The Tennessee Extension Program Planning and Evaluation Model

Joseph L. Donaldson, Extension Specialist
Department of Extension Evaluation & Staff Development

Introduction

The purpose of the Tennessee Extension Program Planning & Evaluation Model is to provide a straight-forward, yet comprehensive, approach to program planning and evaluation that fits the program complexity and organizational structures of Extension in Tennessee. The Logic Model (Taylor-Powell, 2002), the Targeting Outcomes of Program (TOP) Model (Bennett & Rockwell, 1995; Wholey, Hatry & Newcomer, 2004), 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 model's four dimensions are: issue, plan, deliver and evaluate. Each dimension is defined by a set of action steps. This paper expands on those action steps and presents only the research and practices most applicable to planning a quality Extension program.

Identify Issues

Assess Needs

What are the needs of people you serve? 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 data indicators available on the World Wide Web that could help identify certain needs in your community:

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

Annie E. Casey Foundation Kids Count Data Online
http://www.aecf.org

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

Tennessee Department of Health
http://health.state.tn.us/data.htm

Tennessee Department of Education
http://www.state.tn.us/education/reports_data.shtml

Tennessee Department of Economic and Community Development - County and Community Data Sheets
https://www.tnecdit.net/TN_Datasheets

Listen to Advisory Group

One of the most effective ways to assess needs and plan programs to meet those needs is to work with an advisory group (Univ. of Wisconsin Extension, 2003; Barnett, Johnson & Verma, 1999). 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 and other important local institutions.

Extension agents form advisory groups so that people are involved in shaping programs to address the greatest needs in their community. Engage the advisory committee in planning programs. Probe to discover more of their insights into the community, its people and their problems. Research-based information on advisory groups is sparse (Barnett, Johnson & Verma, 1999), yet staff experiences for building and maintaining advisory groups have been published. 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 (University of Wisconsin Extension, 2003).

Techniques for engaging an advisory group include nominal group technique and Delphi study. Examples are available in the *Journal of Extension* (http://www.joe.org), by searching for keyword, i.e., "nominal group technique." 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.

The County Agricultural Committee is one advisory group. The roles of the County Agricultural Committee, such as securing county funds for Extension work, are consistent with the advisory functions identified in a New Hampshire study of local advisory group members (Black, Howe, Howell & Bedker, 1992). The degree to which the County Agricultural Committee can identify needs and suggest program implementation depends on their expertise and the county situation. Before deciding to use the Agricultural Committee as your sole advisory group, determine if the committee is representative of the county's population. Another appropriate strategy is the inclusion of at least one Agricultural Committee member on every program advisory committee.

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 the group which needs are most likely to be reduced with education, as education is the service provided by Extension. What about the needs that cannot be addressed through education? 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 that 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? Advisory groups are often helpful in identifying target audiences.

Plan

Plan Outcomes

What will be the result of your program? What is the ultimate result you wish to achieve? 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. What are the needs you are trying to reduce? What will the home, family and community be like after the needs are reduced? Your ultimate result might include one or more of these aims: to preserve clean water, to build a healthy natural environment, to improve human health or to maintain tourism.

The ultimate result you are seeking will be the conditions reflected in the long-term outcomes. Bennett and Rockwell (1995) described these as Social, Economic and Environmental Conditions (SEEC). The outcomes set and measured in pursuit of these conditions are described as learning outcomes and action outcomes. *Learning outcomes* describe the short-term outcomes (knowledge, attitudes, skills or aspirations), while *action outcomes* describe the medium-term (actions or behaviors).

Figure 1. Examples of Planned Outcomes

Issue	Learning	Action	Conditions
Parenting Education	• Parents increase knowledge of child development. • Parents learn new ways to discipline. • Parents become aware of community resources that will help them.	• Parents practice improved parenting skills. • Parents use the local Parenting Resource Center, and use of other services also increases.	• Reduced rates of child abuse and neglect.

Write Educational Objectives

While outcomes describe the broad aims of the program, educational objectives are the specific things the audience will learn or do. Educational objectives tell specifically who will achieve what when the program is conducted. 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 need a challenge to succeed. Objectives should target the audience of greatest concern (Figure 2).

Figure 2. Examples of Educational Objectives and Outcome Indicators

<u>Targeted Outcome</u>: Dairy farmers will improve their farm income by at least 10 percent through higher milk quality.

<u>Outcome Indicators</u>: Number of dairy farmers who adopted written plans for treating sick cows have no antibiotic residue in milk and increased income.

<u>Objective</u>: Dairy farmers will understand how using written plans for treating sick cows can keep antibiotic residue out of their milk and increase income.

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? As an educator and change agent, you will establish the outcome indicators and plan the techniques you will use to measure those outcomes. What indicates that the educational objective was achieved from your programming?

Evaluation techniques vary widely. You may need to use a survey, questionnaire or 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?

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, action (practice change) or outcome (SEEC) levels, then that particular program is a low priority. Bennett and Rockwell (1995) have described levels of program performance (Figure 3).

Figure 3. Levels of Program Performance

Outcome Level – SEEC – Highest Level of Program Performance

Action Level – Practices

Learning Level – KASA

Reaction Level – Reactions

Output Level – Participation

Input Level – Activities

Input Level – Resources - Lowest Level of Program Performance

(Bennett & Rockwell, 1995; Kirkpatrick, 1996; Taylor-Powell, 2002)

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 web sites

- Contacting subject-matter specialists and/or regional program leaders

From these or other sources, obtain the information you need to address the issue, and contact Extension specialists to determine the curricula's validity and alignment with current research.

Secure Inputs

Secure needed input from your advisory council, subject matter specialists, regional program leaders and any key stakeholders who can assist in planning the program. Create your individual 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 regional program leader.

Your inputs might include time and effort, Extension funding, a meeting location or other tangible resources. Input is secured from collaborators or program partners. Collaborators and partners are internal (the Extension forage specialist) or external (a local farm business that is providing funding). These partners may be involved in program planning, teaching or even 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 states' Plans of Work or Annual Accomplishment Reports. Many of these reports are available on state Extension web sites.

Deliver

Design the Learning

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. Richardson, Jenkins and Crickenberger (1994) have described all the teaching techniques we use in Extension education as experiential, reinforcement, integrative or other (Figure 4). The right mix of these methods makes a program.

Recruit/train Volunteers

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

Figure 4. 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, & 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 may need to adapt the program to employ non-print methods.

Manage Program Resources

Managing volunteers and other program resources such as 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 regional program leaders are just three of the ways agents develop these competencies.

Evaluate

Collect Indicator Data

Collecting indicator data may be as simple as a show of hands or as complex as a mailed questionnaire. Focus groups or interviews may be used to describe the program's impact. Data on knowledge gain can be collected through group and individual recall games.

Some preparation must be made for data storage and retrieval. Statistical software programs, spreadsheets or survey-builder Web sites are all options, depending on the program's content and resources.

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, knowledge, attitudes, skills and/or aspirations (KASA). *Action* means practice change. What specific practices have the clients adopted? Evaluating conditions refers to those social, economic or environmental states that 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. Confidentiality and anonymity of program participants must be maintained. Impact statements should read, "A local farmer has doubled farm income through Extension's value-added farm products program..." rather than "Bill Jones made twice as much money this year through Extension's value-added farm products program."

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 5).

Figure 5. Example Impact Statement

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

* 88 percent of students learned the deductions from paychecks.

* 75 percent learned how to write a check and keep a checkbook register.

* 74 percent learned the connection between education and their future career.

* 42 percent 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 percent) 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, report in the System for University Planning, Evaluation and Reporting (SUPER). This software is designed to furnish needed information about our total Extension 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, the county agricultural committee and other stakeholders. 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.

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