The Tennessee Extension Program Planning and Evaluation Model

Joseph L. Donaldson, MS, Extension Specialist
Department of Extension Evaluation & Staff Development
212-D Morgan Hall
2621 Morgan Circle
Knoxville, TN 37996-4525
T: 865-974-7245
F: 865-974-0882
jldonaldson@utk.edu

Introduction

Today, the proliferation of program development and evaluation models being used in Extension demands that we stop and take inventory. The Logic Model (Taylor-Powell, 2002), the Targeting Outcomes of Program (TOP) Model (Bennett & Rockwell, 1995), the Cornell Cooperative Extension Program Development Model (Duttweiler, 2001), and the Extension Education Learning System (Richardson, 1994) all propose a coordinated process for planning, conducting, and evaluating Extension programs. These models have contributed to a four-step model for Extension work in Tennessee.

The purpose of the Tennessee Extension Program Planning & Evaluation Model is to provide a straight-forward, yet comprehensive approach to program planning and evaluation. The model achieves this purpose using terms from the Tennessee Annual Planning Database. The model's four dimensions are: issue, plan, deliver, and evaluate. Each dimension is defined by a set of action steps. The purpose of this paper is to expand on those action steps and present only the research and practice most applicable to planning a quality Extension program.

Identify Issues

Assess Needs

What are the needs of people? To answer this question, first and foremost, listen to people. Observe the needs in their lives. Examine census data. Examine other data sources such as the local newspaper or data provided by the Chamber of Commerce. This process is known as needs assessment.

Issues are often obvious. Three home fires in one month in one neighborhood will get everyone's attention. This provides a teachable moment for fire prevention and home safety programs. Taking advantage of such teachable moments speeds adoption of recommended safety and fire prevention practices.

Likewise, issues are just as likely to be hidden from the casual observer. The personal bankruptcy rate, for example, is one problem that people may not be willing to discuss.

Affected individuals just don't stand up and say "I have a problem managing my money and I need help."

Following is a partial list of Internet data that could help identify certain needs in your community:

United States Census Bureau
http://www.census.gov/

Tennessee Agricultural Statistics Service
http://www.nass.usda.gov/tn/

Tennessee Department of Health and UT Community Health Research Group
http://www2.state.tn.us/health/statistics/HIT/hsr_hit.htm

Tennessee Department of Education
http://www.state.tn.us/education/mreport.htm

Tennessee Department of Economic and Community Development
http://www.state.tn.us/ecd/tnglance.htm

Listen to Advisory Group

One of the most effective ways to assess needs is to work with an advisory group (Univ. of Wisconsin Extension, 2003). Advisory groups must be representative of the geographic, political, racial, ethnic, and socio-economic diversities of your county or area served. The importance of involving non-traditional or under-served clientele cannot be underestimated. People will share their needs and goals if we will ask. Also, advisory groups usually have representation from community coalitions, government agencies, schools, etc.

Extension agents form advisory groups so that people are involved in shaping programs to address the greatest needs in their community. Involve the advisory committee in planning programs. Probe to discover more of their insights into the community, its people, and their problems. The most effective and active advisory groups have these characteristics:

(1) members who were first invited to serve either face-to-face or on the telephone and then sent a letter to remind them of the first meeting.
(2) member rotation to ensure new ideas and not wear-out the members.
(3) members who feel free to discuss their community.
(4) members who feel their input is taken seriously.
(5) members who are informed about program accomplishments.

Techniques for involving an advisory group include nominal group processing, Delphi study, and others. Don't hesitate to share data that you've collected with the advisory group. However, be careful not to let your data sharing take prominence away from listening to what's on their mind.

Identify Issues/Set Priorities
Most likely every need identified will not be addressed by Extension. Work with your advisory group to separate needs from wants and to prioritize the needs of greatest concern. Help your group to distinguish between cause and effect. What are the problems, the real issues? After an advisory group has listed the greatest needs, ask them which needs are most likely to be reduced with education, as education is the service provided by Extension.

Other public service agencies, clubs, and groups exist who will meet some of the needs. Work with your advisory group so that they are aware of the needs that Extension is most capable of addressing. Inform your advisory group of resources, for example, how many volunteers are involved in certain programs.

Target Audience
Target an audience who has the identified needs. Who is most affected by the issue? Who benefits the most from having the issue addressed with education? Who is most at-risk for the problem? For whom is the need the greatest?

Plan

Plan Outcomes
What will be the result of your program? What is the ultimate result? If you are sponsoring a River Rescue Program that includes collecting litter along river banks, what is the ultimate result? To host a day for litter collection? That's just one goal toward your ultimate result. Your ultimate result might include one or more or these aims: to preserve clean water, to build a healthy natural environment, to improve human health, or to maintain tourism. Bennett described all these as Social, Economic, and Environmental Conditions (SEEC). What needs are you trying to reduce? What will the home, family, and community be like after the needs are reduced?

Write Educational Objectives
Objectives must be SMART – Specific, Measurable, Attainable, Realistic, and Targeted. Specific objectives tell who will achieve what. Achievement should be measured in a tangible way. Program objectives should be attainable and realistic. Objectives should not be so easy that real work is not needed to achieve them. People – including extension professionals planning programs – need a challenge to succeed. Objectives should target the audience of greatest concern.

Plan Evaluation/Establish Outcome Indicators
Was your effort a success? How will you know if you hit the target? What kinds of data will you need to collect to know if your objectives were met? An educator and change agent makes two things happen. First, establish the outcome indicators, and secondly, plan the techniques you will use to measure those outcomes. What indicates that the educational objective was achieved from your programming?

Figure 1. Examples of Educational Objectives and Outcome Indicators

Educational Objectives	*Outcome Indicators*
10 migrant workers will attain "better housing."	1. Number of homes attained with insulation. 2. Number of homes with hot, running water. 3. Number of participants renting housing with standard plumbing.
30% of youth participants will reduce their use of vending machines to "save money" and "improve health."	1. Amount of money saved. 2. Number of participants saving. 3. Number of participants reporting fewer vending machine visits. 4. Percentage increase in fruit/vegetable consumption. 5. Percentage decrease in vending machine business.
15 dairy farmers will improve their farm income by 10% through "higher milk quality."	1. Percentage of dairy farmers who improve their farm income. 2. Number of farmers who have increased income. 3. Total increase in farm income. 4. Number of dairy farmers with no antibiotic residue in milk.

Evaluation techniques vary widely. You may need to design a survey, questionnaire, pre-post test, make observations, weigh a harvested crop, count acres planted, or count yield data. Your challenge is selecting the correct technique to obtain answers for your questions. Was the program a success? Were the objectives met? Bennett and Rockwell (1995) have described levels of program performance (Figure 2).

Extension's goal is to measure program performance at the highest possible level. That's why our major programs are planned and conducted to change practices and ultimately to improve the quality of life through positive changes in social, economic, or environmental circumstances. If change cannot be measured at the learning (KASA), action (practice change), or outcome (SEEC) levels, then that particular program is a low priority.

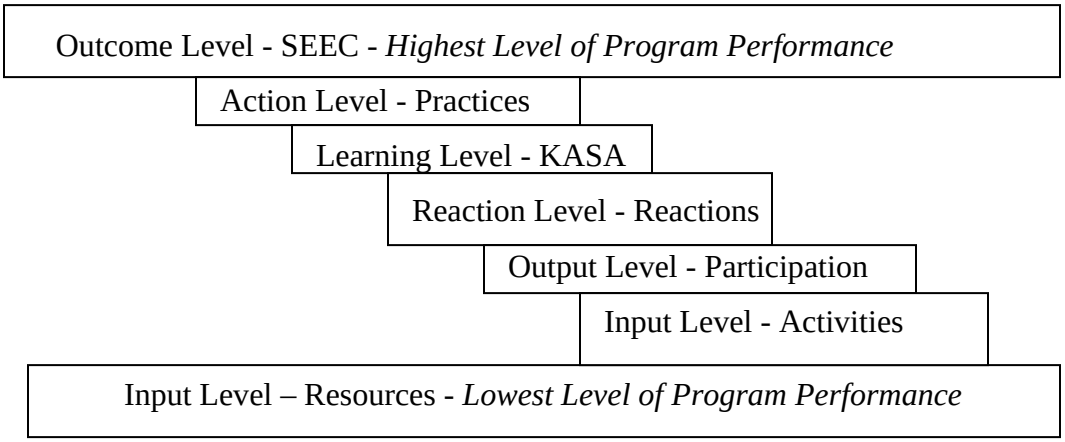
Obtain Curricula

The research-based knowledge you need to initiate this effort may be contained in an extension or other publication, research article, curriculum package, etc. Seldom does one educator have all the necessary facts and tangible materials to conduct the program. Obtaining your curricula might include any or all of these jobs:

-Inventory of resources in your office
-Searching University Extension websites
-Contacting a subject-matter specialist

From these or other sources, obtain the information you need to address the issue.

Figure 2. Levels of Program Performance



Sources: Bennett & Rockwell (1995)
Kirkpatrick (1996)
Taylor-Powell (2002)

Secure Inputs
Secure needed input from your advisory council, subject matter specialists, extension administrators, and any key stakeholders who can assist in planning the program. Create your Annual Plan. Share the annual plan with your supervisor. In the case of county extension agents, your annual plan is shared with your County Extension Director and your District Program Leader.

Your inputs might include funding, a meeting location, or other tangible resources. Input is secured from collaborators or program partners. These partners may be involved in program planning, teaching, or even funding. Collaborators and partners are internal (the extension forage specialist) or external (a local farm business who is providing funding). Consider all possibilities for multi-county and multi-state inputs.

In the case of extension subject matter specialists, secure input from county agents as to the issues identified in the counties, leading indicators, program curricula needs, and research needs. Consider all possibilities for multi-state program efforts by contacting colleagues and reviewing state Plan of Work or Annual Accomplishment Reports. Many of these reports are available on state extension websites.

Deliver

Design the Learning
Richardson, Jenkins, and Crickenberger (1994) have described all the teaching techniques we use in extension education as experiential, reinforcement, integrative, or other (Figure 3). The right mix of these methods makes a program.

A program is a set of learning opportunities provided for a specific audience. It has specific, measurable objectives. Any one delivery method alone does not constitute a program.

Recruit/train Volunteers

People need to be involved! Very few, if any, extension programs are conducted without volunteers. The effective extension professional is an effective manager of volunteers. Even the smartest, most resourceful people benefit from training prior to the first time they do something.

Figure 3. Methods for Effective Program Delivery

These methods are shown as examples. This is not meant to be an exhaustive list.

Experiential	***Integrative***	***Reinforcement***	***Other Methods***
Method demonstration	Conference	Fact sheet	Mass media
Result demonstration	Seminar	Reference notebook	Photograph
On-farm test	Panel	Publication	Bulletin board
In-home test	Meeting	Poster	Show
Tour	Discussion group	Personal letter	Fair
Field day	Phone conversation	Newsletter	Exhibit
Workshop	Personal visit		
Game	Office visit		
Skit			
Case study			
Role play			
Food tasting			

Richardson, Jenkins, and Crickenberger, (1994)

Teach/Conduct Program

Teaching methods may have to be adjusted depending on the circumstances. The educator may discover, for example, that the target audience has difficulty reading the printed material and adapt the program to non-print methods.

Manage Program Resources

Managing volunteers and other program resources like publications and equipment is a big job that requires a multitude of skills! These competencies include:

- Program planning, implementation, and evaluation,
- Working with people,
- Personal and professional development,
- Faculty and staff relations,
- Personal skills,
- Management responsibility, and
- Work habits (Cooper & Graham, 2001).

A number of opportunities are provided to develop the necessary competencies to manage program resources. Extension professional associations, in-service training, and coaching from district program leaders are just three of the ways agents develop these competencies.

Evaluate

Collect Indicator Data

Implement your plan for evaluation. Compare impacts to objectives.

Evaluate Learning, Actions, and Conditions

Concentrate your evaluation efforts on outcomes. Outcomes are real, measurable changes in learning, action, or conditions (Taylor-Powell, 2002). Changes in learning could occur along four lines, KASA – knowledge, attitudes, skills, and/or aspirations. Action means practice change. What specific practices have the clients adopted? Evaluating conditions refers to those social, economic, or environmental states which are the ultimate aim of extension programming (Bennett & Rockwell, 1995).

Write Impact Statements

Compose a professional report of the program. In extension we call this report an impact statement. An impact statement is so named because our ultimate goal is a positive impact for people. Impact statements should include:

- the number of people served;
- the problem addressed;
- the way in which indicators were measured, for example a pre/post test;
- the indicators of impact, the percentages, facts, and figures;
- other indicators that demonstrate practice change or improved SEEC (Figure 4).

Figure 4. Example Impact Statement

Of the 725 Example County students in the 4-H Financial Management Program, four intact classes were randomly selected and surveyed. The survey was completed by 75 students, or 10% of participants, with a response rate of 100%. The following impacts were achieved:

*88% of students learned the deductions from your paycheck.
*75% learned how to write a check and keep a checkbook register.
*74% learned the connection between education and their future career.
*42% learned the importance of saving money.

Two months after attending a 4-H session on savings, one 8th grader reported saving $50 and "buying Christmas presents for my family." The money was saved from not consuming a daily soda at school. The youth was spending $25 per month in school vending machines. This is a yearly savings of more than $200.

In addition, one-third of participants (36%) reported that they took the initiative to talk to their parents about money management as a result of this program.

The major mistake made in composing impact statements is to provide a list of activities. Activity evaluation, while important to improve your program, is one of the lowest

measures of program performance. Our public, decision-makers, and funding partners demand accountability measures that show impacts to human or environmental capital.

Report Impacts
Impacts should be reported both internally and externally. Internally, and firstly, report in the Tennessee Extension MIS system. This system is designed to furnish needed information about our total Extension and Research effort in Tennessee. This information is provided to the USDA through required annual reports.

Outcomes should also be reported locally. Report outcomes to county advisory committees, county extension committee, and other groups. Annually, County Extension Directors provide a written report to county government detailing the Extension effort for the year. Your major impacts should be included in the County Extension Director's summary.

Summary

Tennessee's model for Extension Program Planning and Evaluation is based on research and best practices. This model is used to meet goals such as

- effective program planning at the local, multi-county, state, and regional levels,
- linking program planning to evaluation,
- coordinating University resources,
- reporting impacts,
- acquiring stakeholder input,
- improving accountability and evaluation, and
- satisfying legislative mandates.

Meeting these goals will result in an Extension program that yields results for Tennesseans and improves their quality of life.

References

Bennett, C. & Rockwell, K. (1995). Targeting outcomes of programs (TOP): An integrated approach to planning and evaluation. Retrieved August 29, 2003, from University of Nebraska TOP Web site: http://citnews.unl.edu/TOP/english/index.html.

Cooper, A.W. & Graham, D.L. (2001, Feb.). Competencies needed to be successful county agents and county supervisors. *Journal of Extension*, 39(1). Retrieved from: http://www.joe.org/joe/2001february/rb3.html

Duttweiler, M. (2001). Cornell Cooperative Extension (CCE) Program development Model. Retrieved August 29, 2003, from CCE-Program Development Web site: http://www.cce.cornell.edu/admin/program/documents/model.htm.

Kirkpatrick, D. (1996, Jan.). Great ideas, revisited: Techniques for evaluating training programs. *Training and Development*, 50, 54-59.

Richardson, J.G., Jenkins, D.M. and Crickenberger, R.G. (1994). Extension education process and practice: Program delivery methods. SD 6, N.C. Cooperative Extension Service, North Carolina State University, [on-line]. Available: http://www.ces.ncsu.edu/resources/education/.

Richardson, J.G. (1994). Extension Education Process and Practice: Extension education learning system. SD 7, N.C. Cooperative Extension Service, North Carolina State University, [on-line]. Available: http://www.ces.ncsu.edu/resources /education/sd7/.

Taylor-Powell, E. (2002). Program development in UW-Extension. Retrieved August 28, 2003, from University of Wisconsin-Extension-Cooperative Extension, Program Development and Evaluation Unit Web site: http://www1.uwex.edu/ces/pubs/pdf/G3658_1.PDF.

University of Wisconsin Extension (2003). Advisory Committees. Retrieved August 28, 2003, from the University of Wisconsin-Extension-Cooperative Extension, Program Development and Evaluation Unit Web site: http://www1.uwex.edu/ces/pubs/pdf/G3658_1.PDF.

A State Partner in the Cooperative Extension System
The Agricultural Extension Service offers its programs to all eligible persons regardless of race, color, age, national origin, sex or disability and is an Equal Opportunity Employer.
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
The University of Tennessee Institute of Agriculture, U.S. Department of Agriculture, and county governments cooperating in furtherance of Acts of May 8 and June 30, 1914.
Agricultural Extension Service
Charles Norman, Dean