

# Building Impactful Extension Programs By Understanding How People Change<sup>1</sup>

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## Encouraging Behavior Change Through Extension Programming

Extension “is reported to be one of the world’s most successful change agencies” (Rogers, 2003, p. 391), and the ability to encourage behavior change remains critical to Extension programming accountability and ultimately to its success (Harder, 2012). Programs that result in increased knowledge without actual change in practice have been compared to programs that do not increase knowledge at all (Clements, 1999). Educational outreach activities must continually evolve to serve changing consumer behaviors and emerging technologies (Doerfert, 2011). However, change in general is highly complex, even at the individual level (Conroy & Allen, 2010). This article describes an approach to understanding how Extension audiences move through the process of change as a means of delivering meaningful programming at the most appropriate level.

Educational programs should be “based on solid principles of behavior change” (Pratt & Bowman, 2008), and it is important to recognize that behavior change is something that happens over time (Shaw, 2010). A current focus among agricultural education research includes measures to increase our understanding of how audiences react to various programs, including the impact programs have on consumer behaviors (Doerfert, 2011). While we have many

ways to look at how our programs impact our Extension clientele, evaluating behavioral change resulting from planned programs is a major challenge (Clements, 1999).

Many of the behaviors encouraged through Extension programming are complex changes that are not adopted immediately. However, this does not mean that a program has not affected the target audience; it does not need to be “all or nothing” (Clements, 1999). Changes in practices involve “moving through a range of stages, and each stage has its own requirements for institutional support” (Conroy & Allen, 2010, p. 196). The following example illustrates this range of stages.

*Consider a time that you adopted something new, like a brand new workout class at the local gym. Most likely, you did not hear about it the first day it was offered in your city. You were unaware of this new thing, but other people were participating. At some point you heard about it, and you may have thought it sounded crazy. As time passed, you may have started to notice that some friends or coworkers were trying this new workout and having good results. At this point you might have started to think about trying it. At some point, you might have called some local gyms to find out about class schedules and prices as you prepare to try this workout. All of these stages may have led up to you taking action and trying this new activity. After trying it, you might have continued*

1. This document is AEC527, one of a series of the Department of Agricultural Education and Communication, UF/IFAS Extension. Original publication date December 2014. Reviewed August 2017. Visit the EDIS website at <http://edis.ifas.ufl.edu>.
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U.S. Department of Agriculture, UF/IFAS Extension Service, University of Florida, IFAS, Florida A & M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Nick T. Place, dean for UF/IFAS Extension.

*doing this workout over many years, maintaining it as a part of your life, or you may have decided it was not for you, and terminated the behavior.*

Extension educational programming is based on a primary goal of bringing about individual behavior change (Boone, Safrit, & Jones, 2002), and it has been suggested that “our goal should be to begin to move our clientele from one stage of change to another in order to maximize program impact in terms of adoption of best practices” (Clements, 1999, Challenges for Extension Professionals) even if this means reducing the number of programs conducted or clientele reached. This translates to a focus on more meaningful impacts. Extension professionals have the opportunity to better understand an audience’s perceived barriers and benefits of making specific changes when they understand where someone is in the process of behavior change (Shaw, 2010). We can gain an understanding of Extension clients’ progression using the concept of *stages of change*. This concept has proven to be useful in needs assessments and evaluation activities, and there are numerous models that characterize the change process.

## Introduction to the Transtheoretical Model of Change

The Transtheoretical Model of Change (Norcross, Krebs, & Prochaska, 2011; Prochaska & Marcus, 1994), or TTM, is one of a number of useful interpretations of the stages of change. The TTM model portrays a clear picture of how people move gradually to the eventual adoption of some behavior. In the late 1970s, TTM was developed out of similarities among some major psychotherapy theories that were used to explain individual change processes (Norcross & Goldfried, 2005). TTM includes four major concepts that are summarized below: the process of change, the stages of change, and two indicators of success—confidence and decisional balance (Xiao & Wu, 2006).

### The Process of Change

TTM is a valuable model for Extension because it not only defines the stages of change but also explains how change occurs (*process of change*). An understanding of how change occurs allows Extension professionals to match audiences with appropriate methods of messaging and supporting activities to encourage movement through to the next stage.

### The Stages of Change

The stages of change are described in detail below. The amount of time Extension clients spend at one stage is variable, and will be different from one person to the next

(Norcross, Krebs, & Prochaska, 2011). While we may not be able to predict how long an Extension client would spend in one stage, we can identify the stage he/she is in and understand his/her needs based on the stage.

## Indicators of Successful Behavior Change

The TTM offers two additional elements that are considered indicators of successful change: *decisional balance* and *confidence* (Xiao & Wu, 2006). Decisional balance refers to an individual’s perception that the benefits of a practice change far outweigh the costs of adoption (Xiao & Wu, 2006); in other words, that the change was worthwhile. Confidence refers to how comfortable an individual is in not engaging in a competing, less-desirable behavior (Xiao & Wu, 2006).

## Understanding Stages as Defined by the Transtheoretical Model of Change

The five stages of change are known as Precontemplation, Contemplation, Preparation, Action, and Maintenance (Norcross & Goldfried, 2005; Shaw, 2010). These stages can be defined with respect to specific behaviors that occur when individual are in a particular stage (Prochaska & Marcus, 1994). It is important to note that movement through the stages is not linear. Individuals can regress to a previous stage or exit the process entirely during any particular change.

Gutter, Hayhoe, and Wang (2006) characterized these stages in terms of financial savings behavior. They represented these stages with respect to setting goals for savings, seeking information on savings, actively contributing to an account, and maintaining the savings program for at least six months.

There are multiple processes that relate to progression toward behavior change. The following table adapted from Prochaska, Redding, and Evers (1997) places them in context of the stages of change. The table also provides the definitions of these processes, drawing from Prochaska, Redding, and Evers (1997).

These processes of change can help us to select appropriate Extension activities and teaching methods. One way to incorporate the stages of change is by developing activities to reach people at each stage within a major Extension program.

## An Example from Family and Consumer Sciences

Let us consider how Family and Consumer Sciences Financial Management Priority Work Group Programs such as Family Album Blogging and Florida Saves help to raise consciousness of various issues which may affect families. Florida Saves is a targeted social marketing campaign involving social media and marketing materials, as well as a workshop series and webinar series. The webinars serve to provide information, which helps people believe in the importance of improving their financial behaviors. Participants want to be savers and they commit to doing so.

Several programs are designed to aid families as they begin taking actions. The VITA program helps families complete their own taxes. Fresh Start Florida helps families learn how to begin banking relationships. In the case of consumers being disenfranchised because of poor account management, the program can serve as a second chance program helping them get back into mainstream banking.

The Florida Master Money Mentor Volunteers work with families to establish goals, manage their spending, reduce debt, and increase savings. They provide ongoing support and information to families while they are maintaining the behavior.

The stages of change are applicable to any context within Extension and can serve as a means to more strongly focused programming. Let us change perspective and consider Extension programming to encourage the adoption of rain shutoff devices for the home landscape within a small neighborhood. A rain shutoff device detects when a specified amount of rain has fallen and shuts off an automated irrigation system for a set amount of time, resulting in a reduction of wasted water in the landscape. Different approaches will be more effective based on the audience's stage of change, and ideally we would identify the stage during our needs assessment activities.

## An Example from Landscape Water Conservation Programming

Assume we determined that the majority of our audience members were unaware of local water issues and were not considering any measure to save water in their home lawns—that is, they are in the precontemplation stage. A precontemplation approach would dictate that we focus on making the issue of water conservation known to our participants. We might use mass media or newsletters to share details about the severity of our local water shortage

during this stage and educate our participants about the functional workings of the watershed.

If we determined that our audience members were aware of the local water concern and largely were in the contemplation stage, we would work to build on their initial awareness. This means that we might share more detail about how much water this technology could save. Furthermore, we might present the actual number of gallons of water one would save with this technology and the corresponding financial savings that the individual could expect to see on his/her utility bill. To engage a group of participants at this stage we might look at the potential water savings that would result from an entire neighborhood adopting this technology.

If our Extension clients were in the preparation stage and were planning to take action at some point in the future, we would focus on making this change more likely to happen. We might conduct a demonstration of how to install the rain shutoff device or make different models available for clients to try. We also could consider partnering with a nearby landscape supply store to provide discounted devices, or even provide the devices to residents for free.

If we determined that the neighborhood members were largely in the action stage and most were using rain shutoff devices, we would want to provide encouragement for the positive behavior. We would want to emphasize the quantity of water that they were saving. We might also provide support for continued use of the technology. For example, we might conduct demonstrations of ways to verify that the shutoff device is working and instruct participants about recommended maintenance strategies.

If our audience was in the maintenance stage and most had been using rain shutoff devices for more than six months, we would continue to reinforce the positive benefits resulting from their actions and we might also consider asking them to get involved in advocating for the behavior among their neighbors and possibly contributing to a demonstration or branding of the social norm within their community.

We can help our participants make progress through the different stages of change by combining different smaller programs into a major program, as in the example from the Family and Consumer Sciences Financial Management Priority Work Group, or by combining different activities within a single program, as in the examples related to the adoption of rain shutoff devices.

## Identifying Stages of Change and Recruiting Based on These Stages

Identifying your target audience's stages of change is invaluable for tailoring your programs to match the audience's needs and helping them move to further stages of change. Each of the five stages of the TTM relates to a point in time in the life of an individual with regards to the adoption of, or the presence/absence of plans to adopt, a particular change within different time-frames (or, in other words, a continuum between *Behavior Intention* and *Behavior Observed*). Therefore we need to collect data to capture the stage of change individuals are in with respect to the specific changes that we wish to promote in their lives. Figures 1 and 2 are examples of two Likert-type scales that can be used to help you establish at which stage of change your participants currently are. The labels for the scale points correspond to the five stages of change in the TTM (i.e., 1 = Precontemplation, 2 = Contemplation, 3 = Preparation, 4 = Action, and 5 = Maintenance).

| Please tell us about your engagement in each of the following activities. |  |                                     |                                    |   |   |
|---|--|-------------------------------------|------------------------------------|---|---|
|   | I don't intend to do this anytime soon | I intend to do this within 6 months | I intend to do this within 1 month | I have been doing this for less than 6 months | I have been doing this for more than 6 months |
| Read nutrition labels to choose foods with less fat                       | 1                                      | 2                                   | 3                                  | 4   | 5   |
| Exercise at least three times per week for 30 minutes each time           | 1                                      | 2                                   | 3                                  | 4   | 5   |
| Eat at least five servings of fruits and vegetables per day               | 1                                      | 2                                   | 3                                  | 4   | 5   |

Figure 1. Example evaluation question 1. (adapted from Jayaratne, Hanula, & Crawley, 2005).

Knowing your target audience's stage of change empowers you to incorporate the most effective messages into your program to encourage progression to the next stage and also to be more realistic in your expectations, and therefore the evaluation, for your program. Moving an audience from one stage to another is a great accomplishment that may be

overlooked when evaluating a program based on complete adoption alone.

| Please tell us about your engagement in each of the following water-saving activities. |                     |                      |                             |                          |                               |
|--|---------------------|----------------------|-----------------------------|--------------------------|-------------------------------|
|  | Not Important to me | I'm considering this | I'm doing this occasionally | I'm doing this regularly | This is now a part of my life |
| Follow watering restrictions   | 1                   | 2                    | 3                           | 4                        | 5                             |
| Use rain barrel or cistern   | 1                   | 2                    | 3                           | 4                        | 5                             |
| Inspect irrigation system to ensure it is working properly                             | 1                   | 2                    | 3                           | 4                        | 5                             |

Figure 2. Example evaluation question 2. (adapted from Jayaratne, Hanula, & Crawley, 2005).

For example, if your audience is composed mostly of individuals at the precontemplation or contemplation stages, then you need to concentrate on providing as much information as possible on the proposed change(s), the reasons for changing, the risks of not changing, and the benefits of changing. The effectiveness of a program offered to an audience with these characteristics could then be evaluated in terms of observed changes in awareness, self-efficacy, knowledge, and attitudes of participants with respect to the proposed changes. On the other hand, if your audience is composed mostly of individuals who have already taken action or are in a maintenance stage, then you should not waste time providing information that they already know or trying to convince them of the need to change; you should focus your efforts on teaching them strategies to overcome the common challenges that may jeopardize their change process and helping them realize all the benefits that they have already achieved, and will be achieving soon, as a result of their decision to change.

In addition to tailoring the content and delivery of your existing programs, you may also develop new programs or direct individuals in your audience to other existing programs based on knowing where they are in the process of change. The strengths and limitations of your programs helping participants move through the stages of change will indicate what types of outcomes (e.g., changes in awareness, knowledge, skills, attitudes, aspirations, behavior, or practices, etc.) should result from participation in your programs. Your evaluation activities must concentrate on exploring those outcomes that can be plausibly connected with what your program can realistically achieve.

# Using TTM to Communicate about Planned Programs and Resulting Outcomes

The use of TTM as a framework to evaluate and communicate the outcomes of a program brings a new dimension to both activities by placing emphasis not only on the outcomes but also on the context and process that led to them. In this case, the context refers to the characteristics of our audience, particularly in regards to their readiness to change, and the process considers the actions that we implemented (e.g., adapting program content and delivery) to give our audience the best chance to achieve positive outcomes as a result of their participation in our program.

Structuring communication/reporting activities in alignment with TTM allows you to logically and sequentially explain what you did, why you did it, what was feasible to expect from what you did, and the result of what you did. A structure like this makes it easier for readers and stakeholders to understand not only the activities that you conducted but also the rationale behind your activities and, more importantly, the cumulative contribution of your activities to promote maintained positive change.

## Conclusion

As strategic behavior change begins during planning and needs assessment, it is important to determine ways to best serve an audience very early in the Extension programming process. This publication describes TTM and discusses its value in delivering meaningful programming based on a comprehensive understanding of a specific Extension audience. It is important to recognize the complex and staged nature of behavioral change, and Extension professionals may find TTM to be a valuable tool for planning and reporting.

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Table 1. Stages of change and definitions.

| Stage            | Defined by  |
|------------------|---|
| Precontemplation | No intention of behavior change, lack of consideration of the issue                                   |
| Contemplation    | Consideration of the issue, inclined toward changing the behavior                                     |
| Preparation      | Individual plans to act in the near future  |
| Action           | Individual is engaging in the behavior  |
| Maintenance      | Individual has been engaging in the behavior for at least 6 months with minimal chance for reversion. |

Table 2. Stages of change with corresponding processes and characteristics.

| Stage of Change  | What Extension clientele are experiencing in this stage   | Appropriate teaching approach /communications  | Example teaching methods  |
|--|---|--|---|
| All  | Experiencing negative emotions that go along with unhealthy behavior risks ( <i>Social liberation</i> )   |  |   |
| Precontemplation:<br>Extension clients have no awareness, no intention of taking action                      | Discovering and learning new things that support the healthy behavior change ( <i>Consciousness raising</i> )<br>Realizing the impact of the behavior on one's close social and physical environment ( <i>Environmental reevaluation</i> )<br>Realizing that social norms are changing in the direction of supporting the healthy behavior change ( <i>Dramatic relief</i> )  | Present the issue and make it relevant<br>Expose Extension clients to benefits associated with the behavior change<br>Emphasize social norms related to the behavior, provide examples from clients' peer groups | Newsletters<br>Mass media<br>Signs<br>Prompts<br>Social media   |
| Contemplation:<br>Extension clients have awareness   | Realizing that the behavior change is an important part of one's identity ( <i>Self-reevaluation</i> )  | Build upon clients' initial understanding of the behavior change<br>Positively influence clients' perceptions of the behavior<br>Continue enhancing benefits and social norms                                    | Workshops<br>Field days<br>Group meetings<br>Presentations from adopters<br>Group discussions   |
| Preparation: Extension clients are preparing to take action  | Making a firm commitment to change ( <i>Self-liberation</i> )   | Help clientele to overcome barriers to making the change<br>Encourage trials of the behavior   | Demonstration of results<br>Hands-on activities<br>How-to guides  |
| Action/Maintenance:<br>Extension clients are engaging in change (action) and sustaining change (maintenance) | Substituting healthy alternative behaviors and cognitions for the unhealthy behaviors ( <i>Counter conditioning</i> )<br>Altering cues that impact behaviors: removing bad ones, adding good ones. ( <i>Stimulus control</i> )<br>Increasing the rewards for the positive behavior change and decreasing the rewards of the unhealthy behavior ( <i>Reinforcement management</i> )<br>Seeking and using social support for the healthy behavior change ( <i>Helping relationships</i> ) | Provide social and informational support for behavior adoption<br>Provide encouragement and reinforcement  | Demonstration of methods<br>Individual consultations<br>Competitions<br>Advocacy/support groups<br>Recognition programs<br>Research updates |

Table 3. An example of financial programming targeted to specific audience stages of change.

| Stage            | Program  |
|------------------|--|
| Precontemplation | Family Album<br>Florida Saves                                |
| Contemplation    | Webinars   |
| Preparation      | Fresh Start Florida<br>Florida Saves 2020<br>Women and Money |
| Action           | VITA<br>Florida Master Money Mentor<br>Fresh Start Florida   |
| Maintenance      | Florida Master Money Mentor<br>Florida Saves                 |