ABSTRACT

          To document the effectiveness of instruction, a retrospective
pre-post type of evaluation was used to evaluate the effectiveness of a
continuing education program designed for adults involved in community
economic development. At the conclusion of the learning experience, the 35
participants were asked to complete a brief questionnaire that included four
demographic items and nine statements regarding program content. An analysis
of participant responses revealed that the educational program increased
their knowledge level with respect to each of the statements. Participants
increased their understanding of the components of strategic planning as a
result of the small group work, electronic slides, and written materials of
the program. (SLD)

Running Head: RETROSPECTIVE PRE-POST QUESTIONNAIRE

Using A Retrospective Pre-Post Questionnaire To Determine Program Impact

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Abstract

Documenting program impact is of primary importance for educators of all types in today's political economy. To better document the effectiveness of instruction, a retrospective pre-post type evaluation was used to evaluate the effectivness of a continuing education program designed for adults involved in community economic development. At the conclusion of the learning experience, participants were asked to complete a brief questionnaire that included four demographic items and nine statements regarding the program's content such as: "I have a basic awareness of the mechanics of strategic planning". An analysis of participant responses revealed that the educational program increased their level of knowledge with respect to each of the statements.

Using A Retrospective Pre-Post Questionnaire To Determine Program Impact

Introduction

Documenting program impact is important for all educators in today's political economy. The use of retrospective pretest program evaluation provides educators an opportunity to see students' perceptions of their change in knowledge, skills, attitudes, and behavior after participation in an educational intervention. Moreover, this self-reported information not only enables the instructor to measure participants' change, it also permits improved documentation of impact of the instruction.

To better document the effectiveness of instruction, a retrospective pretest was used with thirty-five participants of a continuing education program designed for adults involved in community economic development. At the conclusion of the learning experience, participants were asked to complete a brief questionnaire that included: [1]four demographic items; and [2] nine statements regarding the program's content such as: "I have a basic awareness of the mechanics of strategic planning". Results indicated that the participants increased their understanding of the components of strategic planning as a result of the small group work, electronic slides, and written materials.

Extension Education as a Way of Teaching and Learning

Extension, as an arm of the land grant university, has been involved in informal education at the local community-level since early in the 20th century. With the passage of the Smith-Lever Act in 1914, the idea of placing Extension educators in every county to work with local committees, organizations, and residents in conducting programming to address local needs

became a reality. Through the relationship with the local agent, community residents have had access to a variety of resources, research-based information, and campus-based personnel for nearly a century.

The well-defined programming areas within Extension today were not evident in its early years. In the beginning, one agent was to work in the areas of agriculture, home economics, and with other issues of community concern. As the informal educational network evolved, however, distinctions began to emerge which prioritized educational programming into four areas: agriculture and natural resources, community development, family and consumer sciences, and 4-H-youth development (Conglose, 2000).

As the communities with which Extension works have evolved, the relationship that exists among these communities, the university, and Extension has also evolved. What began as a county agent working on a variety of projects across what we think of today as the four program areas, now most often involves several full time agents in one county focusing on many different community issues.

The educational model used in Extension outreach is unique in that it involves communities, stakeholders, and universities in ongoing conversations to define issues and problems on which educational programming can focus. In 2002, Peters referred to this as "practical public work" and stated that this was the predominant mode of Extension outreach for the first fifty years of Extension's history.

A key component of this "practical public work" involves an active local constituency which is engaged with the local agent in "planning and developing programs, non-formal teaching, facilitating meetings and community forums, providing technical expertise, and applying research-based knowledge to the problems of individuals, families, businesses, and

communities" (Peters, 2002). While it can be argued that with the technological advancements of the recent past, Extension outreach efforts have become more focused on technology transfer, this "practical public work", which characterized Extension outreach efforts in the first part of the 20th century, continues to be the dominant thrust of Extension's community development efforts.

Peters (2002) described three distinctive types of learning that are made possible through this philosophy of educational outreach: instrumental, communicative, and emancipatory. (Habermas, 1971; Cranton, 1998; in Peters, 2002). Engaging local residents in programming designed to enhance their understanding of how tax incentive programs work, or how to go about forming a community improvement corporation, or how to develop a tourism and visitors' bureau would all be examples of *instrumental learning.*

Communicative learning takes place when one is involved in activities or exercises that lead to better understanding of "each other's views, problems, hopes, and interests." Last, when members of a community are engaged in programming that enhances their "leadership, confidence, and courage and enable[s] them to act together to change the world in ways that further[s] their values and ideals," they have experienced *emancipatory learning* (Peters, 2002).

Much of the educational effort conducted in Extension's community development programming area yields these types of learning. However, often the challenge is being able to accurately measure the impact of these educational efforts.

The Retrospective Pretest

Documenting changes in knowledge and behavior as a result of Extension programming can be done simply and efficiently using the retrospective pre- post-test evaluation (Rockwell,

1989; Stevens, 1999). This tool "is specifically useful for evaluating the impact of Extension programs by asking participants to report actual changes in behavior" (Stevens, 1999). The retrospective pretest design, (also referred to as post- then pre- and retrospective pre- post-test (Rockwell, 1989; Pratt et al, 2000) is not unlike the typical pretest-posttest. The primary difference, however, is that it is administered only once.

At the conclusion of some experience, program, or treatment, participants are asked to share the knowledge or attitude they had toward a particular subject after the experience or treatment. As part of the same questionnaire, participants are also asked to share the knowledge or attitude they had toward this subject prior to the experience or treatment.

The retrospective pretest is similar to a more traditional pretest/posttest evaluation method, however, the retrospective pretest provides the participant with a "baseline" level of knowledge. That is, when the participant is asked to respond to a question about how much they know about a particular subject after they have some basic knowledge of the subject itself, they are more able to accurately reflect on the degree of change in knowledge or attitude (Rockwell, 1989). Without some basic level of understanding of the topic or concepts discussed, participants are unable to correctly assess their baseline level of understanding. Furthermore, respondents will oftentimes overestimate their level of knowledge on a particular subject when using the traditional pretest-posttest (Pratt, McGuigan, and Katzev, 2000). With the retrospective pretest methodology, respondents are given an opportunity to learn how much they know about a subject prior to responding to a questionnaire.

The retrospective pre-test can also be more accurate because it is answered in the same frame of reference as the post-test. Doing so reduces the chances that respondents score better on a post-test as a result of their exposure to a pretest. This is also referred to as "response-shift

bias" in self-report pretest/post-test designs and can be minimized through use of the retrospective pre-test design according to Pratt et al. (2000).

Using the Retrospective Pretest in Extension Education

Extension educators have long known the importance of conducting program evaluations and evaluations of teaching effectiveness to improve programs and teaching methods . However, with the passage of the Government Performance and Results Act of 1993 (GPRA), a renewed emphasis was placed upon the program effectiveness component in Extension. (Richardson, Gamble, and Mustian, 1998; O'Neil, 1998).

The GPRA requires all federally funded agencies to develop and implement an accountability system based on performance measurement (Government Performance and Results Act of 1993 webpage). One way to address GPRA accountability issues involves the use of the retrospective pretest design to measure the performance of Extension programming. This methodology was used to determine change in knowledge, skills, and attitudes toward strategic planning among 35 economic development professionals after their involvement in a traditional Extension educational program.

The educational program was one part of a multi-part series designed specifically for economic development professionals and community officials involved in local economic development efforts. The program, roughly two hours in length, was held in a formal classroom-type setting. Instructional methods involved powerpoint slides, small group discussion, and role playing. Participants expressed a relatively high level of interest in the topic, as many were previously involved in strategic planning exercises.

Following the presentation and related group activities, participants were asked to complete a short questionnaire. This questionnaire was part of the informational materials provided to each participant and was identified by a different color paper and layout (eg. font, landscape).

Design

The two-sided, one page questionnaire was formatted in the landscape orientation. The front page of the questionnaire contained four background questions designed to collect basic personalogical data. Specifically, information was requested on the role played in economic development; the number of years of experience in these roles; the population of the community on which these efforts are focused; and, how often their organization engages in a formal strategic planning process with its members and clientele. The reverse side contained the retrospective pretest.

The retrospective pretest was designed with instructions at the top, an example, and nine statements. The statements were developed using the learning objectives for the strategic planning workshop. Participants were asked to indicate their level of agreement with each of the statements before and after the workshop using a six-point, Likert-type scale; (1 - strongly disagree and 6 - strongly agree).

Administration

Workshop participants were asked to complete the one page questionnaire at the conclusion of the program. A conscious attempt was made by the instructor to downplay the instrument and there was no verbal instruction provided for completing the two-part questionnaire. Participants were simply asked to place their completed questionnaire on a table

at the back of the room as they exited. Of 35 workshop participants, 32 questionnaires were completed. One of the 32 submitted was only partially completed (front side only).

Data input/analysis

The questionnaire data was analyzed using SPSS 10.1, to determine if participation in the workshop affected participant knowledge, awareness, confidence, and attitude. While the SPSS software is quite capable of examining the degree of change (among numerous other data analysis procedures) the degree of change was not examined. Group means (before and after) were also examined.

Results and Discussion

The retrospective pretest indicated that workshop participants experienced a positive change in knowledge, awareness, confidence, and attitudes, in general. There were positive changes in all nine workshop indicators. All but one of the nine workshop indicators registered positive change for at least one third of the respondents. Furthermore, the overall mean for the nine items increased from 3.9 (before) to 4.9 (after) (see Table 1).

Table I

Paired t-Tests for Retrospective Pretest (n=31)

Variable		Mean	sd.
I have a basic awareness of the mechanics of strategic planning.	Pre-test	3.7	1.6
	Post Test	4.7	1.0
I know what the key components of strategic planning are.	Pre-test	3.5	1.4
	Post Test	4.7	1.1
I think I could facilitate a strategic planning process.	Pre-test	3.3	1.5
	Post Test	4.5	1.1

I have the skills necessary to facilitate a strategic planning process.	Pre-test	3.5	1.4
	Post Test	4.4	1.2
Strategic planning can provide direction to an organization's efforts.	Pre-test	4.4	1.6
	Post Test	5.2	1.1
I would like to try facilitating a strategic planning process at some point.	Pre-test	3.6	1.6
	Post Test	4.6	1.3
I will attempt some form of strategic planning process in the future.	Pre-test	4.0	1.8
	Post Test	5.0	1.1
Thinking strategically is a worthwhile practice.	Pre-test	4.6	1.6
	Post Test	5.4	1.0
Strategic planning is an ideal way to guide an organization's economic development efforts.	Pre-test	4.4	1.7
	Post Test	5.3	1.0

Note. All items were significant at .05 alpha. N=31.

After participating in the workshop, nearly three-quarters of respondents registered an increased level of confidence in their abilities to facilitate a strategic planning process. Corresponding to this increased level of confidence was a change (+62%) in understanding the skills necessary to facilitate a strategic planning process. Nearly that same amount (57%) registered a change in the desire to try facilitating a strategic planning process at some point.

With regards to recognizing the key components of strategic planning, only 15% registered a change as a result of their participation in the workshop. Taking into account the workshop participants' exposure to such processes through their place of employment could explain the relatively low degree of change in knowledge (Note: one half of those responding indicated their employer engages in a formal strategic planning process annually.)

Group means (before and after) for each of the indicators showed an increase in knowledge, awareness, confidence, and attitudes. The following three indicators had the greatest increase: "I know what the key components of strategic planning are", "I think I could facilitate a strategic planning process", and "Strategic planning is an ideal way to guide an organization's economic development efforts".

Conclusions and Recommendations

Extension educators and others looking for simple and effective methods of improving program evaluation may find the retrospective pretest a useful tool. The simple retrospective pretest used as part of this strategic planning workshop demonstrated a new and different way to evaluate the impact of this type of Extension programming. Simple statistical analysis illustrated a change in respondents as a result of their participation in the workshop.

However, prior to using this methodology for program evaluation, there are a few things that require attention: A two-part (pre and post) questionnaire must be developed that includes the program objectives. Armed with the most basic electronic word processor skills, one can develop a questionnaire with little trouble. Once a template has been developed, modifying a questionnaire for different programs could be easily done .

An understanding of how the data collected will be analyzed is also helpful. Program evaluations that involve a relatively large number of questions and/or respondents will require the use of the computer for data analysis. For someone without a great deal of experience using data analysis software, setting up this data file could be a daunting task. However, once established, data can be entered with little instruction and the analyses described in this paper can be done with little trouble.

This method of determining impact may take more time than many of us have been accustomed to devoting to program evaluation. Nevertheless, as more emphasis is being placed on documenting the impact of our work, this program evaluation method is relatively quick to develop, easy to administer, and provides much more meaningful information than many of the methods currently being used.

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