

making the data work for you

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Have you ever walked hand-in-hand into program development with a computer? It can be a valuable aid. It can help organize statistics from and for groups quickly and efficiently, and is especially helpful when we use it to:

1. Get the most mileage out of a spot-in-time survey.
2. Get information out of records.
3. Help interpret new information.

Getting Mileage from Survey

Simple tabulation is usually sufficient for totaling the responses to each question in a survey. Computers are great for doing secondary analysis—going beyond your first question and seeing how different types of people responded or how responses to one question related to responses to other questions. Here are some examples.

Need Study

A Wisconsin farm management agent felt farmers might not be getting the right kind of help from tax preparers. He organized an agent-specialist team and got funding to employ professional telephone interviewers to get a high response rate and generalizable data. Random samples were drawn from 11 farmers in each of 5 counties.

The first run of data answered the initial questions and showed that farmers were missing some advantages related to depreciation, capital gains, and investment credit. The agent-specialist team developed fact sheets on those subjects for statewide use.

But the computer helped the team go a lot farther. Through further computer analysis, the team was able to look at questions like: Who prepares his/her own tax? Who is most apt to use lawyers or accountants? Do different types of tax preparers handle things differently?

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The total of 480 responses and access to a computer permitted analyses that couldn't have been handled with just 60-70 respondents in the agent's own county. The data collection and analysis cost over \$10,000, but the results from the fact sheets and increased tax programming will probably save farmers several times that amount.

*Program Area
Impact*

We added a few general impact questions to the farm income tax survey. The computer helped us deal with specific questions like: Are dairy farmers more apt to use Extension than other farmers? Are high- and low-income farmers equally apt to use Extension?

Method Study

Two Wisconsin Extension home economists and several state specialists wanted to know the best ways of reaching young marrieds in a metropolitan area. The data needed to be generalizable, so we invested in telephone surveys. And again, to get full value from the investment, we used the computer for further analyses dealing with questions like: Does interest in learning change when children are born? Do men and women differ in the ways they want to get information?

But remember, there are things that computers can't do. Computers can organize data, but can't tell us what those data mean. Computers can't make decisions for us. We should use them to get information processed . . . , but we must be prepared to do a good deal of thinking about those data.

Results Study

To what extent are 4-H members learning the things that projects are designed to teach? How well are 4-H animal science projects doing in teaching life skills? State 4-H personnel and the agents and specialists on the animal science developmental committee tried to find out. Students interviewed 150 older animal science members and 87 parents of younger members by telephone. The computer helped in three ways:

1. By making comparisons and further analyses very easy.
2. By making a representative state sample possible, with no extra work for agents. The sample was drawn by computer from the enrollees in the 30 counties in the 4-H computer enrollment program.
3. By analyzing over 12,000 animal science enrollments in the University of Wisconsin-Extension computer and describing members in terms of places of residence, age, sex, and nature of the animal project taken.

The total cost was about \$3,000. No one county has a single picture of results in that county. But, all counties can use the data to show new leaders, old leaders, donors, and elected officials what's being learned through 4-H.

Multiple Impact Studies

At the request of a district director, we used telephone interviews and extensive computer analysis to handle 20 separate studies through 1 survey. By using the computer, we were able not only to describe Extension's total impact, but also to look at impact on separate clientele groups (farmers, elderly, etc.), and to examine the impact of various Extension methods.

Maximizing Effect

In each of the above studies, an investment in generalizable data (random samples with a high response rate achieved through telephone interviews) was maximized by computer analyses that quadrupled the amount of information gotten from one survey. In each instance, the data were used by several Extension agents and specialists.

Getting Info Out of Records

Sometimes we don't have to go to surveys. Computers help us get information out of records.

Secondary Data

We can siphon off summary data about actual practice and characteristics of program participants when people use the computer for other purposes, such as keeping DHIA records, balancing rations, and analyzing nutritional intake or family budgets.

Situational Analysis

Presently, UW-Extension is requesting state funds for local Extension positions working with business. We need to project the volume of work for these positions. We have information from past surveys and will be relating it to data from (1) business mailing lists, (2) the census, and (3) past enrollments. In each case, the computer processes information by county, types of business, and other characteristics.

Not Reinventing the Wheel

Computerized plans of work are helpful to an agent who wants to develop a special program, but doesn't want to reinvent the wheel. A quick computer search can give the names of agents in the past three or four years who have devoted considerable effort in the particular area of his/her interest.

Requests for Information

This example is fictitious—I think. Telephone call from Senator X: "How much of our tax money is going into programs that increase the quality and quantity of meat available

to the consumer? What's Extension doing about this in my district?"

Without computerized information, the administrator receiving such a telephone call would have to hem, haw, and guess. It would be difficult to convey an impression of Extension's being dynamically at work. With a computerized information system, the administrator can quickly give a concise summary of the days and dollars Extension is allocating and the location of major activities.

Helping Interpret Data

One of the most difficult problems with evaluative data is interpreting them. Sports fans can evaluate an athlete's performance by studying track records and batting averages. Extension hasn't built up records of batting averages and may be setting performance criteria too high or too low. Computers can help us by providing other data to compare a specific performance with.

Is Enough Being Done?

Local people criticized an agent and told his supervisor he wasn't doing enough. As one way of dealing with the situation, we pulled EMIS data from that county and 15 other counties with similar population, and arrayed the 16 counties. Although the agent in question seldom topped the list, he was never at the bottom of it either. Administration was able to show the people in that county that they were getting the same amount of work from their agent as were people in other counties.

Comparison Over Time

Two sets of UW-Extension specialists who do a lot of workshops—recreation industry and natural environment—are currently working on standard end-of-meeting sheets, follow-up instruments, and a master computerized file. They feel that by having common information from similar respondents over a period of time, they can compare results and reaction information among workshops based on the nature of the workshop and can monitor participant response.

This comparison will both improve the interpretation of individual sets of data and help specialists learn a good deal more about how clientele respond to various topics and types of teaching. The computer makes it simple to store, retrieve, and compare information. *Data systems* that help provide a background for understanding a particular set of data and help expand Extension's total understanding of itself and its operation will become more important.

A Computer Can't . . .

The above examples show only a few ways the computer can help Extension personnel better organize and use data. Computers are best used when data work is complex. If we just need a simple tabulation, a calculator will handle it faster and at less cost. Computers pay off when we:

1. Want to look at a set of data in several ways.
2. Need to store and relate data collected at different times.
3. Need to combine data from several sources.
4. Need to do statistical analysis.

But remember, there are things that computers can't do. *Computers can organize data, but can't tell us what those data mean.* Computers can't make decisions for us. We should use them to get information processed so we have clear descriptions and comparisons, but we must be prepared to do a good deal of thinking about those data.

Looking to the Future

Computers will continue to be important aids in program development. We need numerical information in Extension to: (1) determine pervasiveness of need, (2) set priorities, (3) sharpen focus, (4) select best methods, (5) record number and type of people reached, (6) summarize results, (7) monitor resource investments, and (8) defend and support budgets.

However, the emphasis will shift from individual use to data that can be used by and for groups of Extension personnel. A group approach to data will be essential both in accountability and in program development.

Accountability

Extension must provide numerical data on needs and results that adequately represent a *whole state* or the *whole country*. It's not enough to splice together separate information from individual counties. Fundors are requiring concise need and results summaries that match and relate to budget requests. It's essential that such summaries be available.

The total funding picture has changed with the advent of a host of new socially oriented programs and taxpayer reluctance to continue to expand government programming. There's no guarantee that Extension can continue to get either state or federal funds. Thus, we need to improve our use of the computer in building appropriate summaries.

Program Development

Data are growing too expensive for individuals to collect for their exclusive use. Costs for collecting and interpreting data are rising. In addition, relationships with clientele are

weakened if too many data are collected from the same people. Future emphasis in program development will be on group planned data projects (need analyses and results studies) that provide data for several agents and specialists.

Efficient future use will come as individuals work together on data projects and become more skilled in improving interpretation.