# Before and After

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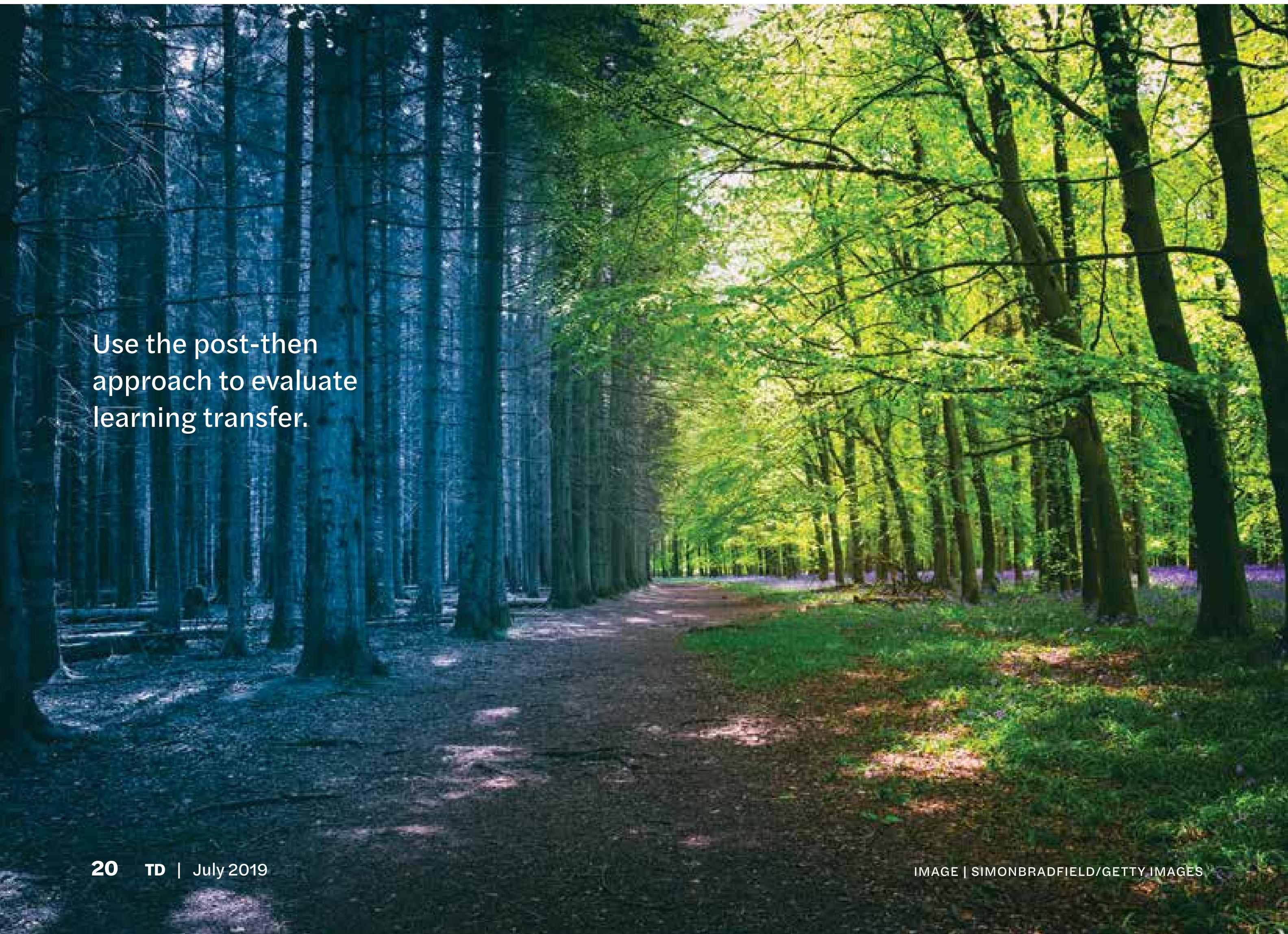
Clients frequently ask me to suggest some approaches and methods they can use to measure and evaluate change in participants following training, coaching, and other talent development engagements. What they are really asking for is an easy, reliable, and valid way to measure whether a program truly has impact.

L&D professionals often hear about the growing necessity to provide senior management with solid evidence that what the L&D function designs and delivers is more than just enter*train*ment for employees participating in the myriad coaching, traditional classroom training, blended learning, or microlearning experiences offered.



Use the post-then approach to evaluate learning transfer.

IMAGE | SIMONBRADFIELD/GETTY IMAGES

Whether it's as simple as a 360-degree feedback meeting or something more complex, such as a year-long high-potential talent program or the search for easier ways to demonstrate knowledge and skill acquisition, evaluating intended and actual learning transfer is elusive for many companies that design and deliver such programs today.

Traditional summative evaluation levels include:

- knowledge or skills acquisition
- knowledge application or skills transfer back on the job
- skills maintenance and adherence
- organizational impact
- financial return on investment.

Some L&D functions rely on self-ratings to evaluate change in participants. However, research suggests that most people are unable to effectively rate their own skills, abilities, and competence because they have poor self-insight and self-awareness. In fact, those who are least competent tend to overrate themselves relative to others (a phenomenon known as the Dunning-Kruger effect), and it is most pronounced when a person is new to learning something. In contrast, current research suggests that how individuals see their personality and style is much more congruent and accurate relative to how others experience them.

## We don't know what we don't know

Most of the clients Envisia Learning advises are aware of pre- and post-assessments as a means to evaluate training and coaching programs and calculate change in participants' perceived knowledge, confidence, or skills. Yet, in certain types of self-report program evaluations, a comparison of pretest and post-test results may be an inaccurate assessment of impact, because participants may have limited knowledge at the beginning of a training program that prevents them from accurately assessing baseline behaviors. By the end of the program, their new understanding of content may have an impact on their self-assessment responses, which causes response shift bias.

As such, a pre-assessment completed prior to a program may be less accurate because participants have limited knowledge of what they don't know until they have experienced the program. Additionally, if you administer a pretest at the beginning of the program, participants have no way to correct an answer after the fact if they made an inaccurate assessment in the baseline data. Given these limitations, Envisia Learning suggests the post-then method, which is a brief but more accurate way of evaluating change in a participant's self-perceived knowledge, skills, or competence. This approach corrects for the response shift bias.

## How to use a post-then approach

Start by defining the training or coaching program's specific behavioral goals and outcomes. These serve as the key anchor points in determining what participants have learned and can apply back on the job.

Next, create an evaluation form that asks participants to rate the goals using some form of Likert scale. List each goal twice, using action verbs that match the type of response scale. The first rating participants complete is a traditional post-assessment. After participants are done with this *post* rating, use the same behavioral goals but ask participants to provide a retrospective analysis of how they would evaluate their knowledge or competence before the event (see figure).

### Sample Post-Program Then Evaluation

Here you will have the chance to evaluate the level of skill and knowledge you have as a result of participating in this Behavioral Interviewing Workshop. Rate the skills and knowledge you feel you possessed before the training program began.

| | Very Low | | | | Very High |
|---|---|---|---|---|---|
| Create behavioral interviewing question that elicits examples of past performance based on the specific job requirements. | 1 | 2 | 3 | 4 | 5 |
| Identify specific follow-up questions to capture missing information provided by the candidate in a behavioral interview (e.g., the situation, the behavior, the outcome). | 1 | 2 | 3 | 4 | 5 |
| Identify specific questions that are unfair or illegal that are often used in candidate interview processes. | 1 | 2 | 3 | 4 | 5 |

## A comparison of pretest and post-test results may be an inaccurate assessment of impact.

This is referred to as the *then* rating, and it is typically less biased given that the experience of the training event provides a better benchmark to truly compare pre and post changes.

The trick is to collect these two ratings from participants at the end of the program, eliminating the need for any preprogram assessment. This will simplify the evaluation process and minimize this precourse task, even if it only takes a few minutes at the beginning of the training session.

### Limitations of using then scores

All individuals providing a retrospective evaluation of their self-perceived skills and abilities may be blinded by some common perceptual biases.

**Recall bias.** At the end of a training program, participants may distort, or just be unable to recall, what they felt or thought they could do behaviorally. For example, it may be difficult for them to recall and rate their skills from the beginning of a one-year high-potential leadership program. This could lead to inaccurate *then* ratings. However, this recall bias is accentuated for attitudinal ratings as opposed to skills.

**Effort justification bias.** When participants invest time, energy, and effort in something like training or coaching programs, they are likely to expect positive change and may be inclined to purposely manipulate the evaluation. As a result, post-program ratings tend to be a bit inflated to justify the sunken costs of participating in such offerings.

**Past self versus present self bias.** In general, individuals evaluate their current and future selves as better than their past selves—even if improvement or change has not occurred. As a result, people tend to inflate their current level of skills and competence relative to an earlier time in their lives when asked to provide retrospective comparisons to their current state. Aside from evaluation, this bias suggests that trainers and coaches should focus participants' developmental planning efforts in a future-oriented manner and help them compare their ideal self with their real self to motivate changed behavior.

### Using pre-post-then as an alternative

In using post-then evaluation, you may simply be trading one set of biases for another. Research suggests that the perfect solution is to try to gather self-assessments at the beginning of a training program in addition to the two ratings gathered at the program's end. This generates three independent ratings that you can compare—each with a slightly different interpretation and purpose toward measuring participant change.

**Pre-post change.** The difference in these scores tells you, in a traditional manner, how participants rate themselves before and after the program but are subject to response shift bias. As such, these change scores are probably less useful for training evaluation purposes, so don't use or report these independently as a way to demonstrate change in knowledge or skill.

**Post-then change.** Comparison of post-then scores minimizes the response shift bias that makes pre-assessments largely inaccurate but may be affected by recall or other cognitive biases. Use and report this particular score at the end of the training program, particularly if the group is not concerned with recall or similar biases.

**Pre-then change.** If you decide to collect all three ratings (pre, post, and then), the comparison of pre versus then provides a nice metric about the magnitude of the response shift bias that occurred. It provides trainers a proxy of how new the program content was for a participant or how challenging it was. This is an important formative evaluation about the program's appropriateness for the target audience.

To report change scores to key stakeholders in your organization to capitalize on the advantages of this post-then evaluation approach—and if you are statistically minded—consider using a statistical test (correlated t-test) to determine whether the change scores are significant and meaningful. That can be a useful and powerful way of demonstrating that the training or coaching program had an impact on self-reported enhancement and improvement in knowledge, skills, and abilities.

### Reduce the bias

Pre-post self-ratings are often inaccurate due to a shift in perspective following a training program. Despite possible biases, using the post-program *then* evaluation may promote self-reflection, reinforce self-efficacy, and provide control for the known response shift bias that occurs. If the aim of your training evaluation is to understand how participants feel about their knowledge and skill acquisition, sense of confidence to apply a skill to the job, or willingness to try a new behavior, the retrospective post approach provides a more direct and less biased assessment of these factors.

The challenge in constructing a pre-post-then evaluation instrument is to clearly define and focus on specific behaviors that may change and then select an appropriate scale that measures the amount of self-perceived behavior change. However, once you have done so, you can easily apply this brief but useful self-report evaluation approach to all your training and coaching programs.

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