
The Curbside Door Hanger Feedback Strategy

Increasing Recycling Participation Using Community-Based Social Marketing

Introduction

What strategies work to increase participation in community recycling programs? Many recycling program managers develop outreach initiatives based on information gained by word-of-mouth, through trade journals or by attending conferences. These are all important sources of information.

However, unbeknownst to many program managers, social scientists have been studying recycling behavior since the 1970's. In order to identify the barriers and motivations that are related to people's recycling habits, social scientists ask recyclers and non-recyclers questions about a wide variety of factors that might influence their recycling behavior. They then use statistical methods to determine which of these factors are linked to recycling participation and which are not.

Researchers have also evaluated the effectiveness of a variety of strategies to overcome barriers and strengthen motivations. This body of research can provide clear guidance to recycling managers who wish to improve participation in recycling programs.

This document first describes a particular motivation to be strengthened and then a strategy that has been shown to be effective in doing that.

The Motivation: Social Pressure

People are motivated to recycle by actual pressure they receive from family and friends to do so. Furthermore, simply knowing that family, friends and neighbors recycle increases our likelihood of recycling.¹ How can program managers strengthen this motivation in order to make recycling the norm in their communities?

The Strategy: Providing Feedback on Neighborhood Recycling Rates

In 1993, one hundred twenty households in LaVerne, California were provided with four weeks of weekly feedback on the quantity of recyclables collected in their neighborhood and on the percentage of households participating in the program. This let residents know what the prevailing recycling habits were -- that is, what the "norm" was -- in their neighborhood with regards to recycling. This information gave residents something against which to compare their own recycling behavior. Because social norms influence people's behavior, the strategy motivated people to make sure that their own recycling habits measured up to the neighborhood norm, both while the feedback was being provided and after it ended.²

Benefits

The residents who received the feedback increased the amount of material they recycled by 19% by volume compared to a control group that received no outreach at all. This increase was observed during the period in which feedback was provided, and also for four weeks after the feedback ended.

Procedure

The week prior to beginning the feedback, residents received a message stating that, "Volunteers will be conducting a study on recycling. Your household has been selected as part of a larger sample of La Verne residents..... In order for La Verne to achieve the benefits of recycling, please try to recycle as much as possible." This information was printed on one side

Strategy #2

of a green door hanger, and placed on the front doorknob of each household. This door hanger served the purpose of alerting residents that they would be part of a new outreach effort to increase recycling.

For four subsequent weeks, the researchers observed the volume of recyclables set out by each household in the study area. Later on the same collection day, the researchers returned to each household and left a preprinted door hanger on which they had written the amount of material set out in the neighborhood for the current week, the previous week and since the beginning of the study. The researchers also provided feedback on the number of residents participating in the program that week. A sample of the weekly feedback:

Neighborhood Recycling Results

Below is printed recycling participation of LaVerne residents in your neighborhood.

This week: July 15 – 19

Participation 54 out of 120 households
Amount newspaper (# crates) 42
Amount glass (# crates) 18
Amount plastic (# crates) 25
Amount metal (# crates) 15
TOTAL (# crates) 100

Last week: July 6 – 12

Participation 48 out of 120 households
Amount newspaper (# crates) 38
Amount glass (# crates) 16
Amount plastic (# crates) 22
Amount metal (# crates) 14
TOTAL (# crates) 90

Cumulative Total

Weekly Participation 41%
Amount newspaper (# crates) 110
Amount glass (# crates) 49
Amount plastic (# crates) 67
Amount metal (# crates) 39
TOTAL (# crates) 265

In making their observations, the researchers estimated the fullness of each crate to the nearest quarter crate. They then added up all of the full and partially full crates to come up with the number of full-crate-equivalents that had been set out for recycling that week. Few if any curbside programs in Massachusetts provide separate recycling containers for each material, as is the case in LaVerne. Feedback provided in a Massachusetts program would likely be in terms of recycling bins full of bottles and cans and bags full of paper.

Additional Considerations

Gathering some preliminary information on the actual and perceived recycling participation rate in a neighborhood will help you determine if the Curbside Door Hanger Feedback Strategy is likely to be effective there. If the actual percentage of people participating is lower than what people believe it to be, providing feedback on the actual participation rate may cause people to feel less motivated to participate. On the other hand, providing participation rate feedback will be most effective in areas where the participation rate is actually higher than people think it is.³ The actual participation rate can be estimated by observing 80-100 households in the neighborhood on one collection day if collection is biweekly, and on two subsequent collection days if collection is weekly. This will take about an hour per collection day in a suburban setting if the houses are on contiguous streets. It will take longer if the streets are in different parts of the neighborhood, but choosing streets randomly will give a more accurate picture of participation. Speaking with a sample of 40 residents will reveal what the perceived participation rate is in the neighborhood in which the outreach is to take place. Using phone numbers randomly taken from the phone book, it will take about five hours of calling to reach and speak

Strategy #2

with 40 people on the phone. This is a task that can be done by volunteers at home between the hours of 7-9pm.

Resources Needed

Adjusted to 2002 dollars, the reported cost of printing the door hangers used in the LaVerne study would be \$31/1000 households/week. The total time involved in conducting weekly observation of recyclables quantities and participation, writing feedback on the door hangers and distributing them is estimated to be 35hrs/wk/1000 households in a suburban setting. The time needed to organize and plan for the observations and distribution is not included in this estimate. Distributing the initial door hanger with the project announcement and plea to recycle is estimated to take about 21 hours per 1000 households.

Additional Research Needed

Since observations of amounts recycled were made for only four weeks after the feedback ended in the LaVerne study, evaluating the durability of any changes in recycling behavior over a longer time period would be beneficial.

It is also important to determine the scale upon which this strategy is effective. In 1993, one hundred twenty LaVerne households received the neighborhood feedback. In a subsequent study, similar feedback was provided to the entire community of 11,000 households. The feedback had no effect on tonnage in the city-wide study. This result led the researcher, Dr. P. Wesley Schultz, to conclude that the feedback is more likely to be effective if delivered to a group to which residents feel more of a sense of connection, such as a neighborhood or block. The question that must be answered is, "For how large a neighborhood will the feedback be meaningful to people?"

Finally, it would also be beneficial to test several methods of reducing the

amount of municipal staff time needed to carry out this strategy:

Method 1. Have the feedback for each week printed rather than written on the door hangers and have the hangers distributed by a door-to-door distribution company. If possible, use a type font that approximates the "handwritten" look. While this approach is likely to increase printing costs, door-to-door distribution can be surprisingly inexpensive using a contracted firm. In 1999, the City of Cambridge used a distribution firm to deliver door hangers promoting recycling to 4,500 households in a dense urban neighborhood for \$400.00.

Printing the feedback on the door hangers would mean that the feedback could not be delivered during the same collection day that observations were made. It would be important to determine if delayed feedback were as effective as the "same day" feedback delivered in the LaVerne study.

Method 2. Rather than making observations of every household, it is possible to observe a random sample of households in the neighborhood, and provide feedback based on a more limited number of observations. The size of the sample would be determined in part by the variability in the quantity of recyclables that people set out for collection. If the quantities were fairly similar from house to house, a smaller sample could be used. If the set out volumes were very inconsistent, a larger sample would be needed.

Method 3. Eliminate observations completely. Use weight slips to determine the weight of material collected on a truck route or trash day. In order to make the amount easier for people to visualize, convert the weight into the equivalent number of bins and bags full of recyclables. Eliminate the feedback on the percentage of households participating in the program.

Strategy #2

The disadvantage of this approach is that eliminating the feedback on the percentage of households participating may decrease the effectiveness of the strategy. Specifically, it would be disadvantageous to eliminate participation rate feedback if the actual percentage of people participating is higher than people believe it to be.

Variation on the Strategy

Residents of an apartment complex affiliated with Western Michigan University were also provided with recycling feedback.⁵ Residents were given a line graph that illustrated the total weight of the paper recycled by the apartment complex during each of the previous 6 weeks, and informed that a similar graph would be published in the campus newspaper each week for the next five weeks. In addition to the feedback, residents were given information about how and what to recycle and were given the opportunity to make a public commitment to recycle. The commitment request was in the form of a letter mailed to each residential unit. The letter asked residents to make a formal commitment to recycle as much paper as they could and to give permission for the publication of their names in a monthly campus housing newsletter under a caption describing these individuals as people who are “concerned about the future of our environment.” The researchers found that combining “how to” information with feedback and a commitment request increased recycling more than “how to” information or feedback alone.

It would be beneficial to determine whether including “how to” information and a commitment request in the Curbside Door Hanger Feedback Strategy would make it more effective.

Evaluation Method

In order to rule out the possibility that changes in recycling tonnage are due to

seasonal variations or other factors rather than the strategy, observations or weights should also be obtained for a control area which is not exposed to the Curbside Door Hanger Feedback Strategy. The control area should be demographically similar to the area in which the strategy is carried out. Baseline observations or weights should be obtained for five weeks in each area before the strategy is implemented, for four to five weeks while the strategy is implemented and for five weeks after the feedback is discontinued. The difference in tonnage in the strategy area before, during and after the feedback would be compared to any change in tonnage in the control area during the same time period. If the change in tonnage in the strategy area is greater than the change in the control area, it can be concluded that the change is due to the strategy.

If the strategy is effective, it will be beneficial to determine if changes in recycling behavior persist. This can be done by obtaining observations or weights in both the control group and the targeted strategy area for several more five week periods over at least a year's time.

Questions?

Contact Brooke Nash of the Massachusetts Department of Environmental Protection, Municipal Recycling Branch, at 617-292-5984.

End Notes

¹Gamba, R. & Oskamp, S. (1994); Oskamp, S. et. al. (1991); Werner, C. M. & Makela, E. (1998)

²Schultz, P.W. (1998)

³Schultz, P.W. (2002)

⁴ Schultz, P.W. (2002, November).

⁵DeLeon, I.G & Fuqua, R.W. (1995)

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Strategy #2

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