



# Use of New Media to Cause Recycling Behavior Change

(Summary Report)

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Infrastructure, Design, Environment, and Sustainability  
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## **Executive Summary**

The UNC Charlotte Office of Waste Reduction and Recycling in collaboration with the Environmental Assistance Office (EAO), the NC Department of Environment and Natural Resources - Division of Pollution Prevention and Environmental Assistance (NCDENR-DPPEA), and Mecklenburg County Land Use and Environmental Services (LUESA) Solid Waste Division conducted a study to track recycling behavior change after using new media in three residence halls on the campus of the University of North Carolina at Charlotte. The study aimed to increase recycling tonnage by enhancing positive attitudes towards recycling. It was hypothesized that upon receiving the new media intervention, students would use the information to influence others in their residence hall to recycle more frequently and that the recycling rate for these residence halls would increase accordingly. Residents from Cedar, Hickory, and Sycamore Halls were surveyed regarding their daily recycling habits, knowledge about recycling, and recycling choices. During the initial survey of students, recyclables from each residence hall were collected and weighed over a four week period to achieve a recycling behavior baseline.

In an attempt to increase recycling, the students who indicated a desire to participate in the project were emailed information about recycling from RE3.org. During February and March of 2009, the participants received four consecutive weekly emails from RE3.org providing links to social networking sites (Facebook.com and YouTube.com), reminding students to recycle, and asking participants to remind their friends to recycle. New media interventions were established with 27 students: 10 males and 17 females.

After four weeks of emails, a follow-up survey was conducted from March 30 to April 13 of 2009 to determine any attitudinal or reported behavior changes towards recycling. Additionally, the weights of the recycled materials from the three residence halls were again collected and measured for four weeks from March 30 to April 24 of 2009 to see if the amount of recycling in the residence halls had increased.

Before the first week of the study, no participants were fans of UNC Charlotte Recycling or the RE3.org page on Facebook. It is unknown if any were following RE3.org on Twitter or had seen the YouTube page prior to the study. At the end of the four weeks, one known

intervention participant had become a fan of UNC Charlotte Recycling, RE3.org's Twitter following nearly doubled in size throughout the study, and RE3.org's YouTube page saw an increase in visitors. While these social media trends could potentially correlate with the RE3.org weekly emails, they do not signify causation. It is still unclear as to the effects of using social media tools to instigate recycling behavior change.

Comparing the initial survey to the final survey showed a definite increase in the number of students from all three dorms who claimed to "always" or "frequently" recycle in their residence hall; however, the actual amount of recyclable material collected from Sycamore Hall decreased. In contrast, students from Cedar Hall and Hickory Hall increased the material recycled in their residence halls. The fact that residents at Sycamore Hall did not increase recycling behavior after the intervention could be attributed to the ineffectiveness of the intervention or a misrepresentation of the baseline data. Sycamore Hall was not perceived to be a high performance recycling dorm at the on-set of the project; however, the dorm's recycling rate was high before the intervention and therefore does not reflect a large incremental improvement. The large increase in recycling at Hickory and Cedar could be attributed to the new media intervention.

Educating students about recycling is important, however according to surveyed participants, the majority felt they possessed sufficient recycling knowledge and just forget to do it. The top reported recycling barriers identified in this study were:

- 1) Not thinking about recycling
- 2) Not recycling due to inconveniently located recycling bins.

Students stated they receive news and information via television (82%), the Internet (51%), and friends/family (66%) – two of which provide a perfect platform for the use of new media. Therefore, the continued use of this highly economical and demographically appropriate new media approach is recommended as a means of reminding students to recycle and facilitate influencing their peers to recycle, as well. Further studies on continuing to increase recycling on campus should focus on ways to remind students to recycle and the location of recycling bins.

## **Introduction**

The UNC Charlotte Office of Waste Reduction and Recycling in collaboration with the Environmental Assistance Office (EAO), the NC Department of Environment and Natural Resources - Division of Pollution Prevention and Environmental Assistance (NCDENR-DPPEA), and Mecklenburg County Land Use and Environmental Services (LUESA) Solid Waste Division conducted a study to track recycling behavior change after using new media in three residence halls on the campus of the University of North Carolina at Charlotte. The study aimed to increase recycling tonnage and positive attitudes towards recycling. It was hypothesized that upon receiving this new media intervention, students would use the information to influence others in their residence hall to recycle more frequently and that the recycling rate for the residence hall would increase. Residents from Cedar, Hickory, and Sycamore Halls were surveyed about their daily recycling habits, knowledge about recycling, and recycling choices. During the initial survey of students, recyclables from each residence hall were collected and weighed over four weeks to achieve a recycling baseline.

## **Location and Frequency of Recycling**

Dormitory residents were asked when, where, and how often they recycle. Convenience was the most important factor in determining when students will recycle; 47% of the surveyed students agreed that they “always” recycle when it is convenient. Twenty-nine percent said they “always” recycle when in their residence halls, but only 20% of survey respondents recycle with the same frequency on other parts of campus. This disparity between recycling at a residential hall versus recycling at other locations on campus was shown throughout the project. This suggests that recycling in the residence halls is more convenient than recycling throughout campus. When recycling bins are readily available, the majority of survey respondents (74%) say they are willing to recycle. When recycling bins are inconvenient, survey respondents (over 50%) reported that they were less likely to seek them out in order to recycle. Participants were also asked if others around them recycle, if they encouraged others to recycle, if they had knowledge about what happens to recyclable materials, and if they felt guilty when they did not recycle. The majority of respondents said they influence their peers to recycle and have knowledge about recycled materials. Participants’ reasons for recycling showed that they have some knowledge about their effects on the environment as well as the economic benefits of

recycling. The most common reasons why students recycled were because it helps the environment, was convenient, and saves money. In contrast, when students do not recycle, the most frequent reasons were because they simply did not think about it (47%) or it was inconvenient (37%).

### **Individual Dorm Recycling Behavior: Cedar Hall**

Forty-seven residents (of the 80 total residents of Cedar Hall) participated in our survey. As expected, convenience was the most influential factor with regards to recycling for those surveyed from Cedar Hall. Over 40% of those surveyed “always” recycle when convenient, and nearly 47% of respondents said that they recycle in their residence hall at least frequently.

When the Cedar Hall residents did not have a recycling bin close by, their recycling habits changed. The majority of Cedar Hall residents agreed that when recycling bins are not available at a close proximity or when there is a need to carry a recyclable back to the residence hall, they were only likely to recycle “sometimes” rather than “most of the time.” The respondents also answered questions about their experiences with recycling and whether they influenced others to recycle. For the most part, those who responded from Cedar Hall encouraged others to recycle, and recognized that others around them also recycled. Less than 30% of the respondents said they felt guilty when throwing recyclables in a regular trashcan.

The most common reasons for why respondents from Cedar Hall recycle include: helping the environment (23%), convenience (21%) and saving money (18%). Social factors such as recycling being expected, being perceived as the cool thing to do, or because others recycle, accounted for 36% of responses. While understanding the reasons why respondents recycle is valuable to this analysis, the most valuable insight lies in finding out what prevents respondents from recycling. The most common answer was “not thinking about it,” followed by the inconvenient location of recycling bins.

### **Individual Dorm Recycling Behavior: Hickory Hall**

Forty-one residents, of the 80 total residents of Hickory Hall, participated in this survey. Forty-six percent of those surveyed reported that they “always” recycle when it is convenient and over 50% stated they recycle “frequently” or “always” on campus and in their residence hall.

Over 65% of those surveyed from Hickory Hall encourage others to recycle. Fifty-one percent agreed most of their friends recycle, and 71% said that their roommates recycle. Thirty-nine percent of those who took the survey said they had feelings of guilt for throwing recyclables into trashcan instead of recycling.

The reasons why respondents recycle are consistent with the previous results from Cedar Hall. “Helps the environment,” was the number one choice with 28% of respondents, followed by convenience (26%) and the fact that recycling saves money (18%). Social expectations and the influence of others was only 18%. This is lower than Cedar Hall which had 36% of respondents choose these social factors. Again, “not thinking about recycling” (39%) and “inconveniently located” (37%) were the main reasons that prevented students in Hickory Hall from recycling.

### **Individual Dorm Behavior: Sycamore Hall**

Sycamore Hall houses approximately 75 students, of which 43 participated in our initial survey. Over 50% of respondents agreed that they always recycle when bins are available. Thirty-three percent “always” recycle at their residence hall, while 14% “never” recycle in their residence hall. On campus, respondents recycled with less frequency; only 28% “always” recycle and 21% recycle “occasionally.” When bins are not available, 19% of respondents say they “never” recycle.

When recycling bins are not available, 68% of males from Sycamore Hall reported taking the extra effort to recycle “most of the time” or “sometimes.” Forty three percent of Sycamore Hall females reported doing the same.

The overall group of respondents shared some of their experiences related to recycling by explaining how they influenced others and how others around them behave. Close to 50% of respondents encourage others to recycle, know what happens with recycled products, what to recycle, and feel guilty when throwing recyclables into the trashcan.

Most respondents (70 to 79%) agreed with having had a strong knowledge base about what can and cannot be recycled. Only 11% of males and 9% of females from Sycamore Hall did not know what could be recycled. The main reason residents of Sycamore Hall recycle was to help the environment (31%). When discussing respondents’ reasons for recycling, the students

from the Sycamore Hall agreed that not thinking about it (38%) and inconveniently located recycling bins (29%) were the primary reasons.

### Comparison of Recycling Behavior between Residence Halls

The recycling behavior between residence halls was compared to determine if there were any differences between the residence halls in recycling habits. Figure 1 compares the recycling behavior of the residents from each dorm while on campus. Sycamore Hall had the highest percentage of survey respondents who claim to “always” (25%) or “frequently” (44%) recycle while on campus. Residents from Cedar Hall and Hickory Hall were more likely to recycle only “frequently” or “sometimes” rather than “always.”

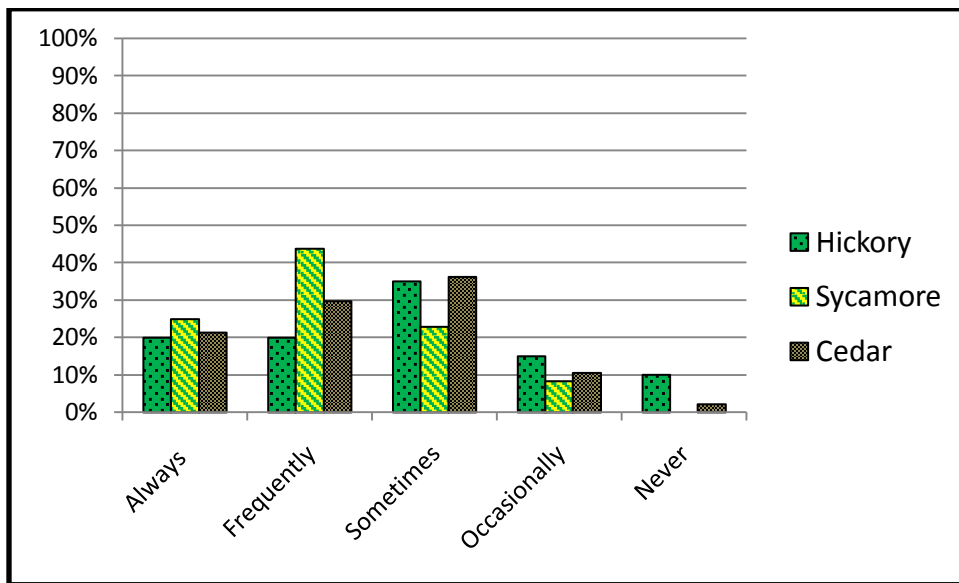


Figure 1: Comparison of recycling behavior while on campus

Figure 2 shows the frequency with which residents of the three surveyed residence halls recycle when recycling bins are located in a convenient location. Responses from all three residence halls reported “always or frequently” as the most common responses when convenient.



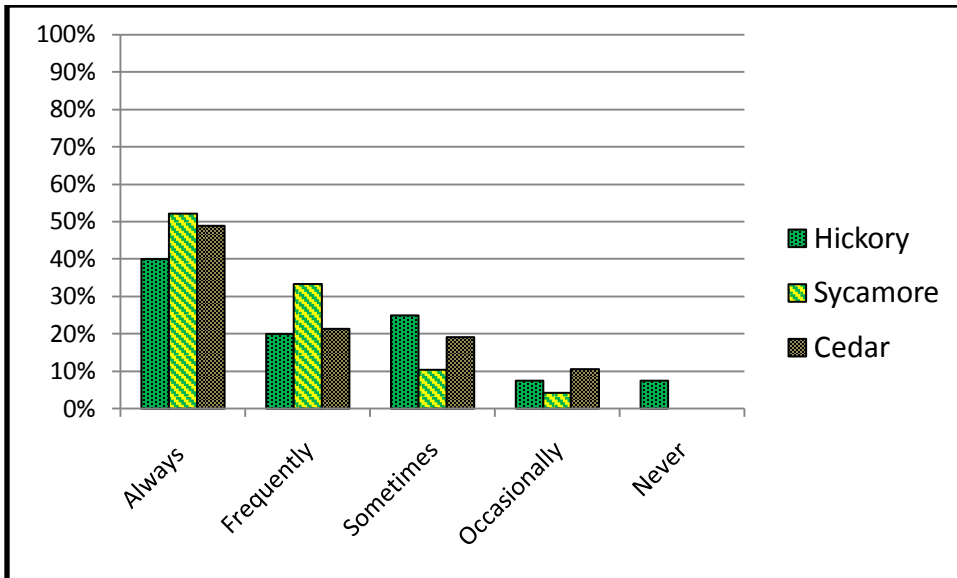


Figure 2: Comparison of recycling behavior when recycling was convenient

Figure 3 shows the comparison of recycling behavior when recycling was inconvenient. As expected, the likelihood that anyone surveyed from Cedar, Hickory, or Sycamore Halls will recycle when the recycle bins are in an inconvenient location decreased to “sometimes” or just “occasionally.”

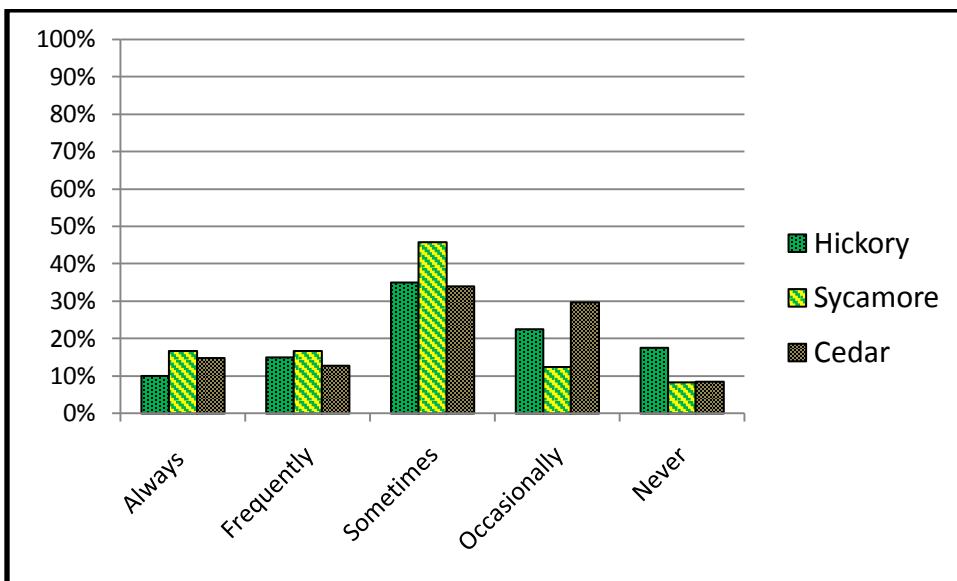


Figure 3: Comparison of recycling behavior when recycling was inconvenient

### Weights of Recycled Materials Collected from Each Residence Hall (Baseline Data)

Sycamore, Hickory, and Cedar Residence Halls all have recycling bins by the buildings' front entrances. The three residence halls are key-access residence halls and therefore the only people who have access to the dorm recycling bins are the residents. This ensured that measuring the amount of recyclables in the residence hall bins would be an accurate reflection of how much the dormitory residents were recycling while in their residence halls.

The residence halls' recyclable bins were emptied on a daily basis by the facilities team. For the purpose of this study, the weights of the recyclable materials from the bins were recorded. The baseline recycling data was collected for four weeks from February 1, 2009 to February 27, 2009. The amount of recycled material from each residence hall is summarized in Figure 4.

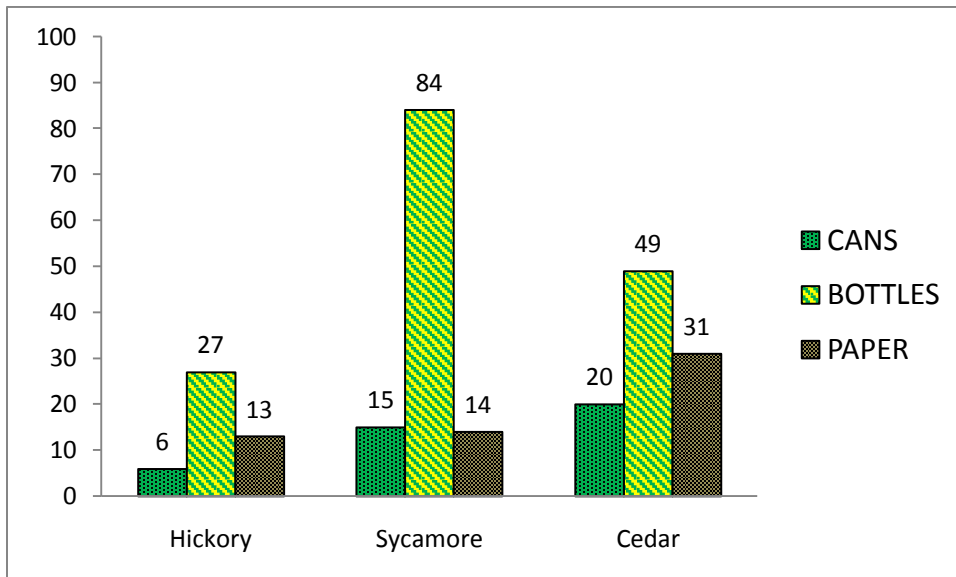


Figure 4: Pounds of recyclables collected from residence halls

### Initial Conclusions from Baseline Survey and Weight of Recycled Materials

Overall, convenience was the main factor in determining whether students would recycle. The amount of recyclables collected from each dorm was compared to the attitudes and shown recycling habits reported by the dorm residents on their surveys. Sycamore Hall had the greatest percentage of surveyed residents who claimed that they always recycle in their residence hall so it was expected that the greatest amount of recyclables would have been collected from this

dorm. The weights of recyclables collected indicated that Sycamore Hall did have the highest total amount of recycling (84 lbs of bottles, 15 lbs of cans, and 14 lbs of paper). The least amount of recycling occurred in Hickory Hall (27 lbs of bottles, 6 lbs of cans, and 13 lbs of paper) and residents of Cedar Hall recycled categorically the most paper (31 lbs) and cans (20 lbs) but not the greatest amount overall.

### **Intervention Action Plan**

Sycamore Hall was going to be the main experimental group. During the initial survey, nine students from this hall indicated an interest in participating in a recycling study using norms. The participants were contacted with the Residence Advisors' assistance and an education session was held. However, due to the limited number of participants, the study was modified to discover if social networking sites, like Facebook.com could elicit behavior changes in recycling in all three residential halls. During the months of February and March, RE3.org sent four consecutive weekly emails to all residential hall survey participants that indicated an interest in being involved with a recycling study. The new media interventions were established with 27 students, ten males and 17 females (nine from each dorm). Each email included a small section explaining what the study was for and giving the students the opportunity to opt out, which none did. Using information from the baseline survey that showed students needed reminders about recycling, each email provided a link to a social networking site and reminded the student to recycle. The emails consisted of the following:

Week One: Become UNC Charlotte's Recycling Friend on Facebook

Week Two: Remember to recycle in your dorm/link to [www.RE3.org](http://www.RE3.org)

Week Three: Join the RE3.org group/page/cause on Facebook or follow on Twitter

Week Four: Watch some recycling videos on RE3.org's YouTube page.

A follow-up survey was conducted during a two week time frame from March 30, 2009 to April 13, 2009 to determine any attitudinal or reported behavior changes towards recycling. Additionally, the weights of the recyclables from the three residence halls were again collected and measured for four weeks from March 30, 2009 to April 24, 2009 to see if the amount of recycling in the residence halls had increased.

## Results from Follow-up Survey

In the follow-up survey, the amount of students who “always” recycle in their residence hall increased from 28% in the initial survey to 38%. While those who “never” recycle in their residence hall decreased from 9% in the initial survey to 5%. Those who reported that they “always” recycle at other locations around campus stayed about the same from the initial survey but those who recycle “frequently” and “occasionally” on campus increased slightly and those who “never” recycle on campus decreased slightly. The amount of recycling when convenient stayed the same as the initial survey in which most respondents recycled only “occasionally” when it was inconvenient to do so. In the follow-up survey, the majority of respondents said they recycled “sometimes” when it was inconvenient (Figure 5).

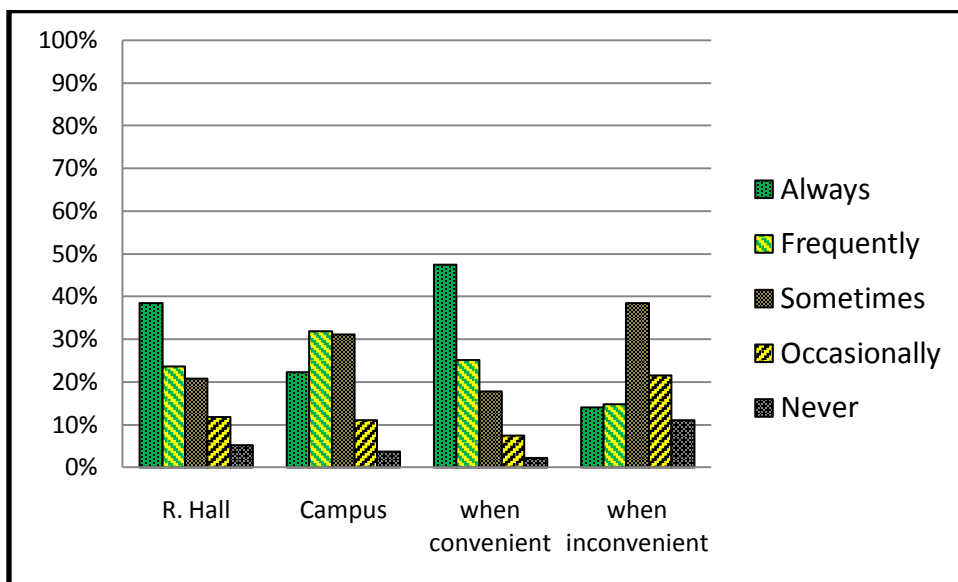


Figure 5: Location and frequency of recycling respondents (follow-up survey)

As with the initial survey, it was obvious that those surveyed were less likely to recycle when it was inconvenient; however, the percentage of males who would recycle “most of the time” when it was inconvenient increased from 18% to 20% in the follow-up survey. The amount of females who would recycle “most of the time” when it was inconvenient increased from 30% to 35%. Those who “never” recycle decreased for each gender to just over 10% (Figure 6).

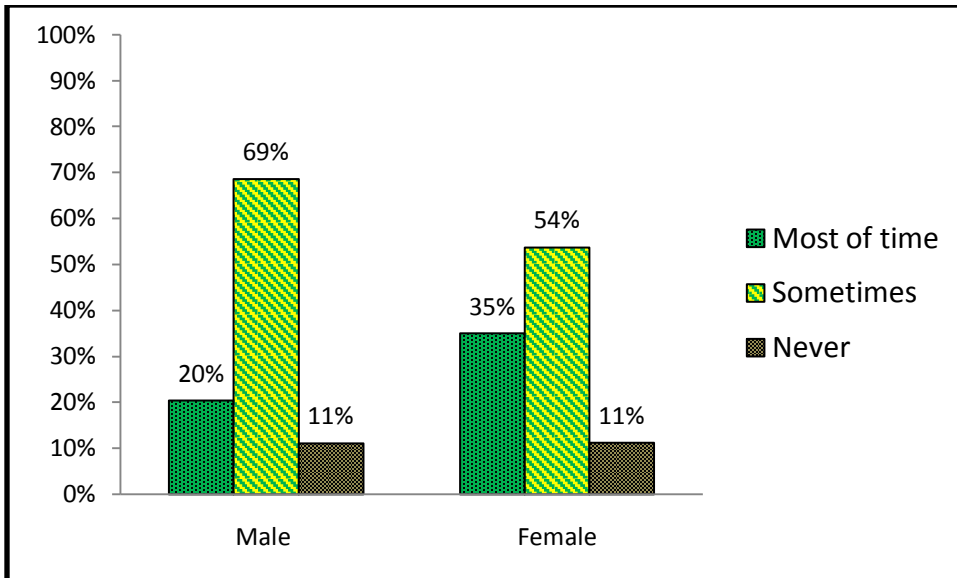


Figure 6: Gender and recycling when inconvenient (follow-up survey)

The percentage of students who encouraged others to recycle increased from 60% to 65%. Those who said their friends recycle increased from 47% to 56% and the percentage of those survey respondents whose roommates recycled was 63% similar to the baseline survey (Figure 7).

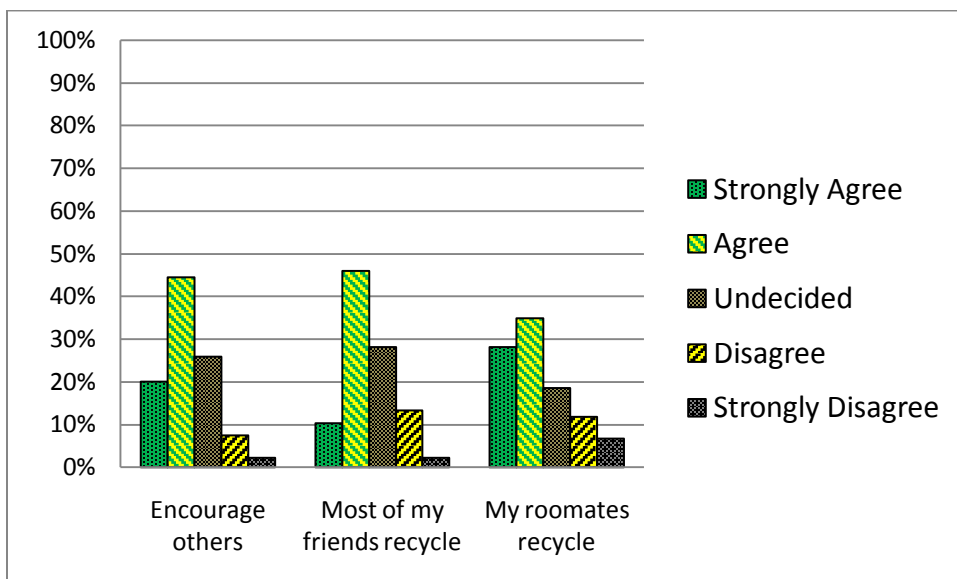


Figure 7: Survey respondents experience with recycling (follow-up survey)

In the initial survey, “not thinking about it” was the main reason students did not recycle. In the follow-up survey, the main reason was because recycling was inconvenient (43%). The

percent of those who “don’t think about it” decreased from 41% to 36%. The percentage of students who thought recycling was “not important” decreased from 5% to 3%, and “takes too much time” increased from 7% to 11%. In the follow up survey, students from Hickory, Sycamore, and Cedar Halls were asked about their use of the social networking sites, such as Facebook.com. Results from that question follow.

### Follow-up Survey: Cedar Hall

At Cedar Hall, the percentage of those who said they “always” recycle increased in every category for location and frequency for Cedar Hall. The largest increase was in on-campus recycling. In the initial survey, only 7% of survey respondents “always” recycled in their residence hall; in the follow-up survey, this increased to 21%. The percent of survey respondents who said they “never” recycle decreased in every category from the initial survey.

The main reasons for students from Cedar Hall to not recycle was initially because they were “not thinking about it” (43%) and were affected by the inconvenient location of the recycling bins (41%). In the follow-up survey, there was a decrease to 35% for those who did not think about recycling and an increase to 44% for inconvenience. The Facebook.com evaluation of the survey respondents showed wall postings (60% responding, 49% posting) and viewing photographs (51%) as the most frequent usages for Cedar Hall residents (Figure 8).

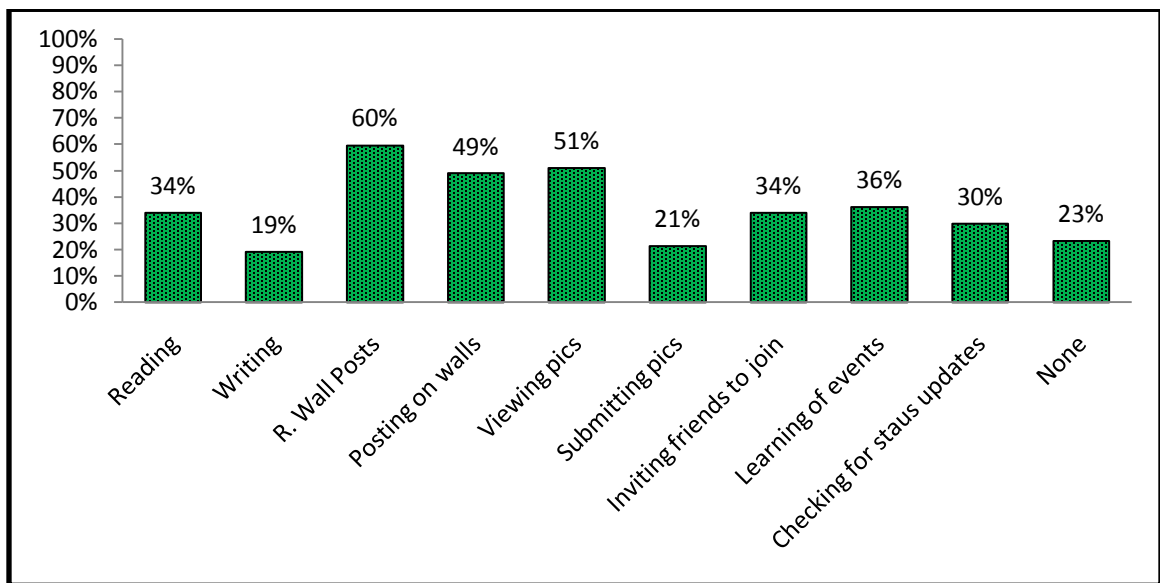


Figure 8: Respondents Facebook.com usage (follow-up survey Cedar Hall)

## Follow-up Survey: Hickory Hall

The location and frequency with which the follow-up survey respondents from Hickory Hall recycled showed an increase from 28% to 37% for residents who “always recycle” while in their residence hall; while recycling on campus, “when convenient” and “when inconvenient” remained about the same from the initial survey.

The experiences of survey respondents with recycling showed the percentage of students who encouraged others to recycle was at 48% and the amount of students who said their friends recycle decreased to 60% in the follow-up survey. The amount of students whose roommates recycled increased from 38% to 61%.

The reasons Hickory Hall respondents gave for not recycling were mainly inconveniently located recycling bins (40%) and not thinking about it (38%). The Facebook.com evaluation of the Hickory Hall residents showed wall postings (55% responding, 45% posting) and viewing photographs (50%) as the most frequent usages (Figure 9).

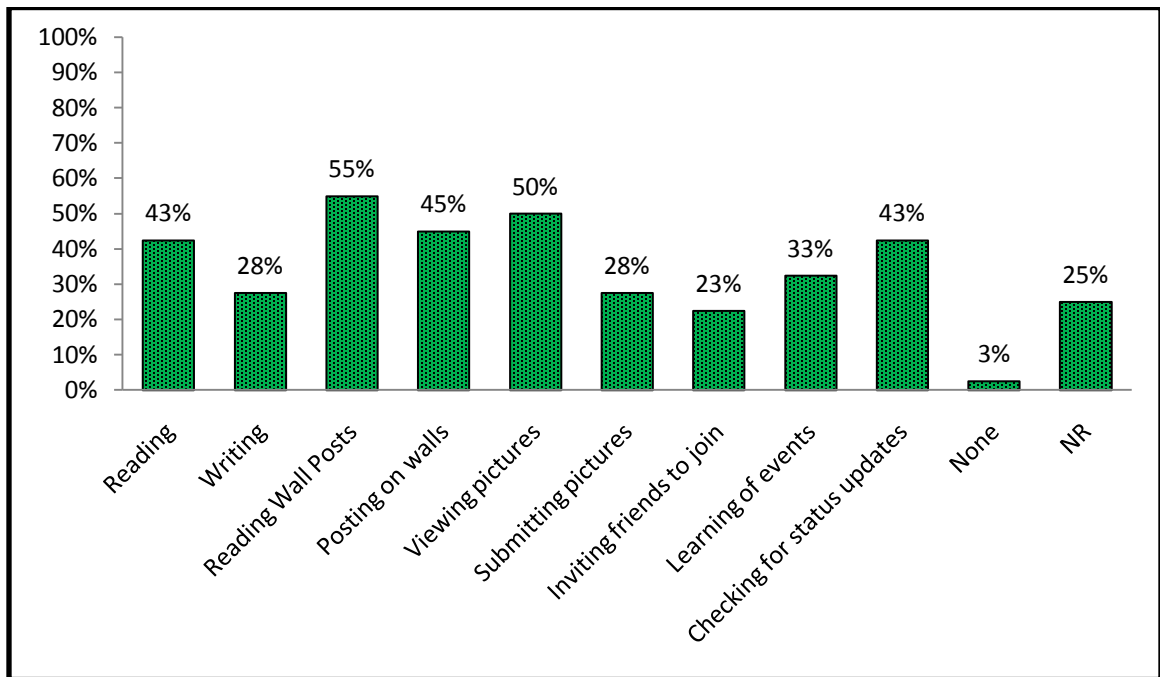


Figure 9: Respondents Facebook.com usage (follow-up survey Hickory Hall)

## Follow-up Survey: Sycamore Hall

The residents of Sycamore Hall had recycling behavior influenced by student peers and media (Facebook.com, Twitter.com, and e-mail communications from RE3.org). Sycamore Hall residents' recycling behavior while in their residence hall increased from 32% to 44% for “always” and from 21% to 35% for “frequently.”

The percentage of students from Sycamore Hall who encourage others to recycle increased from 65% to 72%. The amount of students who say their friends or roommates recycle also increased about 10% since the initial survey. Students who responded to the follow up survey were asked in what ways they used Facebook.com. Posting on their profile (52%), responding to posts (50%) and viewing pictures (48%) were the most common ways students in Sycamore Hall used this website (Figure 10).

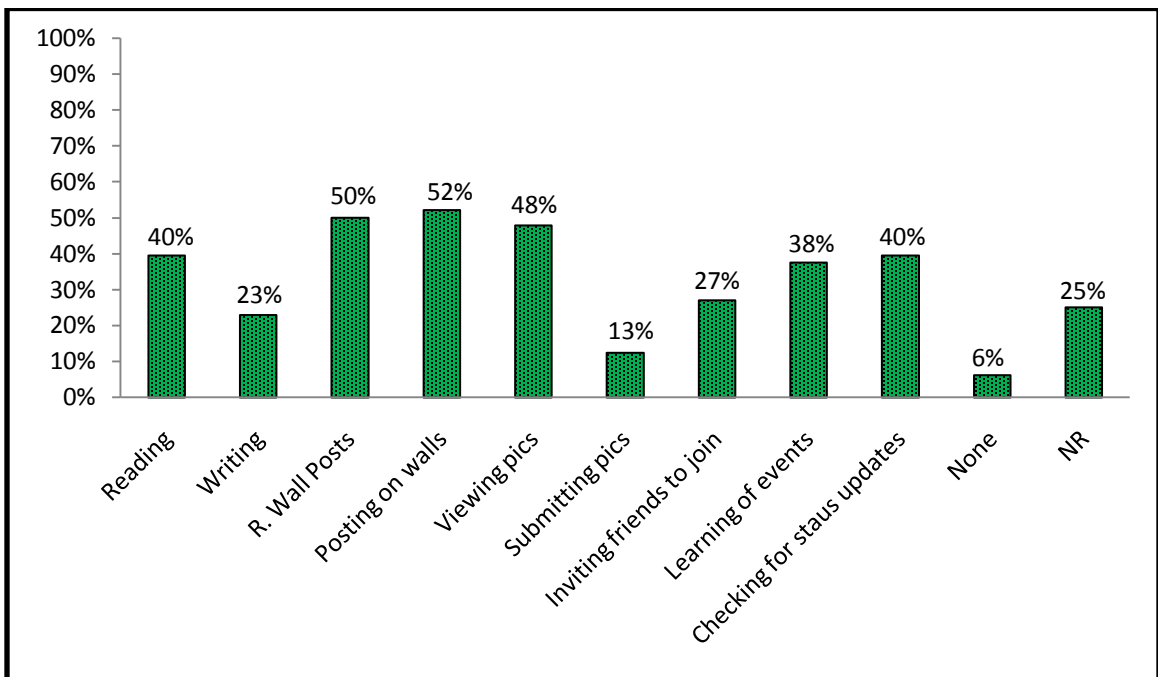


Figure 10: Respondents Facebook.com usage (follow-up survey Sycamore Hall)



## Follow-up Comparison of Recycling Behavior between Residence Halls

As with the initial survey, the recycling behavior between residence halls was compared to determine if there were any differences between the residence halls in the frequency or location of student recycling habits. Evaluations for recycling in the residence halls showed Sycamore Hall had the highest percentage of survey respondents which “always” recycle (44%) and only 2% who “never” recycle in the residence hall. Hickory Hall had the highest percentage of students who “never” recycle (13%) in their residence hall.

The amount of students who “always” recycled from Hickory Hall increased from 9% to 20% and stayed the same for Sycamore Hall. Those from Sycamore Hall who “frequently” recycled on campus rose from 22% to 44%. Residents from Sycamore Hall who “never” recycle on campus went from 6% to 0% (Figure 11). Responses from all three residence halls were similar for students who “always” recycled when it was convenient, at 40-52%. The percentages of students from Sycamore and Cedar Halls who “never” recycled when it was convenient decreased from 3% to 0% (Figure 12). Students that “always” recycled even though it was inconvenient stayed the same for Sycamore (10%) and Hickory (17%) residence halls. Those who “never” recycled when it was inconvenient decreased for Cedar and Sycamore Halls.

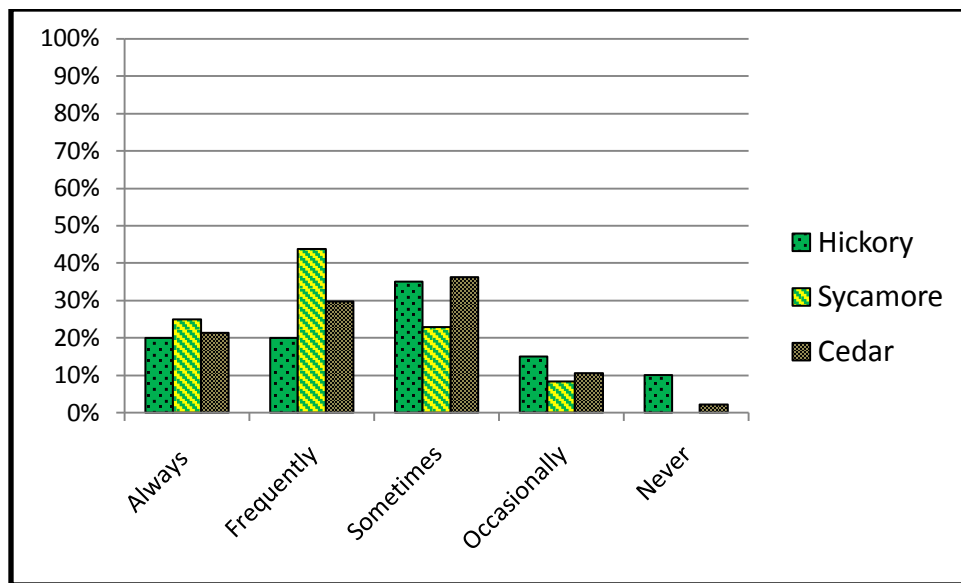


Figure 11: Comparison of recycling behavior while on campus (follow-up survey)

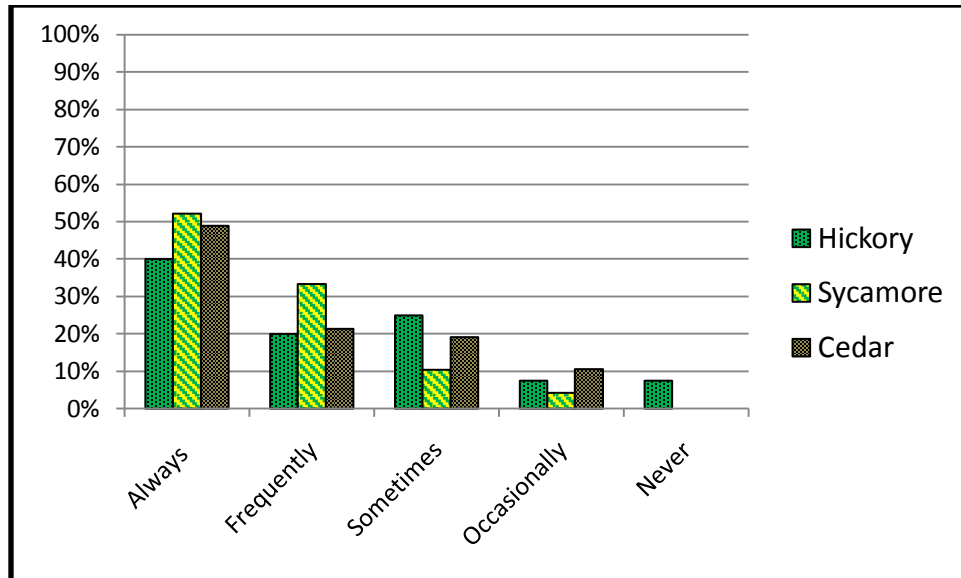


Figure 12: Comparison of recycling behavior when recycling is convenient (follow-up)

### Weight of Recycled Materials Collected From Each Residence Hall (Follow-up Survey)

The weight of the recyclables collected from the residence halls was recorded during March 30, 2009 to April 24, 2009. The amount of recyclables collected from each residence hall is shown in Figure 13. All three residence halls collected more bottles than cans or paper. Sycamore decreased from a total of 113 pounds collected in February 2009 to 108 pounds collected in April 2009. However, the other two dorms increased their recycled material significantly. Cedar originally collected 51 pounds in February but increased to 129 pounds in April. Hickory went from 46 pounds to 106 pounds as indicated in the follow-up results.

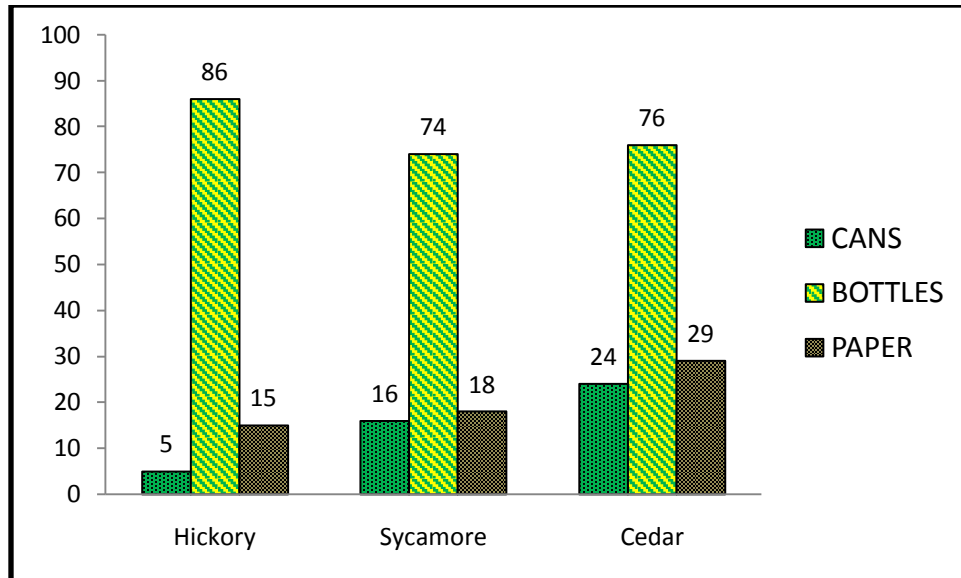


Figure 13: Amount of recyclables collected from each residence hall (Final)

## Final Conclusions

Overall, the follow-up survey showed a 10% increase in the number of students who said they “always” recycle in the residence halls. The number of students who “always” recycle throughout other parts of campus remained about the same from the initial survey, but students who recycle “frequently” and “occasionally” on campus both slightly increased while those who “never” recycle on campus decreased slightly. Recycling “when convenient” remained the same after the initial responses. In the initial survey, the majority of survey respondents said they recycled only “occasionally” when it was inconvenient to do so; in the follow-up survey, the majority of survey respondents reported recycling “sometimes” when it was inconvenient. These differences showed that in the time between surveys there was a change in the reported recycling attitudes of the students from Hickory, Sycamore, and Cedar Halls.

Twenty seven students received emails with links to additional recycling information through RE3.org, Facebook.com and YouTube.com. The hypothesis was that the recycling information received by the students would lead to a change in recycling attitudes and behaviors and lead students to influence the recycling behaviors of others in the dorm. In order to see if the anticipated outcome was achieved, the percent change in reported recycling behaviors of the residence halls was studied.

The Cedar Hall residents reported recycling behaviors changed from the first survey to the follow up survey; there was an increase in “always” behavior and a decrease in “never” and “occasionally.” There was an increase in the number of respondents who “always” recycle in their residence halls (8.5%), on campus (4%), and when convenient (6%).

For Hickory Hall, the data showed there was an increase in the number of residents who “always” recycle in their residence hall (6%) and a decrease in the amount of students who “always” recycle on campus (-6.5%), when convenient (-6%), and when inconvenient (-4%). There was an increase in the percentage of students who say they “never” recycle in every category (3-5%) for Hickory Hall; the greatest change occurred at 9% for “occasionally” recycling when inconvenient.

Sycamore Hall showed an increase in the number of students who “always” recycled in the dorm (10%) and when inconvenient (8%). The greatest amount of behavioral change occurred for “frequently” on campus and “sometimes” when inconvenient at 20%. This data signifies an improvement in reported recycling behavior and suggests that the presence of new media interventions had an effect on the attitudes of students towards recycling.

To determine if actual recycling behavior had changed, not just student attitudes and reported behavior, the amount of recyclables collected from the residence halls was compared. The results demonstrate that although recycling attitudes may have changed, the actual amount of recycling in Sycamore Hall has not changed (Figure 14). There were only small increases in the amount of cans (1%) and paper (4%) recycled, and recycling of bottles decreased. Conversely, the amount of recycling from Hickory and Cedar Halls increased; the weight of cans and paper recycled from both residence halls remained relatively the same, but the weight of bottles recycled increased by 25% in Cedar Hall and by almost 60% in Hickory Hall. Also, while all three halls saw an increase in the percentage of students who claimed to “always” recycle in their residence hall, this change was only evidenced in Hickory and Cedar Halls when the actual weight of recycled materials increased.

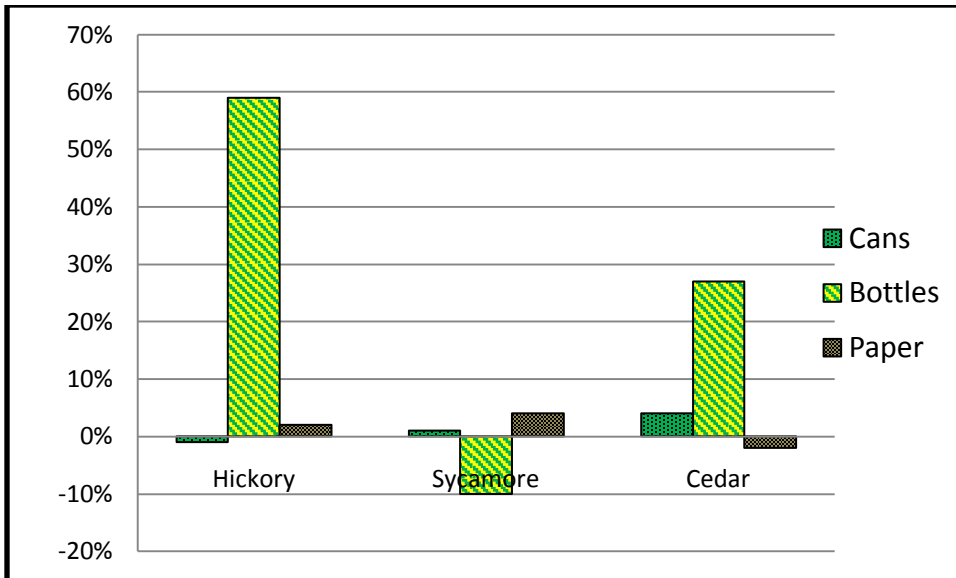


Figure 14: Percent change in recyclables collected from each residence hall

The fact that residents at Sycamore Hall did not increase recycling behavior after the intervention could be attributed to the ineffectiveness of the intervention or a misrepresentation of the baseline data. Sycamore Hall was not perceived to be a high performance recycling dorm at the on-set of the project; however, the dorm’s recycling rate was high before the intervention and therefore does not reflect a large incremental improvement. The large increase in recycling at Hickory and Cedar could be attributed to the new media intervention.

In the initial survey, “not thinking about it” was the main reason students did not recycle; in the follow-up survey, the main reason was because recycling was inconvenient. The percent of students who “don’t think about it” decreased from 41% to 36%. This suggested that a slightly higher percentage of students were more aware of recycling and thinking more about recycling since the initial survey. The percentage of students who thought recycling was “not important” decreased from 5% to 3%, and the final survey showed an increase in responses regarding not recycling because it “takes too much time” (from 7% to 11%), and it is “inconvenient” (37% to 43%).

Overall, respondents felt that barriers to recycling were not thinking about recycling and inconveniently located recycling bins; residents were more likely to “always” recycle when it was convenient (Hickory 40%, Sycamore 52%, and Cedar 49%). The frequencies of those who

“always” recycle suggest that it is more convenient to recycle in the residence halls than to recycle elsewhere on campus. This provided evidence that if the convenience of recycling is increased then student recycling behavior would also increase. Therefore, one key to changing behavior may involve changing the location of the recycling bins to be more convenient for students; i.e. having bins on each floor instead of just the entrances to the residence halls. Additionally, since students would be walking past the recycling bins more regularly, they would be more aware of recycling, think about it more often.

Before the first week of the study, no participants were fans of UNC Charlotte Recycling or the RE3.org page on Facebook. It is unknown if any were following RE3.org on Twitter or had seen the YouTube page prior to the study. At the end of the four weeks, one known intervention participant had become a fan of UNC Charlotte Recycling, RE3.org’s Twitter following nearly doubled in size throughout the study, and RE3.org’s YouTube page saw an increase in visitors. While these social media trends could potentially correlate with the RE3.org weekly emails, they do not signify causation. It is still unclear as to the effects of using social media tools to trigger recycling behavior change.

Forty-one percent of students just “Don’t think about recycling.” Sending recycling reminders using new media may have caused the increase in reported recycling behavior change at Sycamore Hall as well as the increase of actual recycling tonnage at Hickory and Cedar Halls due to recycling suggestions keeping the issue at the forefront of participants’ minds. The percentage of students who reported encouraging others to recycle increased from 60-65% from the baseline survey to the follow-up survey, as well, demonstrating that simple awareness can be a powerful motivator that is easily facilitated using new media sites.

### **Recommendations**

Educating students about recycling is important, however according to surveyed participants, the majority felt they possessed sufficient recycling knowledge and just forget to do it. The top reported recycling barriers identified in this study were:

- 1) Not thinking about recycling
- 2) Not recycling due to inconveniently located recycling bins.

Students stated they receive news and information via television (82%), the Internet (51%), and friends/family (66%) – two of which provide a perfect platform for the use of new media. Therefore, the continued use of this highly economical and demographically appropriate new media approach is recommended as a means of reminding students to recycle and facilitate influencing their peers to recycle, as well. Further studies on continuing to increase recycling on campus should focus on ways to remind students to recycle and the location of recycling bins.