Marketing Strategies to Motivate Participation in Municipal Recycling Programs

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Doctoral Study by Dr. William Forrest Spear
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Agenda

• Study background
• Findings/results
• Recommendations
• Discussion
Background

- Landfills & incinerators are poor alternatives for solid waste disposal.
- In contrast, recycling provides economic, environmental, and social benefits.
- There are towns in New Hampshire with unusually high recycling rates and towns with low recycling rates.
- Study purpose: compare performance of four towns to identify best practices that may lead to improved recycling rates.
Selecting target communities

- Recycling rate
- Population
Recycling Rate Distribution

Histogram

Data source: Solid Waste Report to the legislature 2007, NHDES
Candidate Selection
Candidate Selection

2007 NH Population (NH OEP)
Problem Statement

• Discarding solid waste creates detriments
  – Landfills and incineration cause pollution and make poor use of land resources.

• Recycling saves money and energy, reduces pollution and creates jobs.

• Two NH towns in this study recycle 75% of solid waste but state average is 20.4%. US average is 32%.

• Causes of poor recycling programs include structural and behavioral issues.
Purpose Statement

• The purpose of this qualitative method explanatory case study
  – Explain lack of recycling motivation;
  – describe sustainable /recycling practices for four small New Hampshire communities; and
  – inform the study of consumer misbehavior and marketing strategies for other forms of voluntary behavior (e. g. blood donation).
Method/Design chosen to help add new insights

• Case study method is appropriate for the study of complex systems and for studies involving motivations that are difficult to identify (Yin, 1999).

• Explanatory case study design is appropriate for comparing multiple cases to discover a causal relationship between specific factors and specific results (Yin, 2009).

• Limitation: results cannot be statistically inferred to other populations.
Population and sample size

- Stratified, purposeful sampling strategy used to select towns.
- Convenience sampling used to select residents.
- Sample size (24 residents and 7 employees) was appropriate for qualitative research but it was also flexible and would have been expanded as long as novel data surfaced.
Data Collection

• Pilot study to test data collection instruments.
• On site data collection in four towns
  – Observation.
  – Document review.
  – Questionnaires/surveys:
    • demographic (structured questions);
    • recycling background (structured and open-ended questions); and
    • marketing and launch survey.
  – Personal interviews (Smartpens).
Data Analysis

• Collected and organized samples from document review.

• Recorded and coded responses to questionnaires and surveys in Excel.

• Created transcripts from Smartpen recordings.

• Used HyperRESEARCH to code and analyze interview transcripts.
Summary of Findings

Two categories

- Resident perception of recycling importance
  - Influenced by recycling promotion
- Traffic flow and logistics
  - Ease of avoiding recycling area
  - Ease of avoiding eye contact with employees
Residents are generally happy with employees

- “They are great. They are very friendly. They answer questions and help you with something heavy” (personal interview response from a participant in town H1).

- In town H2 a participant reported, “Very friendly. They help, and they all seem happy with their job”. Another participant from town H2 replied, “I like to see staff that is willing to give face time to people because I think that encourages them to do the right thing. I think that’s what they are trained to do”.

- One participant in town L1 stated, “They all have been good. Every time I’ve had a question or needed something, they’ve been friendly and polite”
Observation Finding

• Observed that the staff at towns H1, H2, and H3 were more engaging with residents than the staff at town L1.
• From the resident responses, it appears that passive engagement, such as what occurs when residents seek answers from staff, was not as effective or appreciated as active engagement when staff initiates the conversation.
Findings: Promotion

Do You Know of Benefits that Recycling Provides to Your Town?

- No
- Revenue to town
- Environ. Benefits
- Landfill diversion
- Red. Consump. of scarce resources
- Keep town cleaner

Number of Responses:

- L1
- H1
- H2
- H3
Findings

• Only in town H2 was the signage rated effective by residents. A sign placed near the entrance promoted recycling of paper and savings.

• It was interesting to note that town H1 used signage promoting the savings per ton as well, but there were so many signs present at this facility, it appeared the message was lost because of “advertising noise”
Findings

Of the 12 participants recommending changes to the promotion of their town recycling program:

• one participant wanted to know where the recycled materials go
• four wanted to see educational promotion
• seven wanted to see promotion of the results or benefits of recycling.
• Of the 12 participants recommending additional promotion of their town recycling program, seven or 58.3% were from town L1
Findings

50% of the residents in Town H3 did not request any changes to their recycling program, and only one resident from this town asked to see more promotions in the form of education.

- Interesting that town H3 had such a high recycling rate yet very little signage. While this might appear to diminish the importance of signage as a promotional method, it is important to note that 50% of the resident participants from Town H3 did not know the benefits of recycling.

- 87.5% of H3 participants indicated word-of-mouth was used to promote recycling.

- Perhaps signage is less important when replaced by effective word-of-mouth communication.
Findings

• The most form of promotion at all recycling centers in study was word-of-mouth promotion by employees.

• Word-of-mouth is less expense than other forms of traditional advertising, and it has a unique interpersonal characteristic that can make message more credible when the receiver and sender have a preexisting relationship and when the sender is perceived as an expert.

• Good customer service is a wise investment because it can lead to a good opinion of the operation and create the relationship that makes word-of-mouth communication effective.
Findings

• While all four towns used varying levels of signage at the facility to promote recycling, only the employees in higher performing towns were recognized by participants as using word-of-mouth promotion.
• A missed opportunity for town L1.
Advertisements from Recycle More Minnesota campaign (a joint effort between the Recycling Association of Minnesota (RAM) and the Minnesota Pollution Control Agency (MPCA)). Used with permission. Copyright © Minnesota Pollution Control Agency
A negative advertisement was created by the author of this study to determine if positive advertisements are preferred for the voluntary act of recycling.
Findings

• Ad showing types of recyclable materials identified by 41.2% of participants as favorite.
• Advertisement referring to jobs created identified as favorite by 25.8% of participants.
• Advertisement stating *It’s your responsibility* (a negative ad) was the favorite of only 16.1% of participants. Note that three of those five participants identifying the negative ad as their favorite ad were municipal recycling program employees. Only 6.5% of residents rated the negative ad as their favorite.
Findings: The Bottom Line

• L2 became H1 because of change in recycling rate – 19% in 2007 versus 35% in 2011 - retained target community because of unique learning opportunity.

• Word of mouth promotion was more popular and effective than expected.

• Town with second highest recycling rate used little signage but word of mouth was effective in communicating expectation for residents to recycle.

• Traffic flow can be an important factor in making solid waste disposal and recycling seem to require the same effort and it can facilitate eye contact between residents and employees.
L1 Layout and Traffic Flow

Copyright, W.F. Spear, 2012
H2 Layout and Traffic Flow

Copyright, W.F. Spear, 2012
Interesting Contradiction: Poor traffic flow overcome by effective promotion (WOM & signage)

H1 Layout and Traffic Flow

Copyright, W.F. Spear, 2012
Recommendations based upon findings

• Recycling facilities must be neat and clean, bins must be easily accessible.
• Residents must feel that their recycling program is high quality in order to value the operation.
• Clutter can create the detriment of “advertising noise” that will confuse residents and reduce likelihood of receiving messages.
Recommendations

Traffic flow must be convenient and fast but prevent drop and run behavior. All traffic must be routed through the recycling area. If possible, the solid waste area and the recycling area should be immediately adjacent. Approach makes recycling more convenient and forces residents to make eye contact with employees and other residents.
Recommendations

• Signage is effective when simple, compelling, and uncluttered.

• The AIDA framework provides a guide for evaluating recycling promotion.
  – Awareness is achieved with signage that is attractive and clear.
  – Interest results when messages are important and presented in an appealing way.
  – Desire stage occurs when messages include benefits of recycling and describe the ease of recycling at the facility. Residents will act when benefits exceed effort required.

• Less is more when planning signage at the recycling center.
Recommendations

• High performing recycling programs employ active engagement between employees and residents. Employees should be friendly, professional, visible, and offer help when possible to increase the convenience of recycling.

• Employees provide word-of-mouth promotion.

• Employees should initiate conversations. Greet residents, offer help, and provide positive reinforcement.

• Uniforms enhance professional image and help residents identify employees.
Recommendations

• Signs and word-of-mouth promotion at the facility should be positive but should subtly create an expectation for recycling as well.
• Remember that 54.8% of participants identified environmental benefits as their reason for recycling and 61.3% identified financial gain.
• Address specific financial and environmental benefits realized from the recycling program in promotional messages.
Recommendations

• Recycling programs should include established goals and performance to those goals should be displayed.
• Goals should be included in the 30-second commercials used by employees.
Recommendations

• The two highest performing towns in this study have outreach programs with local schools.

• Strategy has potential to create recycling habit at a young age and minimally serves as a promotional method for recycling.
Recommendations

• Displayed metrics should be simple yet compelling. Percent of solid waste recycled is common.

• Financial results should be posted using full cost accounting methods that calculate revenues from the sale of recycled materials, in addition to the cost of disposal that was avoided through recycling (Qian, Burritt, & Monroe, 2011).

• Life-cycle assessment methods can be employed that would add the external costs such as the reduction in greenhouse emissions and resource conservation to the full cost metrics.
# Marketing Plan Elements

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<th>Marketing Plan</th>
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<td>Business Description &amp; Vision</td>
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<td>Objectives &amp; Goals</td>
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*Note: Sources include the American Marketing Association (Clancy, K., 2008; Lee, L. & Hayes, D., 2007), SCORE, a non-profit organization supported by the U.S. Small Business Administration (SCORE Association, 2011), and the U.S. Small Business Administration (U.S. Small Business Administration, 2012).*
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Recommendations for future Researchers

• Follow-up quantitative study of all towns in New Hampshire?
  – explore importance of traffic patterns;
  – explore influence of positive signage versus traditional reminder messages; and
  – study the influence of recycling behavior on incremental acts of sustainability.

• Follow-up study to measure results in the four target towns after the implementation of recommended actions?
Questions?