

Using Cluster Analysis to Target Educational Messages to Consumers

Abstract

Cluster analysis is a common marketing tool for identifying groups of customers, clients, or consumers similar enough in demographics, behaviors, or attitudes to warrant specialized methods for targeting them with a desired message. We used cluster analysis on data from an integrated pest management (IPM) survey of the general public to categorize groups by their similarities with regard to IPM-related attitudes and behaviors. We describe how we used these data to target critical IPM messages in ways most likely to elicit positive behavior change. The methods we used could be applied in many disciplines to target Extension educational messages to diverse client groups.

Heidi Kratsch

Associate Professor
and Horticulture
Specialist
University of Nevada
Cooperative Extension
Reno, Nevada
kratschh@unce.unr.edu
[u](#)

JoAnne Skelly

Professor Emerita
University of Nevada
Cooperative Extension
Carson City, Nevada
skellyj@unce.unr.edu

George Hill

Professor Emeritus
University of Nevada
Reno, Nevada
gchill@unr.edu

Susan Donaldson

Professor Emeritus
University of Nevada
Cooperative Extension
Reno, Nevada
donaldsons@unce.unr.edu

Introduction

Extension educators assess and prioritize the needs of their stakeholder groups to develop educational programming for those audiences. However, rarely do they consider the unique perspectives, behaviors, and attitudes of different target audience members when designing such programs. This additional effort can be accomplished through audience segmentation, and it can make educational programs more efficient and effective.

Social marketers use audience segmentation as a first step toward designing programs for influencing behavior change (Andreason, 1995; Lefebvre, 2013; McKenzie-Mohr, 2011; Wilbur, 2006). Target audiences can be parceled into smaller, discrete units with common characteristics (Wilbur, 2006). Barriers and benefits to learning and behavior change can then be identified for each unit, allowing development of more effective programming strategies (Lefebvre, 2013; McKenzie-Mohr, 2011).

Audience segmentation also has been used by Extension workers to identify effective delivery methods for forestry information (Bardon, Hazel, & Miller, 2007), to organize homeowners into groups according to their values and knowledge about lawn care (Mangiafico, Obropta, & Rossi-Griffin, 2012), to evaluate the information communication system of a network of community gardens (Loria, 2013), and to identify groups for landscape water conservation programs (Monaghan, Ott, Wilber, Gouldthorpe, & Racevskis, 2013).

Feature	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
landscape? the time					
How often are pesticides applied on your lawn?	Seldom	Seldom	Seldom	Seldom	Never
How often are weed-and-feed-type products used on your lawn?	Less than once per year	1 to 3 times per year	1 to 3 times per year	Never	1 to 3 times per year
I prefer not to use pesticides.	Maybe	Yes	Maybe	Yes	Maybe

Note. Reported responses are based on the median within each cluster.

Survey respondents were asked to indicate their degrees of agreement or disagreement with a number of statements about lawns and lawn care (Figure 1). Answers above 3 indicate general agreement with the statement. Answers below 3 indicate disagreement. The questions were designed to help us understand the degree to which respondents aspired to a perfect lawn and what they believed is needed to achieve it. Respondents in cluster 4 were least likely to have attitudes indicating desire for a perfect lawn. Similar to respondents in cluster 5, they generally did not believe that managing a lawn without using pesticides was time-consuming. Respondents in clusters 2 through 4 were the most interested in learning more about less toxic lawn care methods and the most willing to pay more for less toxic products. Respondents in cluster 5 were the least interested in learning more about, and paying more for, less toxic methods or products.

Figure 1.

Respondents' Attitudes About Lawns and Lawn Care by Cluster

