

Recycling Education for a Better Tomorrow

*Shannon Davey, Hanna-Keelan Associates
E. Raedene Combs, University of Nebraska-Lincoln*

Introduction

Trash that was discarded through the years has packed many landfills to capacity. Today, cities are searching for new landfill areas. Recycling, the reuse of wastes to form a different product, could contribute significantly to the alleviation of the waste problem. It provides two main advantages: (a) It diverts waste from landfills, and (b) it extends resource supplies, while saving both money and energy (Burn, 1986).

Recycling has consistently demonstrated strong grass-roots support. It rates high in most opinion polls, but rate of adoption is disappointing in terms of number of households participating and amount of the waste stream being recovered.

The purpose of this paper is to investigate the role that education can play in helping consumers understand the importance of recycling, and, how they might participate in this endeavor. Generalizable findings from past research provide the framework which is supplemented with insights provided by in-depth case studies of current recyclers.

Review of Literature

Attitudes

One difference between recyclers and non-recyclers is the importance of reasons for recycling. These reasons include financial reward, environmental quality, social pressure, and convenience. Using monetary reward or punishment to encourage behavior is only a temporary fix. Intrinsic motives, such as feeling good about doing something for the community or the environment, were significant incentives for recycling (Vining & Ebreo, 1990).

Behavior

An important aspect is the error of assuming that once someone knows why he/she should recycle, he/she knows exactly what to do then. Research shows increases in environmental awareness and verbal commitment toward improving the environment, but it also shows that these new attitudes do not predict new behaviors. People do not always know how to translate attitudes into overt behavior (DeYoung, 1989; McGuinness, Jones, & Cole, 1977).

Perceived barriers

Perceived barriers to recycling are recognized by recyclers and non-recyclers. Not knowing how or what to recycle appears as a major reason people do not recycle more often or at all. Another barrier is insufficient room to store recyclables (DeYoung, 1990; Poore, 1989). Lack of community involvement, such as curbside pickup and removal, is a third barrier (Poore, 1989).

Case Studies

Three case studies of recyclers were conducted to learn how their experiences coincided with findings in the literature, and to provide specific examples of how recycling behavior is integrated into family lives.

To qualify as a recycler, the participant had to recycle all materials appropriate to his/her household and feasible in the midwestern community of 200,000 people. A list of possible participants was generated by contacting the city recycling office and a builder known for designing recycling centers. The first three qualifying individuals contacted by telephone who agreed to participate were selected.

Information for development of the case studies was obtained through: (a) interview, (b) diary, (c) questionnaire, and (d) observation. This is triangulation of data. The first interview consisted of several general, or grand tour, questions on recycling that allowed participants to provide what they considered relevant information. Then, participants recorded each recycling event in a two-week recycling diary. They completed a questionnaire about family demographics, participants' recycling habits, and recycling center. For the observation component, the researcher took pictures and made drawings of the recycling unit, and observed how it was used. A follow-up interview verified that the researcher's written account was accurate and clarified and expanded the account when necessary. Participants' statements related to educational implications were collected too.

Case Study # 1

The husband and wife each have a college education and family income between \$20,000 and \$39,000. They recall recycling as a lifelong habit. Community involvement, such as Earth Day celebrations, and education on environmental issues are important to this couple. They believe that recycling is also reusing and purchasing fewer products. They use paper sacks for recycling. Curbside service greatly facilitates their recycling efforts.

The couple had many ideas on how to educate others about recycling. One is to work with children. "Children can have a real impact on their parents by showing them what they have learned in school." They also believe that changing people's behavior requires setting a good example, one person at a time. This couple felt that the best strategy would be to implement mandatory policies, then provide education to consumers. They suggested workshops on composting, how to design home recycling centers, and how to be a better consumer.

Case Study # 2

The main recycler is the wife who has a college degree. Family income is in the range of \$40,000 to \$59,000. She recalls starting to recycle while in college in the 1970s. "I was definitely influenced by the need to take care of our resources and to make use of what we got so what we have around will be here for the next generation . . . we cannot keep the habits of a throw-away Society." When shopping, she often looks for products that are recyclable and sometimes refuses to purchase an item with excess packaging. This household has plastic recycling bins in the basement. They had used a small upstairs closet, but moved the center to keep their three-year-old son from getting into it and possibly injuring himself. Recyclables are washed, left to dry, and taken downstairs nightly. About once a month, the materials are recycled at a drop-off site a few blocks away. She felt curbside pickup would make it easier for people to participate.

She believes that education is a long-term strategy to facilitate recycling. "Working with school children as well as educating the public will help instigate change. The more we all try to come up with solutions and advocate recycling, the easier it will become for everyone. Sometimes we have to be creative and set examples for others." She suggested sponsoring recycling activities through the Scouts and encouraging manufacturers to use less packaging. She does not try to pressure others to recycle.

Case Study # 3

This recycler is a single male, with a college degree and an income between \$60,000 and \$79,000. He has a special recycling center (built-in closet with three stacked plastic bins) in the kitchen of his new home. He has a youth who helps him clean recycled material and transport it. He grew up during World War II and recycled everything. "I stayed on with the habits that I developed in grade school of recycling anything where there was a place to recycle. It has become, not a goal, but a challenge to see how little I can send to the landfill. I have lived here

almost two years, and I have not even started garbage service. Something I do naturally is recycling and looking for reusable products."

He believes that easier places to recycle, such as drop-off sites at grocery stores, would facilitate recycling. And, government should spend more money on educational programs of what to recycle and how to start recycling. He does not pressure others to recycle.

Discussion and Implications

Findings and implications for recycling education are in Table 1. To enrich the educational experience, students could develop their own

Table 1. Insights and Implications

Insights from research	Insights from case studies	Implications for educational programs
Need for attitude development.	Commitment to protecting the environment. Influenced at an early age. Stated recycling was a personal commitment (didn't pressure others).	Change attitudes by showing students the importance of recycling. Introduce programs at an early age. Emphasize possibility for personal satisfaction.
Translating attitudes into behavior.	Each contributed to general welfare by recycling.	Have students engage in some form of recycling behavior (at school and/or home).
Removing barriers to recycling efforts.	Used different types of recycling centers from paper sacks to built-in recycling center. Noted desirability of community recycling service (but were not involved in promoting).	Present and/or have students develop ideas for recycling centers. Discuss what might be appropriate centers for different income groups. Have students write letters to community leaders, stating their concern about lack of recycling services.

case studies through interviews, observations, and questionnaires to learn more about those who recycle and, perhaps, become inspired through the process. Each of the participants in this case study had a college education, common among recyclers. Students may want to gain additional insights into recycling behavior of families with less education.

Resources that could be used in curriculum development include *Recycle: A Handbook for Kids* by G. Gibbons (1996) from Brown, Little & Company, New York; *Easy Recycling Handbook* by D. McVicker (1994) from Grassroots, Gilbert, Arizona; and, *Promoting Source Reduction and Recyclability in the Marketplace* (1989) from EPA, RCRA Docket, 401 M St. SW, Washington D.C. 20460. Additional resources may be obtained from city, state and non-profit recycling offices.

References

- Burn, S.M., & Oskamp, S. (1986). Increasing community recycling with persuasive communication and public commitment. *Journal of Applied Social Psychology, 16*, 29-41.
- DeYoung, R. (1988-89) Exploring the difference between recyclers and non-recyclers: The role of information. *Journal of Environmental Systems, 18*, 341-351.
- DeYoung, R. (1990). Recycling as appropriate behavior: A review of survey data from selected recycling education programs in Michigan. *Resources, Conservation and Recycling, 3*, 4-13.
- McGuinness, J., Jones, A. P., & Cole, S. G. (1977). Attitudinal correlates of recycling behavior. *Journal of Applied Psychology, 62*, 376-384.
- Poore, J. (1989, September/October). Kitchen design for recycling. *Garbage, 1*, 18-24.
- Vining, J., & Ebreo, A. (1990). What makes a recycler? A comparison of recyclers and nonrecyclers. *Environment and Behavior, 22*, 55-73.

Shannon Davey, Researcher, Hanna-Keelan Associates Community Planning and Research, 3275 Holdrege, Lincoln, NE 68503 (402) 464-5383.

E. Raedene Combs, is Professor, University of Nebraska-Lincoln, Home Economics 134, Lincoln, NE 68583-0801 (402) 472-2915; e-mail: fmcs008@unlvm.unl.edu.