How to Measure Learning Effectiveness

Metrics and KPIs
For L&D professionals

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Introduction

$80 billion.

That's how much U.S businesses spend each year on training their employees. But a big budget doesn't always ensure that Learning and Development is effective. Survey results have shown that:

- 75% of surveyed American managers aren't satisfied with their companies' L&D functions (HBR, 2016)
- 70% of surveyed employees feel that they don't have the skills to be effective in their jobs (Gartner, 2020)

These numbers demonstrate the importance and necessity of measuring the effectiveness of your training programs. L&D professionals who can track the business results of their programs report having a **higher satisfaction with their services, more executive support, and continued and increased resources for L&D investments**.

Getting started with learning analytics

The case for learning analytics is clear. Not sure where to get started in tracking your own performance?

In this guide, we have gathered metrics and KPIs that can help you quantify the value you are adding with your L&D initiatives and correlate them with the four levels of the Kirkpatrick evaluation model.

We also provide clear instructions on how to calculate these metrics, as well as how to gather the data you need.

Kirkpatrick evaluation model

The Kirkpatrick evaluation model is a four-level model designed to help you measure the effectiveness of your course, from participants' direct response to the initiative, to the actual business impact the training creates. This guide provides example KPIs and metrics for the various levels to help you take a data-driven approach to understanding the effectiveness of your L&D initiatives.

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How training changes behaviors
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Knowledge and skills employees acquire through training
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How people directly respond to training
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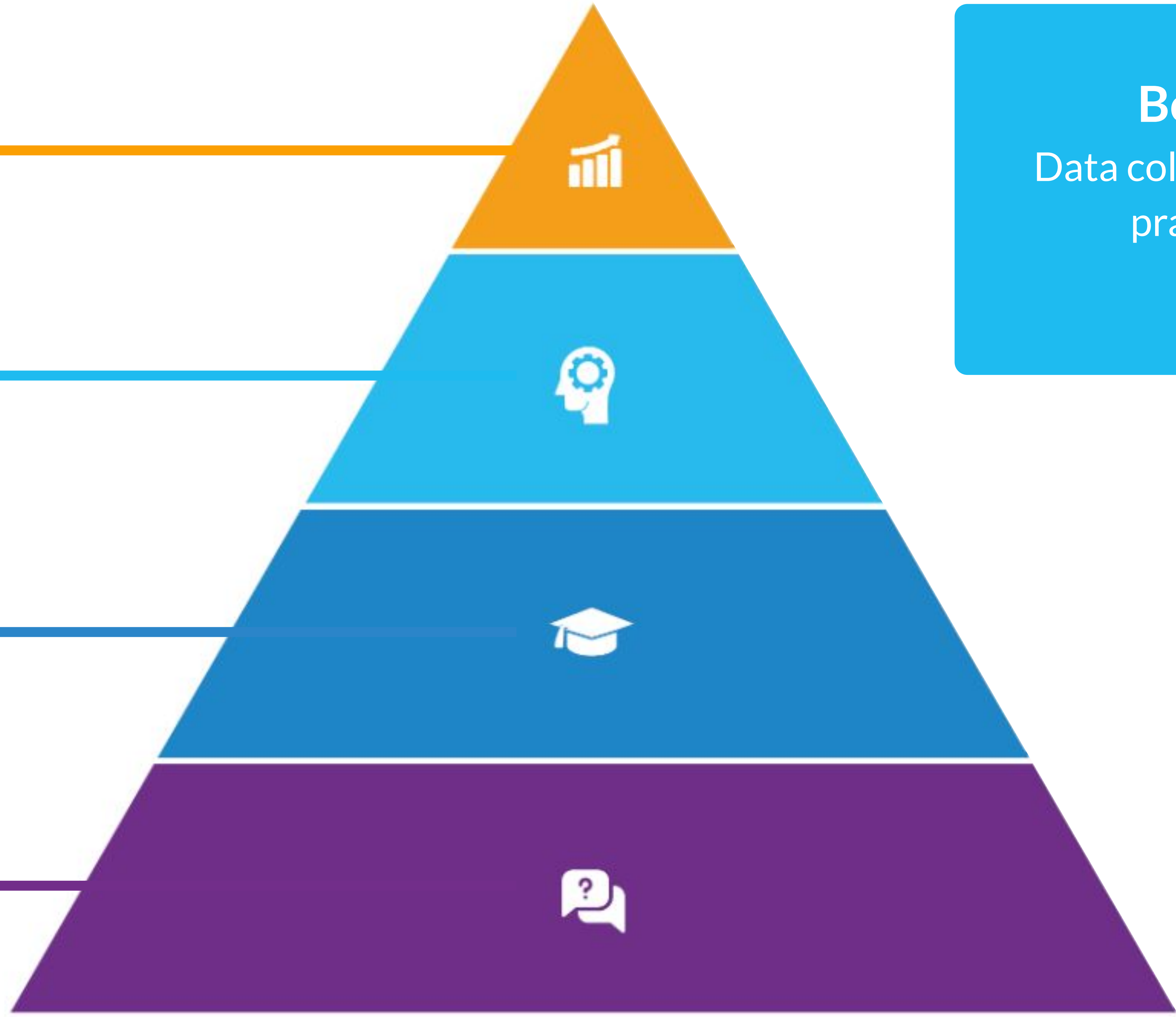

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Level 1: Reaction

Goals for this level

Your main focus here is evaluating the reaction of the participants after the training. Your goals are to get a good grasp of how satisfied the learners are with your training and to identify any potential points of improvement.

Level 1: Reaction

How to collect the data

Metrics for different levels require different types of data gathering. In each chapter, we explain how to get both the qualitative and quantitative data you need to generate insights.

More data collection tips

Get more tips and advice to improve your data collection on page 20.

Learn more

Quantitative data

You can use surveys or questionnaires with scales from 1 to 10, or ones that are specifically designed to measure opinions such as the Likert scale.

Qualitative data

There are two methods: including open-ended questions in surveys, and conducting interviews with learners. For both methods, use questions such as:

- What would you change or improve in this training?
- What resources or support do you need to apply what you have learned?
- What topic or section did you find most valuable?

Level 1: Reaction

Metric: Training experience satisfaction

You can use your Net Promoter Score for this KPI. Ask your learners a question such as “On a scale from 1 to 10, how likely are you to recommend this training?” Based on the responses, you can discern 3 categories:

- Promoters (9 - 10)
- Passives (7-8)
- Detractors (6 or below)

Once you have categorized your respondents, you can use this formula to calculate your employee NPS, or eNPS:

Formula

eNPS =

% of Promoters - % of Detractors

Any score that is above 0 is okay. However, a score between 10 and 30 is good, and anything above 50 is excellent. You should be concerned if your employee NPS is -10 or lower.

Metric: Course completion rate

This grants insight into how many students completed 100% of the course.

Formula

Completion rate =

Students who have completed the course / Students enrolled * 100

Turn the page for an example calculation >

Level 1: Reaction

Example

If 1000 employees enrolled and 50 completed 100% of the course, then the course completion rate would be:

$$50/1000*100 = 5\%$$

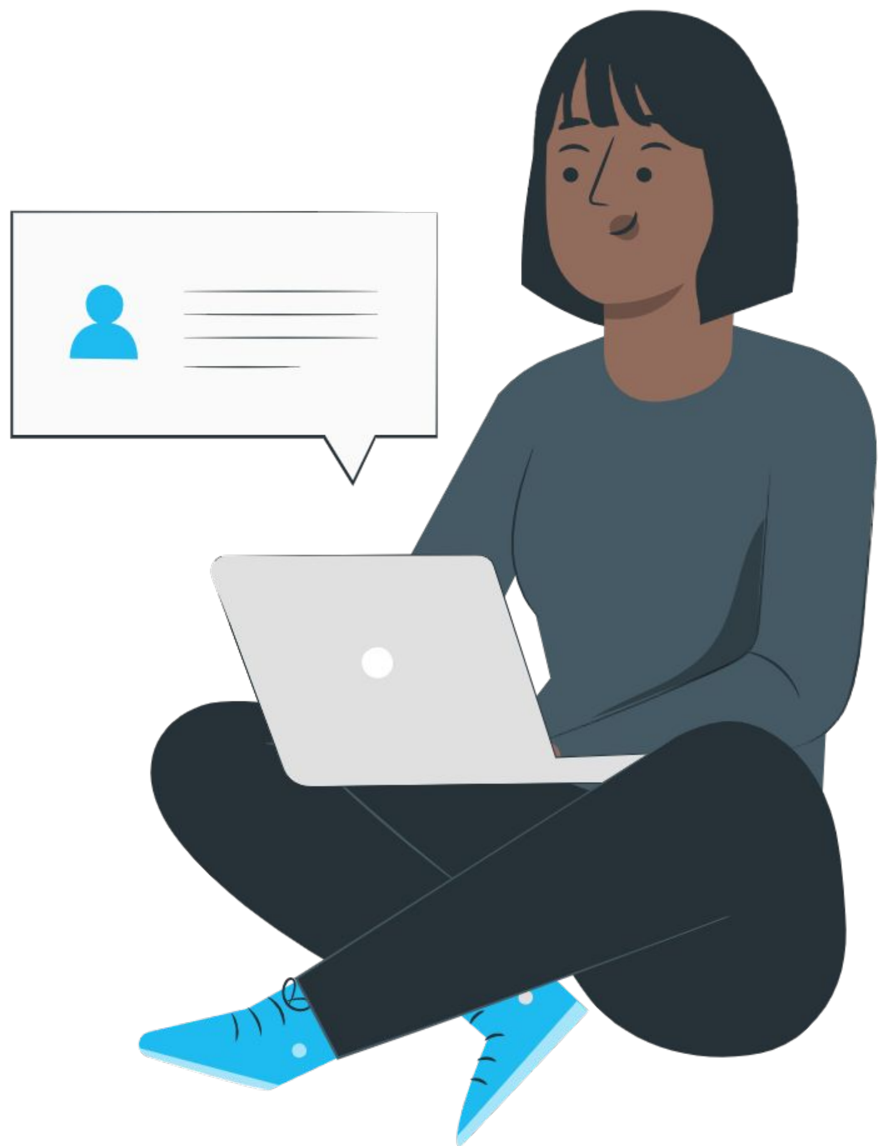
Metric: Learner drop off rate

This is similar to the course completion rate: it uses a percentage to show how many learners made it to the end of a course.

Why both metrics? With the learner drop off rate, you would ideally also measure where students stop learning, so that you can identify lessons that need improving, or even technical issues that you need to address.

Formula

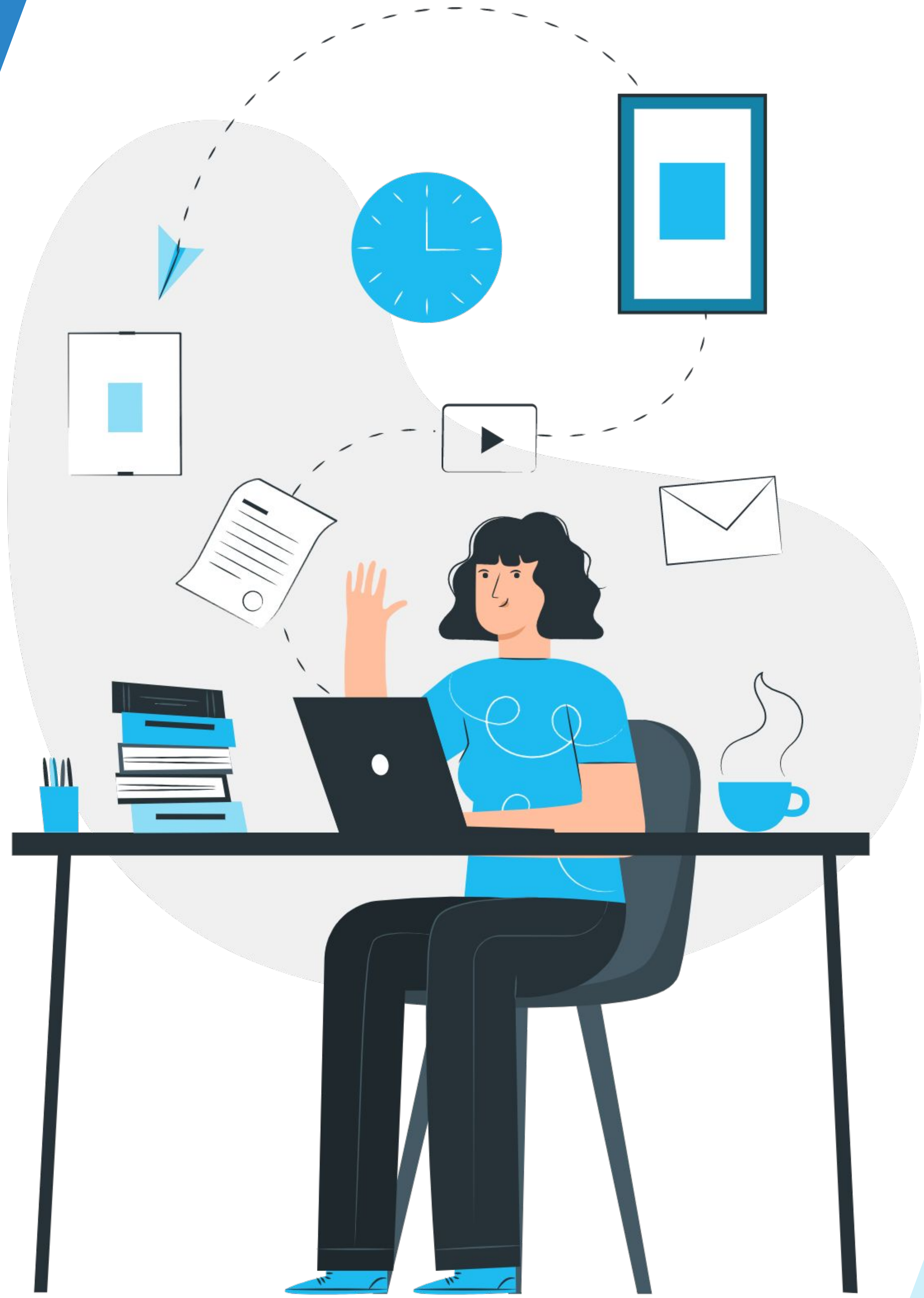
Learner drop off rate = Students who have not completed the part of a course / Students who started the part of a course * 100



Level 2: Learning

Goals for this level

At this level, you'll need to understand the extent to which your employees have retained knowledge and skills after their training. Your goals are to ensure your training has met its objectives, and to identify the skills that your training can further develop.



Level 2: Learning

How to collect the data

Quantitative data

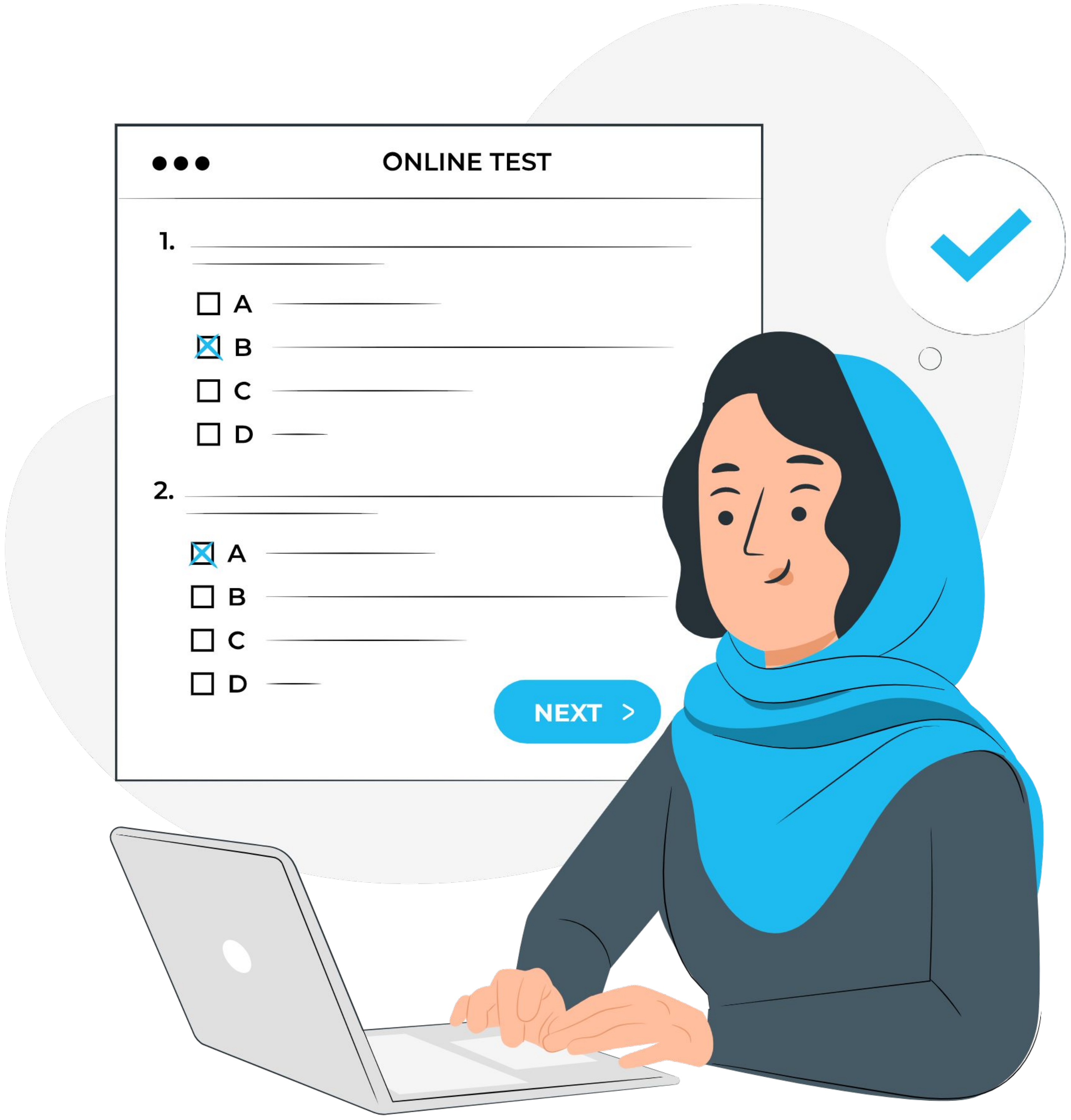
You can use tests learners take before and after the training to compare their knowledge and skills.

Qualitative data

Make use of pre- and post-interviews with employees. You could ask about their confidence levels, or what they learned to help them perform at a higher level.

Metric: Knowledge and skill retention

There is no formula for this. Instead, use qualitative data such as self-assessments and quantitative data such as test results to monitor for differences in knowledge and skill levels before and after the training.



Level 2: Learning

Metric: Assessment pass rate

The percentage of employees who successfully complete their assessment. If this is unexpectedly low, you need to investigate: were the questions too detailed? Was the assessment too difficult, or scheduled too long after the lessons were completed?

Formula

Assessment pass rate =

Employees passing assessment / Employees taking the assessment *100

Example

If 200 employees took a test at the end of a course, and only 45 passed, the pass rate would be:

45/200*100 = 22.5%

Level 3: Behavior

Goals for this level

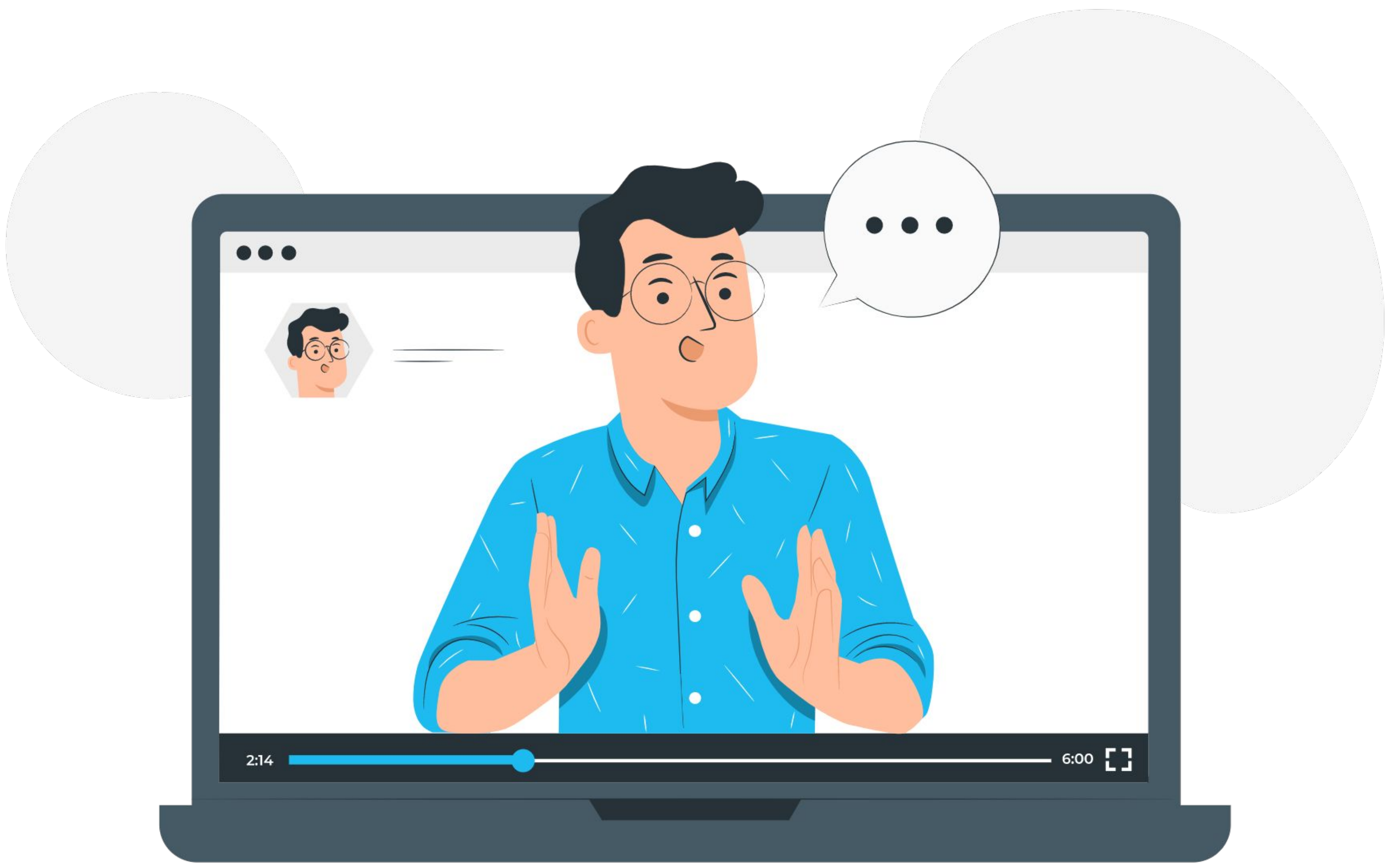
This is where you measure the changes in the behavior and the performance of the employees resulting from the training. This is crucial for understanding the influence of the L&D activity on employees' job performance and attitude, as well as determining if the L&D activity has achieved its desired outcome.

Level 3: Behavior

How to collect the data

Quantitative data

An option to consider is third-party observation, where you'll collect data from reports from managers after their coaching sessions with the employees, for example. You can also gather data using text mining or sentiment analysis from learners' email conversations, personal development plans, or call recording for sales and customer service.



Qualitative data

Include open-ended questions into your interviews or surveys with learners, such as:

- How have you put what you learned in training to use in your job?
- How confident would you be teaching someone else your acquired knowledge and skills?
- Do you feel like your behavior is different now than it was before the training?

Level 3: Behavior

Metric: Employee performance post-training

To measure improvements in employee performance after training, compare employee KPIs before and after the training to monitor for improvements. For example, a sales development representative might have revenue as their main KPIs, and you could monitor if revenue has increased after the training.

Note: We recommend reserving this metric for your most impactful L&D initiatives.

Not sure which metrics to select?

Check out our article on 21 employee performance metrics that every HR professional should know.

Read the guide

Metric: Employee engagement rate

Another sign of a successful L&D program is an increase in employee engagement. One way to track this is by measuring the employee engagement rate before and after the training.

Formula

Employee engagement rate =
Employees above the engagement norm in period /
headcount at beginning of period

Level 4: Impact

Goals for this level

For the final level, you will be measuring L&D's impact on the organization's business outcomes. By gathering concrete and quantifiable results of your training, you can make the case for future L&D initiatives.

Level 4: Impact

How to collect the data

Quantitative data

Depending on the goals of your training and the change you were aiming to inspire in your employees, you can measure its impact by using surveys or hard data. For example, you can use surveys to measure the perceptions of customers and stakeholders, or compare data on employee turnover and retention rate, or analyze sales and profits before and after the training.

Qualitative data

You can conduct interviews or focus groups. For example, you can bring in customers for a focus group and ask them about their experience and how this has changed over time (with a focus on the period before and after your training has taken place). You can also interview managers to determine whether they feel their employees are noticeably more productive or producing higher quality work since the training.

Level 4: Impact

Metric: Training return on investment

This powerful metric lets you demonstrate the financial impact of your L&D initiatives that apply to skills and activities.

Note: You don't need to measure ROI of every training initiative at your organization. Typically, you would only track this key metric for the top 5% of most impactful training programs.

Formula

Training return on investment = (Return of Benefit – Investment Cost) / Investment Cost * 100

Example

Say you spent $45,000 on training to increase the speed of your customer service reps resolving issues. As a result of this, they were able to increase customer satisfaction and sales, which led to an increase of $100,000 in net profit from sales. That would make your training ROI:

($100,000 – $45,000)/45 000*100 = 122%

Level 4: Impact

Metric: Operational efficiency

For trainings and courses that impact operations, you can measure the resulting changes in operational efficiency using metrics such as **time to repair**, **time to recover**, **time to failure**, and **cost-per-click.** Compare measurements from before and after training to note any efficiency improvement.

Metric: Customer satisfaction index

Monitoring this metric for changes after courses and trainings will help you understand how your L&D initiatives are helping your employees better serve your customers. This is only relevant for training on customer-facing skills.

Note: Your customer satisfaction score can range from 0 to 100. The higher your score is, the higher the level of satisfaction from your customers.

Formula

Customer satisfaction score = (Number of positive responses / number of total responses) * 100

Example

If you have 56 positive responses from surveys of 100 customers, your score would be:

$$(56/100)*100 = 56$$

Bonus Content

The finishing touches

With these extra tips and tricks, you will be able to tackle your L&D analytics projects with confidence. Read on to learn more about best practices, customizing the measurement framework, and data collection schedules.

Bonus content

Best practices

To get the best results, you need to use data, and use it in the right way. Here are four best practices to help you make the most of your data-driven approach to L&D.

1: Selecting KPIs

Identify your KPIs before the development phase of your training. Knowing what you want to measure first will enable you to select the most suitable measuring effectiveness method. You may want to consult with key stakeholders first to know which metrics are most important to them.

2: Collecting data

Plan your data collection schedule in the design phase of your training. Know when you want to measure effectiveness and how you will do this, and build it into your training timeline to ensure you stay organized and manage stakeholder expectations.

3: Customizing your evaluation framework

It might not be necessary for you to measure all four Kirkpatrick model levels; plus, this can be a lengthy and expensive process. Spend time conducting your training needs analysis, and choose the training effectiveness evaluation level that best suits those. Do what you need to make a confident, informed decision on the effectiveness of your training.

In the next page, we'll show you how you can determine which level suits you best, based on the type and aims of your training.

4: Acting on your findings

Perhaps the most important practice for measuring training effectiveness is to make sure you put your findings into practice. That means making changes and improvements where necessary and being quick to take action.

Bonus content

Customized measurement framework

While it might be tempting to implement all levels of the Kirkpatrick model, this might not be the most practical and cost-effective move. Instead, you can customize your framework by only measuring what is necessary to help you determine the ROI of your training.

One way to do so is by adding levels based on the type and aims of your training, as suggested by Leslie Allan.

Customized measurement levels

- Level 1. Reaction: For all training programs
- Level 2. Learning: For hard-skills programs
- Level 3. Behavior: For strategic programs
- Level 4. Impact: For programs costing over $50,000

Data collection schedule

Now that you've had the how of measuring training effectiveness out of the way, it is time to consider the when. A best practice is to formulate a data collection schedule in the design phase of your training. There are two reasons for this:

- It allows you to have an overview of when to measure the different levels
- It helps you to manage stakeholder expectations

Head to the next page for an example data collection schedule that you can use as a starting point.

Bonus content

Example data collection schedule

	Start	During	End	After 1 month	After 2 months	After 3 months	...
Level 1: Reaction	✅				✅	✅	✅
Level 2: Learning	✅			✅		✅	
Level 3: Behavior	✅		✅		✅		
Level 4: Impact		✅	✅				

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Sources

[Measuring Training Effectiveness: A Practical Guide]
[10 Employee Training Metrics You Should Know]
[21 Employee Performance Metrics]
[5 Useful Employee Satisfaction Metrics to Track]
[7 Must-Have KPIs To Measure Training Effectiveness For Learning Analytics]
[How to Measure Training Effectiveness in 2021]
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