

## What Is Professional Development Worth? Calculating the Value of Onboarding Programs in Extension

### Abstract

Return on investment (ROI) is a commonly used metric for organizations concerned with demonstrating the value of their investments; it can be used to determine whether funds spent providing professional development programs for Extension professionals are good investments. This article presents a method for calculating ROI for an onboarding program on the basis of the changes in competency levels from before to after program participation. Although limitations to the method exist, the data generated can be used for engaging in meaningful discussions about the value of investing in professional development in Extension organizations.

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### Introduction

Employee satisfaction drives productivity and organizational health (Reese, 2005). In 2006, the Aberdeen Group conducted a survey of 800 enterprises. Results from that survey indicated that 90% of new employees make a decision to stay with an organization within the first 6 months (Johnson & Senges, 2010). This finding indicates a growing need for organizations to identify factors that could lead to employee turnover or retention. The cost of employee turnover is extremely high, affecting productivity, time, profits, and overall success (Cotton & Tuttle, 1986; Glebbeek & Bax, 2004). Some organizations have estimated the cost of turnover to equate to at least 6 months of an employee's pay and benefits (Fitz-Enz, 2009). Employee turnover is rapidly becoming a critical topic for many organizations (Pinkovitz, Moskal, & Green, 1997).

Organizations lose valuable human capital when experienced employees leave and incur additional costs associated with the loss of productivity and shifting of workload to other employees (Byerly, 2012; Pinkovitz et al., 1997). Most formulas for calculating the cost of employee turnover include similar areas of concern (Byerly, 2012). Researchers (Byerly, 2012; Tracey & Hinkin, 2008) have suggested four main factors affecting the cost of employee turnover: (a) separation costs, (b) vacancy costs, (c) training costs, and (d) performance differential costs. Of relevance to this article are training costs, or the costs accrued through equipping an employee with acceptable knowledge and skills for successful performance. An informal survey of program and staff development units across the southern region of the United States showed that these costs ranged widely.

Increased mandates for accountability of public spending have increased demands for Extension to demonstrate fiscally responsible spending, often with expectations of articulating social or economic impact (Franz, Arnold, & Baughman, 2014). Return on investment (ROI) is a commonly used metric for organizations concerned with demonstrating the value of their investments. ROI may be calculated in a variety of ways. Most commonly, ROI is measured as a simple ratio of program benefits to program costs, as shown in the following formula (Phillips, 2003):

$$\text{ROI} = \frac{\text{Program Benefit}}{\text{Program Cost}}$$

Program benefit includes any monetized change in program productivity or profit after a training or program cycle. The program cost includes any direct or indirect cost. A result greater than 1 indicates a favorable investment, whereas a value less than 1 indicates that costs outweigh the benefits.

The trouble with evaluating employee onboarding programs in Extension has been the lack of a clear-cut way to calculate program benefit using dollar values. Instead, most organizations have relied on formative and summative assessments aligned with measuring short- and medium-term outcomes. There has never been an article in the *Journal of Extension* describing the ROI for onboarding new employees.

University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) Extension adopted a formal set of priority competencies for county Extension professionals in 2015 (Harder, 2015). The adoption of the competency framework affected the focus of the onboarding program, among other professional development efforts. The effort to adopt a standard set of competencies was not driven by a desire to measure ROI. Rather, it was the adoption of priority competencies that has enabled UF/IFAS Extension to develop an estimated model for calculating the ROI for onboarding new employees.

## Methods

### Assumptions

The method described is based on the following assumptions:

- An employee's salary is based on his or her competence upon hiring.
- An employee can provide a reasonable estimate in the change of his or her competence resulting from training.
- Individual competency items can be summarized in a competency index.

### Process

The following outline delineates the process UF/IFAS Extension is using to calculate the ROI for onboarding new employees:

1. Develop a "post-then-pre" assessment of the competencies being covered in the onboarding program; use a summated rating scale (e.g., Likert scale) for response options.

2. Administer the assessment at the conclusion of the onboarding program.
3. To analyze data in Microsoft Excel:
  - a. Record frequency counts for each response option for each competency item. Every item should have two scores: "before" and "after."
  - b. Assign weighting factors to each response option from the chosen scale (e.g., 0 = *very low*, 1 = *low*, 2 = *average*, 3 = *high*, 4 = *very high*).
  - c. For every competency item, multiply the frequency count for each response option by the weighting factor for that option to create a weighted score. Add the weighted scores for all response options for a single item to create an item score. This can be done through the use of a sum-product formula. See Figure 1 for an example of how to set up the Excel sheet.
  - d. Calculate the percentage change in the overall sums of weighted scores for "before" and "after."
  - e. Multiply the percentage change by the *average* salary of all employees tested in that cohort to determine the average per-employee value of the training. Then multiply that value by the number of employees in the cohort to determine the marginal value of the training.
    - i.  $36.9\% \times \$47,499 = \$17,527 \times 12 = \$210,325$
  - f. Compare the value of the onboarding to the cost to deliver the onboarding to determine the ROI. In the Figure 1 example, onboarding costs of less than \$17,527 per employee would result in a positive ROI and favorable investment.

**Figure 1.**

Example of Partial Excel Spreadsheet for Competency Change Calculations

Number of participants by competency level	Weight	0	1	2	3	4			
Competency	Pre/Post	Very Low	Low	Average	High	Very High	Weighted	Row Labels &trif;	Sum of Weighted
Conduct a needs assessment of your county	AFTER	0	1	8	3	0	26	BEFORE	620
	BEFORE	4	1	6	1	0	16	AFTER	849
Use the results of a needs assessment for planning	AFTER	0	2	6	3	1	27	Percent increase	36.9%
	BEFORE	2	3	6	1	0	18	Ave. Salary	\$47,499
Conduct interviews to obtain	AFTER	1	1	4	5	1	28	Value	\$210,325

information for planning									added	
	BEFORE	2	2	3	4	0	20		Per employee	\$17,527
Consult professionals with knowledge and experience about planning educational activities	AFTER	0	1	1	5	5	38			
	BEFORE	1	1	5	3	2	28			
Assess available local/community resources	AFTER	0	0	5	6	1	32			
	BEFORE	0	2	6	4	0	26			

## Conclusions

Organizations have invested in professional development programs for their employees in order to increase employee retention and avoid costly turnover (Bradt & Vonnegut, 2009). Using the method described in this article, Extension organizations may now move beyond the evidence supplied by the literature to articulate the actual ROI of their investments in onboarding.

However, limitations of the method outlined should be acknowledged: (a) salary is not the only measure of competence, (b) employees may not provide an honest assessment of their growth or lack thereof, and (c) the wrong competencies may be measured or may not form a reliable index. Employees in successful onboarding programs become adjusted at rapid rates, and organizational productivity soars (Bradt & Vonnegut, 2009); the method outlined here offers one way to begin to quantify professional development value.

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