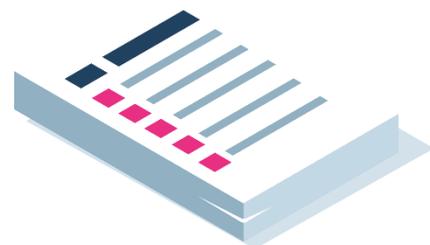


# Measuring the effectiveness of learning

*How assessments help to deliver effective training, unlock potential and improve business performance*

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## Introduction: why is it useful to measure the effectiveness of learning?

John Wanamaker, the US pioneer of the department store, said: “Half the money I spend on advertising is wasted, the trouble is I don't know which half”.

The same can be true in corporate learning. Some training can be powerful, transformative and have a big impact on organizational success. Other learning and development may have little value.

More than \$350 billion is spent globally on training, but research suggests only around 25% of training measurably improved performance.<sup>1</sup> Programs don't focus on business impact and learning is often at the wrong time and is forgotten before it can be used.

Nelson Mandela said: “Education is the most powerful weapon we can use to change the world”.

Today's business leaders can similarly use learning initiatives to navigate the changes introduced by technology, globalization and the pandemic.

Employees need new skills. They need to think and operate outside of their job role and to overcome unexpected hurdles.

It's vital to be able to measure learning effectiveness so it is possible to understand and improve how workforces can adapt and learn to keep up with the pace of change.

A learning program also needs to be measurable to quantify the impact it has. It needs to be adjustable based on how effective it is, based on data about its performance.

This white paper gives a high-level view of how to measure the effectiveness of learning.

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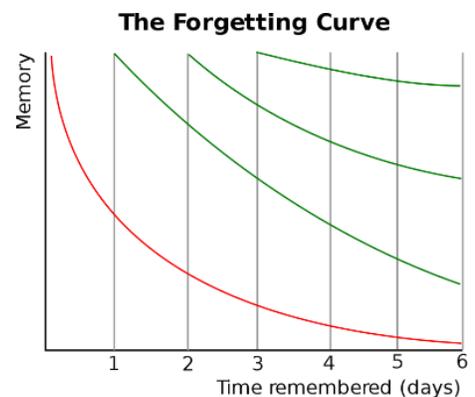
<sup>1</sup> <https://hbr.org/2019/10/where-companies-go-wrong-with-learning-and-development>

## The challenges in measuring the effectiveness of learning

Investments in learning are hard to measure.

There are four reasons why:

1. Knowledge and skill contribute to job performance but there are other factors, like teamwork, attitude, and culture that play a part. So, it can be difficult to work out what is driving performance.
2. Learning is a process, not an event. It happens over time. So, learning effectiveness needs to be measured over time too, as learning is put into practice.
3. There is a forgetting effect. Much of what people learn does not get retained for the long term. Some learning does not get transferred into the job role. So, while training may have delivered several lessons, not all will be remembered.
4. Although formal learning is valuable, much practical learning happens informally. The 70/20/10 model<sup>2</sup> suggests 70% of learning comes from experience, experiment and reflection, 20% from working with others, and just 10% comes from formal learning.



To make informed decisions around training, employers need a clear picture of the actual situation.

That means having robust information about the current state of play and the effectiveness of potential strategies and initiatives.

While this has long been the case, the uncertainties caused by the pandemic and a constantly shifting business environment make measuring the effectiveness of training is even more crucial.

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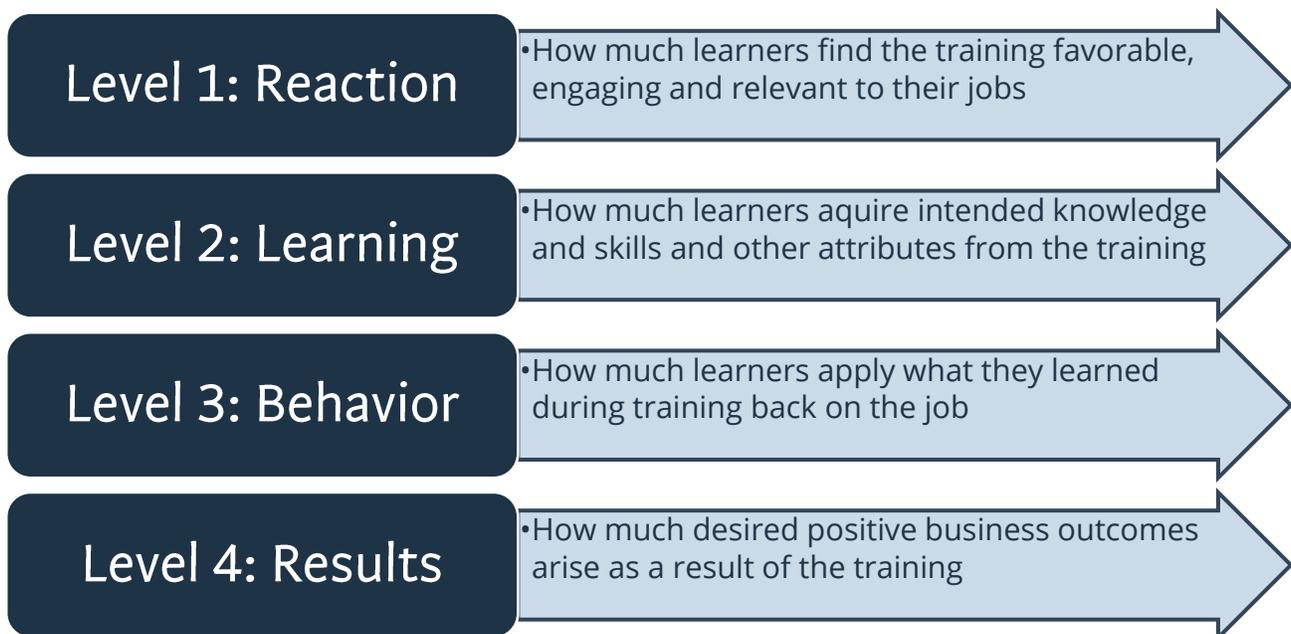
<sup>2</sup> See <https://702010institute.com/702010-model/> for an overview

## How to measure the effectiveness of learning: the Kirkpatrick and other models

Over the years, there have been many approaches<sup>3</sup> to measuring the effectiveness of learning.

One of the most widely used and accepted models is the Kirkpatrick model<sup>4</sup>, which suggests that there are four stages of learning evaluation.

The premise of the Kirkpatrick model is that by gathering data on reaction, learning and behavior, employers can gather the data they need to support evidence of business results.



Although some have criticized the model, it provides a good structure in which to consider learning evaluation.

The model helps to shape training programs. It does this by helping employers to understand and assess what behaviors need to change to ensure learning is implemented. With a clear picture of what those behaviors are, employers can amend training and post-training strategies to help embed lessons.

<sup>3</sup> For example the Learning-Transfer Evaluation Model at <https://www.worklearning.com/wp-content/uploads/2018/02/Thalheimer-The-Learning-Transfer-Evaluation-Model-Report-for-LTEM-v11.pdf> is an attempt to make a more modern model.

<sup>4</sup> For a description of the revised version of this model, see the book “Four Levels of Training Evaluation” by James and Wendy Kirkpatrick. See also a Questionmark podcast interview with Wendy Kirkpatrick available in our Unlocking the Potential of Assessments podcast series at <https://www.questionmark.com/resources/podcasts/>.

## Level 1: Reaction

Reaction is usually measured by giving surveys to learners, such as course evaluation surveys or “smile sheets”. In recent years, there has been increasing understanding<sup>5</sup> that these need to be evaluated with care, as learners are poor predictors of how well they will be able to remember learning and put it into practice in their job.

Good practice for such surveys includes:

1. Keep surveys short and simple.
2. Include questions about motivation and opportunity to apply the learning, and what support learners will get to put it into practice.
3. Send out surveys two to four weeks after the learning rather than, or as well as, immediately.
4. Ensure questions are unbiased. For example, asking “my skills and abilities improved as a result of the training” is a biased question that people will be more likely to answer positively.
5. It’s also best to avoid Likert Scale agree/disagree questions<sup>6</sup> as they can give more positive answers than are truly the case.

## Level 2: Learning

The usual way to measure learning is via tests and quizzes.

Done right, such assessments give employers the information they need to make informed decisions about the effectiveness of learning.

Good practice for such measurement includes:

1. Divide questions into themes to be able to measure learning by topic. This provides feedback to learners and instructors which they can use to improve.
2. Testing knowledge (recall) has some value, but there is more value in testing higher-level skills such as understanding and application.
3. It’s useful to assess learners both before and after the test, to compare the difference. This enables employers to see what employees have gained from the course or event.

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<sup>5</sup> For example, see Will Thalheimer’s book: Performance-Focused Smile Sheets: A Radical Rethinking of a Dangerous Art Form

<sup>6</sup> See <https://blogs.sap.com/2016/05/11/strongly-disagree-should-you-use-agreedisagree-in-survey-questions/> for an explanation of why these are weak

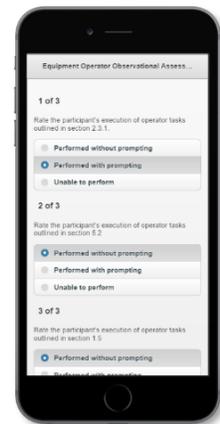
4. It can be useful to ask tests both straight after learning and once some time has elapsed. Not only will this measure learning (and forgetting) over time, it also provides retrieval practice which aids retention<sup>7</sup>.
5. Build valid and reliable tests – see the resources on the Questionmark website for useful blog articles, webinars and videos.

## Level 3: Behavior

Behavior is harder to measure than learning but also more relevant to job performance.

Some ways of measuring and improving post-learning behavior include:

1. Focus on measuring the critical behaviors which impact the desired results.
2. Well-designed surveys are an effective way to measure behavior.
3. Observational assessments, where an instructor or manager observes someone doing a practical task and fills in a checklist (usually on a mobile device) can be very effective.
4. Encourage a positive circle. If employees know that improved behavior is being measured, it will encourage them to adopt that behavior.
5. Encourage and provide opportunities for employees to practice and use the techniques learned during the training in their job. Ensure that managers support their team members in doing so.



## Level 4: Results

Once employers have gathered information on the three previous levels of reaction, learning and behavior, they will be in a better position to evidence the business results of learning.

Good practice includes:

1. Before planning any learning interventions, employers should work out what results they are looking for and what they want the learning to achieve for the business.
2. Look for leading indicators that are early signs of business success. For instance, if employers are training their salespeople to increase revenue, look for indicators of progress like activity pipeline rather than just sales results. This will provide actionable information sooner.
3. Look for trends rather than one-off analyses. Continue analysis over time.

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<sup>7</sup> See Retrieval Practice in Classroom Settings: A Review of Applied Research by Moreira and others for one explanation of this: <https://doi.org/10.3389/feduc.2019.00005>

4. It can be worth doing informal interviews to understand the benefits of, or challenges with, the training. The Brinkerhoff Success Case Method<sup>8</sup> provides one way of structuring such interviews.
5. Some employers are using data science to correlate learning and assessment data with job performance to identify which learning interventions or test success may lead to business performance.

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<sup>8</sup> See <https://www.questionmark.com/using-the-success-case-method-with-questionmark-perception/> for an introduction

## Conclusion: where does technology fit in?

At the beginning of this paper, we shared the challenge advertisers used to have of knowing which part of their advertising works. Modern, digital advertisers might well say that with technology, they now know what leads to results.

The same is true for learning.

Today's technology allows employers to combine online surveys, quizzes and tests with powerful analytics to show which parts of learning are effective.

Such enterprise-grade assessment technology helps employers to get the information and data they need to make informed decisions about the learning and development they provide.

Such assessment technology can identify specific problems and help plot a path toward a solution. Ongoing assessments can give employers confidence that the training they have introduced is working.

As former US President Benjamin Franklin famously said: "An investment in knowledge pays the best interest".

Investing in better learning measurement through Questionmark will pay dividends for many.

We have helped employers across the world transform their training programs, unlock potential and improve business performance. We'd love to have a conversation with others about how we can help them to do the same.

### **Book a demo**

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## About Questionmark:

We help employers and their people unlock their potential to deliver better performance.

Questionmark provides a secure enterprise-grade assessment platform and professional services to leading organizations around the world, delivered with care and unequalled expertise. Its full-service online assessment tool and professional services help customers to improve their performance and meet their compliance requirements. Questionmark enables organizations to unlock their potential by delivering assessments which are valid, reliable and fair, which can be defended.

Questionmark offers secure powerful integration with learning management systems (LMS), learning record stores (LRS) and proctoring services making it easy to bring everything together in one place.

Questionmark's cloud-based assessment management platform offers rapid deployment, scalability for high-volume test delivery, 24/7 support, and the peace-of-mind of secure, audited U.S., Australian and European-based data centers.

## Working with Questionmark

To further explore how Questionmark could work for your organization, or to book a free consultation and demo, please see: <https://www.questionmark.com/request-demo/>

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