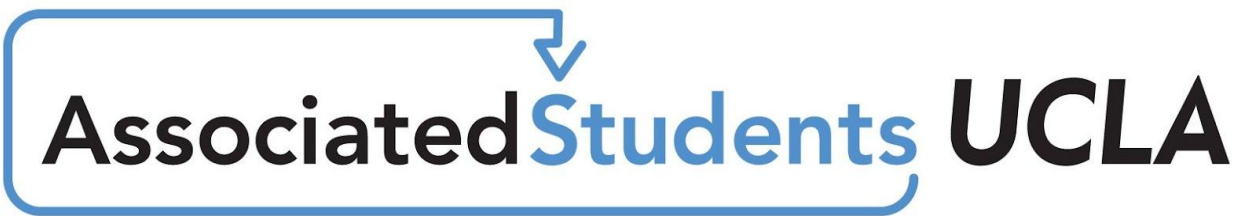


# ART ASUCLA FINAL REPORT 2012



*It all comes back to you!*

## **ASUCLA Action Research Team 2012**

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## Executive Summary

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The ASUCLA Action Research team was one of several of the Education for Sustainable Living Program's teams that set out to improve areas of sustainability on campus. Our team, in particular, was charged with the task of improving sustainability within ASUCLA, the associated student organization at UCLA that operates a number of stores and dining facilities on campus. Initially, our team was asked to research on energy efficiency at ASUCLA facilities. However, sparked by a drive to move the campus towards a zero-waste goal, we focused on implementing a pilot-composting program at Lu Valle. Due to some administrative difficulties, we were unable to continue with our initial objective, and finally settled our focus on recycling at ASUCLA facilities.

Our team has been focusing on improving recycling at Lu Valle and educational outreach about what is or is not recyclable, and determining the most effective way to encourage people to compost and recycle their trash. After evaluating the two trash and recycling systems that UCLA and ASUCLA implement separately, we deemed that a more cohesive and effective way to encourage comprehensive recycling would be to have only one unified system, preferably with clearer wording and signage. In order to understand how students felt about the issue of standardized recycling signage across campus, we conducted a survey to gather student thoughts and attitudes towards recycling on campus.

Our findings showed that the majority of UCLA who took our survey wished to see clearer bins and signs at the ASUCLA restaurants. Ideally, our team would have liked the opportunity to switch the ASUCLA bins at Lu Valle Commons to the campus wide bins, test the effectiveness of new signage by running audits before and after the switch, and eventually implement this universal system in all ASUCLA facilities. However, due to budgetary and time

restrictions, our project scope focused mainly on research and education routes to address the concerns students had with the system, as expressed in the surveys. This focus on education also included raising the general education level of students in regards to recycling, which we addressed by compiling all the data and research we had collected over the course of the two quarters into a flyer (Appendix F), which will be passed out to every new student next year. In this way, the research we have gathered will extend to the student body and hopefully make a difference in student recycling on campus.

## **Objectives and Project Goals**

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Our team has gone through many transformations from what our project scope initially started from. ASUCLA was very enthusiastic about the need for an Action Research Team, and our research on various projects have eventually lead to our final research on recycling systems. We started researching energy monitoring in Kerckhoff and Ackerman, hoping to base our study on the previous Action Research Team that monitored energy usage on the Hill. However, after researching implementation methods, it was deemed too large a project and our research could be better facilitated within a different sector of ASUCLA. Instead, we researched composting in ASUCLA dining facilities and coordinated our research with the Waste Watchers team. Because of budgetary and time concerns, as well as doubts about student interest in composting, it was determined by the ASUCLA board of directors that while composting is a promising route to reach UCLA's goal of zero waste by 2020, it would not be feasible at the present time. After creating surveys about composting, our project scope was shifted to the recycling systems of ASUCLA, specifically evaluating its effectiveness and comparing the dining system to the

campus-wide system. This is the specific topic that our evolving research has landed on and we have concluded with important findings and results.

In order to determine the students' opinions about any proposed changes to the current trash and recycling program at UCLA, we decided to conduct a survey. Our survey questions had been continuously revised over the course of five weeks. They were updated to reflect the scope of our project and changed to include both composting and recycling. The surveys have greatly helped us research appealing and effective signage opinions and gave us important student information by testing their composting and recycling knowledge. Finally, after careful consideration and revision with both the ART directors and stakeholders, we released the survey third week of spring quarter to see a total of about 350 surveys filled out. The questions included a number of different topics, and attempted to gauge the student body's general knowledge of recycling, as well as determine whether students would prefer a single unified bin system and new signage to the bins that ASUCLA currently has in place.

Along with our survey questions, we also researched different compost signs and tried to understand the difference between effective and ineffective signage. We found that the most useful signs at other universities like UC Davis tended to have more visually appealing images, rather than being too wordy. Also, it was critical that the signs indicated specifically what could go where. We considered putting up pictures of the individual, specific items from Lu Valle that could be recycled and composted above the bins, or even pasting the food containers and other various trash/recyclables on the poster, so that it was even clearer. In addition, we want to put signs inside Lu Valle so that the students are reminded to recycle and compost as they eat. Furthermore, after evaluating our surveys and conversing with our stakeholders, we decided to

add an educational component to our project by providing information about recycling through flyers.

Since this is the first time that ASUCLA has attempted to implement a composting program on campus, it was necessary to increase our own knowledge of composting and examine existing programs at other universities to provide guidance for our project. By evaluating the success and challenges that similar projects faced in the past, we would need to evaluate any avoidable difficulties.

Students at the University of California, Davis installed a composting program in the Memorial Union Coffee House, paralleling our original plan at UCLA's Lu Valle Commons. Their website provided examples of their signage, suggesting which aspects of the posters which were the most helpful and clear.



(The different bin signs at UC Davis Memorial Union Coffee House)

The students provided the percentage of contamination documented from the composting bins. In addition to this, they recorded which item was placed in the incorrect bin most often. Utensils

were most frequent, followed by food wrappers. Their findings concluded that they could improve their signage by explicitly identifying which items go in which container, to increase the clarity of the label. The analysis of the project at UC Davis emphasized the importance of relaying as much information about composting to the users. We will be using this analysis, as well as our own surveying and research on campus, to determine the best course of action for the future of ASUCLA's recycling project.

## Background

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UCLA is committed to reaching the goal of having zero waste going to landfills by the year 2020. In order to accomplish this ambitious step towards sustainability on campus, the entire community must have a waste disposal system that is clear and easy to understand. Currently there are several different kinds of waste disposal bins on campus despite the fact that all of the waste ends up being picked up by the same waste collectors.

At ASUCLA facilities, there is a two-bin system: one for trash and the other for recyclables. The recycling bins have green lid with two small circular holes and a label that identifies recyclables as glass, aluminum, and plastic, with photos exclusively of bottles.



(The recycling and trash bins and recycling signs at ASUCLA facilities)

The first problem with these labels is that ASUCLA facilities are capable of recycling paper products, such as the paper plates, bowls, and cups at many of the on-campus restaurants.

Additionally, the circular holes on the top of the lids are too small nor an appropriate shape for many of the recyclable food containers sold at Lu Valle and other ASCULA restaurants.

The alternate two-bin system found campus wide has a bin for all recyclables and a bin for non-recyclable trash. These bins are currently being updated to eliminate any possible confusion with the previous labels to now read, “All Empty Recyclables” and “Non-recyclable Trash.” After surveying over 350 students, there is clear support to the updated recycling efforts on campus. Students wish to promote sustainability through recycling, but many lack the proper knowledge concerning recycling.

## **Initial Conditions**

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Our project began with the knowledge that we would be working to improve an area of ASUCLA sustainability, and branched out from the fact that UCLA has a zero-waste by 2020 goal in place. At first, our team’s project was to evaluate and improve the energy efficiency of ASUCLA facilities, and to encourage energy conservation. However, that project proved to be too large an endeavor to take on, and we began looking at ways to redirect waste from landfills instead.

The Waste Action Research Team had approached ASCULA about the possibility of implementing a composting program in Ackerman and other places on campus that fall under ASUCLA jurisdiction. We had a meeting with both teams and both stakeholders - Karen Noh, the ASUCLA Special Projects Director, and Nurit Katz, the UCLA Sustainability Coordinator, to discuss the possibility of splitting the project between both teams. At the end of the meeting, it was decided that the educational portion of the project would fall to the ASUCLA team, while the Waste Team would deal with the logistics and operations of the project, such as creating a



large composting bin behind Sunset Rec. However, a week before the end of the quarter, we learned that our composting pilot was turned down by the ASUCLA Board of Directors, and we decided to pursue a recycling pilot instead.

As we transitioned to focusing on a recycling program at Lu Valle, we were able to use a significant portion of our information that we gathered from researching composting programs with regards to effective signage, and methods of education. We altered our survey to address recycling, and began researching what and how UCLA recycles. From there, we were able to successfully collect responses from over 350 students, and compile helpful information for our educational flyers which aim to clear up the common misconceptions of students.

## **Research Methodology**

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Our team has been focusing on improving recycling at Lu Valle and educational outreach, which included educating students and faculty about what is and is not recyclable and determining the most effective way to encourage people to compose and recycle their trash. Some of the ideas to enrich education included making brochures to be distributed to students so that they are knowledgeable about proper recycling habits. Our educational plan branched off from the results of the surveys we had conducted, which helped us in determining the best course of action for our project.

We researched different signage that other schools implemented for their composting and recycling programs. This enabled us to have a solid baseline of knowledge about what would be most effective if we were given the liberty to redesign our system. However, since this would be a very costly and large undertaking, we decided to either implement the campus wide system into ASUCLA dining facilities, or keep the current system in place.

We conducted our surveys through SurveyMonkey, and asked questions about recycling knowledge, opinions on bins and signage, and separating food and containers before throwing them away. We also performed a waste audit at Lu Valle Commons, by sorting through the trash in both the recycling and trash bins based on whether or not they were recyclable, in the right bin, or could be recycled with new signs and bins. Finally, we created a flyer with a list of what is and is not recyclable, which compiled all the data and research we had found and which we plan on distributing to students.

## **Data Results and Analysis**

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Through our survey, we determined that students are making a conscious effort to recycle. Of the students surveyed, 80% stated that they recycle regularly, and less than 2% did not recycle at all. However, we also determined that students are, in general, confused about what is actually recyclable. While nearly all students knew that paper, plastic, cardboard and glass are recyclable (98%, 97%, 86%, and 88%, respectively), people seemed to be more confused about the less common recyclable materials. Pepsi cups, in particular, confused students, and while 55% knew that it could be recycled, over a third of the students surveyed, at 37.2%, would have thrown it in the trash. The rest were unsure either way.

Surprisingly, a high number of students already separate their food and recyclable containers when disposing of them. Approximately 53% of students stated that they always separate their food and containers, and 40% stated that they sometimes do. This was validated by the fact that 67% of students said that if they had a plastic container with food in it, they would throw their food in the trash and their plastic container in the recycling bin. Only 7% of the students surveyed stated that they never separated their food and containers. However, almost

93% of students claimed that they would be willing to separate their food waste from their recyclable containers when throwing them away. The main reason students said that they would not separate their food and containers was a matter of convenience and time.

We also wanted to look at the two different signs that were on the bins at ASUCLA facilities and around campus, and determine students' opinions about them. Of the students surveyed, an overwhelming 85% stated that they would prefer the "campus-wide system" to be used at all ASUCLA facilities instead of the current bin system. In addition, nearly 74% of students preferred the proposed changes to the campus-wide bin signs.



(The current campus-wide bin signs and the proposed changes)

After determining that students overwhelmingly preferred the campus-wide bin signs to the ASUCLA bin signs, we performed a waste audit at Lu Valle Commons to see whether or not making the switch would actually benefit the recycling program. Our audit involved sorting

through the trash at Lu Valle and determining what, in each bin, was currently recyclable, what was trash, and what could be recycled if the bins and signs were changed. The results were strongly in favor of the change. All of the material found in the recycling bin was actually recyclable material, meaning there was no contamination. However, there was significantly more waste in the trash bins than the recycling bins, even though 5% of the materials found in the trash can should have been recycled according to the bin signs currently in place. Most importantly, nearly 24% of the trash in the trash can could be recycled if the bin signs allowed for more materials to be recycled beyond just plastic and glass bottles.

Although we were unable to follow through with our composting pilot, we still conducted our composting survey, which will hopefully serve as the foundation for next year's team. From that survey, we determined that the majority of students either have never composted before (41%), or tried and stopped (35%). Most of the students who tried composting and stopped stated that it was because it is not offered on campus, and composting in dorms is too challenging to be feasible. However, even though most students do not compost, students generally have a high level of knowledge about what is compostable.

Over 83% of students on campus expressed interest in installing composting bins around campus, and less than 3% opposed it. Those that did oppose the idea of composting bins on campus mainly attributed their opposition to confusion over what goes in which bin, a lack of time to actually separate their waste, or a fear that composting sites would smell. The majority of students that expressed interest in composting stated that they would be more likely to compost if there were clear and easy to understand signs and conveniently located bins (88% and 87% respectively), and over half of them also claimed that further education about composting would increase the likelihood of their willingness to compost.

In light of the fact that UCLA has a zero-waste goal in place for 2020, nearly 78% of students believe that a lot of emphasis should be put on establishing composting on campus. Approximately 21% believe that a little emphasis should be put on it, and less than 1% said none at all. Similar to the question in the recycling survey, an overwhelming 94% of students stated that they would be willing to separate their food and containers before throwing them away.

## **Key Findings**

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Our recycling survey provided us with a good insight into the minds of the student body regarding their knowledge about recycling as well as their recycling habits, and our research and analysis of the current bin systems helped us understand the criteria needed for effective recycling programs. Both the campus-wide recycling system and the ASUCLA recycling system had their strengths and weaknesses. Both systems were successful in terms of providing easily accessible recycling bins on campus alongside any trash bins, effectively encouraging people to consider which bin to put their waste in before they threw it away. However, they both fell short in other areas. For example, the campus-wide recycling system recycled a variety of materials, but it tended to be confusing for students to understand and determine what goes in which bin, whereas the ASUCLA system had extremely clear signs on the bins and lids that reinforced the signs, but it did not allow as many materials to be recycled.

While we were encouraged that the majority of students do know what is recyclable, we determined that there is still room to educate students and increase the potential of the campus recycling program. We found that while students may be confused about what is recyclable, they are extremely willing to adjust their habits in order to maximize the amount of material being recycled. One of the main reasons why so many recyclable materials are found in the trash is that

people are throwing away their recyclable containers with food in the trash. The fact that the majority of students are willing to separate their food and recyclable containers before throwing them away in their respective bins effectively eliminates this problem. In addition, we found that most students prefer having a consistent recycling program on campus, including at the ASUCLA facilities, and most students prefer the new bin signs to the current ones.

## Recommendations

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Because our project had evolved to mainly a survey and educational research project, our group has set up the foundation for many potential future projects. Our composting survey, which indicated that over 83% of UCLA students surveyed would like to see composting bins on campus, could set the groundwork up for compost support in the future. In this particular year, our composting project was turned down due to a perceived lack of student interest in composting, a belief that hopefully our survey will dispel in the future.

Our recommendation to ASUCLA at this point is to change the lids on the recycling bins to allow for more materials like bowls and clamshell containers to be recycled, and to change the signage for the bins to be more closely related to the on-campus recycling program, rather than having students adjust their recycling habits depending on where they are. We recommend making sure these signs are clear and easily understandable, and if possible, having pictures or lists of what is recyclable at each location would be ideal. Rolling out these changes to all ASUCLA facilities would be the next crucial step.

In addition, our research team's survey regarding student attitudes lays a foundation for future work with recycling bin changes on campus. In the future, hopefully the next research team will be able to secure adequate funding in a timely manner, which can enable them to

change the bins at the ASUCLA restaurants, and then track the progress and effectiveness of the switch. Hopefully, early funding as well as proof of student interest in composting and student confusion about the bins will enable the future team to overcome obstacles that we faced this year.

The next team could also work to co-program with other environmental groups to get better assistance in terms of outreach. Contacting other student groups like E3 and EARTH and asking them to promote our survey could be helpful in attaining more survey responses, generating more educational content, and reaching out to a wider student population. Furthermore, communication between stakeholders of different projects in the future should be well established. This year, we found that rapid, effective communication between our stakeholder and the team was essential for success - future teams should ensure that this happen as well.

Due to the research and surveying our team did this year, follow-up teams in the future have the ability to take our project in many different directions. One may choose to work more on getting composting on campus, while another may choose to ensure that the ASUCLA bins are changed and replaced. As a recommendation to our stakeholders, and the future stakeholders of this team, we hope that regardless of the path that the future team takes, that they use our work to build a better future for UCLA. We also urge future ART teams and stakeholders to move quickly, as implementing composting and improving recycling is imperative for us to reach our fast-approaching 2020 zero-waste goal.

## Conclusion

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While our team initially got off to a rocky start, we were able to accomplish a lot within the two quarters of our ART project. Not only were our members able to learn more about composting and recycling - digging through trash at Lu Valle being one notable example – but we were also able to promote educational outreach methods and encourage students to learn about proper ways to recycle and eliminate waste in a way that is sustainable. With over 350 responses from our surveys, we were able to compile a comprehensive analysis about ways to make the process of recycling easier for students. Participating in the Earth Day Fair, we were also able to spread the word about our project and our overall goals.

While we were not able to meet all the goals we set out to do, because of time constraints and budgeting problems, we do feel that we have set the stage for other ART projects in the future that will be able to learn from our mistakes and carry on with the project. One of the future outlooks for our project is the overall implementation of sign changes that will be incorporated into the recycle bins at Lu Valle and hopefully expand to other ASUCLA facilities on campus. Our ultimate goal is to help achieve UCLA's goal of zero waste by 2020. We hope that what we have accomplished these past two quarters will be a starting point for future action research teams to build off of. Overall, this project has had wonderful potential and we hope to see it flourish and grow throughout the years.



## Appendices

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### Appendix A: List of Recyclables

#### Cans & Foil

- Aluminum beverage cans and aluminum food cans (e.g. cat food cans)
- Steel/tin food and beverage cans
- Clean aluminum foil and foil food trays

#### Glass

- All glass bottles and jars (mayonnaise, apple juice bottles, wine bottles, etc.)
- CA redemption bottles (beer, juice, wine coolers, etc.)

#### Plastics

- Plastics Numbered 1-7
- Water/Juice/Soda bottles
- Food Containers
- Milk and water jugs
- Pepsi cups
- Detergent/cleaning product bottles
- Personal care bottles
- Plastic Shopping Bags

#### Paper

- Newspaper (including inserts)
- Office paper (white and colored)
- Computer paper
- Corrugated cardboard
- Cardboard boxes and paper bags
- Phone books
- Magazines and catalogs
- Food/detergent boxes
- Office mix (file folders, fax paper, envelopes, advertisements, flyers, etc.)
- Junk mail, bulk mail, and scrap paper
- Paper bound with non-water soluble glue (paperback books, hardback books, overnight mail packages, etc.)
- Milk cartons (clean and rinsed)
- Aseptic Packages (juice boxes)

**One key important thing is we want people to dump food and drink first in the trash so as not to contaminate paper.**

## Appendix B: Recycling Survey

1. What are your current recycling habits?
  - I recycle regularly
  - I try on occasion/when it is convenient for me
  - I do not recycle
2. If you responded to the previous question that you do not recycle, why not?
3. Do you separate your food and containers (paper, plastic, etc.) when throwing them away?
  - Yes, I always separate my food and containers
  - I sometimes separate my food and containers
  - No, I never separate my food and containers
4. Would you be willing to separate your food waste from your recyclable containers when discarding your waste?
  - Yes
  - No
  - Depends (please explain)
5. If you had a plastic container with some food in it, which bin would you throw it in?
  - All of it in the trash bin
  - The food in the trash bin, and the container in the recycling bin
  - All of it in the recycling bin
  - I don't know
6. If you had a paper plate with food residue on it, which bin would you throw it in?
  - The trash bin
  - The recycling bin
  - I don't know
7. If you had a wax-lined paper cup (Pepsi cup), which bin would you put it in?
  - The trash bin
  - The recycling bin
  - I don't know
8. There are currently multiple bins in place on campus. Here are photos of the “UCLA campus-wide” recycling and trash bins.



These bins are getting new labels.



Which bin labels do you find to be the clearest? OLD or NEW?

- OLD LABEL: “For everything except food waste” vs. “For trash with food waste only”
- NEW LABEL: “ALL EMPTY RECYCLABLES including empty paper, packaging, bottles, cups, cans, boxes and food containers” vs. “Non-recyclable TRASH ONLY”

9. Some ASUCLA Facilities have a different bin system. Here is a photo of the “ASUCLA” trash and recycling bins, as showcased at Lu Valle Commons.



Would you prefer the “campus-wide system” to be used at all UCLA locations, including ASUCLA restaurants?

- Yes
- No

10. Which of the following does UCLA recycle? (check all that apply)

- Paper
- Plastic
- Cardboard
- Glass
- Aluminum
- Batteries
- Ink cartridges
- DVDs
- Electronics
- Styrofoam
- Aluminum Foil
- Fruits
- Vegetables
- Meat
- Dairy

## Appendix C: Composting Survey

1. Have you ever composted before?
  - Yes, I compost regularly
  - Yes, I've tried it before but stopped because \_\_\_\_\_.
  - No, I have never composted before
  - No, I don't know what composting is
  
2. Rate your knowledge of composting 1-10 (1 no knowledge, 10, expert knowledge)
  
3. Which of the following can be composted? (choose all that apply)
  - Paper
  - Plastic
  - Glass
  - Aluminum
  - Styrofoam
  - Cardboard
  - Tinfoil
  - Fruits
  - Vegetables
  - Meat
  - Dairy
  
4. Would you like to see compost bins around campus, in addition to the trash and recycling bins?
  - Yes, I would love to have compost bins on campus!
  - Yes, it would be nice to have compost bins on campus
  - Sure, but I'm not sure I would use them
  - No, I don't want composting on campus
  
5. If you answered no to question 4, why not? (choose all that apply)
  - It's too confusing to remember what goes into which bin
  - I don't have the time to separate what I throw away
  - I don't believe composting makes a big difference.
  - I don't care about composting
  - Other:
  
6. Which of the following would make you more likely to compost? (choose all that apply)
  - Clear and easy to understand signs over bins
  - Conveniently located bins
  - More education about composting
  - Knowing the benefits that composting has on the environment
  - None - I just don't like composting
  - Other:

7. Our campus has a zero-waste goal for 2020. How much emphasis do you feel should be put on establishing composting on campus?

- A lot
- A little
- None

8. What do you already know about the benefits of composting? (shoose all that apply)

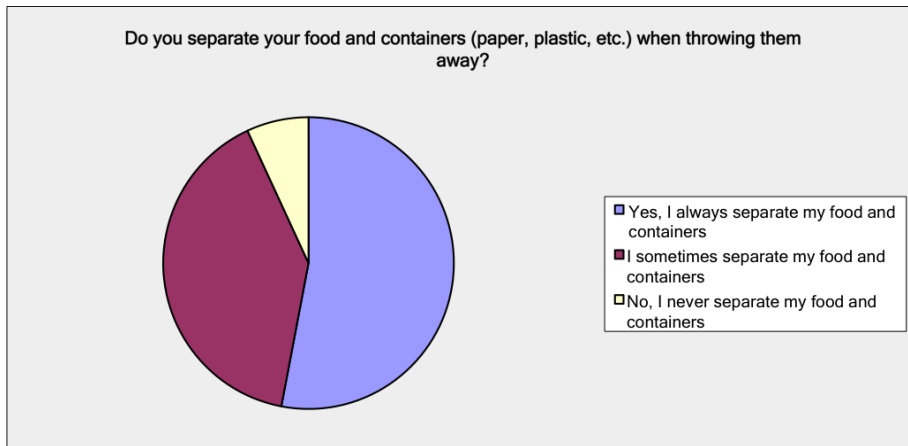
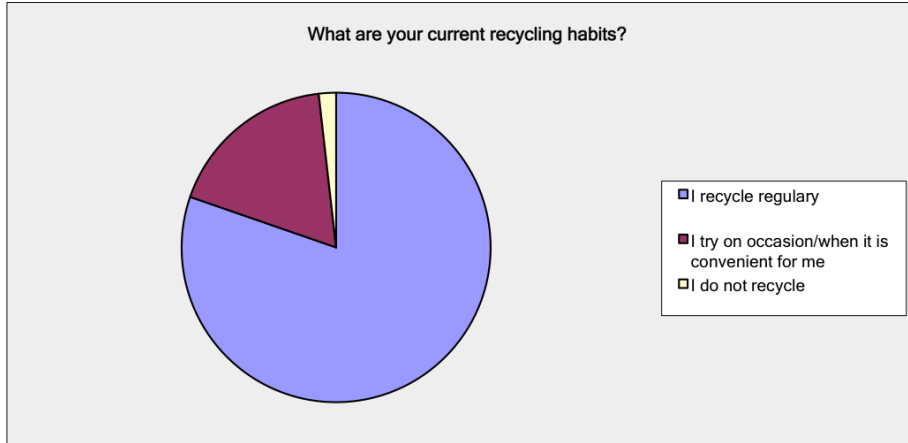
- Mature compost contains humus, which is very beneficial for plant growth.
- Compost cuts down on the amount of waste that gets directed to landfills.
- Many materials can be composted, like food products, green waste, and paper products
- Other:

9. Would you be willing to separate your discarded food waste from your plastic (recyclable!) containers when disposing your waste?

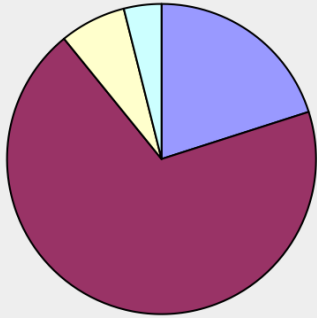
- Yes
- No
- Depends (state reason)

10. If you responded no to the previous question, please state your reason why you would not be willing to separate your discarded food waste.

## Appendix D: Recycling Survey Data

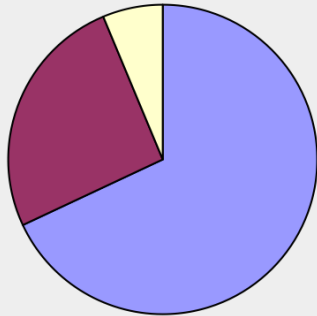


If you had a plastic container with some food in it, which bin would you throw it in?



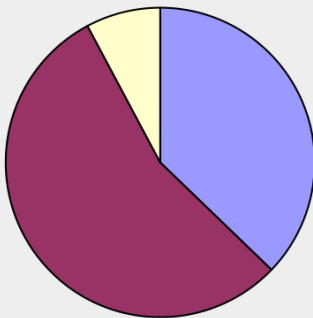
- All of it in the trash bin
- The food in the trash bin, and the container in the recycling bin
- All of it in the recycling bin
- I don't know

If you had a paper plate with food residue on it, which bin would you throw it in?



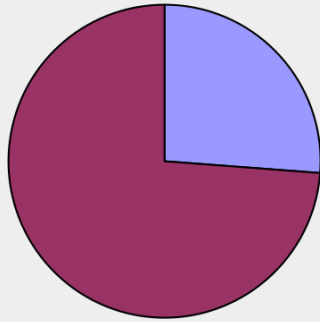
- The trash bin
- The recycling bin
- I don't know

If you had a wax-lined paper cup (Pepsi cup), which bin would you throw it in?



- The trash bin
- The recycling bin (after dumping any liquid)
- I don't know

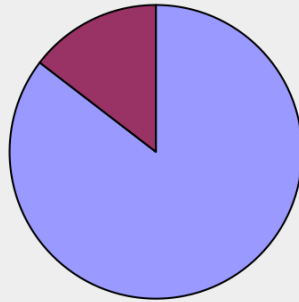
Which bin labels do you find to be the clearest? OLD or NEW?



■ OLD LABEL: "For everything except food waste" vs. "For trash with food waste only"

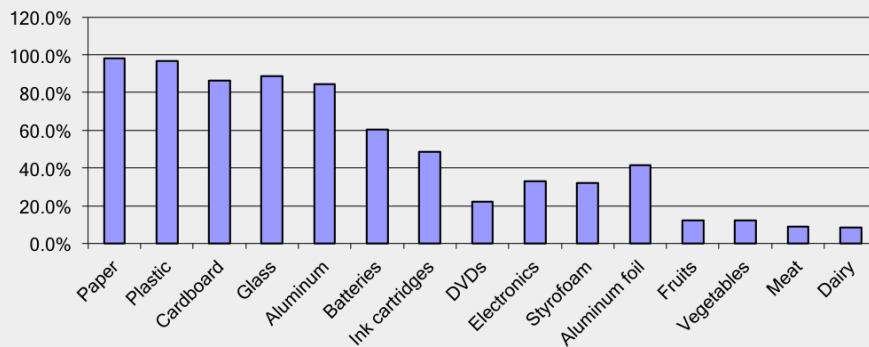
■ NEW LABEL: "ALL EMPTY RECYCLABLES including empty paper, packaging, bottles, cups, cans, boxes and food containers" vs. "Non-recyclable TRASH ONLY"

Would you prefer the "campus-wide system" pictured on the page above to be used at all UCLA locations, including ASUCLA restaurants?



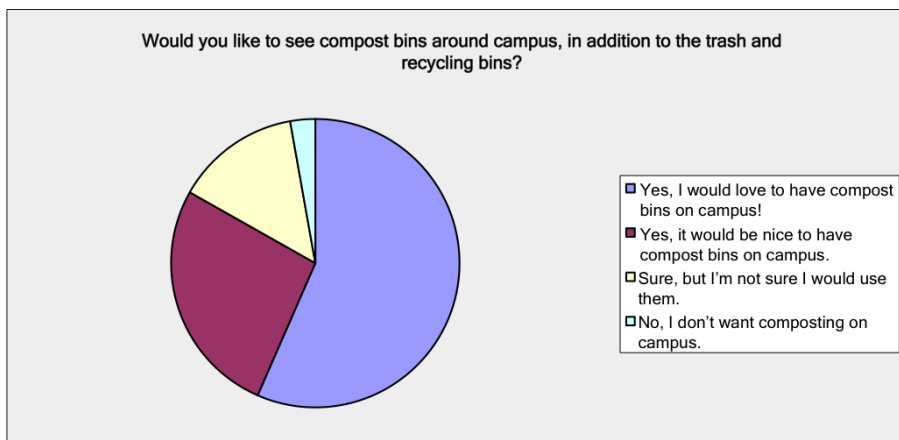
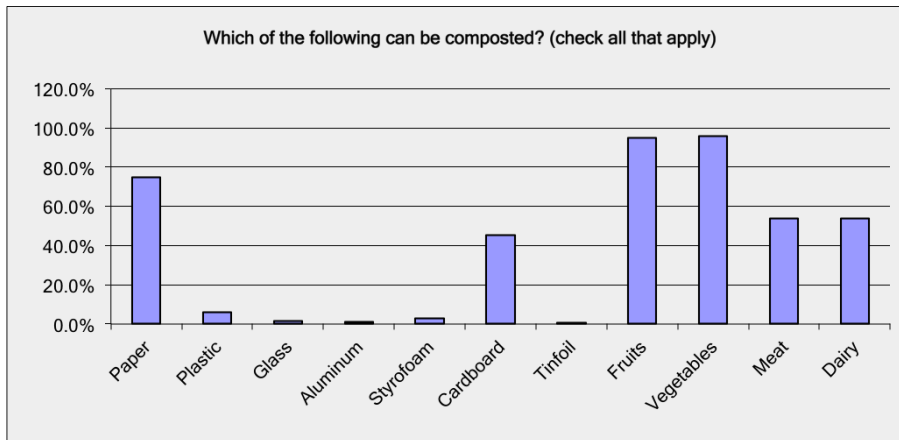
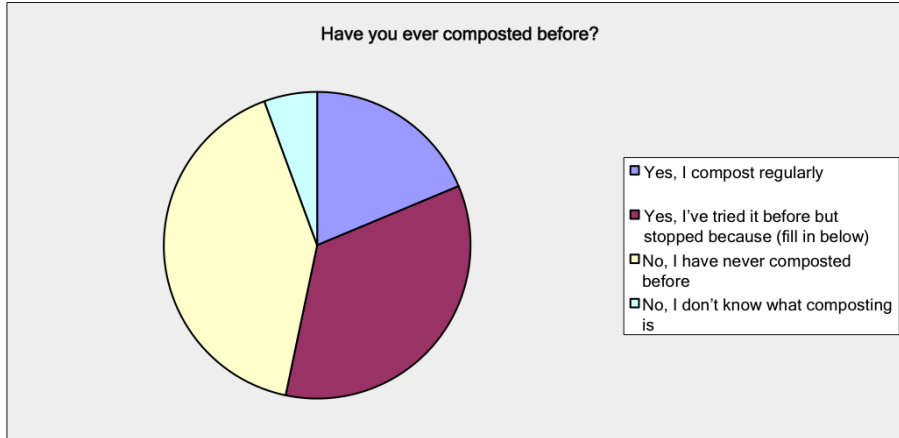
■ Yes  
■ No

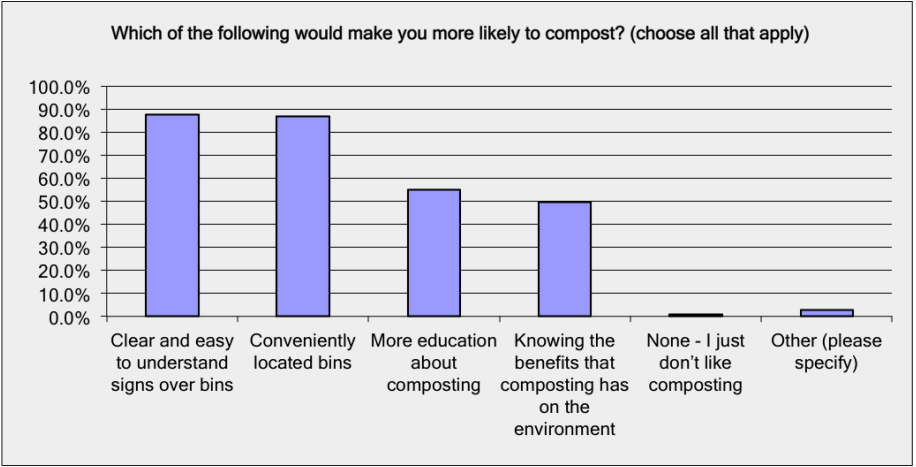
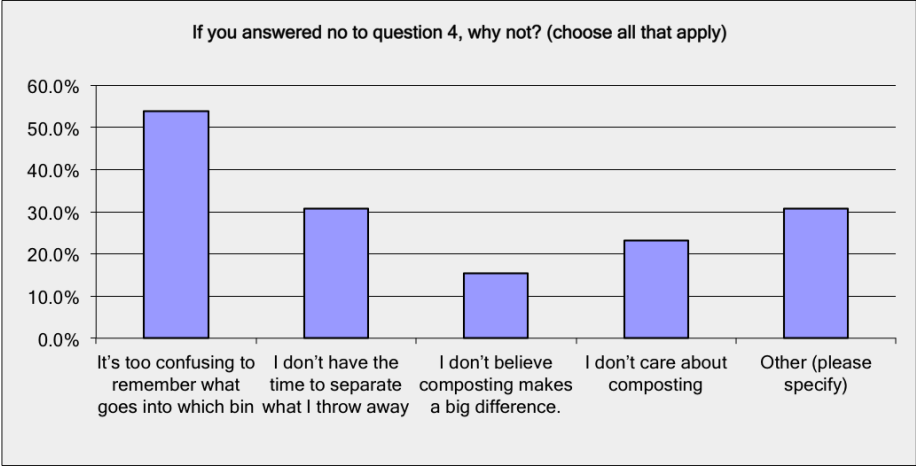
Which of the following does UCLA recycle? (check all that apply)

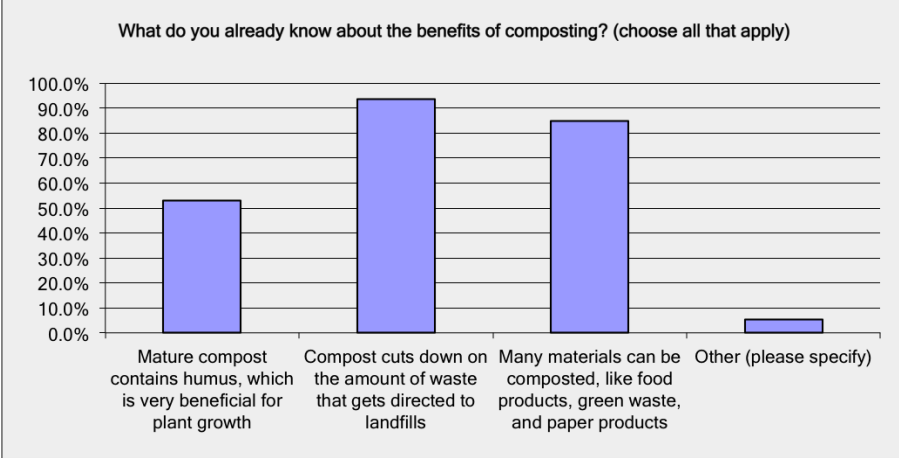




## Appendix E: Composting Survey Data







# TO RECYCLE OR NOT?

## RECYCLE IT

FOIL  
CANS  
PLASTIC  
GLASS  
PAPER



## TRASH IT

ANYTHING  
HEAVILY  
CONTAMINATED  
W/ FOOD,  
LIQUIDS,  
OILS, etc.



**REMEMBER TO DUMP FOOD &  
DRINK BEFORE RECYCLING**  
**RECYCLE PEPSI CUPS & PLASTIC BAGS!**  
**HELP THE EARTH!**



**WHEN IN DOUBT:  
IF IT'S EMPTY,  
RECYCLE IT!**