

**Raising Environmental Awareness among Windsor Youth  
2019**

**University of Windsor  
Campus Community Garden**

**Funded by TD Friends of the Environment**

**Report**

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## **Executive Summary**

The Campus Community Garden (CCG) is dedicated to building healthy, interactive urban communities through the collective production of locally grown, organic food. We believe in promoting positive interaction between the campus and the local community. We support and encourage community building, beautification, and urban agriculture as a means to improve food security in Windsor while fostering a sense of environmental stewardship. To improve the ability of the Campus Community Garden to raise environmental awareness among Windsor's youth, both University of Windsor and high school students, CCG hosted youth 15 high school and one YMCA youth camp visits between April and October 2019. The project was funded by TD Friends of the Environment.

In a continued effort to improve youth group experiences at the University of Windsor Campus Community Garden (CCG), a survey was conducted to gather feedback from high school teachers that participated in CCG youth events between April and October 2019. A sample size of 13 teachers participated in the survey, which was made available on the Qualtrics<sup>SM</sup> website. Participants were asked to rate their experience and express their interest in returning to the CCG in the future. They were also asked a series of open-ended questions to determine best and worst garden activities, their favourite and least favourite aspects of the garden visit, and any constructive commentary they had. Teachers rated the learning experience very highly, though a common recommendation was pre- and post-learning opportunities. An educational video in particular may be a useful tool to help students and other youth grasp concepts such as pollination, sustainability, and food security. Translators may also help resolve communication barriers and improve the learning experience of newcomer youth groups that visit the CCG. The teachers and students enjoyed a variety of activities and aspects of the garden events. According to the teachers, some students found the weeding and the length of the initial information session challenging, and teachers expressed difficulty with keeping some of their students motivated and working. Strong and consistent leadership from the youth coordinator and university volunteers is necessary to monitor the students and ensure they are working towards their goals in the garden. Students may also benefit from an educational activity or break half-way through their work period to allow for rest and help them stay on task when they return to work. One teacher expressed concerns about the students' lack of experience with weeding; extra guidance from the youth coordinator prior to

activities as well as a short field guide of common weeds may help student groups work more efficiently in the garden. Lastly, poor weather experienced by two groups likely had an impact on their enjoyment of the garden. Events should be scheduled later in the spring when the weather has warmed enough to improve student experiences in the garden. Overall, the teachers rated the CCG experience very highly and were interested in returning to the CCG in the future. Continued improvements and additional resources will allow us to meet the needs of students and teachers better and allow for more rewarding experiences in seasons to come.

## **Background**

The Campus Community Garden (CCG) is dedicated to building healthy, interactive urban communities through the collective production of locally grown, organic food. We believe in promoting positive interaction between the campus and the local community. We support and encourage community building, beautification, and urban agriculture as a means to improve food security in Windsor while fostering a sense of environmental stewardship. As part of our mandate to engage the local community in environmental education via urban gardening, the University of Windsor Campus Community Garden (CCG) hosted a total of 15 high school classes and one youth group in 2019. These groups participated in half-day events, which began with an educational ‘tour’ portion followed by active volunteering in the garden and concluded with an educational game activity. Thanks to the grant provided by TD Friends of the Environment Foundation (TDFEF), the CCG was able to accommodate these groups by covering costs of transportation and hospitality.

In an ongoing effort to improve experiences of high school students and teachers at the garden, the CCG team conducted a survey regarding their visits in 2019. The survey was conducted to determine student and teacher satisfaction levels with the educational experience and garden activities, to outline areas of improvement, and to include any positive commentary and constructive suggestions for improvement. The survey was also used to gauge interest in future participation and whether teachers would recommend the CCG to other colleagues.

The results of this survey will help illuminate strong points of the garden events as well as areas for improvement. Teacher responses to survey questions will help the CCG to further develop meaningful learning experiences, increase the consistency of student engagement, improve

efficiency in carrying out garden activities, and accommodate student and teacher needs during their visits. The insights provided by this survey can be utilized to improve future experiences of numerous groups including high school classes and youth groups from local organizations.

## **Methodology**

All high school teachers and youth group coordinators (henceforth referred to as ‘teachers’) that participated in one or more garden events between April and October 2019 were invited to complete the survey. Since students were unavailable to participate in this study due to logistical reasons, the survey was designed to reflect teacher viewpoints of the garden events.

The survey was made available on the Qualtrics<sup>SM</sup> website for the teachers to complete. There was a total sample size (n) of 14 teachers, five of whom visited in the spring (i.e. April to June 2019) and nine in the fall (i.e. September and October 2019). All teachers successfully completed the survey except for one Fall 2019 participant, so the total sample size was decreased to n=13 participants (n=8 for Fall 2019).

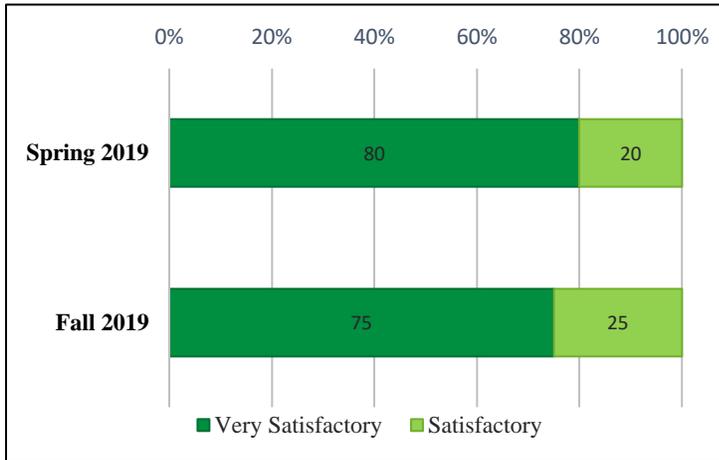
Participants were asked to indicate their overall satisfaction level with the learning experience offered by the CCG during their visit. They were also asked a series of open-ended questions to indicate the best and worst aspects of the trip from the teacher perspective, the favourite and least favourite garden activities of the students, and suggestions that could improve their experience at the CCG. Participants were also asked to rate the weather during their visit and indicate if it may have influenced the enjoyability of the event. To gauge levels of future participation, teachers were asked if they would like to return to the CCG in Fall 2019 and Spring 2020, and if they would recommend the CCG experience to other teachers. Since all participants were given the same survey, teachers who participated in Fall 2019 were asked to disregard the question asking if they would like to return in Fall 2019 (see Appendix A for full list of survey questions).

## **Results**

### **Educational Experience**

Participants were pleased with the educational experience at the CCG and rated it as ‘satisfactory’ or higher. More than three-quarters of the participants rated the experience as ‘very

satisfactory’ while one-quarter viewed it as ‘satisfactory’. Satisfaction levels were consistent throughout the year, with little difference between Spring and Fall 2019 (Figure 1).



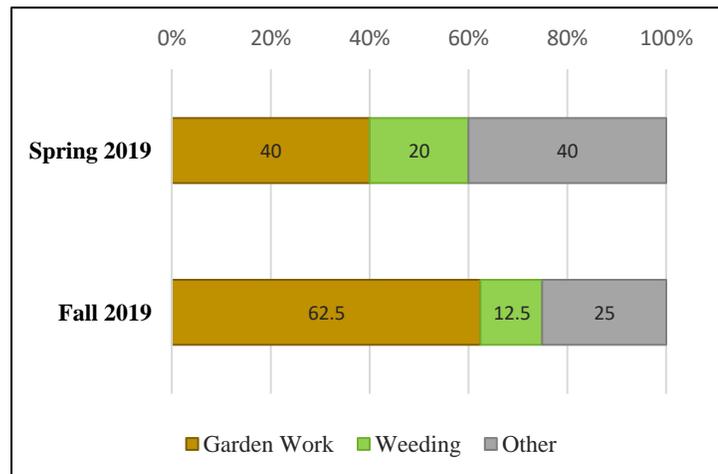
**Figure 1.** Ratings of educational experience among Spring (n=5) and Fall (n=8) 2019 participants (Q2, Appendix A).

When asked to provide commentary on how to better facilitate students’ learning in the garden, almost one-half (46%) of participants mentioned pre- and post- learning opportunities as useful tools for the students to gain more from the experience. Multiple formats of these opportunities were suggested, including hand-out sheets, slide shows, other literature, and a ‘lunch-and-

learn’ in which the coordinator could meet with the students prior to the trip and have discussions with them. Two participants also mentioned videos as a useful format for further learning; one of these participants stated that some of the new concepts were difficult for the students to grasp while they were in the garden. In addition to learning tools, one participant mentioned having a translator present to help communicate new concepts to students who have language barriers.

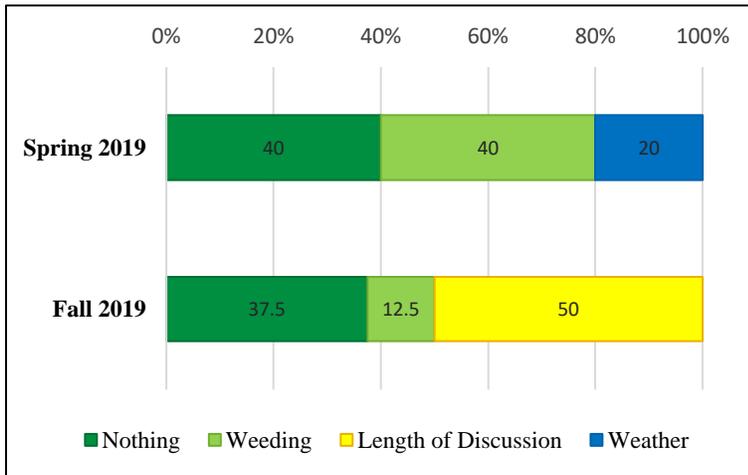
### Student Viewpoints of Garden Activities

According to the teachers, the students enjoyed a variety of activities in the CCG. Teachers in both seasons stated that the students generally liked working in the garden and pulling weeds (Figure 2). However, many other activities were listed as their favourite, such as transplanting plants, installing the surveillance signs, organizing the tool sheds, learning about different



**Figure 2.** Students’ favourite activities in Spring and Fall 2019 (Q5, Appendix A).

plants and food, and finding bugs and slugs in the garden.



**Figure 3.** Students’ least favourite activities in Spring and Fall 2019 (Q6, Appendix A).

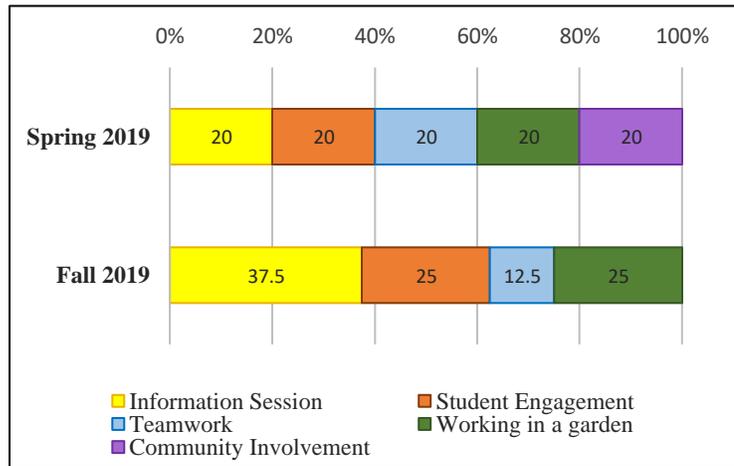
Many teachers in both seasons did not give suggestions for the students’ least favourite activity in the garden. Approximately 40% of participants in Spring 2019 and 12.5% in Fall 2019 stated that weeding was their least favourite, and one participant specifically mentioned that getting pricked by

the weeds (most likely thistles) was the least pleasant part. Interestingly,

50% of teachers in the fall commented that the length of the discussion at the beginning of the trip was the most difficult for students; this was not mentioned at all by the spring participants. Only one participant in Spring 2019 stated that the weather was the most disfavoured (Figure 3).

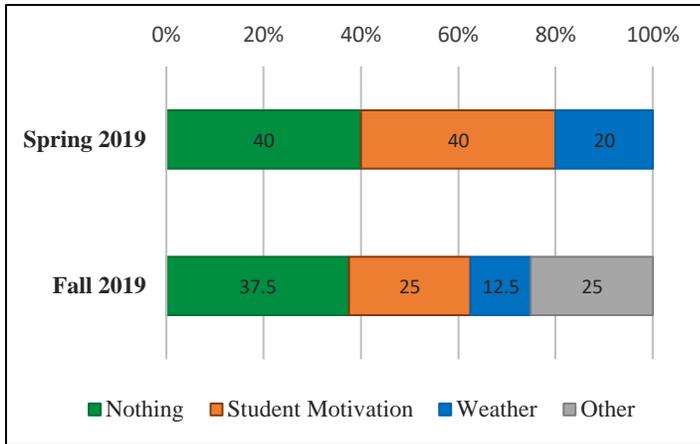
### Teacher Viewpoints of Garden Visit

The teachers cited the following aspects that they found most enjoyable about the CCG event: the information shared and discussed at the beginning of the event; seeing their students fully engaged in discussion and gardening; seeing their students work as a team to get tasks done; getting outside and working in a garden environment; and seeing their students help in a community



**Figure 4.** Teachers’ favourite aspects of the CCG events in Spring and Fall 2019 (Q7, Appendix A).

initiative. Favourite aspects were equally distributed among the five Spring 2019 participants, while the Fall 2019 group favoured the topics discussed with the students (Figure 4).



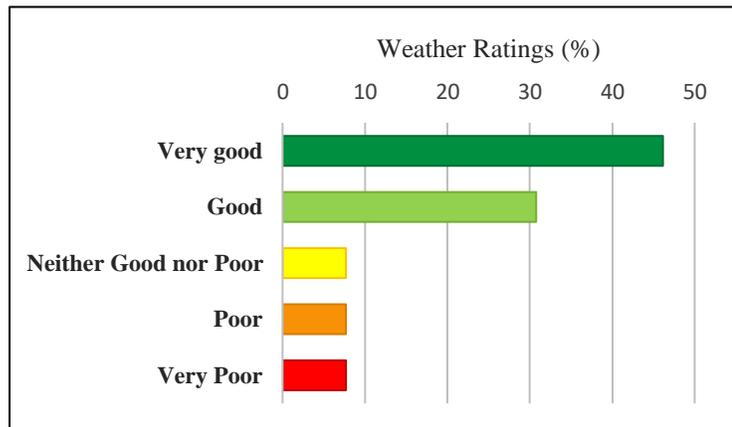
**Figure 5.** Teachers’ least favourite aspects of the CCG events in Spring and Fall 2019 (Q8, Appendix A).

When asked about the least favourite aspects of the experience, approximately one-third of the teachers stated that it was difficult to keep students motivated throughout the duration of garden activities. Two participants (one in each season) mentioned inclement weather conditions as most unfavoured (Figure 5). Fall participants mentioned other problematic aspects such as having to

pay for supply teachers and being unsure if all the information shared was relevant to young gardeners.

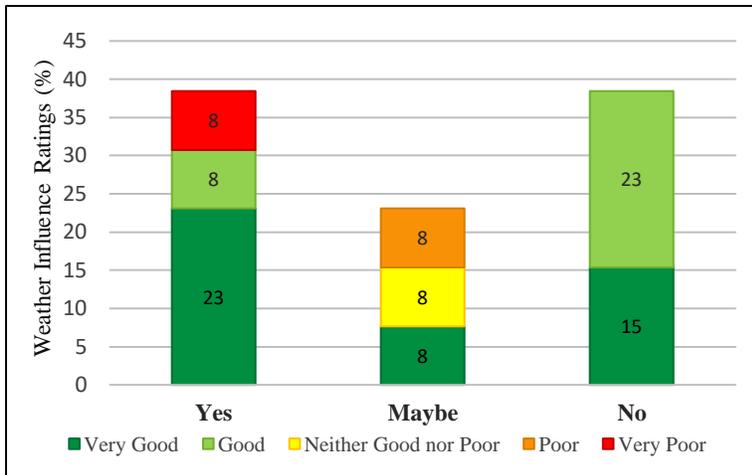
### Influence of Weather

Most of the participants experienced agreeable weather conditions during their visit(s) to the CCG, with 46% of participants rating the weather as ‘very good’ and 36% rating it as ‘good’. Three of thirteen participants (24%) rated the weather as ‘neither good nor poor’ or worse (Figure 6). The Fall 2019 participant that rated the weather as ‘poor’



**Figure 6.** Weather ratings for all 2019 CCG youth events (Q3, Appendix A).

described it as rainy in other sections of the survey. Similarly, the Spring 2019 participant that rated the weather as ‘very poor’ also described it as very cold that day in other sections of the survey.



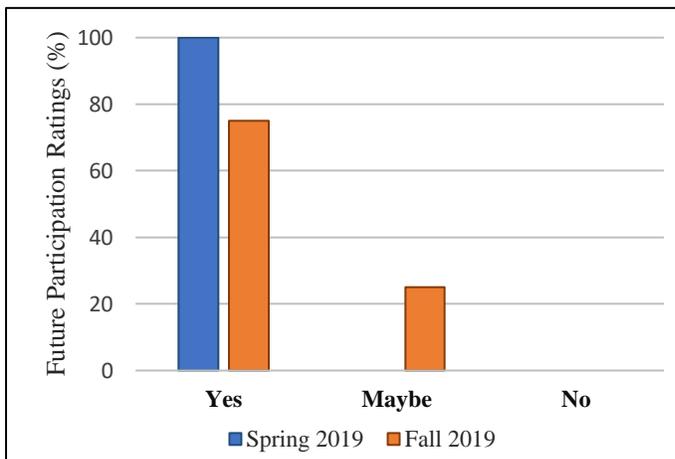
**Figure 7.** Teacher responses when asked if the weather influenced the quality of the experience (Q4, Appendix A). Columns divided into the respective weather ratings indicated in the previous question (Q3, Appendix A).

The weather may have influenced the overall experiences of the student groups in the CCG. Survey results indicated that 38% of all 2019 participants answered ‘yes’ it did in fact influence the experience, 38% answered ‘no’, and 23% answered ‘maybe’ (Figure 7).

While equal percentages of participants answered ‘yes’ and ‘no’, there were noticeable differences in how these respective

participants rated the weather; those that experienced moderate to very poor weather conditions all thought that the weather did or maybe did have an influence on the experience. In contrast, only those that had ‘good’ or ‘very good’ weather stated that they did not think it had an influence (Figure 7).

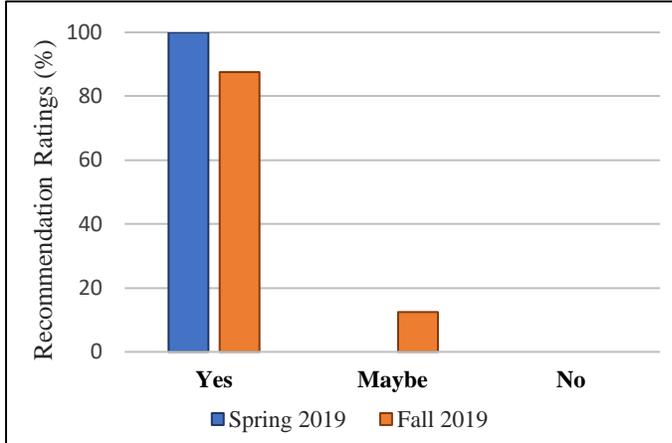
### Future Participation and Recommendation



**Figure 8.** Teacher responses when asked if they would like to return to the CCG in Spring 2020 (Q11, Appendix A). Columns indicate answers from Spring (n=5) and Fall (n=8) 2019 participants.

The teachers expressed considerable interest in returning to the CCG in the future. All Spring 2019 participants responded with ‘yes’ when asked if they would be interested in returning in Fall 2019. When asked if they would return to the CCG in Spring 2020, all spring participants said ‘yes’, while 75% of fall participants said ‘yes’ and 25% said ‘maybe’ (Figure 8).

The majority of teachers were also open to recommending the CCG experience to other



**Figure 9.** Teacher responses when asked if they would recommend the CCG to others (Q9, Appendix A). Columns indicate answers from Spring (n=5) and Fall (n=8) 2019 participants.

colleagues. All five spring participants said that they would recommend the CCG. The vast majority (87.5%) of fall participants said they would recommend it to their colleagues.

Positive recommendations were based on multiple reasons, such as the opinion that the event was a great way for students to get involved in community initiatives, it was a good way to spend time out in nature, there was great information and fun games, and the event was very

well-organized.

### Other Commentary

Three of five Spring 2019 participants mentioned other things that could improve the overall experience at the CCG. One teacher commented that most students have very little experience pulling weeds in the garden, and more instruction of what plants to pull as well as how to pull them could benefit the students and help them work more efficiently. Two teachers mentioned that it may help to give a specific end goal to the student groups and have them work towards it.

In Fall 2019, six of eight participants offered suggestions for areas of improvement. Two teachers mentioned wanting to know more about the community aspect of the garden, such as how the university volunteers got involved as well as wanting to meet the people that benefit from the CCG (e.g. plot holders, shelters that we have donated to, etc.). Two teachers cited improvements to the information session/tour (which they had mentioned in previous answers), including a more interactive discussion and pre-learning opportunities such as a ‘lunch-and-learn’. One teacher mentioned that they would like us to provide more connections for future volunteer opportunities.

The last teacher mentioned that they would like to see an agenda of activities before the event, so they know what needs to be done.

## **Conclusions and Discussion**

According to the results of this survey, the CCG staff and volunteers have successfully created a rewarding garden experience for high school students and other youth groups in 2019. Teachers have expressed a lot of interest in returning to the CCG in the future. In fact, three teachers who had visited in Spring 2019 came back in Fall 2019. We have made significant strides in strengthening connections with these teachers, helping solidify our network of garden volunteers for the years to come.

The survey indicated that most teachers are also motivated to make positive recommendations to their colleagues. In point of fact, the teacher that brought their local Westview Academy class in Spring 2019 recommended the CCG to the teacher who took over that class subject in Fall 2019. That new teacher brought their class to the garden in the fall and plans to return in Spring 2020. Recommendations such as these are a vital component of expanding the CCG volunteer network.

While the ‘educational tour’ portions were highly informative, they often took a substantial proportion of time allotted for the events. Student groups typically had 1.5 hours in the garden, and the tour took about 20 to 30 minutes on average, accounting for one third of the event. Pre-learning opportunities would likely minimize the time needed for the introductory tour and allow for more hands-on time in the garden. These opportunities would also facilitate a deeper educational experience for students who visit the CCG. Videos in particular may be useful to introduce complex concepts such as pollination, food security, and sustainability, which students may not be familiar with when they come to the garden. The CCG garden attendant/youth coordinator completed an educational video at the end of 2019; this will be a valuable pre-learning resource that can help familiarize students with the CCG and important concepts so that they may be more prepared to discuss and expand upon their knowledge while in the garden.

During the 2019 year, the YMAP newcomer youth group visited the CCG. Language barriers made it difficult to communicate garden concepts to the students, which affected their

learning experience. According to suggestions in this survey, translators may play a key role in helping overcome communication barriers experienced by newcomer youths who visit the CCG. We may be able to provide translators by looking to the international university students who have enthusiastically volunteered in the 2019 youth events. The CCG has been working to formalize its affiliations with the University of Windsor International Student Center (ISC), which may help bolster participation in the garden and possibly provide a consistent source of translators for youth events. This affiliation with the ISC can help break down current barriers and promote better communication and learning experiences of newcomers in the CCG.

It is important to note that organizing translators for newcomer youth groups may be challenging because these groups have open attendance and thus an element of unpredictability (e.g. some days zero students show up to the youth programs). This unpredictability makes it logistically difficult for youth group coordinators to plan events, and oftentimes leads to cancellation or rescheduling. More active rapport with youth group coordinators may help general planning go smoothly and reduce the instances of event cancellation.

In terms of student productivity in the garden, teachers suggested that students may benefit from an itinerary with clear outlines of their tasks to complete in the garden. During youth events, students were split into small groups and were assigned one or more university volunteers who were responsible for outlining their specific tasks and monitoring their completion. In many cases, students were given a large task with a clear objective (e.g. completely free up the currant bushes from the overgrown mint and weeds). Such tasks may have been more satisfying to work towards because there were tangible differences before and after their work. However, there were circumstances in which students were given multiple smaller tasks (e.g. pick up garbage and recyclable material from around the garden, pull weeds from a smaller area). Once students completed those tasks, they had the tendency to become distracted and split off into smaller groups. Perhaps it would be more rewarding for students if they were to complete larger tasks during their time in the garden whenever possible and feasible.

Students also seemed to lose focus and motivation partway through their activities, regardless of the size of their tasks. Survey results indicated that students tended to not enjoy weeding and getting picked by thistles, which may have affected their motivation during these

activities. Since routine weed pulling is of the most paramount tasks in garden maintenance, creative solutions are needed to keep students engaged in this activity. Perhaps an additional learning experience (e.g. educational game) or a short break halfway through their work period could help break up the monotony of garden tasks and give students an opportunity to rest and regain motivation to continue their work afterwards.

It is also imperative in moments of distraction that leaders help students stay on task, and quickly give them other tasks if they have completed their work. Monitoring students has proven to be more challenging with larger groups of 25-30 individuals, and volunteers with strong leadership and communication skills are required to ensure that students are focused on doing their work. There were multiple occurrences in which volunteers lost track of their assigned students and continued to work alone in the garden tasks. This may have been caused by lack of previous leadership experience or an unclear outline of their responsibilities as leaders prior to garden events. To help improve leadership and monitoring, the main youth coordinator needs to ensure that university volunteers show up at least 30 minutes prior to the event and then use that time to explain the volunteers' leadership duties, the tasks that they will oversee, and give them advice on how to assist and motivate the students. This pre-event debriefing was done for the latter half of the spring garden events and all fall events, and helped the volunteers monitor the students more effectively. It is important for the youth coordinator to continue de-briefing and training the volunteers to ensure that all youth events run smoothly.

Other teachers mentioned concerns that students have little prior experience with weeding and may need more help learning what plants to weed from the garden and how to properly pull them out. The youth coordinator has used the de-briefing periods as opportunities to show volunteer leaders what plants need to be pulled from certain areas, and advice on how to easily remove them. The volunteer leaders then must communicate that information to their assigned students. However, it may be beneficial for the coordinator to give the entire student group a demonstration of how to pull weeds and give examples of common weeds prior to the start of their activities. The youth coordinator started giving these demonstrations to the fall student groups, which helped them effectively pull weeds from garden beds. However, this demonstration added more time to the initial 'educational tour', and made it feel evidently longer to the students and teachers. The extra time allotted for weeding demonstrations will likely be offset by the use of the

educational video in the future, which will cut down time spent communicating other concepts to the students.

Plant identification is also a valuable skill that helps volunteer leaders and students succeed in the garden. Typically, if the students and leaders have difficulty identifying a plant and whether it should be pulled, the youth coordinator is called over for assistance. While this assistance is feasible most of the time, it may be helpful to all parties if volunteer leaders were provided with a small laminated field guide of common weeds or plants that need pruning in the CCG. These field guides may help the students and leaders do their work more efficiently and provide further learning opportunities for students who are interested in browsing the guides.

Providing teachers with additional information about volunteer opportunities may increase the involvement of high school students and youth groups at the garden. Within the scope of the CCG, the teachers should all be provided our listserv and social media information, so they can be informed about our upcoming general volunteer workdays. This can open the doors for high school students to re-visit the garden and allow them to accumulate more volunteer experience.

Most of the groups experienced moderate to ideal weather during their visits to the CCG. One particular student group had to deal with cold weather, which occurred early in the year on April 11th, 2019. Another group in the fall experienced light rain. The survey results from this study showed that bad weather is most likely to have an effect on student and teacher enjoyment of the garden. It is important to prevent scheduling garden events too early in the spring (or too late in the fall) when the weather is uncomfortably cold. It is also essential to continue scheduling rain dates in the case of extreme inclement weather. There were two events that were rescheduled due to forecast thunderstorms in Spring 2019; the pre-determined rain dates helped to ensure better weather and more enjoyment experienced by the student groups.

In summation, the CCG staff and volunteers successfully provided meaningful and educational experiences for the students and teachers that visited in 2019. The majority of these contacts are interested in future collaboration with the garden. With careful planning around weather conditions, additional resources (i.e. educational video, translators, and common weed field guides), and a stronger emphasis on effective leadership and weeding skills, we can better

meet the needs of youths and facilitate deeper learning and fulfillment for groups that visit the Campus Community Garden in the future.

## **Appendix A. Full Survey**

The survey questions and answer options are outlined below.

**Q1. In your estimate, how many students were present during your visit to the Campus Community Garden?**

A1. Open-ended answer (numeric)

**Q2. How would you rate the students' learning experience at the Campus Community Garden (CCG)?**

A2. Rating scale: Very satisfactory; Satisfactory; Neither satisfactory nor unsatisfactory; Unsatisfactory; Very Unsatisfactory

**Q3. How was the weather during your visit to the Campus Community Garden?**

A3. Rating scale: Very satisfactory; Satisfactory; Neither satisfactory nor unsatisfactory; Unsatisfactory; Very Unsatisfactory

**Q4. Did the weather conditions influence the quality of students' experience at CCG?**

A4. Multiple choice: Yes; No; Maybe

**Q5. What activity did your students enjoy the most?**

A5. Open-ended answer (text)

**Q6. What activity did your students enjoy the least?**

A6. Open-ended answer (text)

**Q7. As a teacher, what part of the trip did you enjoy the most?**

A7. Open-ended answer (text)

**Q8. As a teacher, what part of the trip did you enjoy the least?**

A8. Open-ended answer (text)

**Q9. Would you recommend the CCG visit to other teachers? Please explain your answer.**

A9. Multiple choice with explanation: Yes – explain; No – explain; Maybe – explain

**Q10. Would you be interested in bringing your students to the CCG in Fall 2019?**

A10. Multiple choice: Yes; No; Maybe

**Q11. Would you be interested in bringing your students to the CCG in Spring 2020?**

A11. Multiple choice: Yes; No; Maybe

**Q12. How could we improve the overall CCG experience for you and your students?**

A12. Open-ended answer (text)

**Q13. How could we better facilitate students' learning about food security/sustainability, permaculture, and environmental sustainability?**

A13. Open-ended answer (text)

**Q14. If you have any other comments you would like to share regarding the CCG visit, please write them below.**

A14. Open-ended answer (text)