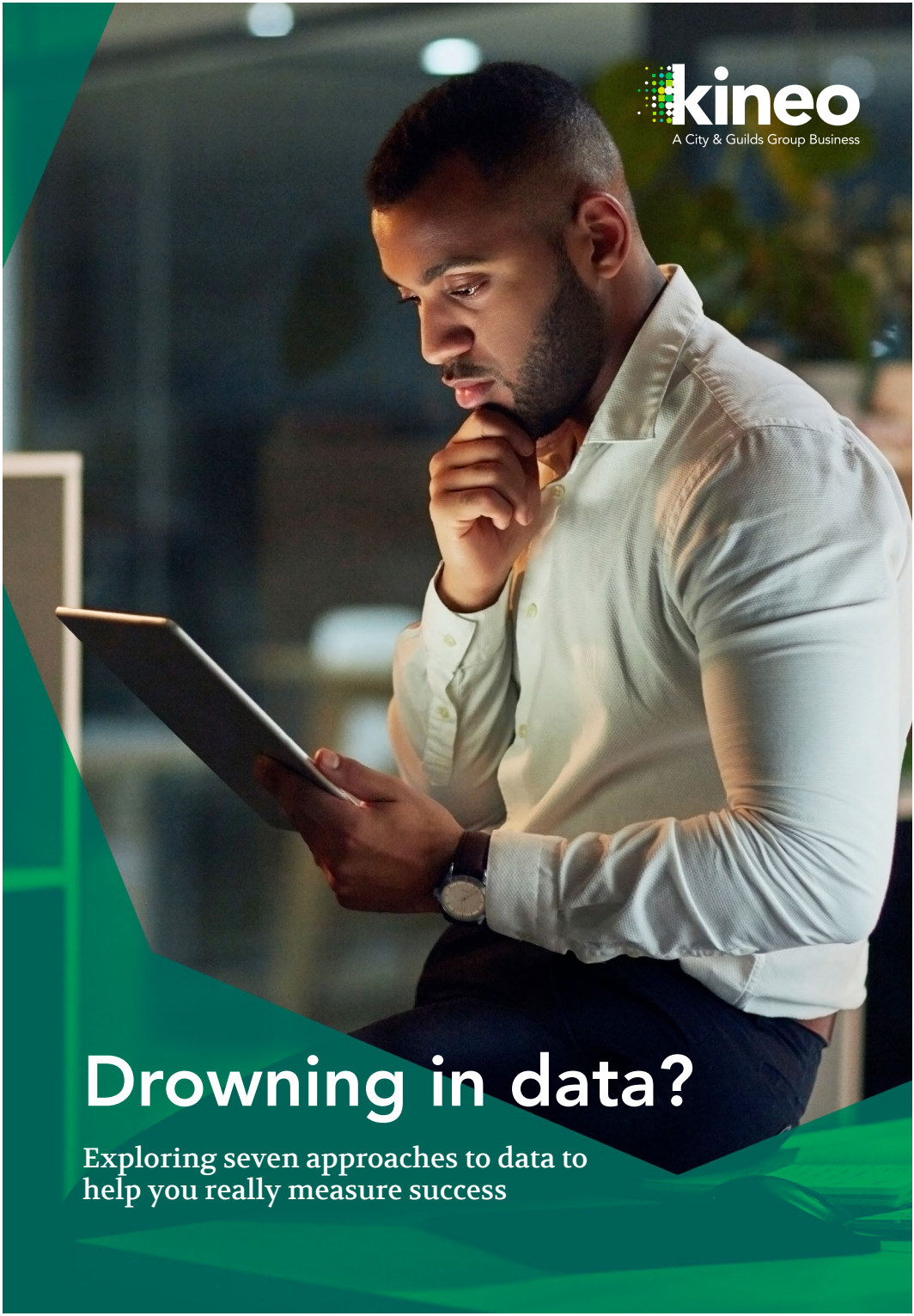


Drowning in data?

Exploring seven approaches to data to help you really measure success

How do you measure impact?

If you've been in L&D long enough, you've probably been confronted with questions about the impact of learning solutions. Your internal voice may say 'yes, of course we make a difference' but you probably also have a sense of unease thinking about your ability to prove it. You're not alone.

Brandon Hall Group's 2020 Learning Measurement Study found that fewer than 16% of organisations are very effectively able to identify and track a series of metrics, including participation, satisfaction, knowledge transfer, behavior change and business impact for any of their learning. In our experience, one of the main reasons for this shortfall is that most of the energy around measurement is spent debating the best way to measure the impact of a specific course or program. While doing so makes sense in some cases, it also takes a significant commitment from the business. On the other hand, we see too little energy being put into a broader learning analytics approach.

Taking a holistic approach to data

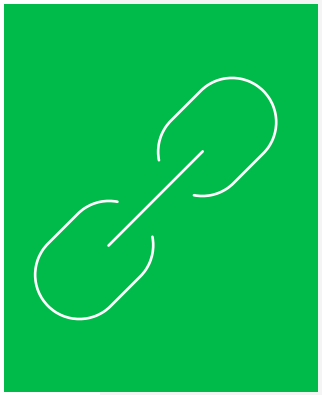
The good news is that there are more tools available to us today to collect and analyse data to identify trends and patterns across a portfolio of learning solutions. The insights from this data may not be the "smoking gun" of ROI, but it can expose patterns and trends on how people interact, feel and perform across learning solutions. Armed with these patterns and trends, the L&D team can and should engage with the business to explore what's driving these trends and how they relate to other metrics the business tracks.- This guide first explores the breadth of measurement approaches and data you can potentially collect, then outlines a simple action plan for planning your data and measurement strategy moving forward.

7 Data Approaches

Let's start by exploring these seven measurement and data approaches:

1. **Business Impact**
2. **Behaviour Change**
3. **Application**
4. **Knowledge Retention**
5. **Confidence**
6. **Engagement**
7. **Reaction**

1. Business Impact

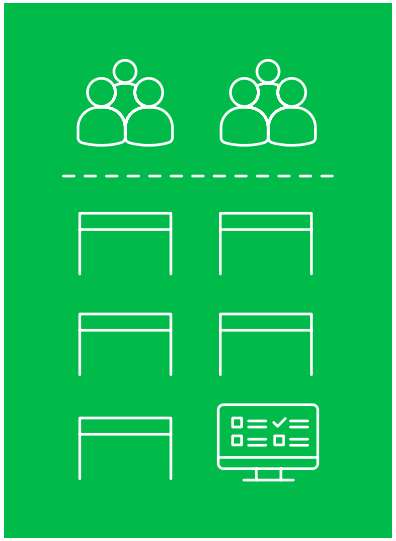


What is it?

Business impact is about trying to establish a direct correlation between training and a business metric. A common example is making a connection between a new sales training program and the success of salespeople.

How to do it?

The most efficacious approach for determining business impact is a controlled experiment. This requires identifying two groups whose current performance is similar and have a similar set of performance barriers that are addressed by the training solution. As part of the experiment, only one group is given the training then business results are monitored to assess the impact of the training.

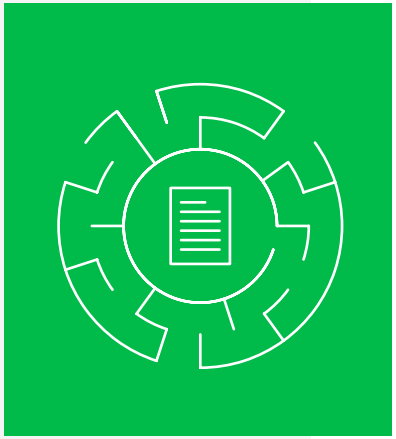


What story does the data tell?

The results of the experiment will tell us if the training improved performance and in some cases what the economic impact is of that improvement. Again, a good example is sales training. A successful training may increase close rates or deal size by x% on average. These data points can then be used to determine the ROI - if on average a sales person closes one additional deal per quarter with a value of $x then the ROI is the total value of those deals of x years divided by the investment in training.

What are the limitations or challenges?

There are several challenges to measuring business impact. The first is convincing the business to take the time to collect baseline data and conduct detailed needs analysis that assess the performance gaps of individuals. This is usually done by having an internal expert provide this insight and doesn't include broad surveys or focus groups to confirm these assumptions at the group or individual level. The second is convincing the business to hold back training from a set of employees to create the control group. The third is even if everything else is done, it can still be difficult to isolate the impact of training from other organisational and environmental factors.



2. Behaviour Change

What is it?

This approach starts with building a behavioural model as part of your needs assessment. The behavioural model identifies both positive behaviours – those we want our audience to continue or increase and negative behaviours – those we want to decrease or eliminate. The measurement strategy revolves around different methods to quantify the frequency of these behaviours before the training and after the training.

How to do it?

The crux of this approach is to collect data about frequency of the behaviours before and after the training. There are several ways to collect this data that include:

- **Self-Assessment**
  This is done by simply asking the participants to provide input on frequency of the behaviours.
- **Manager-Assessment**
  This is done by asking a manager or another individual who is in a position to regularly observe the behaviours to report on frequency.
- **Third-Parties**
  In some cases, a third-party can be used to collect this data. An example would the use of secret shoppers who are given scripts and asked to record the employee's behaviours in a retail setting.

What are the limitations or challenges?

There are some potential impacts on the efficacy of this data. The first is the Hawthorne Effect which refers to the inclination of people who are being observed to change or improve the behaviour being evaluated. The second is the ability to clearly articulate evaluation criteria for observable behaviours that indicate mastery or competence. The third has to do with having appropriate and reliable technology to capture the data. The fourth is the difficulty in correlating the performance as an outcome of the training.

Example:

How I set expectations

	Almost always	Usually	Sometimes	Rarely
My team members are clear on the specific outcomes they are to achieve.	○	○	○	○
My team members have clear targets to achieve that are expressed in clear and measurable terms.	○	○	○	○
My team members understand how their work contributes to our organisation.	○	○	○	○
My team members understand how their work contributes to the success of our team.	○	○	○	○
My team members understand how their work contributes to their personal development.	○	○	○	○

3. Application

What is it?

Assessing application is about creating different levels of a facsimile of a context in which the skills and knowledge covered in the training need to be used. The most common approach is a scenario-based assessment that provides the opportunity to evaluate learners using hypothetical or expected work situations. These situations can range from simple scenarios to complex branching simulations. This approach is especially useful for assessing learners on things where mistakes and/or failure on the job has great consequences, such as life and death situations or in jobs where practicing certain scenarios is necessary or otherwise useful for success. Simulations provide a safe place to fail where learners can experience outcomes of mistakes without the consequences.

How to do it?

The most typical way to assess application is through online learning. Assessments can include simple story-problem style questions, more robust scenarios and complex simulations. While it may be possible to collect data via an LMS using SCORM, xAPI is a more robust and flexible approach to consistently collecting this data. While most frequently done online to reach a large audience economically, this style of assessment can be done live or in written form as well.

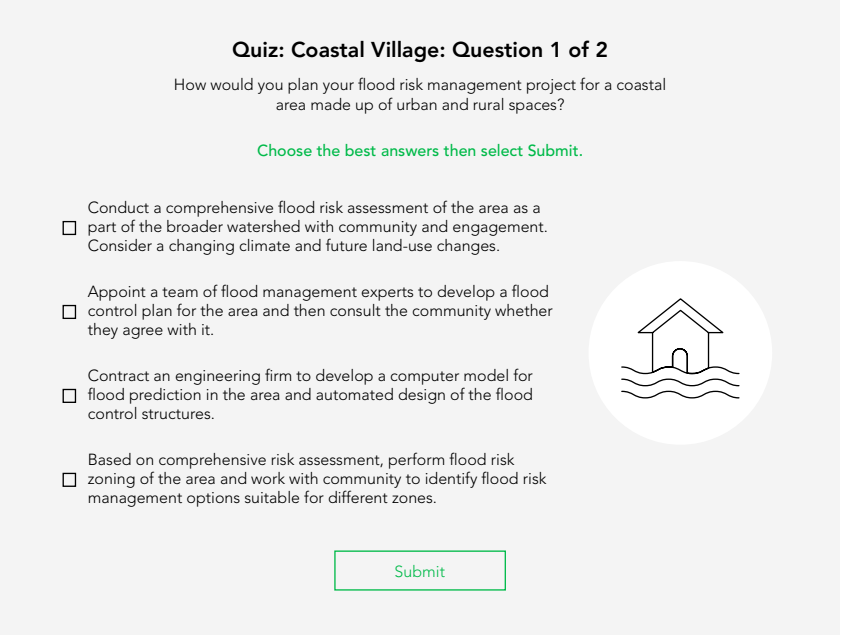
What story does the data tell?

Scenario-based assessments and simulations go beyond simple recall; they give clearer insight into how well a learner can apply concepts in context. This can be a potential indicator of how ready they are to apply concepts on the job. For instance, scenario-based learning could be used to teach bank tellers how to spot red flags for money laundering. It's not life and death, but mistakes have consequences. The military and the medical community use simulations for things that do have life and death consequences. Collecting data on how well learners apply new knowledge and skills can provide an indication of future performance issues and be used as a prompt to look deeper.

What are the limitations or challenges?

The challenges associated with scenario-based assessment are primarily around creating the assessments themselves. They require more hands-on SME involvement. The process can be time consuming and it takes an experienced hand to write scenarios and questions that are in alignment with content and outcomes while at the same time being authentic. And even if we get all of these elements right, scenarios are still once removed from real life so are still not a guarantee for success on the job.

Example:



4. Knowledge Retention

What is it?

Knowledge assessments are ubiquitous in corporate learning events or courses to measure a learner's ability to recall facts and terminology. Most often, these assessments appear at the end of a course or module as knowledge checks or quizzes, and at the end of the course as final assessments.

How to do it?

Most eLearning authoring tools provide an array of question formats that are well-suited for asking knowledge questions. Of course, paper and pencil are always an option as well. Formats typically include True/False, Multiple Choice, Multiple Select, Matching and more. There are also quite a few stand-alone assessment tools including open source tools like HP5. Data can be collected via SCORM by your LMS in many cases but may be limited to only collecting data for end-of-course quizzes and not for questions throughout. xAPI can be used to extend your data capture to all questions. If you use a stand-alone solution, these tools typically include comprehensive data capture.

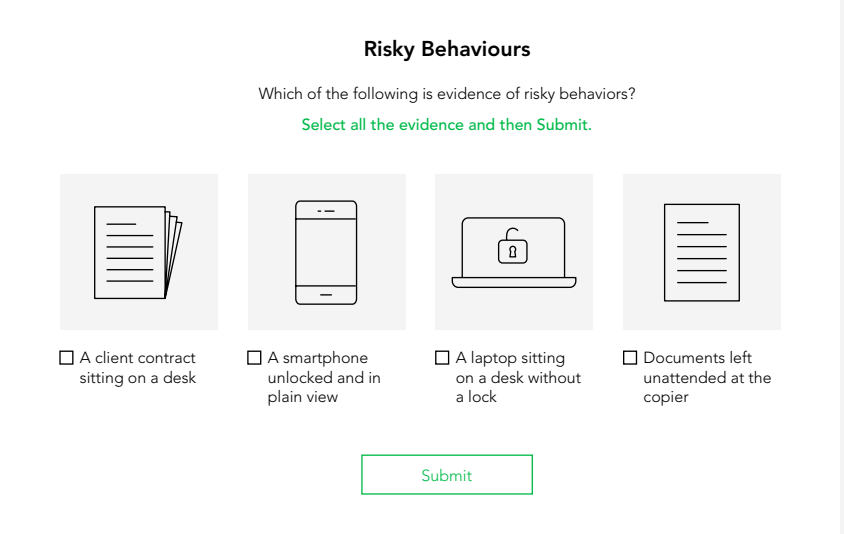
What story does the data tell?

This data tells us if our learners remember content a short time after it is introduced. Learner responses and patterns of responses to these questions can be useful in identifying common areas of weakness across learners or cohorts, but more likely help us identify flaws or gaps in content is presented in the learning experience.

What are the limitations or challenges?

These assessments do present some challenges. Determining whether a learner can recall facts is unlikely to enable decision making and on-the-job application. Knowledge does not necessarily enable performance.

Example:



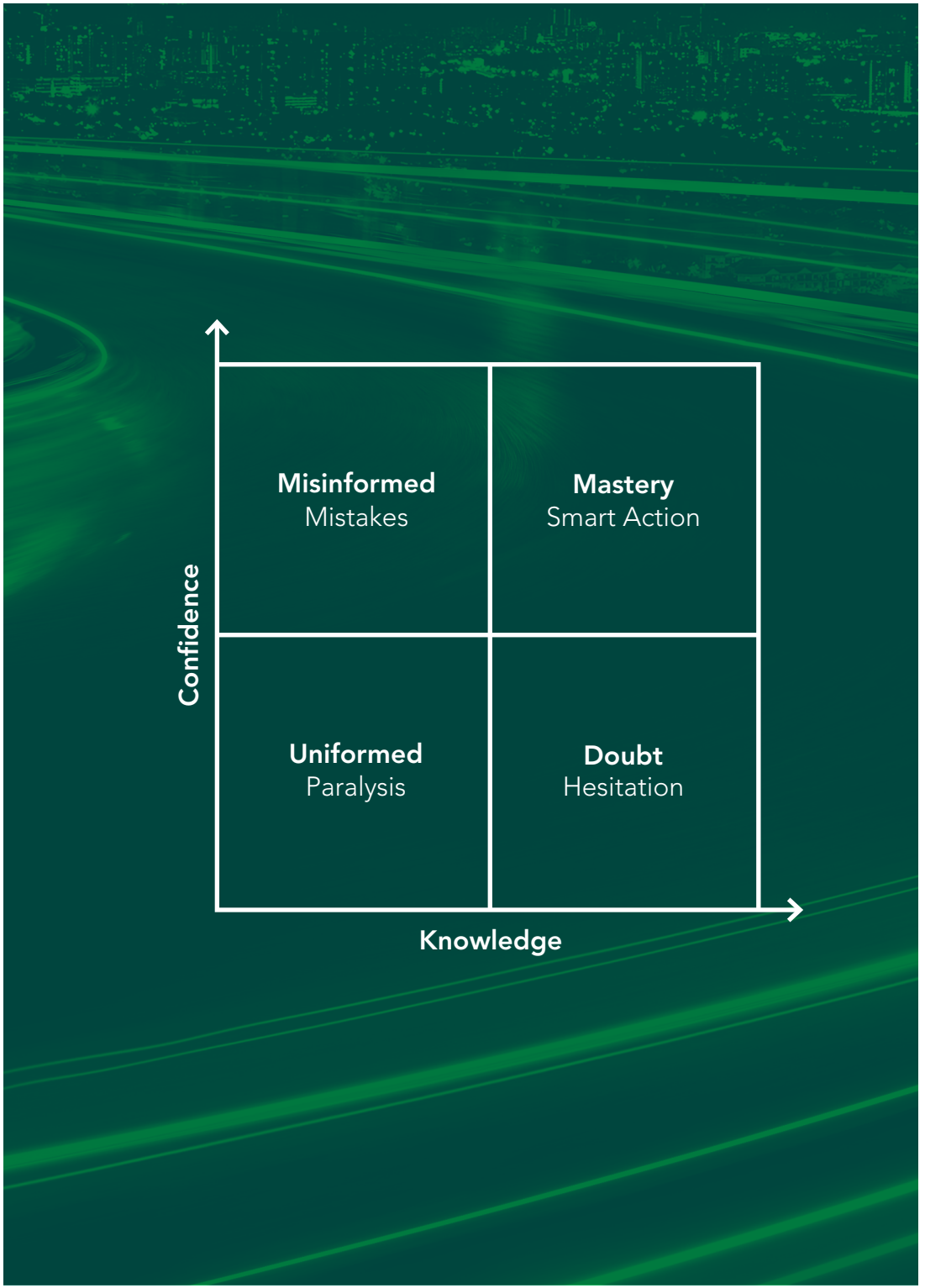
5. Confidence

What is it?

Confidence ratings are metacognitive, requiring the learners to report their own awareness of their thinking – in essence, what do they think about their own thinking? It is the learner's self-report of their own confidence about a judgement or decision, usually given retrospectively after the judgement has been made. Learners answer a question and then rate their confidence in their answer.

A growing number of organisations collect data on learner confidence as part of their assessment strategy. Confidence ratings may be in terms of how confident a learner is about their response to knowledge or application questions, or more broadly in terms of how confident they are about their ability to perform related tasks after the training.

Bruno's research on the linkage between knowledge, confidence, and behavior led to the intuitive conclusion that knowledge alone is necessary but not sufficient to create behaviour. Rather, it is the fusion of knowledge and confidence that leads to behavioural outcomes and empowers people to act. And perhaps even more telling, is that people with knowledge but little confidence are likely to hesitate, or worse, be paralysed at critical times as this knowledge quadrant reflects:



How to do it?

There are many approaches and tools you can use to collect confidence data. These include including a question in the flow of an eLearning course, sending out a separate survey either from your LMS or a third-party tool like Survey Monkey, or a simple email.

What story does the data tell?

When confidence ratings are added to an assessment, it allows us to see the correlation between the answers and how confident learners were. In addition to being an indicator of how ready a learner is to apply knowledge, confidence-based assessments have a reflective effect on learners by prompting them to consider where they are in the learning process and what gaps may still exist. For example, if the learner marks that they are very confident in a topic but cannot get the right answer, it uncovers overconfidence.

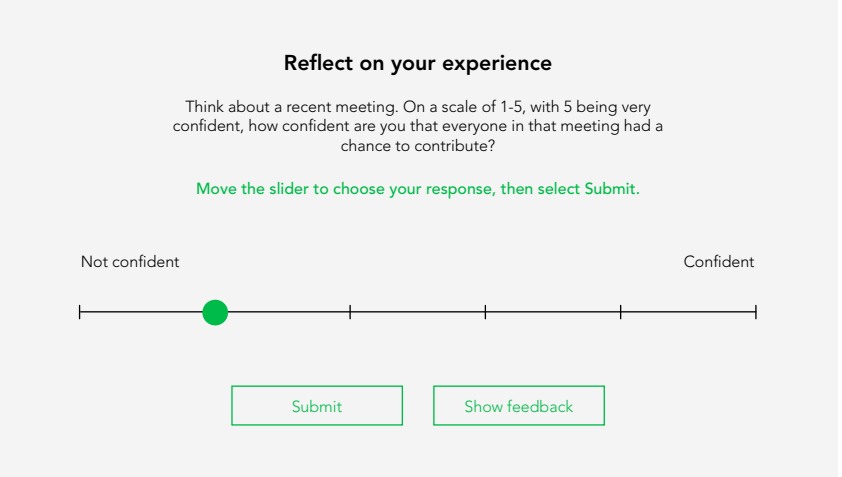
What are the limitations or challenges?

Generally, there are two things to consider when using confidence ratings: (1) response bias and (2) how they are presented to learners.

Response bias: As with most things involving self-reporting, there is a risk that learners will understate or overstate their confidence. It is a subjective assessment, and responses and results should be considered accordingly.

Presentation to learners: It is important to be specific in the verbiage of confidence ratings. Consider the difference between 'How confident are you in your response?' versus 'How confident are you that your response is correct?' The latter is more specific and helps the learner to understand how to respond.

Example of pre-course confidence question:



6. Engagement

What is it?

Unlike the categories above, engagement data isn't about the content being taught. Instead it's about measuring activity. The most common data in this category includes registrations or starts to a course, completions, and time spent.

How to do it?

For eLearning, this data is typically readily accessible through the LMS. Additional data can also be captured using an analytics tool like Google Analytics or by using xAPI. With xAPI, it's possible to collect a lot of additional data points including just about every click in a course, engagement with media assets and more.

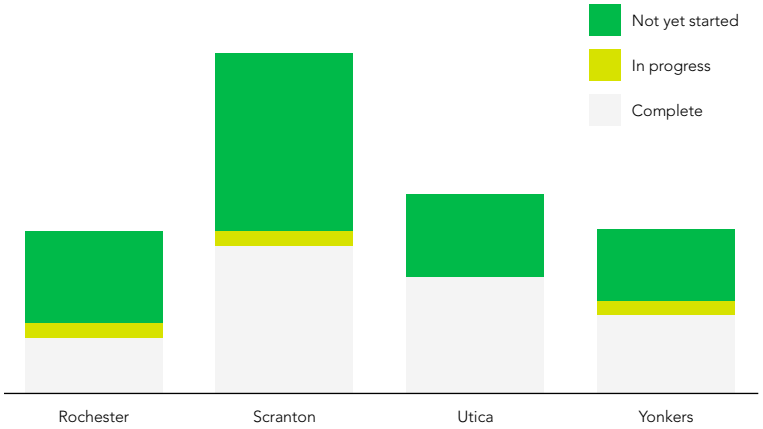
What story does the data tell?

This is a broad category of data that can provide insight into learner activity. Understanding things like what content is most popular, what courses are consistently started but not completed, and what interactions or components get the most or least engagement are potentially good starting points to gaining a deeper understanding of your learners and the effectiveness of your content.

What are the limitations or challenges?

The limitation of this data is that it doesn't provide insight into the behaviors or the "whys" behind them. That's why you can't rely on consumption or engagement data alone to demonstrate value.

Example:



Users organisation name(s)	Complete	In progress	Not yet started
Rochester	4	1	8
Scranton	12	1	16
Utica	10	0	7
Yonkers	11	1	5

7. Reaction Data: How learners liked the experience

What is it?

Reaction data is typically collected via "smile sheets". This data reflects the learner's opinion about or reaction to learning. Questions can range from generic satisfaction – "did you like it" to gauging helpfulness to the learner's job, to likeliness to improve performance.

How to do it?

There are many ways to collect this data: Many LMS, have integrated feedback tools, there are a number of specialised systems designed specifically for gathering learner feedback, general survey tools can be used and, of course, paper and pencil are an option.

What story does the data tell?

These smile sheets are not assessments; they are surveys used to collect feedback from the learners. If they are well-worded, they can help gather input from learners on how to improve learning experiences going forward, how to make the content better, and sometimes how to give them what they need to succeed.

What are the limitations or challenges?

These end-of-course surveys have been around as long as people have delivered training and have been controversial since that time. Emerald Learning (formerly Towards Maturity) describes them as "a data point that isn't particularly meaningful and doesn't provide significant business value." Research corroborates this view showing that "traditional smile sheets are virtually uncorrelated with learning results." While smile sheet data may not give us deep insight into the efficacy of our programs, they are the method most used by organisations to collect feedback.

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Example:

	Overall Ratings										
Rate the overall value of the learning experience Circle ONE number (Please don't circle the words).	Very uncomfortable	1	2	3	Average Value	4	5	6	Very comfortable		
Rate your physical comfort during the learning experience (consider breaks, food, temperature, furniture, light, etc.) Circle ONE number.	Very uncomfortable	1	2	3	Average Value	4	5	6	Very comfortable		
Likelihood that you will utilise what you learned in the next two weeks Circle ONE of the percentages.	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Likelihood that you will share what you've learned with a coworker or friend in the next two weeks	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Social Learning Trends: How tracking trends in responses can improve the learning experience

What is it?

Learning is all about practice and feedback; this assessment type gives the learner the option to compare their answers to their peers. Sometimes we can capture data through the experience using xAPI or similar technology, including Kineo's own Didact. It is particularly well suited to capturing learning analytics data and for facilitating social learning. Evidence shows that when learners can see how their answers compare to their peers' answers, they tend to take a more thoughtful, considered approach to learning, thereby improving the experience and learning outcomes.

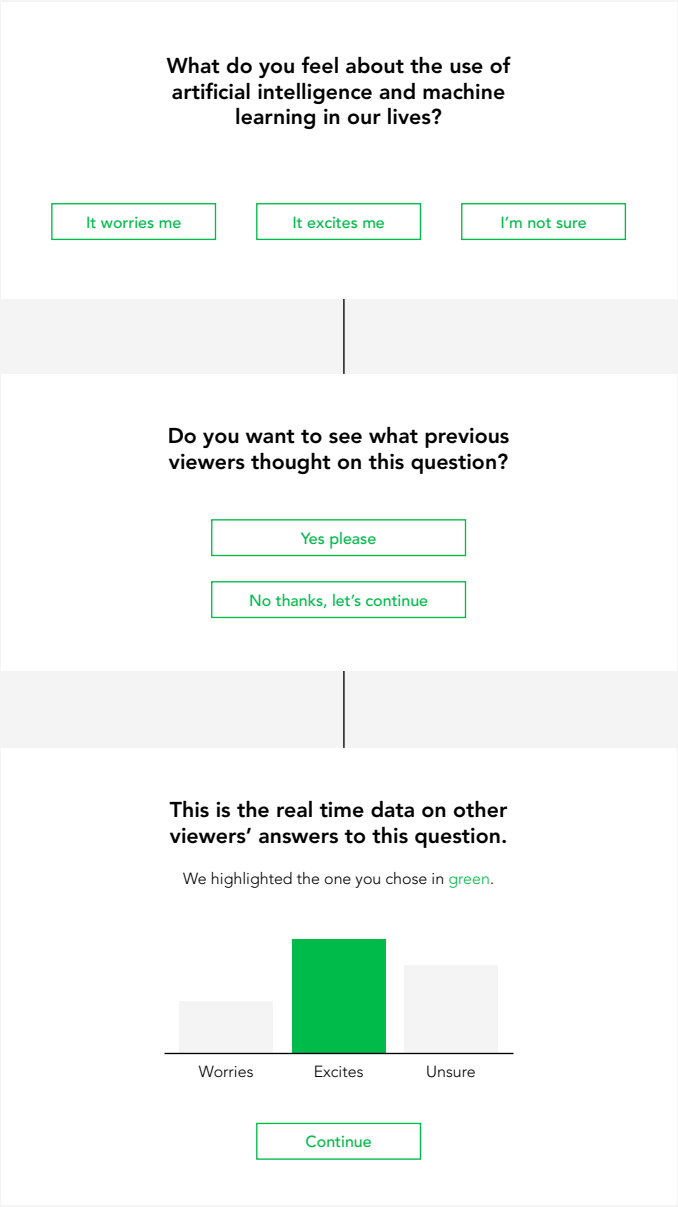
What story does it tell?

This data can be used to measure things like confidence over time, can be fed back to learners to help them evaluate where they are among their peers, or to identify areas for improvement within the experience.

What are the limitations or challenges?

When using this assessment type, it's necessary to consider what type of content it's best suited for and how learners will respond to it.

Example:



Putting it all together

With the information we've provided you should be able to take the next steps toward a measurement strategy that will help move your organisation forward. The key is that you don't have to do it all at once and it's perfectly ok to pick and choose the approaches and data that best align with your goals and organisational needs. Here are three steps to get started:

1. Identify which evaluation approaches and data best fit your organisation and your leaders. There is not a one-size-fits-all measurement framework and it's ok to start small and continue to expand over time. Finally, be realistic about what will work for your organisation based on the tools and data you have access to.
2. Map out the changes in process, technology, and skills you'll need. Processes might include modifying your course design process to be more intentional in adding certain types of questions or creating a new evaluation form and making sure it is sent after every course completion or capturing baseline performance data. Technology may include a setting up learning record store (LRS) or survey tool or new authoring tool. Skills might include the ability to write xAPI statement or assessment writers or data analysis.
3. The last step is to implement and iterate. If you set yourself up for success, the data will start pouring in. Review the data on a regular basis and see what stories emerge.

Finally – give us a call! If your organisation or L&D department needs some assistance with its measurement and evaluation strategy, Kineo would be happy to help.

Discover how we're shaping the future of learning

Everything we do at Kineo stems from a simple idea – if we design a better learning experience, together we'll get better results.

Kineo helps the world's leading businesses improve performance through learning and technology. We're proud of our reputation for being flexible and innovative, and of our award-winning work with clients across the world.

Whatever your business challenge, we will partner with you every step of the way to find the learning solution that fits best – and delivers results.

So, how can we help you?
Get in touch about your digital learning challenges.

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