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FACTORS INFLUENCING PARTICIPATION IN A CAMPUS COMMUNITY GARDEN: THE EXAMPLE OF UMBC'S *THE GARDEN*

When I transferred to UMBC in fall 2013, *The Garden* was just beginning to gain support by advocating for a space on campus and campaigning for funding. Students and staff on campus were hungry for this space to become a reality. I wanted to know what their stories were, why *The Garden* was so deeply desired, and how we could ensure its long-term success by tapping into these core motivations of engagement. Community gardens are venues of social change, and require cooperation to achieve common goals. They are often built to provide food or to beautify an area, and the benefits of eating well and time in nature are well known. But desires can vary among gardeners. I wanted to understand whether UMBC gardeners were motivated to garden because of common benefits or because there were more specific dynamics at work.

[LEFT] 2015. Photograph by Humon Heidarian of the Environmental Task Force.

[RIGHT] Students, 1972, University Archives, Special Collections, University of Maryland, Baltimore County (UMBC).

INTRODUCTION

The Garden is a collaborative endeavor seeking to build both social cohesion and environmental engagement through an organic community garden on the University of Maryland, Baltimore County campus. For several years there has been fluctuating interest in having a community garden on campus. *The Garden* began in 2013 and took advantage of growing concern with sustainability and food equity to garner support from the student body, faculty, and administration. The organization behind *The Garden* proved adept at navigating the university's complex institutional structure to ultimately garner the support of the administration. It did so by securing land permissions, adequate funding, and the support of multiple academic and administrative departments. Grants, student government allocations, and the ProveIt! campus change program provided sufficient funding to meet initial construction and first-season needs. The support of faculty who tied *The Garden* into their courses and gave students academic credit for their work provided academic legitimacy to the project. As an interdisciplinary project, it sought to bring together experts and amateurs from across the campus to work together to design and build raised beds and a permaculture space.

This article discusses a study aimed at understanding participation in *The Garden*. Specifically, it analyzes participant-identified reasons for joining the project and for continued commitment, with the objective of enhancing our understanding of why individuals engage in community gardening, and specifically, *The Garden* at UMBC.

A community garden can be defined as an “organized, grassroots initiative whereby a section of land is used to produce food or flowers or both in an urban environment for the personal use or collective benefit of its members” (Glover, 2005). One purpose of a community garden is to create a place of belonging, outside work or home, where individuals can gather around a common interest (Glover, 2005). Community gardens are known to build civic engagement and

social cohesion (Ohmer, Meadowcroft, Freed, & Lewis, 2009). Glover (2005) discussed how small groups can engage their members more effectively than large groups and can thereby better serve as agents of social change.

Research on community gardens has found that garden participants are committed to beautification, conservation, and community service and that they enjoy the food, health benefits, and socialization that gardening can provide (Draper & Freedman, 2010; Ohmer et al., 2009; Glover, Shinew, & Parry, 2005). Research on community gardens in school or campus settings is in a more nascent stage, but holds potential links with the literature on environmental education in these same contexts. A study that investigated the influence of environmental education on behavior found that students were more likely to act in favor of sustainable land use if they were personally affected by the consequences of their actions or if they were participating with a group (Kulmer, 2011). Research from the United Kingdom shows that university students highly value green spaces and that students' use of these spaces results in college experiences that are more positive (Speake, Edmundson, & Nazaw, 2013). Studies from within the United States on the benefits of school gardens focus primarily on the experiences of elementary school-aged students and do not account for the experiences of adult participants (Blair, 2009; Skinner & Chui, 2012). Community supported agriculture programs have only materialized on college campuses in the United States within the last decade (Wharton & Harmon, 2009). Research does indicate that community gardens tend to emerge in response to social movements, or as a reflection of them (Glover, Shinew, & Parry, 2005).

This study helps to address this important gap in research about campus experiences with community gardens by simultaneously exploring the motivations, expectations, and experiences of involvement in UMBC's *The Garden*. We trace participant motivations for participation and actual experiences throughout the course of the inaugural growing season to identify initial and persistent factors driving participation in *The Garden*. We timed this study to follow participants from the very beginning so as to set a baseline for longitudinal research to continue into the future. Given the diversity of the UMBC campus community and the equal opportunity for participation across groups (e.g., undergraduate, faculty/staff), we hypothesized that the motivations for participation would likely range from more community-oriented or externally-motivated reasons for undergraduates to more internally-motivated ones for faculty/staff.

METHODS

We followed a three-step process to identify a set of initial and persistent factors driving participation in *The Garden*, which included two rounds of participant surveys and focus groups aimed at understanding how motivation translates into participation in an on-campus organic garden. Those seeking a plot in *The Garden* were required to complete an application. Approved gardeners were required to commit to maintaining a plot (weeding, watering, harvesting), agree to the rules and regulations of *The Garden* and UMBC, and attend an orientation session. They were also invited to participate in any *Garden*-related research. Only those who consented to be contacted by student researchers were approached for this study (n=91).

The design of both surveys followed guidelines from the literature (Fink, 2006), and connected to information from applications for garden space. Survey 1 was administered at the beginning of the inaugural growing season in September — October 2014. Survey 2 was distributed at the end of the season, after harvest, in December 2014. Finally, we conducted two focus group sessions in the later part of the season (November 2014) using participants who volunteered in response to Survey 1. We maintained communication with participants through university-affiliated e-mail addresses, and used an online survey software, SurveyMonkey, to administer both surveys, maintaining anonymity in the responses.

Both surveys asked respondents to indicate their motivations to participate in *The Garden*. Motivation options were standardized based on those found in the literature on community gardens, such as *community service, food security, health benefits, sense of community, exercise*, and the simple *pleasure* of gardening (Draper & Freedman, 2010; Ohmer et al., 2009; Glover, Shinew, & Parry, 2005). Additional options drawn from responses from the applications for *Garden* plots were included in the surveys. Respondents were asked to indicate the relevance of each possible motivation based on a five-point rating scale.

Survey 1 included questions about each respondent's role on campus (student, faculty, staff, etc.), engagement in extracurricular activities, degree of experience in gardening, and specific reasons for participating in *The Garden*. Subjects first assessed all of the possible reasons that were given, then selected their primary motive, and finally reported on their individual goals for their *Garden* experience, from what they least expected to most hoped to gain. A free response question asked respondents to elaborate on their reasons for involvement.

All respondents who indicated interest in participating in the mid-season focus groups were contacted (n=40). Individuals were placed in homogeneous groups (faculty and staff together, *The Garden* student organization members together, etc.). The goal was to build cohesive and relaxed groups that would be able to engage in deep discussion (University of Minnesota, 2002).

The focus group questions were based on the responses collected in Survey 1 (Appendix). Questions focused on the most frequently reported motivations from Survey 1: *learning*, the simple *pleasure* of gardening, and *sense of community*. The focus group sessions followed a semi-structured interview format with eight prepared questions and free discussion, allowing slightly different tangents to emerge in each group. The interviewer also prepared supplemental questions to address where time allowed. We convened two focus group sessions, with five to six participants in each. Three focus groups were scheduled, but an emergency closing of the school allowed for only two groups to meet (n=11). Only half of respondents who indicated interest in participating in a focus group provided their scheduling availability. Ultimately, timing within the semester and scheduling challenges limited participation in the focus groups. Focus groups included three faculty members, one member of administrative staff, and seven undergraduate students. Ultimately, the intent of these focus group sessions was to provide a rich qualitative context for the quantitative data obtained in Survey 1.

Survey 2 was designed to mirror Survey 1, with repeated questions using the core rating-scale questions. Abbreviated versions of questions asked during the mid-season focus groups were also posed in a short answer format. These questions were included to supplement the qualitative content gathered in the focus groups. Survey 2 also asked about intent to return to *The Garden* and intent to involve others in gardening.

In order to distill the free text responses about motivations from each survey round, we used a simple word cloud tool to visually identify commonly emphasized terms, as indicators of persistent and shifting motivations.

TABLE. These numbers are based on the total number of respondents who completed the initial basic information section of the survey.

What type of group are you affiliated with in <i>The Garden</i>? (Please select all that apply)				
Answer Options	Survey 1		Survey 2	
	Response Percent	Response Count	Response Percent	Response Count
Undergraduate Student	71	45	64	23
Graduate Student	3	2	8	3
Faculty Member	3	2	11	4
Staff Member	8	5	8	3
Student Organization	40	25	28	10
Informal Student Group	2	1	3	1
Faculty/Staff Group	0	0	0	0
Department	0	0	0	0
Other (please specify)	8	5	0	0
Total Responses		63		36
Total Contacted		91		91

RESULTS

For Survey 1, out of 91 participants contacted, 63 responses were received in total, with 59 completed surveys. This indicates a response rate of 69%, which is greater than that expected of online campus surveys, approximately 20% (Klapowitz, Hadlock, & Levine, 2004). For Survey 2, 36 responses were received from 91 participants contacted, with complete survey responses submitted by 31, indicating a response rate of 40%.

Participants self-identified across several groups, with the biggest representation coming from undergraduate individuals (64-72%) (Table). University Staff, Faculty, and Graduate Students also had plots in *The Garden*. The remainder of the response choices if marked, were more specifically defined by one of the larger groups by virtue of selecting more than one option. For further analysis purposes, we bundled various groups together to compare two main populations: undergraduates and non-undergraduates (University Staff, Faculty, and Graduate Students) (Figures 2 and 3). We drew this distinction based on the assumption that Undergraduates and Non-Undergraduates share common out-of-school circumstances that make them similar types of stakeholders. Undergraduates have an approximately four-year commitment to the campus, while

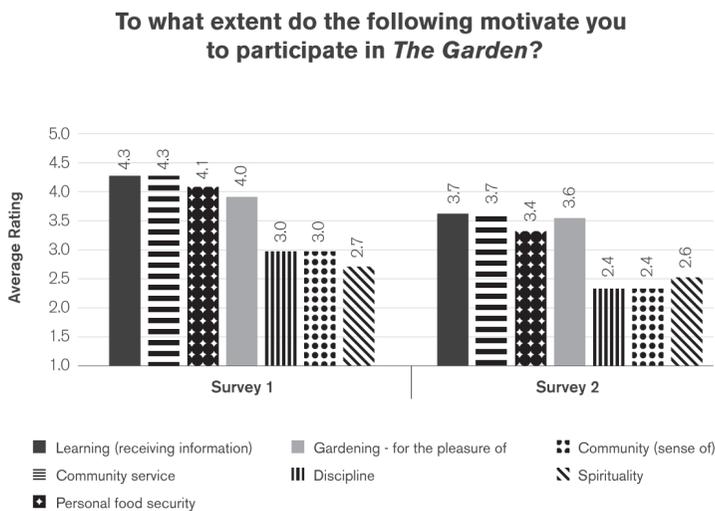


FIGURE 1. Highest and lowest ranked motivations of all respondents. 3.0 indicates neutral rating.

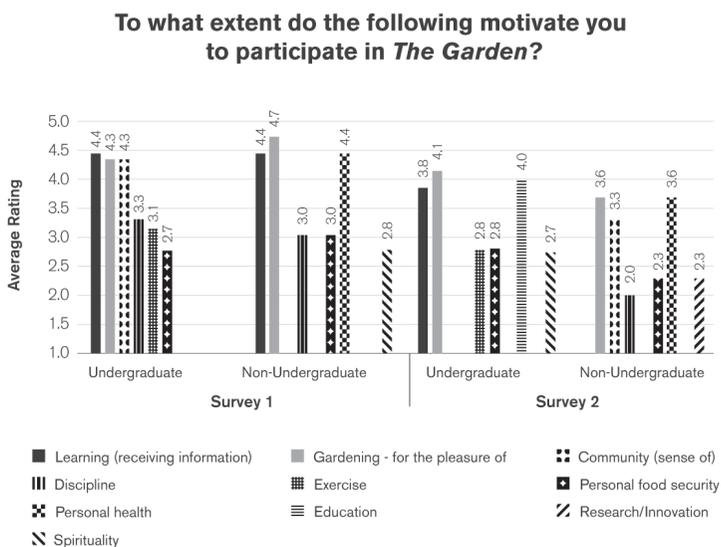


FIGURE 2. Highest and lowest ranked motivations, separated into undergraduate and non-undergraduate responses. 3.0 indicates neutral rating.

Non-Undergraduates have the opportunity to be longer community members. We also compared the motivations of members who had previous gardening experience vs. those who self-identified as novice gardeners (Figure 3).

The core components of each survey were the questions about specific motivations for participating in *The Garden*. Figure 1 shows the highest-rated and lowest-rated motivations from both Survey 1 and Survey 2. Figure 2 demonstrates the differences in motivations between the two main populations. Undergraduate members were strongly motivated by *learning* and *education* experiences in *The Garden* (Figure 2). Non-Undergraduates added Personal Health to their highest motivations (Figure 2).

We also observed that the averages of Survey 2 responses were lower than the averages of Survey 1 responses (Figures 1 and 2). We will explore why we think this might be in the discussion. Insight gleaned from the focus groups and open-text survey questions will be provided in the Discussion section.

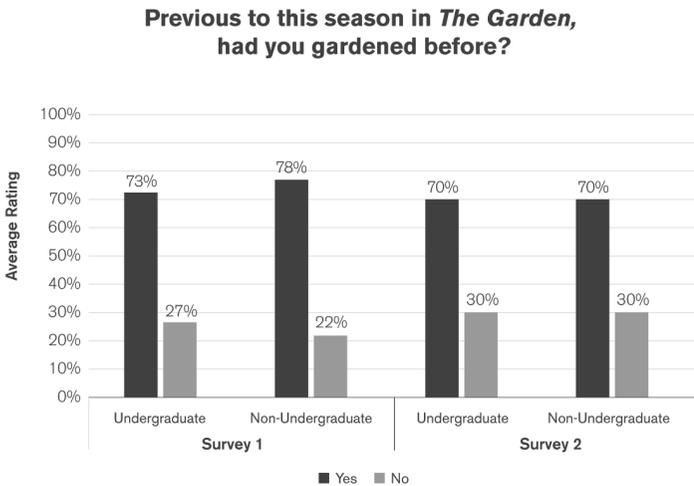


FIGURE 3. Respondent previous experience gardening.

DISCUSSION

The sets of highest- and lowest-rated motives of Survey 1 and 2 were relatively similar, with the most notable change being a shift over time from having *sense of community* be replaced by *community service* as a leading motivation. When considering the motivations for our two main population groups, undergraduates presented themselves as more externally-motivated, while non-undergraduates were observed to be more internally-motivated (e.g., motivated by their individual needs or goals). Undergraduates were concerned with *learning*, *pleasure*, and *community*, while non-undergraduates were concerned with *pleasure* and *personal health* (Figure 2). An example of an externally-

motivated purpose in *The Garden* is provided in this response from an Undergraduate in a focus group: “It’s a good source of education, a good way to meet people, to hear people’s stories, it was just a very different avenue...and I took agriculture for years, but very little farming, so I thought it would be another way to improve on what I already knew...”

Non-Undergraduates were slightly more likely to have previous experience gardening (Figure 3). Having already acquired the knowledge needed for gardening, *learning* may not register as a high priority, and they may understand well the health benefits of diet and exercise, as well as the pleasure of productive leisure activity. For example, a staff member explains why he has a plot in *The Garden*: “About several years ago, I moved to a 3rd floor apartment downtown, so I don’t get much chance to garden. Second, I’m a vegetarian and that really only works if you get good, fresh food. Because you go quite mad if you just eat store bought.”

Personal food security was among the lowest ranked motivations in both surveys (Figures 1 and 2). However, many of the free responses received used language that refers to food security. Participants commonly reported goals such as: “Grow my own veggies,” “To learn more about the food I eat,” “Grow food I can use to cook with at home,” “To grow (and trade for) fresh food.” It is possible that the concept of *food security* was not widely understood by respondents, or that unaddressed food-related issues are active motivators for garden participation.

The drop in motivation for *community* from Survey 1 to Survey 2 may be due to a lack of facilitated interaction with other gardeners (Figure 1). In free responses, gardeners reported a lack of engagement with one another and indicated that fostering community remained a strong desire (Survey 2). This was further detailed during the focus groups, when gardeners called for *Garden* management to facilitate more social events so they could meet each other and know when others would be using the space. Despite this frustration, all respondents in Survey 2 indicated that they would return for another gardening season.

It is possible that respondent goals reflect their experiences and interactions in *The Garden*, after having spent a season in the space. We can see this also reflected in the word clouds generated from Survey 1 and Survey 2 goals (Figures 4 and 5). The goals expressed by respondents in Survey 1 are broad and cover many facets of *The Garden* including community, food, and learning. The goals in Survey 2 are narrower. Community has been de-emphasized, while food, gardening, and enjoyment become dominant. This shift over time may suggest that even when diverse groups enter *The Garden* for a wide variety of reasons, the shared experience of *The Garden* can begin to unify motivations for continued participation.

sustainability). A dramatic increase in response to this item in Survey 2 made clear that this change of wording significantly changed the meaning for the participants, or that the issue became more important to them over the growing season. These results were eliminated from the final data set because a definitive reason for the outlier could not be determined.

FUTURE RESEARCH

Further research could be facilitated by *The Garden* management continuing to implement an online survey on an annual basis, to capture the motivations and expectations of gardeners, and to analyze which goals remain consistent and which change as *The Garden* matures. We recommend continuing with a semi-structured online survey, and including some of the questions from our focus group interviews as open-ended responses on the revised survey. For future recruitment and retention of new campus gardeners, this research could be extended to explore the reasons why certain campus populations do not feel motivated to participate in *The Garden*, as a way of assessing what types of barriers might exist to participation.

CONCLUSION

After this exploratory study of *The Garden* at UMBC, we have a greater understanding of the inaugural gardener population, with specific understanding of motivations for participating in *The Garden*, as well as how those motivations have remained persistent or shifted over the course of the first growing season. While goals become more internally-oriented over time, community remains a top motivation (Figures 2, 4, and 5). Unanimously, gardeners are motivated strongly by simple *pleasure* of gardening. It is possible that even though these diverse groups join *The Garden* for many different reasons, share motivations compel participants to remain committed to the project.

APPENDIX

Focus Group Questions:

1. **When we first contacted you via survey, we asked about your main motivations for becoming a member of The Garden. Thinking back to your response at that time, can you explain why you answered the way that you did?**
Why do you think you answered in the way you did?
2. **Thinking in terms of the benefits you expected to gain, have your experiences met with these expectations?**
What has changed for you during the growing season?
3. **What are the characteristics, or how would you define, a strong community?**
What is important to you in building a strong community?
Do you engage often with other gardeners?
Why do you think this is? And would you like that to change? If you would, why?
If you are seeking more community, do you have suggestions as to how incorporate this?
4. **What do you enjoy most about The Garden?**
How does this pleasure influence your participation?
Is there anything that detracts from your enjoyment of the Garden?
Is there anything missing that you hoped to experience?
5. **How is gardening a learning experience for you? What are you learning?**
How is this similar or different to your typical learning experiences?
How do your learning experiences in The Garden relate to your typical learning experiences? (classroom, clubs, research etc.?)
6. **From your perspective, what is the difference in the experience or value of community vs. individual food gardening?**
7. **Explain the significance/importance for you, that The Garden is a food garden (as opposed to a flower garden.)**
8. **Do you feel like you have had a successful season in The Garden? Why or why not?**
How do you measure that success?
How important is it that your expectations are fulfilled in order for you to return?

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