SEEKING SOLUTIONS TO SOLID WASTE MANAGEMENT: THE ROLE OF LIFESTYLES

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Solid waste disposal is a complex issue facing individuals, local communities, and our larger society. This article focuses on how consumer decision-making and lifestyles contribute to the creation of and solutions to the solid waste management problem. The content of educational programs and curriculum designed to address lifestyle issues is also addressed.

The Solid Waste Management Problem

Public decision makers, especially in local communities, are searching for ways to manage the stream of waste buried in landfills, burned in incinerators, or shipped elsewhere. Policy makers and waste educators have focused most of their attention and resources on developing markets for recycled products, teaching households the "how to's" of recycling or composting, developing waste disposal technology, and siting landfills. In comparison, the roles that values, consumer decision-making, and lifestyles play in reducing solid waste problems have largely been ignored. Research-based knowledge of effective methods to change the waste management behavior of households is even more limited.

The solid waste management problem is complex and requires a variety of solutions. It is short-sighted to ignore the role of households in both the generation of solid waste and the reduction and disposal of solid waste. Consumer educators can contribute an understanding of the impact of lifestyles on the generation of waste and perspectives on long-term changes in consumer behavior to the multidisciplinary issue of waste management.

Lifestyles and the Waste Stream

Lifestyles are an expression of our values, beliefs, and attitudes demonstrated through the purchase and allocation of human and non-human resources [15]. Solid waste disposal issues are reminders

that our lifestyles, our chosen patterns of behavior, are testing the earth's capacity. Consumers make dozens of lifestyle decisions every day which affect the solid waste stream, the larger environment, and the quality of life of current and future generations. Many consumers are asking, "How can we choose lifestyles which allow us to realize our full human potential and preserve the environment at the same time?"

Consumers who question the impact of their lifestyle on the environment may fear that drastic lifestyle changes are necessary to make a worthwhile difference. Often, consumers find the possibility threatening. The possible lifestyle changes that policy makers and environmentalists often suggest include restricted choices of products and services, restrictions on the use of land and possessions, and reduced convenience, comfort, and access to material goods. In contrast, Devall [3] and others suggest that a rich lifestyle does not have to be expensive, wasteful, or harmful to the earth. Devall and Sessions [4] and Fox [9] argue that practicing an ecological lifestyle is a process of rediscovering what is essential, important, and meaningful in our lives.

Changing Consumer Lifestyles

Existing research on long-term consumer behavior changes, especially conservation and environmental behavior, suggests that change depends upon a variety of influences [2, 6, 10, 16]. Two influential change factors are: 1) the role of intrinsic motivation, and 2) attitudes and perceptions regarding eco-consciousness and lifestyle flexibility.

Various research studies indicate that we tend to consistently underestimate the role of intrinsic motivation as an incentive to change behavior and overestimate the role of extrinsic motivation [5, 6, 18]. Extrinsic motivation includes rewarding changed conservation behaviors with money or social approval and requiring behaviors through local policies. In comparison, intrinsic motivation relies on individuals' changing their lifestyle behaviors because change is viewed as worthwhile for its own sake, or the right thing to do. Intrinsically motivating consumers to rethink their lifestyles and their impact on solid waste issues requires deep perceptual changes in values and attitudes, and these changes can be encouraged through education.

The degree of eco-consciousness and lifestyle flexibility individuals express also influences long-term environmental behavior change [13, 15, 16, 17]. Eco-consciousness refers to the extent to which an individual considers self and the earth to be interdependent, as well

as an overall sense of responsibility for the environment and the earth. Lifestyle flexibility refers to how willing individuals might be to change or adapt their use of resources, such as time, money, or skills, depending upon the perceived costs and benefits of change. Individuals who have greater lifestyle flexibility and eco-consciousness are more likely to make long-term changes in their lifestyles to preserve the environment while striving to maximize the quality of their lives [15, 16, 17].

Implications for Curriculum and Educational Program Development

Research indicates that key components of an educational program designed to affect long-term behavior changes would address values and attitudes regarding lifestyle flexibility and eco-consciousness as well as intrinsic motivations to adapt an ecology-conscious lifestyle. Educators can adapt the following curriculum and programming ideas for a variety of age groups. Individual consumers as well as public decision makers, solid waste officers, and other professionals involved in solid waste issues are potential target audiences.

Increase Understanding of Households as Ecosystems. In an ecosystem, resources that originate with the natural environment are returned to the environment. Are we returning the output from our lifestyles to the environment at a rate and in a form that can be readily assimilated? Many examples of solid waste disposal problems confronting communities could be used to illustrate how lifestyles are testing the environment. Recognition that our lifestyles have implications beyond our own household system is an important beginning concept for consumers to understand. If interdependence between households and the environment is not understood or is ignored, consumers are not likely to be intrinsically motivated to rethink the impact of their household system on the larger environment.

Individuals can become more aware of the environmental impact of lifestyle decisions on the larger environment through an analysis of their own household ecosystem. Areas to explore include: 1) what is brought in (inputs), 2) how resources are used (actions), and 3) what results from actions (outputs). An ecosystem approach goes beyond the typical focus on system outputs (waste disposal or recycling) and recognizes the potential impact of household changes in inputs (source reduction) and actions (reuse, changes in habits).

Case studies can be developed to help illustrate how changes in inputs, actions, and outputs might be different for diverse household systems. For example, a family with two children under three years

of age might make different choices than a childless couple if both were forced to reduce household waste by 25 percent. Assumptions regarding values, attitudes, and the impact of waste reduction on the quality of life can be discussed. Other contrasting situations that might provoke interesting discussion include: 1) a farm family living 20 miles from a recycling center versus an urban family living in a high-rise apartment building with on-site recycling; 2) two parents working outside the home versus one outside earner; 3) a two-parent family versus a single-parent family; and 4) a family with an incontinent grandparent who needs diapers versus a family with a newborn.

Analyze Eco-Consciousness and Consumer Decision-Making. Educators can stimulate group discussion using products intentionally selected to represent different consumer values and lifestyles. Each group could receive at least two products from the following categories: 1) newly introduced products with excellent sales records and 2) environmentally friendly products representing various shades of "green." Products in the first category could be selected to represent what market research as well as consumer consumption patterns suggest is important to today's consumers. Examples of specific products introduced in 1989 include disposable contact lenses, dry beer, premoistened cleaning towels, fresh pastas and cheeses, a limited edition two-seater high performance sports car, and convenient microwavable frozen entrees.[1]

Products in the second category could be selected to reflect characteristics commonly considered to be more environmentally sound. Such characteristics could include: 1) made from and/or packaged in recyclable materials; 2) not excessively packaged or wrapped; 3) sold in reusable or refillable containers; 4) not disproportionate users of energy or other resources in manufacturing, use, or disposal; and 5) not dangerous to the health of people or animals [1, 8]. Specific products could include compact fluorescent lighting, cloth or string reusable bags for shopping, unbleached coffee filters, cleaning concentrates in pouches, or a fuel-efficient car.[2]

Educators could buy the products for participants to actually examine or they could describe each product with a picture on a card.

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[1]One source of such product examples is *Marketing News* which publishes the American Marketing Association top ten products of the year.

[2]Product examples can be found in environmental mail order publications, publications such as *The Green Consumer* [8] and *Ecologue* [1], and retail outlets.

Educators could ask participants to discuss the following questions: 1) What is your impression of the lifestyle of a person who would buy such a product? 2) What do you think is important to a person buying such a product? What are their values and beliefs? 3) If money were no object, would you buy this product? Why or why not? and 4) Which of these products are most people you know most likely to purchase? Why? This small group exercise helps raise questions regarding resource tradeoffs, lifestyle flexibility, and influences on consumption decisions.

In addition, the exercise can also be used to increase awareness of the interrelationships of consumer decisions with marketing practices. "Green" products and marketing techniques are increasingly visible in the marketplace, but few standards or regulations exist to help consumers sort through the maze of "green" claims. Many claims are trivial, confusing, and misleading [11, 12]. Educators and/or students could find examples of "green" products and claims in local stores and discuss state or federal government regulations regarding environmental advertising and labeling claims. Consumers could also write manufacturers or local businesses regarding specific products or practices which might help consumers make more informed ecology-conscious lifestyle decisions.

Examine Lifestyle Flexibility and the Role of Values. An activity that encourages consumers to examine and discuss which practices they are willing or unwilling to incorporate into their lifestyle and the reasons for such decisions might also increase awareness of the possibilities of what it might mean to "live as if nature mattered." This activity could list specific options for reducing, reusing, or recycling waste. The options should require varying degrees of time, energy, and inconvenience. For example, in an activity related to yard waste the lifestyle change options could include: 1) pay to have bagged yard waste picked up by trash hauler, 2) take bagged yard waste to a community composting site, 3) leave grass clippings on the lawn and start a backyard compost site, and 4) illegally dump yard waste in a local dumpster. Discussion questions could focus on why an option was or was not chosen and how such choices might differ among members of the same household, or among different households. Participants could be encouraged to discuss: 1) the tradeoffs in human and non-human resources involved in lifestyle decisions, and 2) why some households are more likely than others to be flexible in household inputs, actions, or outputs.

Educators could also develop activities to increase awareness of the relationship between personal value systems and environmental

actions as well as individuals' willingness to change their lifestyles. Consumers could rank values such as convenience, frugality, efficiency, quality, participation in social causes, freedom of choice, materialism, and others. Consumers could also discuss ways more eco-conscious household inputs, actions, or outputs might challenge an individual's most important values. Lifestyle decisions relating to feminine products [14] and diapers [7] are excellent topics for such a discussion. For example, discussion could focus on how existing value systems are challenged by suggestions such as: 1) women should be required to give up tampons and use washable cotton pads as a feminine product alternative, or 2) communities should ban all disposable diapers from being sold. Additional examples of potential lifestyle changes can be tailored for the age group of learners.

Conclusions

Consumer educators face the challenge of creating educational programming which helps consumers develop intrinsic motivation to lead more eco-conscious and flexible lifestyles. The curriculum development ideas presented in this paper offer a place to begin to recognize and integrate the role of lifestyles as part of solid waste problems and solutions.

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