energy conservation: feelings influence actions

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That the world, particularly the industrialized segment, faces an energy crisis has been vividly demonstrated and dramatized as no other single issue in recent years. For the United States, the problem of excessive reliance of a high-energy society on expensive imports and dwindling domestic supplies of fossil fuels has been compounded by executive and legislative indecision, and consumer skepticism about the truth about energy.

Conservation Behaviors

Efforts are being made to promote the "conservation ethic" among the general public, while private industry and government try to find and harness alternative sources of energy. In general, however, the American public has adopted only conservation practices that don't affect lifestyle, and then only during crisis periods. Once the crisis is over, the adoption rate drops substantially.[1] Significant conservation measures have many fewer followers.[2]

Reality of Crisis

Public apathy with energy conservation may be linked with the feeling that there's no real energy problem. In a two-year study (1976-78), by the Office of Technology Assessment of the U.S. Congress, the public viewed energy as a short-term difficulty that could be rectified through technological and institutional changes. They saw the "energy crisis" as a political dilemma, rather than a true resource shortage.[3] A 1978 Gallup poll showed that only *4 out of 10 Americans felt the situation was "fairly serious."*[4] Other surveys indicated that between 38% and 64% believed the country faced a long-term energy problem.[5]

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Olsen and Goodnight found little or no relationship between belief in the energy problem and actual energy conservation behaviors.[6] This is contrary to the conviction among behavioral scientists about the interrelationships among the knowledge, feeling, and action components of human behavior. It's generally maintained that positive feelings about objects and events tend to generate positive actions, while negative feelings have the opposite effect.

By the same token, pleasant, satisfying experiences are instrumental in shaping favorable attitudes and beliefs. This position is supported by Leedom who reviewed recent energy education research and concluded that direct, purposeful experience was most likely to shape values and attitudes for a "conservation ethic" and lead to actual energy conservation actions. Using the cognitive approach, employing information and persuasion techniques produced negligible behavioral changes.[7]

Basic Questions

From this review of behavioral change *per se,* and behavioral response to energy education approaches, two basic questions arise:

1. Is the interaction phenomenon between the feeling and action components of behavior demonstrable for energy conservation?
2. How effective is an energy education program in promoting the "conservation ethic," and which teaching approaches should Extension education take?

Louisiana Study

Answers to these questions were sought in an educational program conducted with Louisiana residents during 1978. The Residential Energy Conservation Education Program (RECEP) was jointly conducted by the Louisiana State University *Cooperative Extension Service and the Louisiana Extension* Homemakers Council. Extension specialists and home economists developed the overall teaching plan, prepared a package of energy conservation teaching materials, and trained volunteer leaders from the state's homemaker councils.

The trained leaders organized over 3,000 community meetings during a 9-month period. The information was presented to 47,000 attendees through lectures and handouts. Near the end of the program, a mail questionnaire soliciting behavioral responses to energy conservation feelings and practices was sent to 10,000 participants. A self-selecting sample of 3,026 participants responded.

Findings

Ten practices related to home heating and cooling, home appliances, and driving habits were studied. The level of adoption of these practices measured *after* participation in the educational program was related to participant perception of the energy crisis. The seriousness of the energy crisis was perceived as low if the respondents felt the problem was "make believe," medium if they felt it was "real, but not critical," and high if they felt it was "extremely critical." It was expected that the higher the perception of criticalness, the greater the adoption level.

The data in Table 1 basically substantiate this expectation. For all 10 practices, the adoption level tended to increase as the perception of criticalness moved from low to medium to high. The increases in adoption levels for all but 2 practices ranged between 10 and 20 percentage points from 1 perception category to the next. Furthermore, the differences in adoption levels were statistically significant at the .001 level in 9 out of the 10 practices.

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A second major observation of the study was that, in general, the adoption of energy-saving practices was fairly high. Nearly one-fourth to one-half of the participants indicated that they'd been observing at least one or more of the energy-saving practices before their entry into the program. Participation increased this range to between 70% and 90%, showing that the educational program almost doubled adoption levels.

Implications

Both questions raised in this article were affirmatively answered. An interaction did exist between the feeling and action components of energy conservation behavior, and the educational program was effective in promoting the "conservation ethic."

What does this mean for Extension educators? It tells us that although we may be reasonably effective in changing behavior through the traditional means of presenting information, the impact could be greater if we consider the feeling aspect of behavior and use teaching materials and techniques that enable people to ventilate negative feelings, engage in a

Table 1. Adoption of energy-saving practices.

Practice	Percent adoption by perception of criticalness			x^2, 2df
	Make believe[a]	Real[b]	Critical[c]	
1. Doing big energy jobs (washing dishes, etc.) before 2 p.m. and after 8 p.m.	61%	73%	87%	99.709*
2. Room temperature kept at or below 72° F this past winter.	43	64	82	135.108*
3. Room temperature kept at or above 78° F this past summer.	48	64	80	96.878*
4. Using small appliances for cooking.	57	75	86	83.170*
5. Pre-rinsing dishes in cold water.	39	56	75	124.273*
6. Looking for energy-efficient labels when shopping for appliances.	43	63	81	133.221*
7. Setting hot water heater between 120° and 140° F.	50	74	88	130.815*
8. Combining shopping trips.	84	87	89	3.85 NS
9. *Adjusting gas appliances* so flame is completely blue.	69	69	85	78.314*
10. Using lowest heat possible to keep foods cooking.	75	85	93	62.452*

Number of total respondents (range)

[a] 111–140
[b] 1181–1363
[c] 948–1021

NS—Not significant at .10 level.
*Significant at .001 level.

dialogue about issues, and hopefully modify these feelings. Role playing, demonstrations, and participatory experiences with personal situations are excellent ways of moving toward these goals.

Footnotes

1. M. E. Olsen and J. A. Goodnight, *Social Aspects of Energy Conservation* (Seattle, Washington: Batelle Human Affairs Research Center, 1977).
2. M. Rappeport and P. Labaw, *General Public Attitudes and Behavior Regarding Energy Saving, Highlight Report,* Vol. IX (Princeton, New Jersey: Opinion Research Corporation, 1975).

3. U.S., Congress, Office of Technology Assessment, *Changes in the Future Use and Characteristics of the Automobile Transportation System,* Vol. III (Washington, D.C.: Superintendent of Documents, 1979).
4. Kenneth R. Sheets, "Energy: U.S. Living in a Fool's Paradise?" *U.S. News and World Report,* LXXXIV (May 1, 1978), 102.
5. Olsen and Goodnight, *Social Aspects of Energy Conservation.*
6. *Ibid.*
7. N. Leedom, *A Review of Energy Education Research* (Lansing, Michigan: Michigan Department of Commerce, Energy Extension Service, 1978).

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