information they learned through other sources to actual practice. This finding validates the value of hands-on experience in learning.

The seventh subtheme of the learn-

ing experiences conceptual theme was veteran gardeners. Participants identified older, veteran gardeners as an important learning resource. Such seasoned gardeners were a rich source of information and experience. This finding is the same from studies of other groups of self-directed learners (Brookfield, 1984; Tough, 1979).

Conclusion

This study showed many of the roles that gardening can play in the lives of avid gardeners. It supported the notion by others (Dunnett and Qasim, 2000; Dwyer et al, 1991; Lewis, 1991; Relf, 1992) that gardening can have considerable personal, social, educational, psychological, and even spiritual values in their lives.

This study showed that avid gardeners believe that their past gardening experiences influence their interest and motivation in gardening. It suggested that the personal constructs a person holds about gardening may be influenced and shaped by significant people during their childhood, such as parents.

This study supported the idea that gardening can be the vehicle for social connections. Participants identified volunteer work, being a garden ambassador, visiting a garden, and plant societies as means for developing meaningful social interactions. This theme is consistent with other studies of community gardens, neighborhood landscaping, and tree planting programs which have documented the benefits of social interactions through gardening (Lewis, 1992).

The findings of this study supported the concept that gardening has positive emotional benefits. Emotional benefits identified by study participants included: outlet for artistic expression, uplifted emotions through mental escape and relaxation, increased self-confidence and self-esteem with gardening success, and integrating other interests with their love of plants. These findings are closely related to those suggested in the literature (e.g., Bennett and Swasey, 1996; Dunnett and Qasim, 2000; Dwyer et al, 1991; Kaplan, 1973; Relf, 1992).

This study suggested that learning sources and strategies can be important factors for motivating gardeners. The avid gardeners in this study identified a variety of sources and strategies to expand their gardening knowledge, including books and magazines, the agricultural extension service, plant societies, volunteer work, career, and veteran

gardeners. This study confirmed that visiting a public garden can be an important self-learning resource and strategy for avid gardeners. Such information underscores the value of such resources in formal and informal gardening education.

Study participants clearly showed that a public garden was a place to socially interact with others, enhance their human well-being, strengthen their gardening background, and extend their gardening knowledge and skill.

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