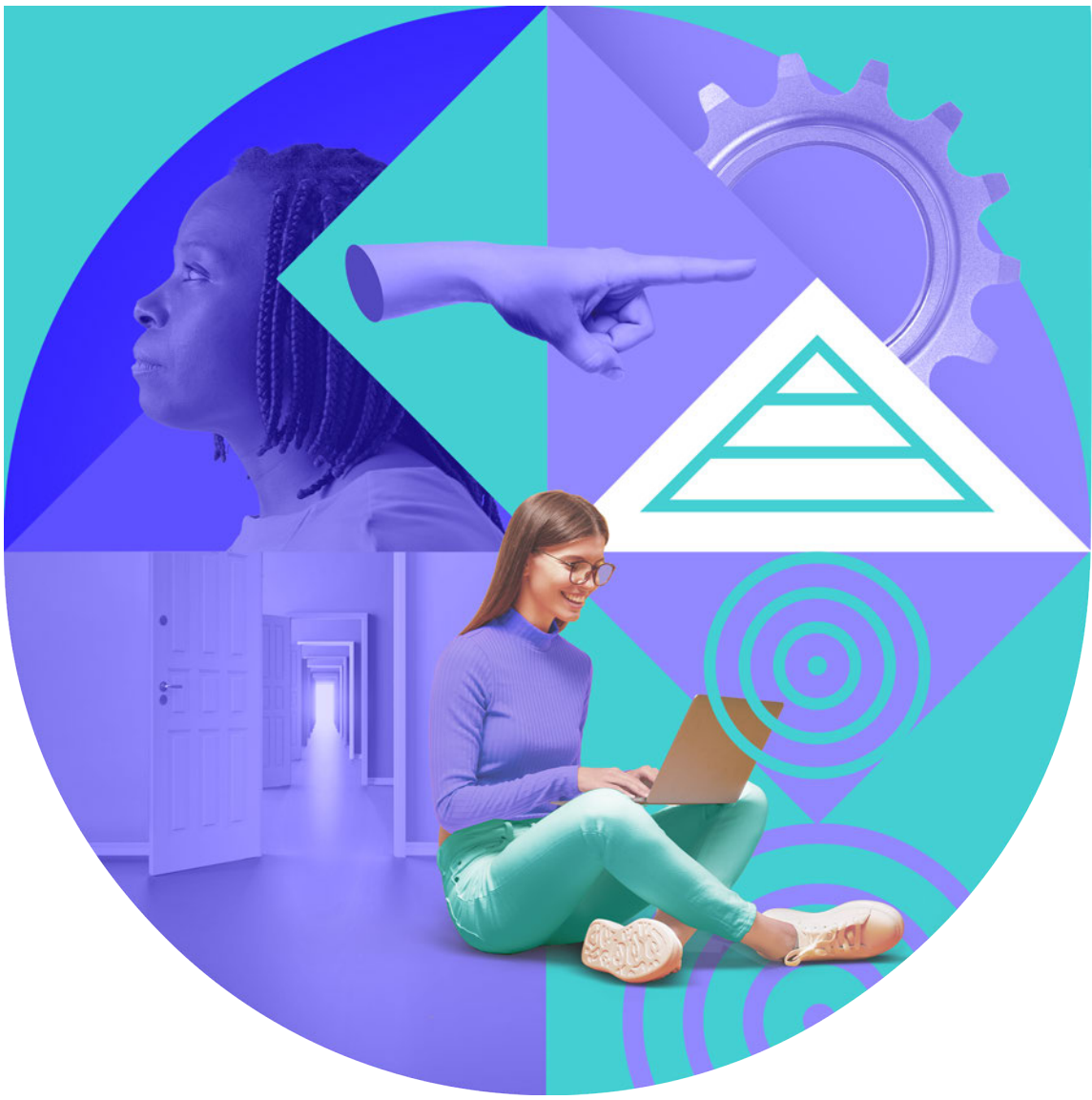


L&D's guide to digital pedagogy for learning design

thinqi

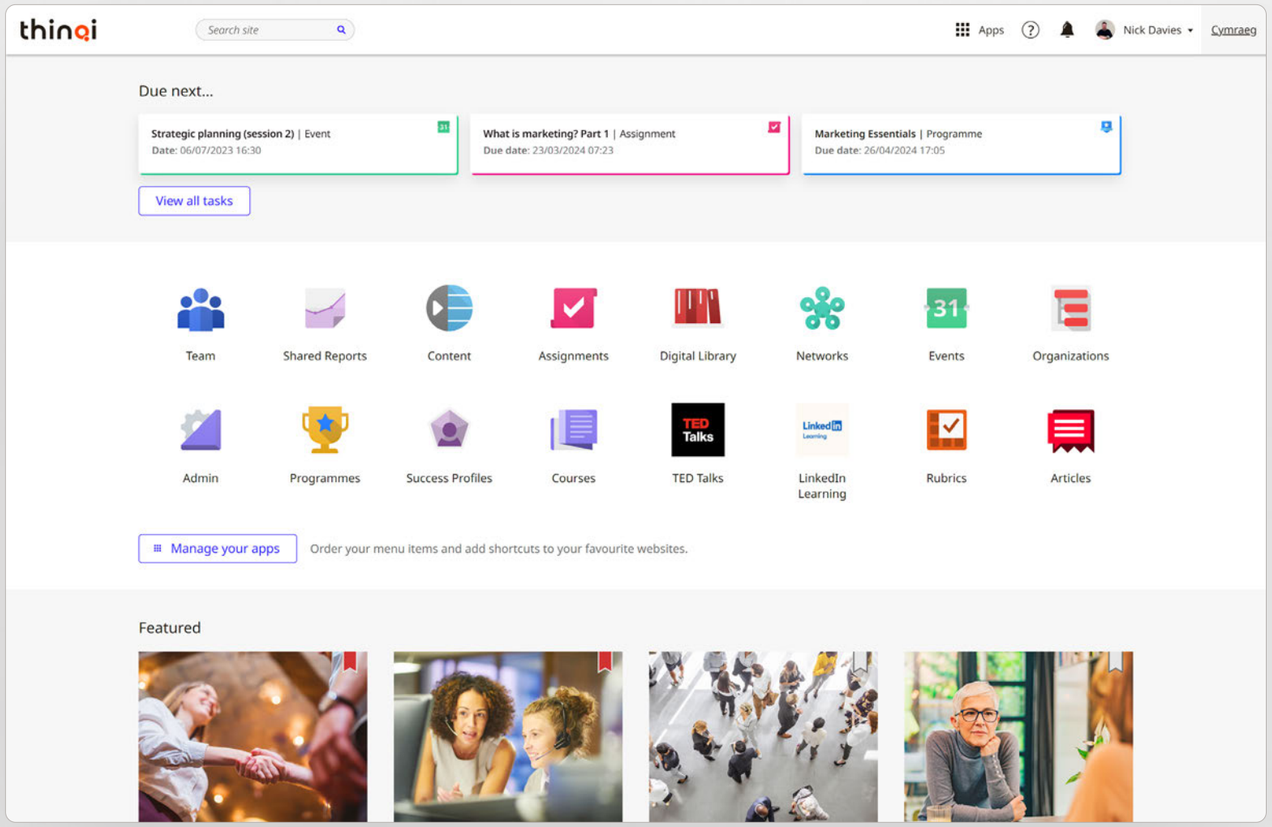
Contents

01

SECTION 1

About Thinqi

Created by educators and trusted by policy makers across the world, Thinqi is an award-winning learning management system that transforms the way learners engage with their development, providing a smart and effective way to improve their skills.



Thinqi's learning system comes with a proven track record of success. We work with national and regional governments, large school groups and universities in implementing and, crucially, embedding the technology at the heart of education transformation projects. We provide best-in-class digital educational tools across the public sector in basic and higher education and in a range of multinational companies in the corporate commercial sector.

Built upon a foundation of over 50 collective years of asynchronous, distance and face-to-face teaching, our team of learning experts are passionate about customer success, offering support at every step of the journey towards digital transformation. Tailored to the needs of your business, our experts will:

Support your team and respond to learning needs

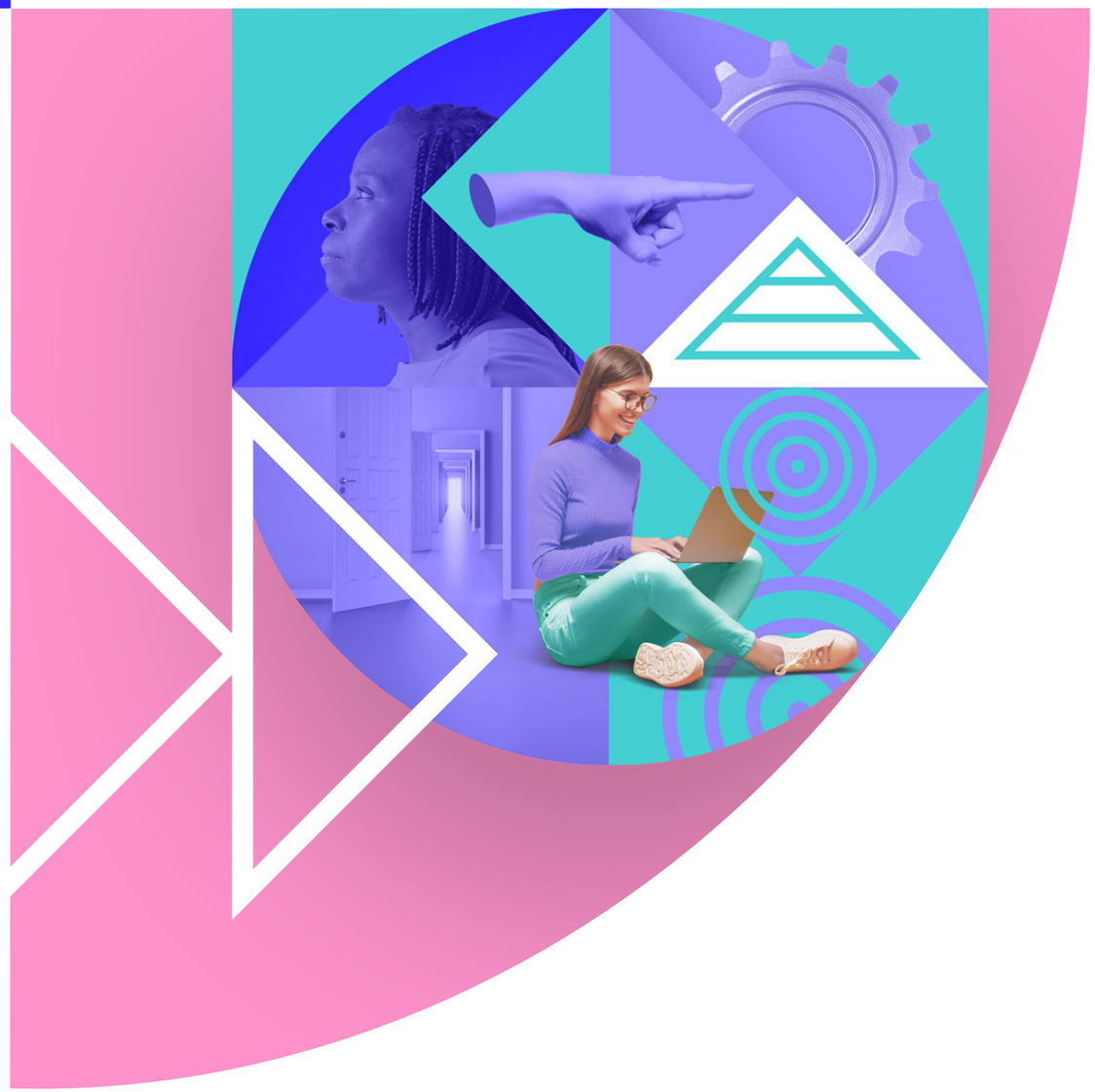
Share their expertise in delivering blended learning that gets results

Help design a roadmap for sustainable L&D delivery in your organisation

Our approach has delivered measurable business improvement for customers across the globe including Cambridge University, Oxford University, Honda Motor Europe, Boots, BMW and Allianz Partners UK.

Together, we'll drive engagement for blended learning, helping you to grow a community of happier, more engaged and more capable staff.

02



SECTION 2

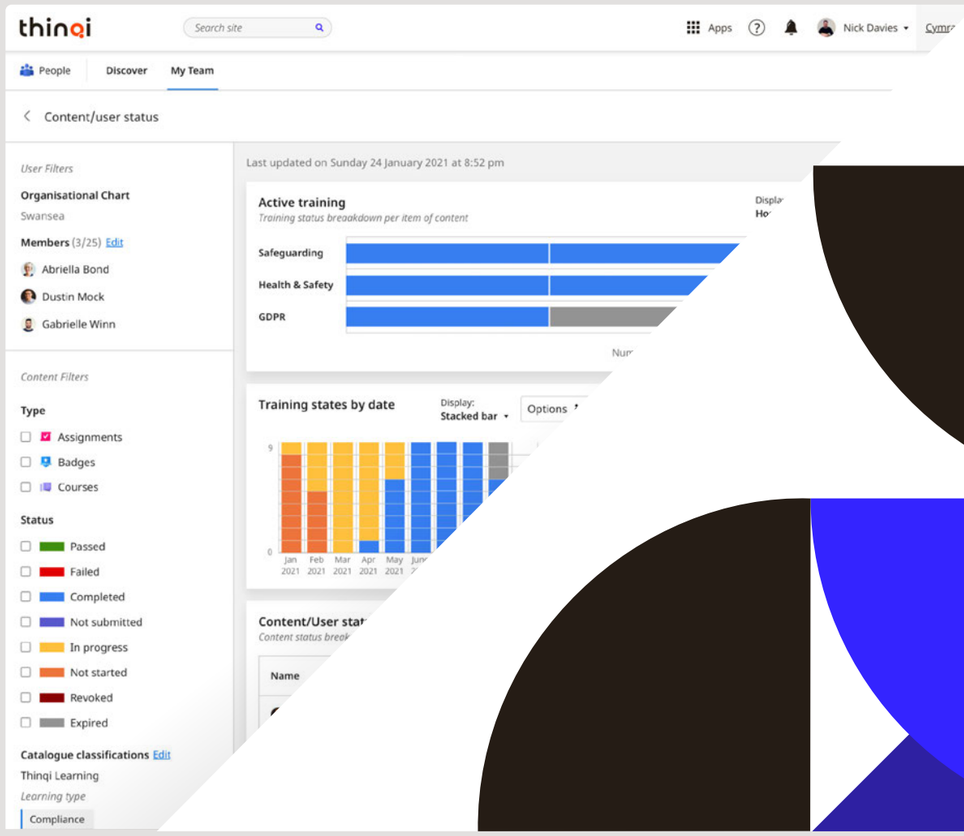
Welcome

In the competitive market of digital learning solutions, it's easy for providers to fall into the trap of ignoring sound theories of learning and only give their users a taste of the flavour of the month.

Here at Thinqi, however, we draw on a range of theories—from the past and the present—to form the method and practice behind our learning system.

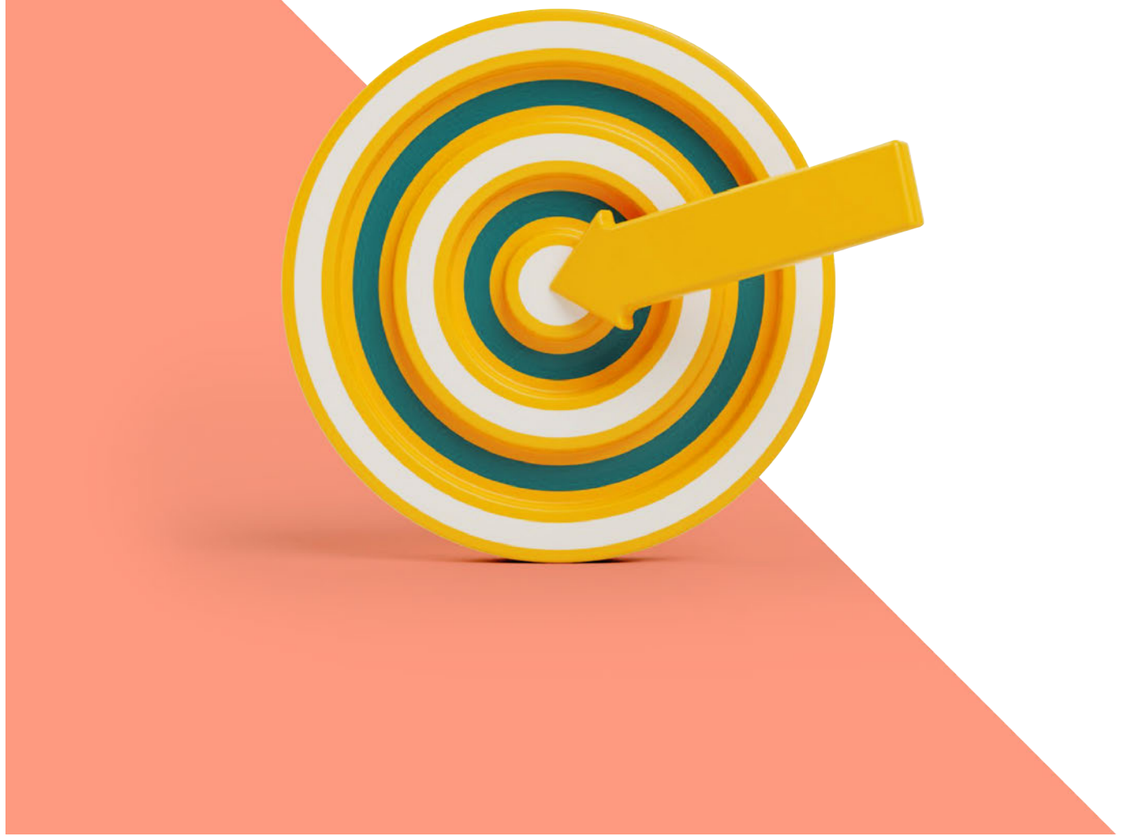
With over 20 years of educational practice, we've put together this expert guide to take you on a journey into what matters first and foremost: **the learning theory**.

By building a sound foundation of pedagogical knowledge, you can then use your technology to build learning programmes that don't just look fantastic, but also work.



That's smarter learning.

03

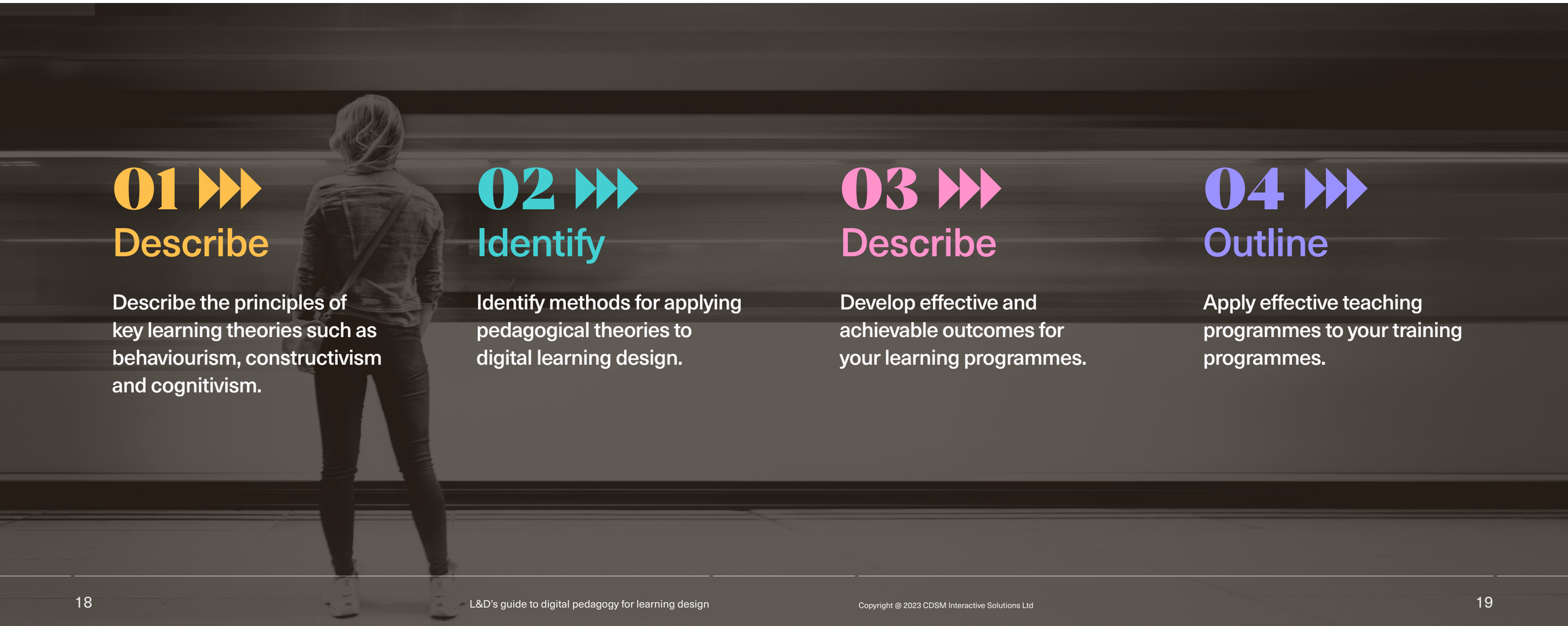


SECTION 3

Learning outcomes

Any good learning activity should have clear learning objectives. Here's an outline of what you should take away from this guide.

By the end of this guide, you'll be able to:



01 Describe

Describe the principles of key learning theories such as behaviourism, constructivism and cognitivism.

02 Identify

Identify methods for applying pedagogical theories to digital learning design.

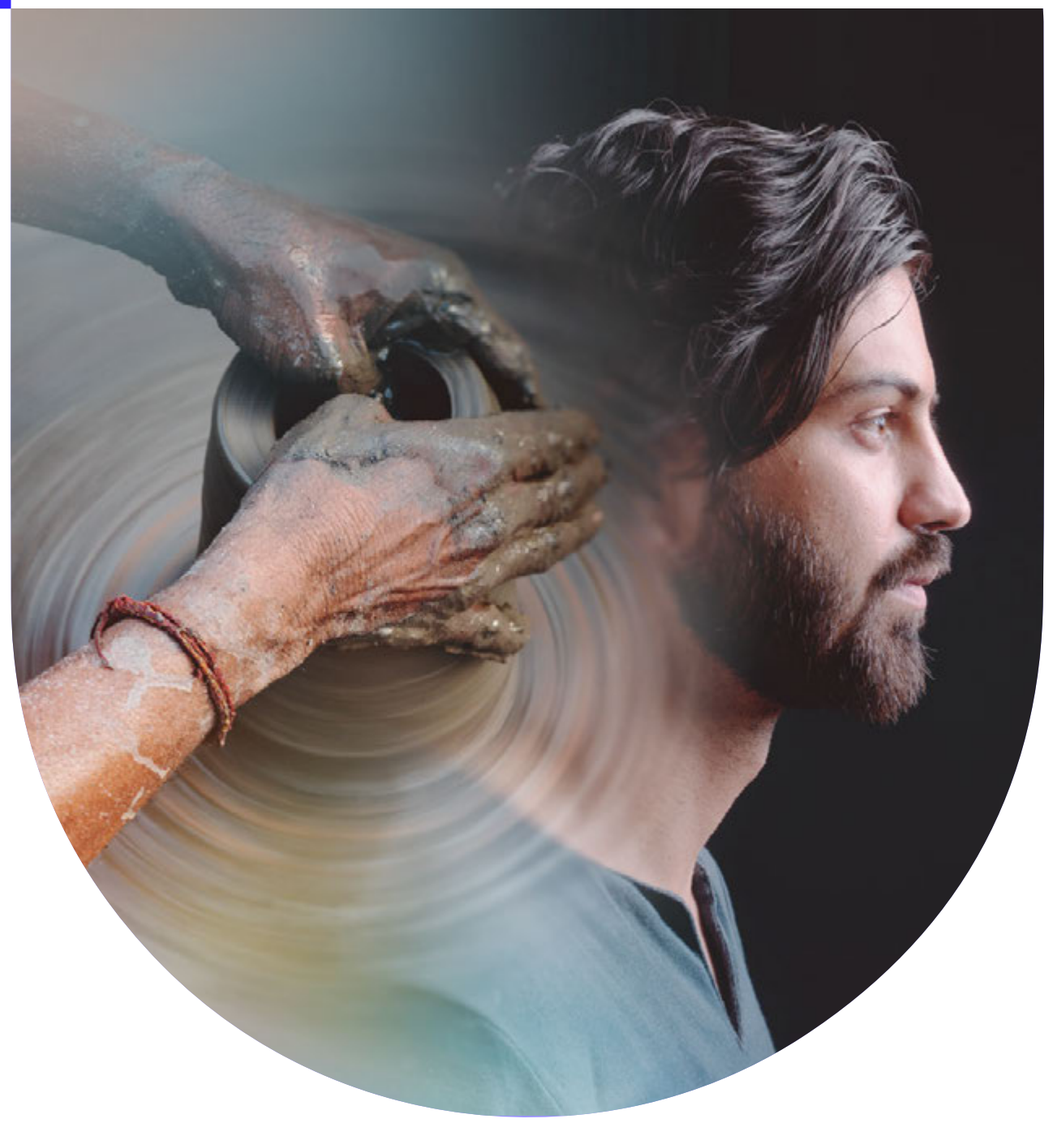
03 Describe

Develop effective and achievable outcomes for your learning programmes.

04 Outline

Apply effective teaching programmes to your training programmes.

04



SECTION 4

What is behaviourism?

The following statement was made in 1924 by **John Watson**, who is often referred to as the founding father of behavioural science:

> *"Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any kind of specialist I might select—doctor, lawyer, artist, merchant-chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations and race of his ancestors."*[1]

What's important to understand is that the quote effectively sums up one of the key concepts associated with an early branch of behaviourism; **that behaviour can be shaped by environmental stimuli.**

[1] *Watson, John: Behaviorism (2009) [1958], p. 82*

Modern behavioural science seeks to understand all human behaviours and the factors that influence them. Behavioural science today sees learners as active, responsive creators of their own learning and experience. Identifying influences on behaviour, such as language emotions and internal feelings, is key to improving it.

Although modern behavioural science is almost unrecognisable from its origins in the early behaviourism of Watson and his peers, some elements have evolved into familiar teaching practice.

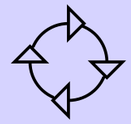
Let's summarise some of the key tenets of behavioural science before looking at how it can be applied to L&D.

01

Behavioural science focuses on shaping behaviour and how it can be changed or moulded by external and internal stimuli.

02

In order to create behavioural change, learners repeat a desired behaviour until it becomes automatic. The desired behaviour is encouraged through reinforcement. Learners form an association between the desired behaviour and the end result which leads to an increase in that behaviour.



03

Some early behavourists suggested that tasks should be broken down into small, achievable steps so that learners can work towards an end goal and demonstrate an achievement. More recently, behavioural scientists have looked at how 'nudging' specific actions can help people to achieve an end goal.

04

Behavioural science tells us that emotional reactions such as anxiety, avoidance and optimism can become conditioned responses to stimuli. This means it's more important to create learning environments that promote positive emotional responses and encourage learning.

How to shape behaviour in a learning environment

Shaping behaviour in a learning environment may sound daunting unless we break it down into smaller, more achievable steps.

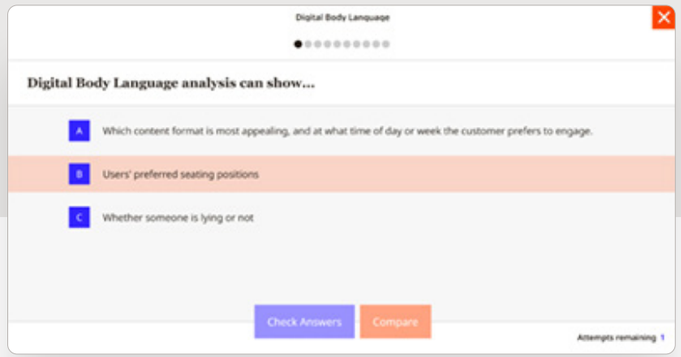
01 » 02 » 03

01 Give praise

Praise from a trainer is key to supporting learners in developing appropriate behaviours that enable learning. From a behaviourist perspective, praise given in response to appropriate behaviour is an extrinsic reward that reinforces that behaviour. John Woollard, in his book Psychology for the Classroom: Behaviourism, explains that praise, celebration, approval and token economy are all examples of interventions for behaviour modification through positive reinforcement.[2]

Consider how you can build positive reinforcement in your training and development sessions and materials.

For example, our learning system enables you to easily provide frequent feedback and praise throughout formative and summative assessments.



02

Model positive learning behaviours

Modeling required behaviour is also useful. What can you do to exhibit the behaviours you are attempting to foster? For example, in Thinqi, we allow you to reinforce desired outcomes by providing exemplar resources for learners to compare their own work against. This helps to familiarise them with good practice and to model it moving forward.

Consider your role in your own organisation. Are you encouraging leaders to role model a positive attitude towards learning opportunities? Do you actively role model positive learning behaviours within the organisation? Have you had a discussion around role modelling with your leadership team?

This isn't about personalities. This is about behaviours.

Case study

Google

In 2017, Google was named as the tech company with the best corporate culture. Its cofounder, Larry Page, was also named as Fortune's 2014 Businessperson of the Year. It's easy to see why—as part of Google's Project Oxygen to develop better leaders, Google changed its employee feedback surveys to mirror the qualities of what it believed were great leaders. **The eight qualities required for being a successful manager, in order of importance, are:**

01
They're great coaches

02
They empower their team and don't micro-manage

03
They express interest in their team members' success and personal wellbeing

04
They are productive and results-oriented

05
They help employees with career development

06
They have a clear vision and strategy for the team

07
They have key technical skills that help them advise the team

08
They're good communicators and listen to their teams

Note that all of the above qualities demonstrate a leader's commitment towards employee success and are all behavioural. Rather than focusing on outputs, surveys at Google focus on how much time managers spend on coaching and supporting their teams, and how clearly they communicate goals. These surveys have helped to shape management training programmes centred around these skills.

Role modelling plays a fundamental part in Google's success as a culture that supports and actively encourages innovation, even to the point where its own CEOs have moved aside to let others take over.

Google may be leading the way in search and data analytics, but it also teaches us a lot about innovation through role modelling and fostering a culture that supports continuous development.

03

Focus on learner experience

Knowing that behaviour is influenced by conditioned emotional responses means that it's important to consider learners' experiences of learning as well. Is the process supportive, accessible and enjoyable?

Today's learners are used to accessing information when and how they want it. A 'one size fits all' approach to learning is both outdated and inconducive to learner engagement. Technology has made it far easier to create highly personalised experiences centred on individual learning pathways.

Accessibility, format, bite-sized modules and social networks within the learning system have enabled more opportunity for L&D professionals to create learning programmes that not only look appealing, but maintain learner engagement.

Case study

As a result of the 2020 pandemic, L&D teams have scrambled to get their programmes online as teams tried immediately to adapt to online learning. This has proved a major headache for organisations like iamsold who have had to transition almost overnight. It became all too easy to skip a Zoom or Teams session, or switch off from an e-learning module.

For the launch of 'Success Hub', iamsold's online learning portal powered by Thinqi, a competition was set up using the dedicated Assignments feature called 'Test Your Auction Might'. This incorporated a series of playlist quizzes to test partner knowledge, with a cash prize used as an incentive. By providing insight into how the platform works through a fun launch activity, this initiative created an immediate buzz.

iamsold, part of the iamproperty Group, is the largest residential auctioneer in the UK and pioneer of the Modern Method of Auction (MMoA). One of the predominant challenges for their learning and development team was a lack of engagement with online learning, so they worked with our team at Thinqi to implement a smarter solution to address this.

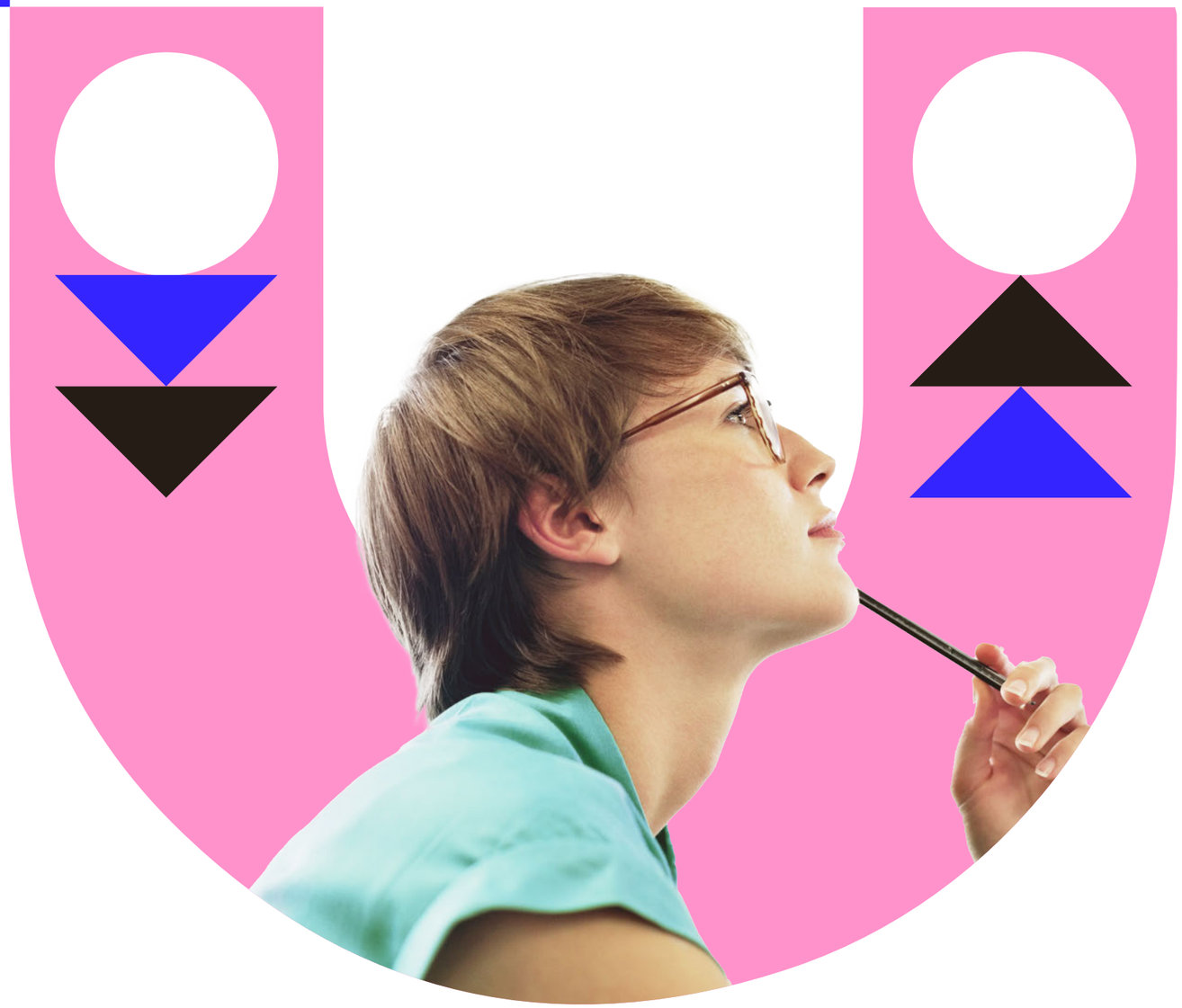
Before using the Thinqi learning system, the L&D team at iamsold used substantial Powerpoint presentations that would take up to three hours to deliver in the classroom environment. This did not translate well to the virtual environment and there was no way of the trainer knowing whether learners were actually retaining any knowledge.

300
NEW USERS

1000+
LOGINS

Within just 8 weeks after launch, stats revealed soaring rates of engagement with 300 new users and over 1,000 logins. By making the learning easy to access and focusing on learner experience over a 'lift and shift' approach to learning content, iamsold's employees not only completed that initial assignment but kept returning for more.

05



SECTION 5

How to set better learning outcomes

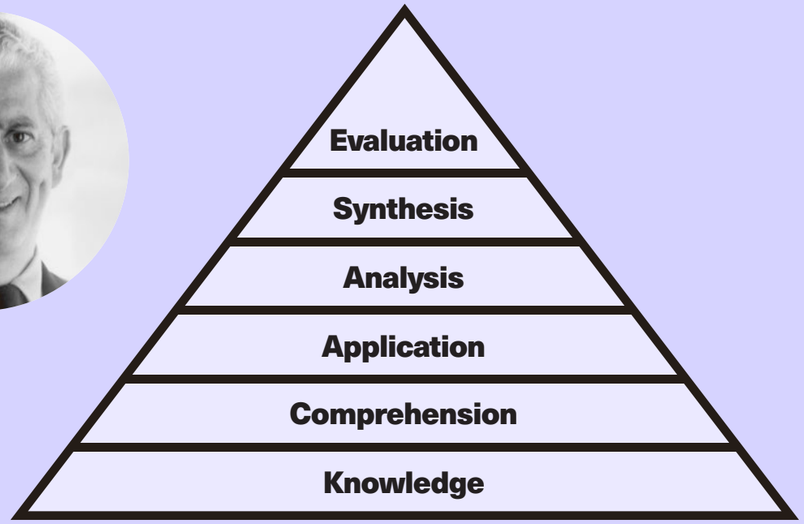
What more could you be doing to help your learners achieve their goals? Behavioural scientists suggest that it's important to create the right environment and help shape behaviours that enable learning. The way in which we guide or instruct learning is a key consideration in this. One of the most effective ways to guide learners is to tell them explicitly where they should be heading and how to get there.

Cue learning outcomes.

What are observable and measurable outcomes?

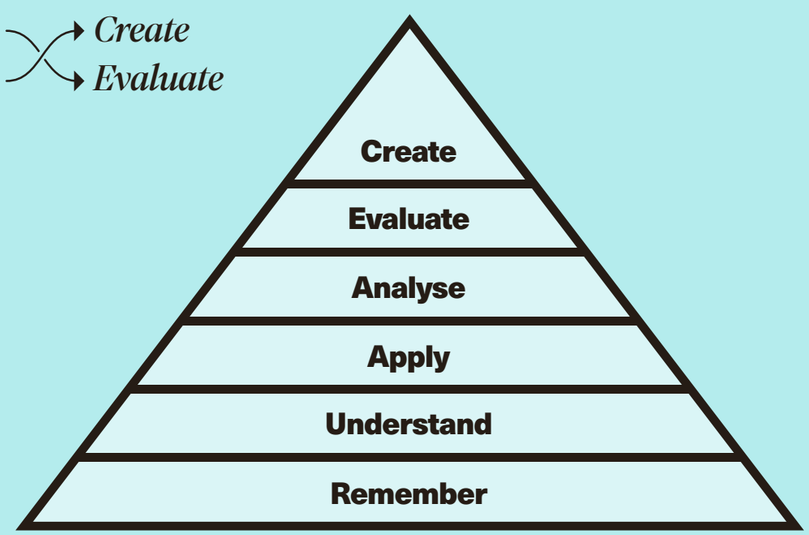
Between 1949 and 1953, a committee of educators—chaired by Benjamin Bloom—met for a series of conferences designed to improve curricula and examinations. As a result of these conferences, the committee came up with a taxonomy that classifies skills into a hierarchy, known as **'Bloom's Taxonomy'**.

Since Bloom's first volume (Handbook I: Cognitive) was published in 1956, Bloom's taxonomy has helped practitioners to plan and organise training. In Handbook I, Bloom and his committee identified a number of cognitive levels at which humans can function. These range from the basic function of understanding and recalling new information, to the more complex function of evaluating information and connecting it with other knowledge.



Bloom's taxonomy

Bloom's cognitive levels are commonly displayed as a step pyramid, with the lower-level functions located at the bottom.



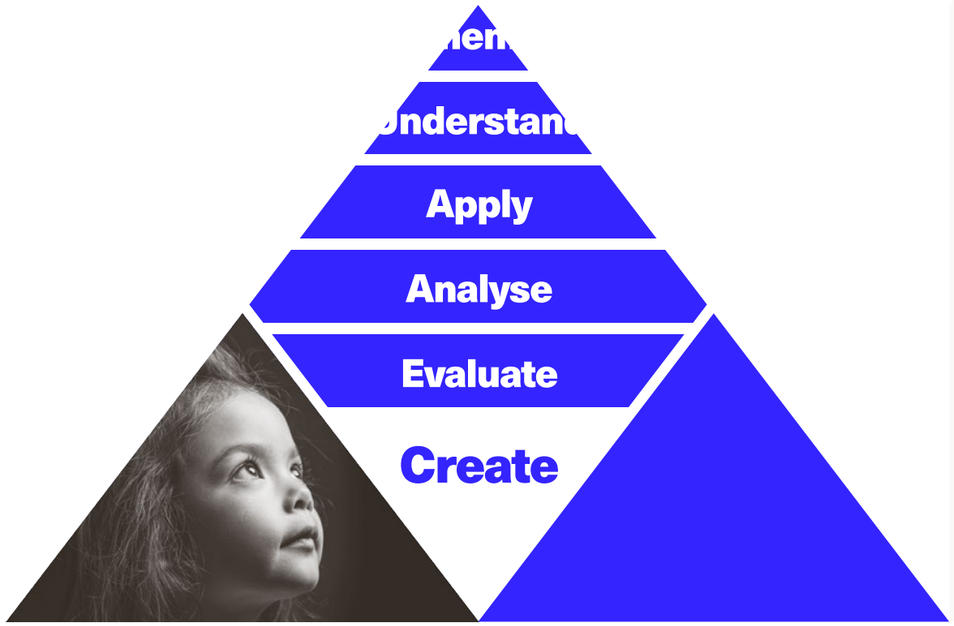
Anderson and Krathwohl revision (2001)

The taxonomy of the cognitive domain was revised by Anderson and Krathwohl in 2001 to include verbs rather than nouns and to reposition two of the nouns.

What's wrong with the pyramid structure?

The step-pyramid structure is often interpreted as suggesting that the higher-level functions can only be reached if the levels below them have been achieved, and that not all learners will be able to reach the top level. Some educators strongly disagree with this structure, especially when it is applied to Anderson and Krathwohl's revised taxonomy.

Shelley Wright of the **Buck Institute for Education (BIE)** goes as far as to suggest that the revised taxonomy should be flipped on its head, so that learners begin with an introduction to a subject through creating, rather than being bombarded with facts they need to remember.



"I dislike the pyramid because it creates the impression that there is a scarcity of creativity — only those who can traverse the bottom levels and reach the summit can be creative...I think the narrowing pyramid also posits that our students need a lot more focus on factual knowledge than creativity, or analyzing, or evaluating and applying what they've learned. And in a Google-world, it's just not true."

—Shelley Wright, BIE

01

Plan your training

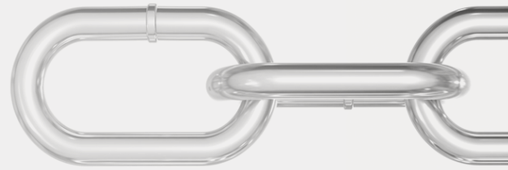
To fail to plan is to plan to fail. Consider what your learners need to know and how they get there. What steps do they need to follow? This benefits both you and your learners. It will give them a clear path to follow and enable you to continually evaluate progress against the goals you set.

02

Use a taxonomy

Create learning outcomes that will inform and direct. Regardless of how you want your learners to achieve them, it's useful to set out what you want them to be able to do using active verbs that relate to cognitive skills, not tasks. Knowing what goals they are working towards also enables learners to ensure that they have chosen the correct course or strategy and can commit to achieving it

03

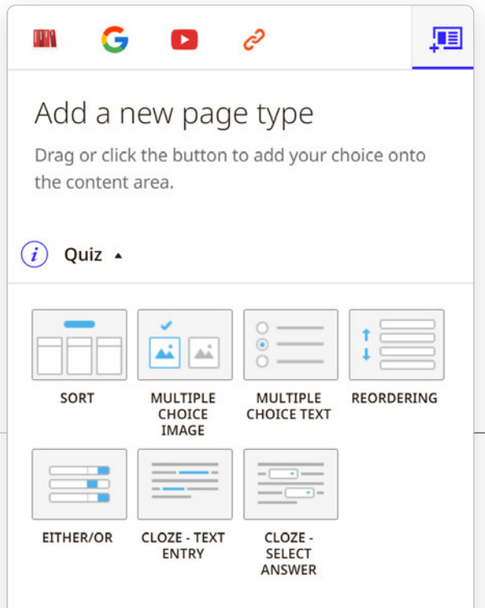


Link assessments and feedback to learning outcomes

What you set out as learning outcomes should be what you assess at the end of the learning journey. They should inform the design of the ongoing and final assessment activities that are critical to checking learners' understanding and progress. Learning outcomes should also shape the feedback you provide your learners.

Our 3 simple steps for using learning outcomes

Here are three simple steps you can take for setting learning outcomes that guide learners towards success.



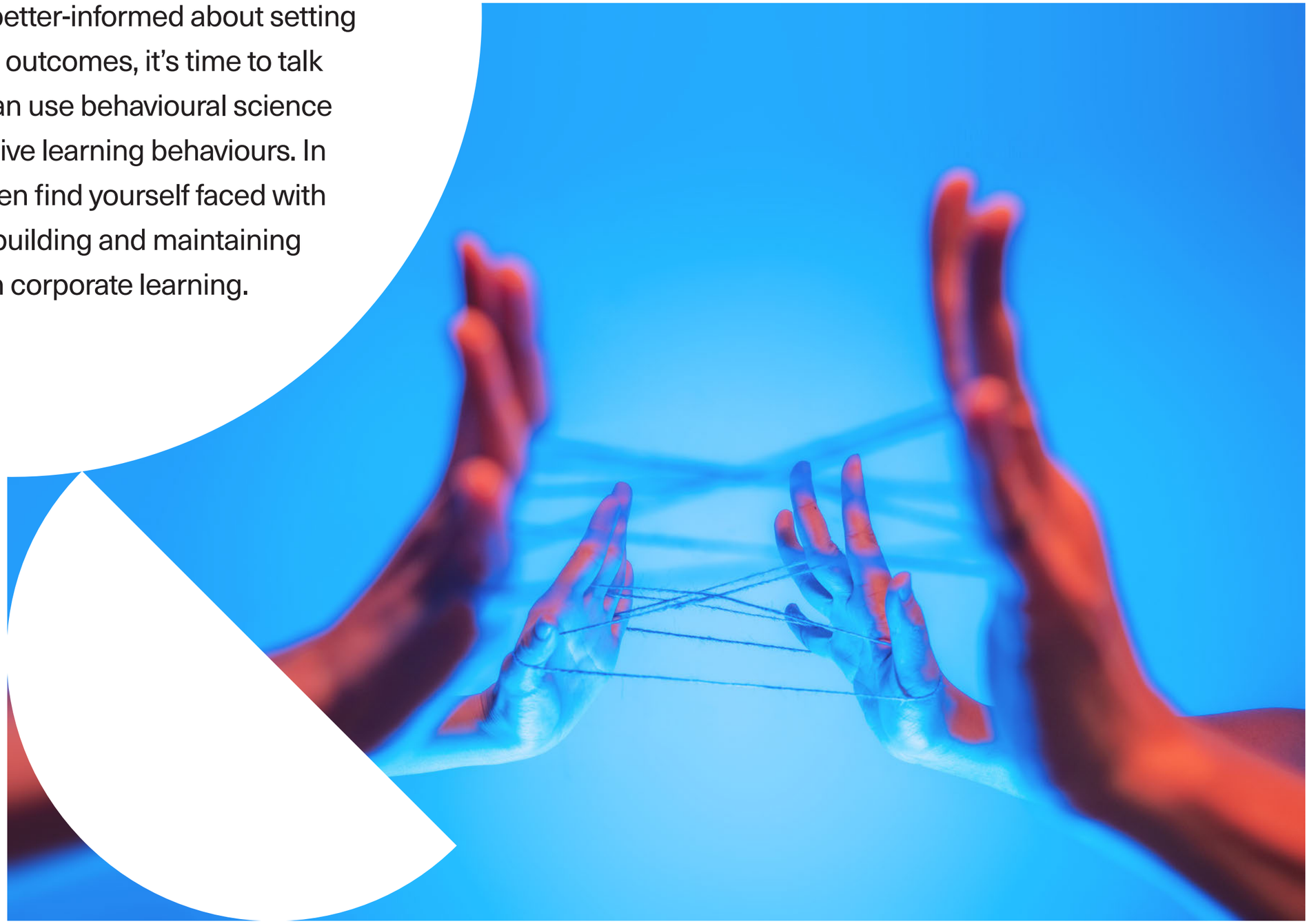
The Playlists tool in Thinqi contains a range of assessment templates that can be used to assess how well your learners have achieved the learning outcomes. Choose from a variety of templates from multiple-choice questions to free text entry, then take advantage of our in-depth reporting and analytics to evaluate what's working and what needs to be improved.

06

SECTION 6

Using nudge theory in learning

Now that you're better-informed about setting effective learning outcomes, it's time to talk about how you can use behavioural science to influence positive learning behaviours. In L&D, you may often find yourself faced with the challenge of building and maintaining engagement with corporate learning.



You're not alone: the 2020 LinkedIn Learning survey of over 6,000 respondents revealed that

35%

of L&D professionals are looking for new ways to boost learner engagement.[3]

Are you painstakingly seeking ways of encouraging positive learning behaviours for time-poor employees?

Maybe, despite investing in that state-of-the-art new learning management system (LMS), you still face disappointingly low login and completion rates for training modules?

How can you gently influence behaviour without compromising the modern learner's sense of independence?

Let's talk about *nudge theory*.

[3] *LinkedIn, 4th Annual Workplace Learning Report:* ***https://learning.linkedin.com/content/dam/me/learning/resources/pdfs/LinkedIn-Learning-2020-Workplace-Learning-Report.pdf***

What is nudge theory?

Nudge theory, commonly associated with behavioural science, suggests that you can design 'choice environments' that enable you to subtly influence the behaviour and decision-making of others. This is achieved via strategically-placed 'nudges' to prompt partiular actions.

[4] *The Behavioural Insights Team, EAST: Four Simple Ways to Apply Behavioural Insights (2014): https://learning.linkedin.com/content/dam/me/learning/resources/pdfs/LinkedIn-Learning-2020-Workplace-Learning-Report.pdf*

Okay, so what is a 'nudge'?

Put simply, a nudge is a subtle action that encourages people to make a particular decision. In the 2014 paper 'EAST: Four Simple Ways to Apply Behavioural Insights', the Behavioural Insights Team (BIT) found that **nudging people owing Courts Service fines with a text message 10 days before bailiffs were due doubled the value of payments made without the need for further investigation.**[4]

You have 10 days to pay your court service fine.

Reminder: your court service fine is still unpaid.

The great news is that we can also harness the power of nudge theory to drive positive behaviours in L&D.

How to apply nudge theory in L&D

Nudge theory can encourage your employees to learn, and to embed positive learning behaviours that will help improve performance and positively impact your organisation's bottom-line. Working with the British Government, BIT has extensively researched nudge theory and achieved notable successes. Here, we will use the basis of their EAST (Easy, Attractive, Social, Timely) framework and apply this to the learning context.

Easy
Attractive
Social
Timely

01 Make it easy

You can nudge learners towards the learning content by organising it within a userfriendly and intuitive system. If accessing the content is perceived as a hassle, any nudges you create will fail to have an impact. Consider any barriers that are preventing learners from getting what they need:

Could you simplify the process?

If you're using an LMS, consider your sign-in process—is it single sign-on (SSO)?	Is the system intuitive and easy to use?	Is it mobile-accessible?

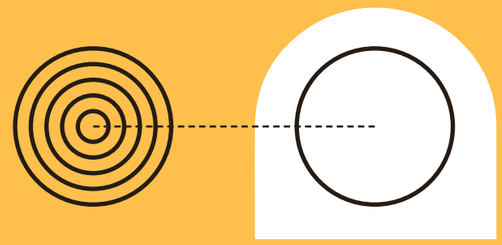
Think also about harnessing the power of defaults. For example, how long have you remained with the same default tariff for your energy or broadband provider despite potentially missing out on cheaper options elsewhere? Did you put it off due to the inconvenience of searching and switching? In a learning context, having employees automatically enrolled onto learning pathways relevant to their personal learning journey ensures they are always clear on the next steps—minus any perceived hassle.

Your messaging should also be clear and simple. This means avoiding lengthy emails and reams of complex instructions. Set clear and achievable learning outcomes and include concise instructions when setting tasks or assignments.

01 Make it accessible

02 Use defaults

03 Keep your messaging simple



02

Make it attractive

Time-poor employees can easily fall out of routine with learning. To nudge them into returning, your offering needs to be attractive enough to get their attention. This doesn't mean you need to seek out a learning system loaded with all the latest bells and whistles.

You still need to put learning at the forefront and see technology as the enabler.

This is about making your learning offering stand out against the noise. As stated in the BIT paper, individuals are far more likely to undertake a particular action if they have an incentive to do so—for example, in government, tax subsidies and grants can encourage particular behaviours. In the learning context, reward mechanisms such as badges and gamification can likewise draw in more hesitant learners.

MARKETING TIPS

the AIDA model

Let's consider the AIDA (Awarness, Interest, Desire, Action) model used by marketers:

Awareness

What actions are you taking to raise awareness of your learning programmes (e.g. emails, adverts, recommendations)? Does your L&D have a particular 'brand' or recognisable tone of voice?

Interest

Once you have people's attention, you need to maintain their interest. Is your learning content personal and relevant to your audience? Do titles and summaries pique their curiosity? Can you craft a compelling message?

Desire

The beauty of L&D is that your audience is internal, meaning you can get to know your learners and collect key information through questionnaires, surveys, interviews or just an informal chat. This will ensure your messaging is relevant and effective. Remember to communicate value— what are the benefits that will drive people to want to sign up?

Action

Now it's time to drive people to take action. Create a sense of urgency with a clear call-to-action and include a link so they are able to take the appropriate action immediately.

For example:

LAST FEW PLACES REMAINING— SIGN UP TODAY!

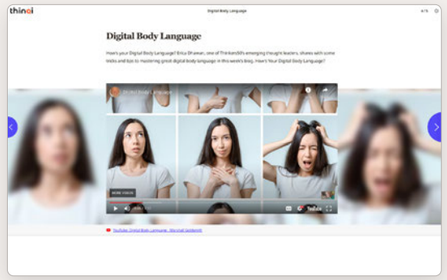
Creates sense of urgency

Sign up today and join 1,000 learners taking their career to the next level

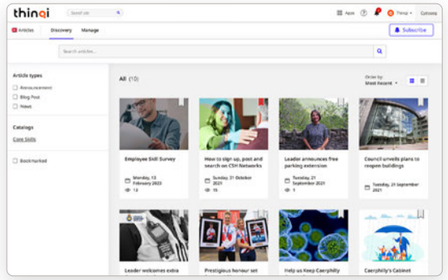
Uses social nudging

Take a good look at the content you plan to make available. What do learners really need to know in order to achieve the learning outcomes? Does that lengthy article you plan to share really provide value or is it simply an unnecessary extra to bulk out your resources?

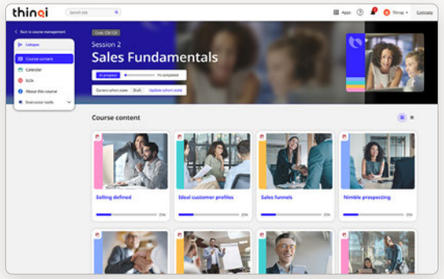
Remove anything which is not immediately relevant and consider a range of options for your learning content. These could include:



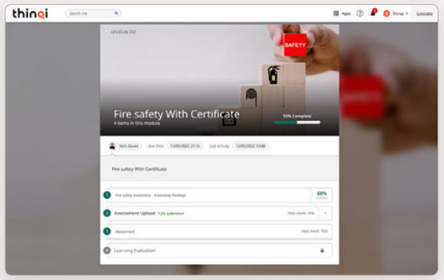
Videos



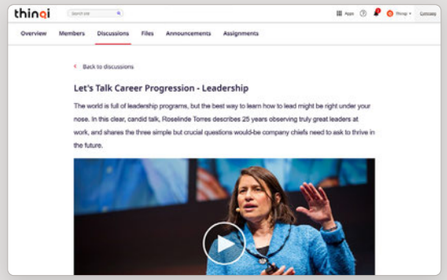
Articles



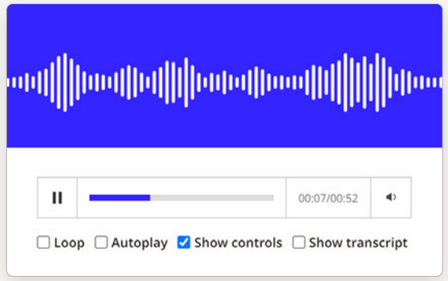
Online learning modules



Assignments



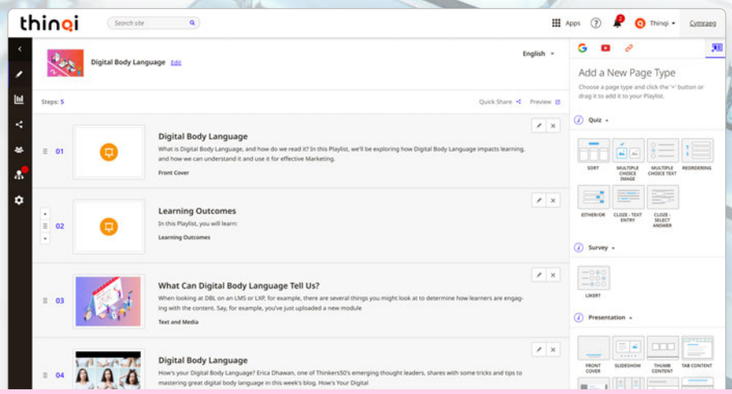
Discussion forums



Audio content

For example, [Thinqi](#) allows you to incorporate many of the above examples in the form of a digestible playlist that's ready to access at point-of-need. It's also designed to provide an appealing and personalised learning experience, with recommended content tailored to individual learning pathways.

Playlists



03 Make it social

Humans are social creatures and are constantly influenced by those around them. How can we harness this to help drive desired behaviours?

Case study

If people see that the majority of people take a certain action, they're likely to follow suit.

HM Revenue & Customs

BIT ran a series of trials with HMRC where they tested various social norm messages against a control letter (which contained no social norm) in letters to 100,000 Self Assessment tax debtors[5].

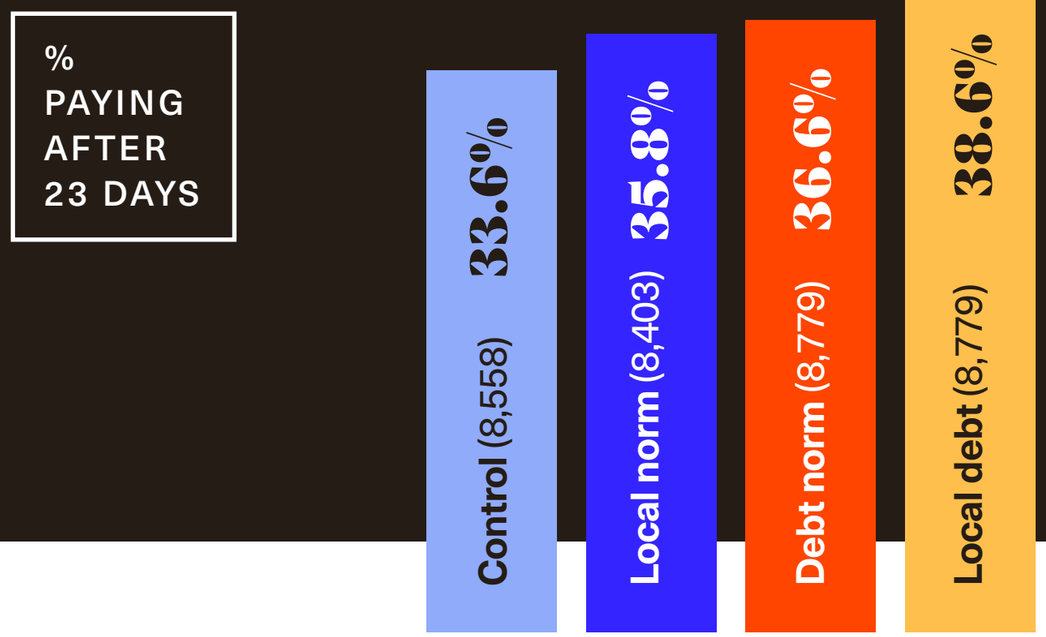
The **'local norm'** letters stated that the majority of people in the recipient's local area had already paid on time, but the area was not referred to by name.

The **'debt norm'** letters pointed out that most people with a similar debt had paid.

The **'local and debt norm'** combined these two messages.

The result?

£1.2 million more was paid to HMRC in the first month for the local and debt norm group than the control group (a **15% increase**).



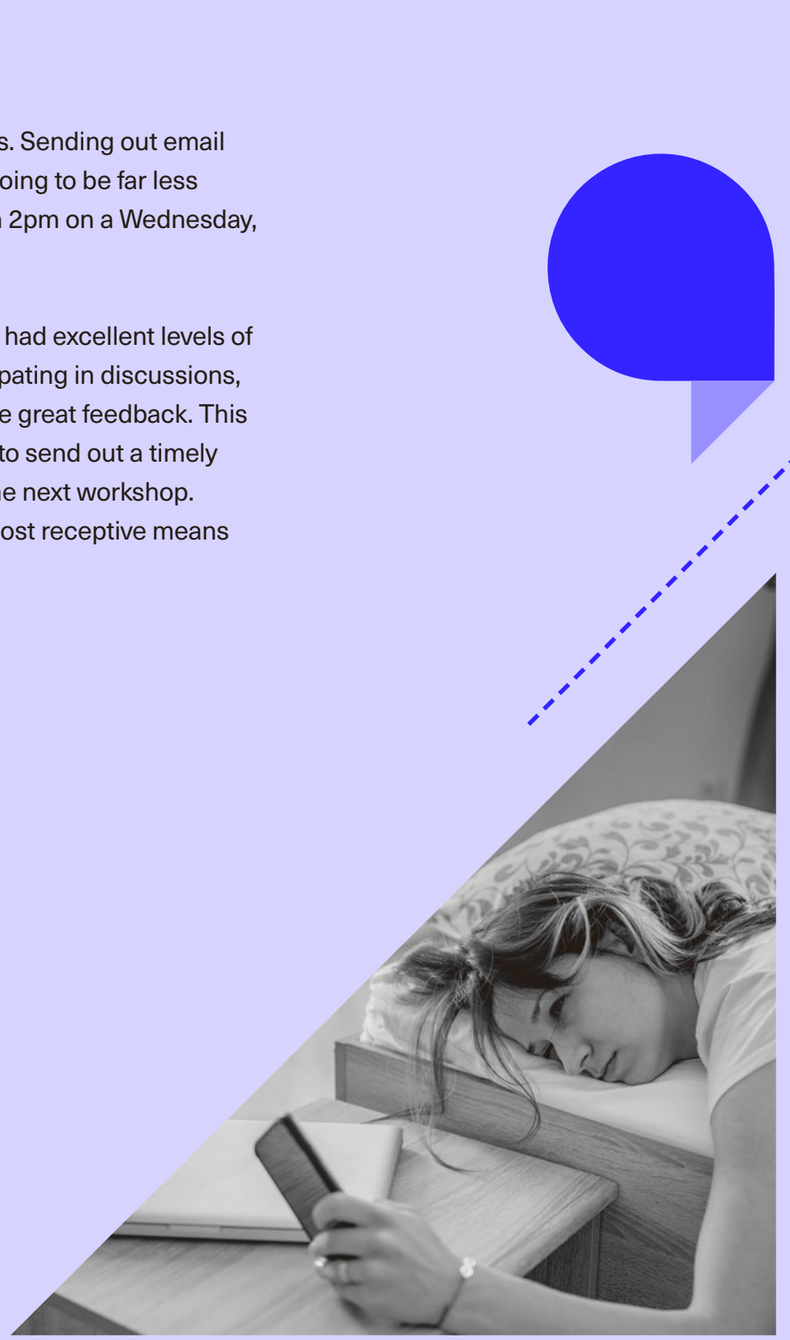
In the learning context, consider using networks of learning communities to facilitate discussion and influence positive behaviour. Thinqi provides dedicated networking and discussion spaces to ensure people have one central place to access formal, informal and collaborative learning.

[5] *Hallsworth, M., List, J. A., Metcalfe, R. D. & Vlaev, I. (2014). The behavioralist as tax collector NBER Working Paper no. 20007.*

04 Make it timely

Finally, consider the timing of your nudges. Sending out email reminders for an overdue assignment is going to be far less effective if sent at 7pm on a Saturday than 2pm on a Wednesday, for example.

Perhaps you recently ran a workshop that had excellent levels of engagement. People were actively participating in discussions, forthcoming with group activities and gave great feedback. This would have been the perfect opportunity to send out a timely notification the next day to recommend the next workshop. Hooking people's interest when they're most receptive means they're more likely to respond positively.



07

SECTION 7

Constructivism and the journey of discovery

You're likely familiar with constructivism—an approach which places your employees firmly at the centre of the learning process.

constructivism

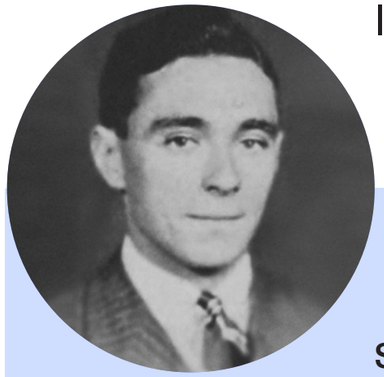
In the workplace, this involves giving your employees the opportunity to draw on what they know, enabling them to explore and discover for themselves, and guiding them as they consider and reflect on new experiences or subjects in order to use them productively.

What is discovery learning?

According to Jerome Bruner's The Act of Discovery (1961), learning is more effective, both in terms of long-term retention and understanding, if learners are actively involved in the acquiring of knowledge. Bruner believed that in order for learners to effectively acquire knowledge, they need to create meaning themselves by discovering relationships and building on their own prior knowledge.

This is known as discovery learning, and it involves the learner seeking information to build their own bigger picture.

However, although constructivism places an emphasis on learner-led experiences...

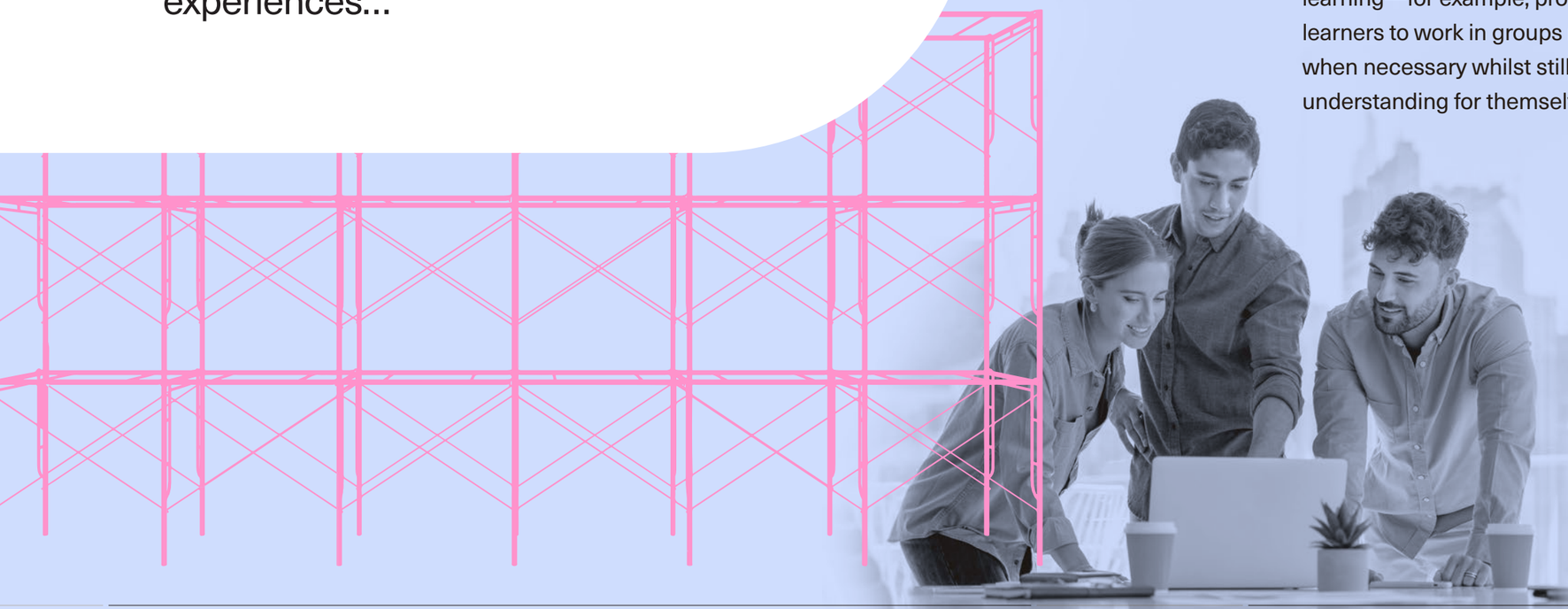


...this doesn't mean that learners should simply be left to their own devices.

Social constructivism and 'scaffolding'

Bruner emphasised the impact of others on learners as they develop their knowledge and skills, which means he's often associated with a branch of constructivism known as 'social constructivism'. Social constructivism emphasises the collaborative nature of learning.

Bruner referred to support from others as 'scaffolding'. Scaffolding learning—for example, providing useful information or encouraging learners to work in groups rather than alone—helps guide learners when necessary whilst still giving them the freedom to create understanding for themselves.

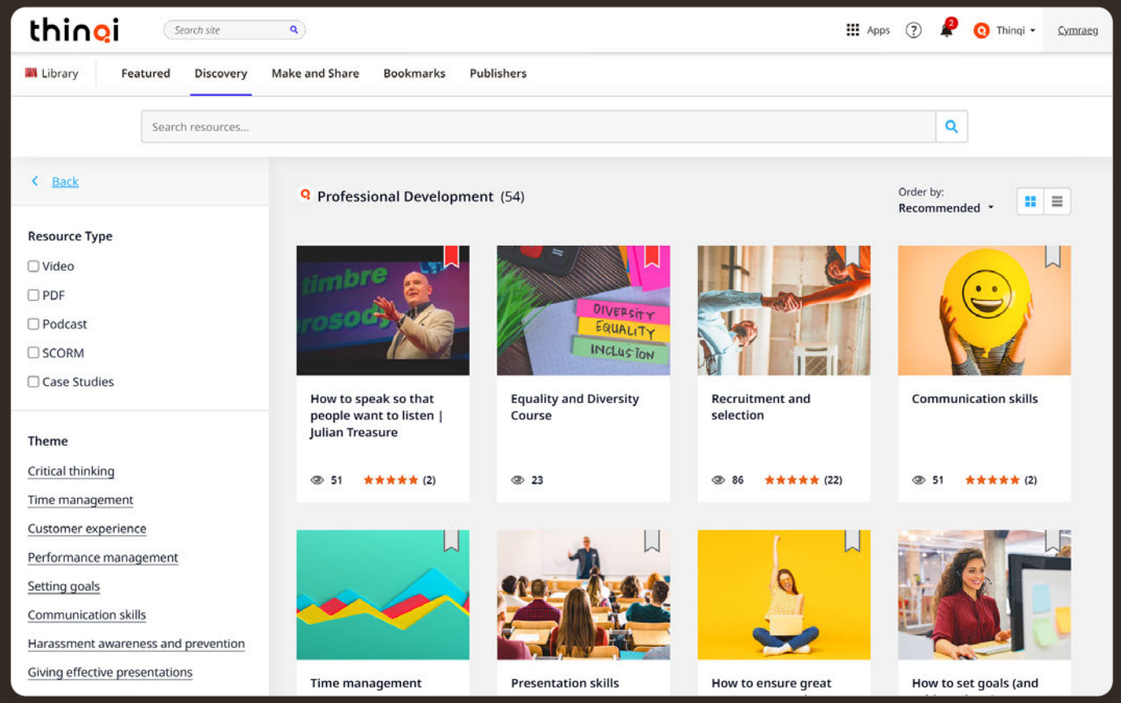


How to take your learners on a journey of discovery using learning technologies

Want to encourage discovery learning and work with the needs and wants of modern learners? Here's how we do it with the Thinqi learning system.

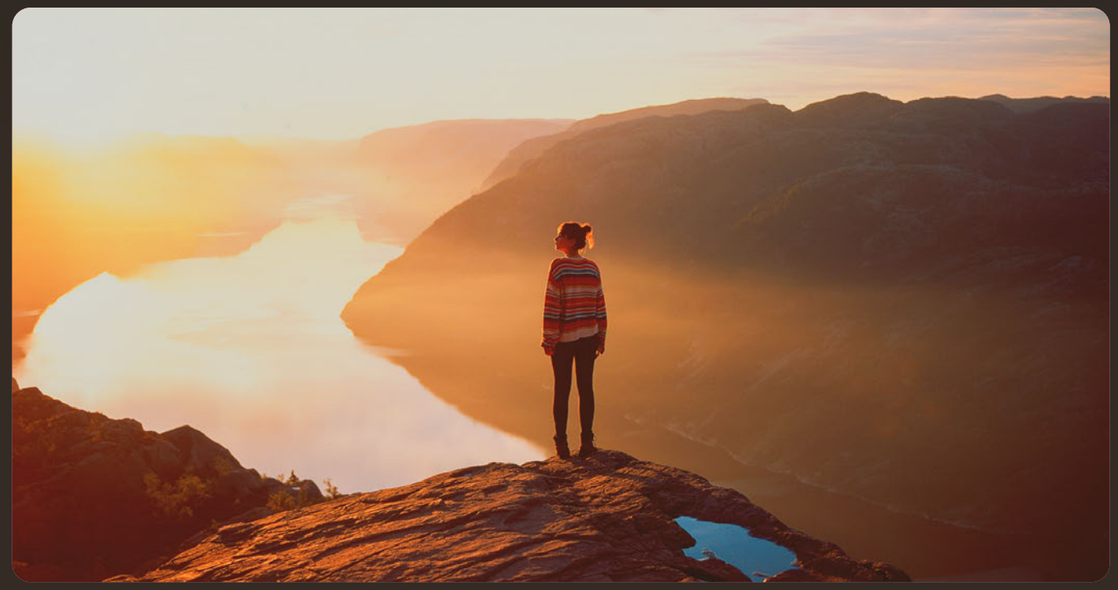
01 Enable discovery

Thinqi's learning system combines the benefits of both the traditional LMS and the capabilities of the LXP to support how people learn. Curation and user-led experiences are key capabilities that support a self-led journey of discovery.

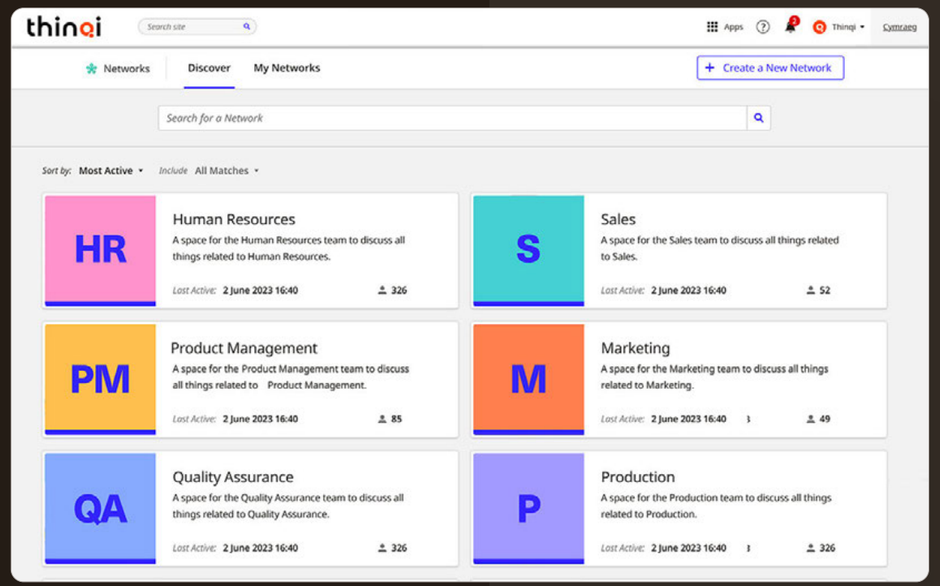


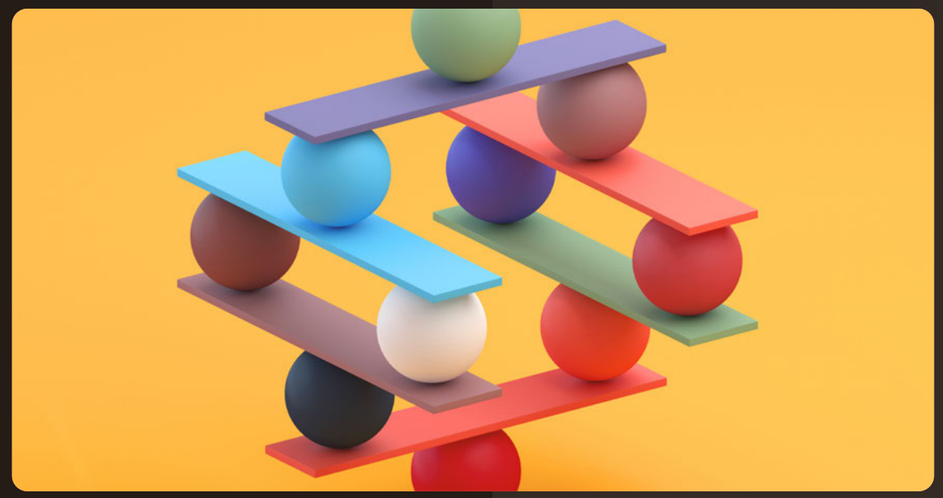
Other features include:

- an open system to accommodate external resources
- the ability for all Thinqi users to contribute their own content in the Digital Library
- adaptive learning paths, with clear development pathways and personalised content recommendations
- discussion spaces that facilitate inquiry, critical thinking and reflection via forums and real-time chat facilities
- the ability to track learning outside of formal situations (with the help of xAPI)
- the ability to track soft skills
- the capacity for marked and unmarked practice assignments



02 Encourage interaction and collaboration





Luis E. Romero, an MIT-trained economist, speaker and author, states that,

> *"when a team develops a culture based on humility, hard work, excellence and learning, its members become able to translate both their victories and their failures into inputs for continuous improvement."*

He also highlights that in doing so, each team member will also benefit from the opportunity to develop specialised skills that give the team a competitive advantage.

Romero has cited learning as one of the key factors in developing this culture; as the workplace moves away from formal, classroom-based training, employees are seeking more informal opportunities to learn from their peers and mentors. The challenge of independent e-learning is isolation, so Thinqi is designed to give its users 24/7 access to a community of peers and coaches. This in turn enables them to share, reflect and discuss learning material collectively.

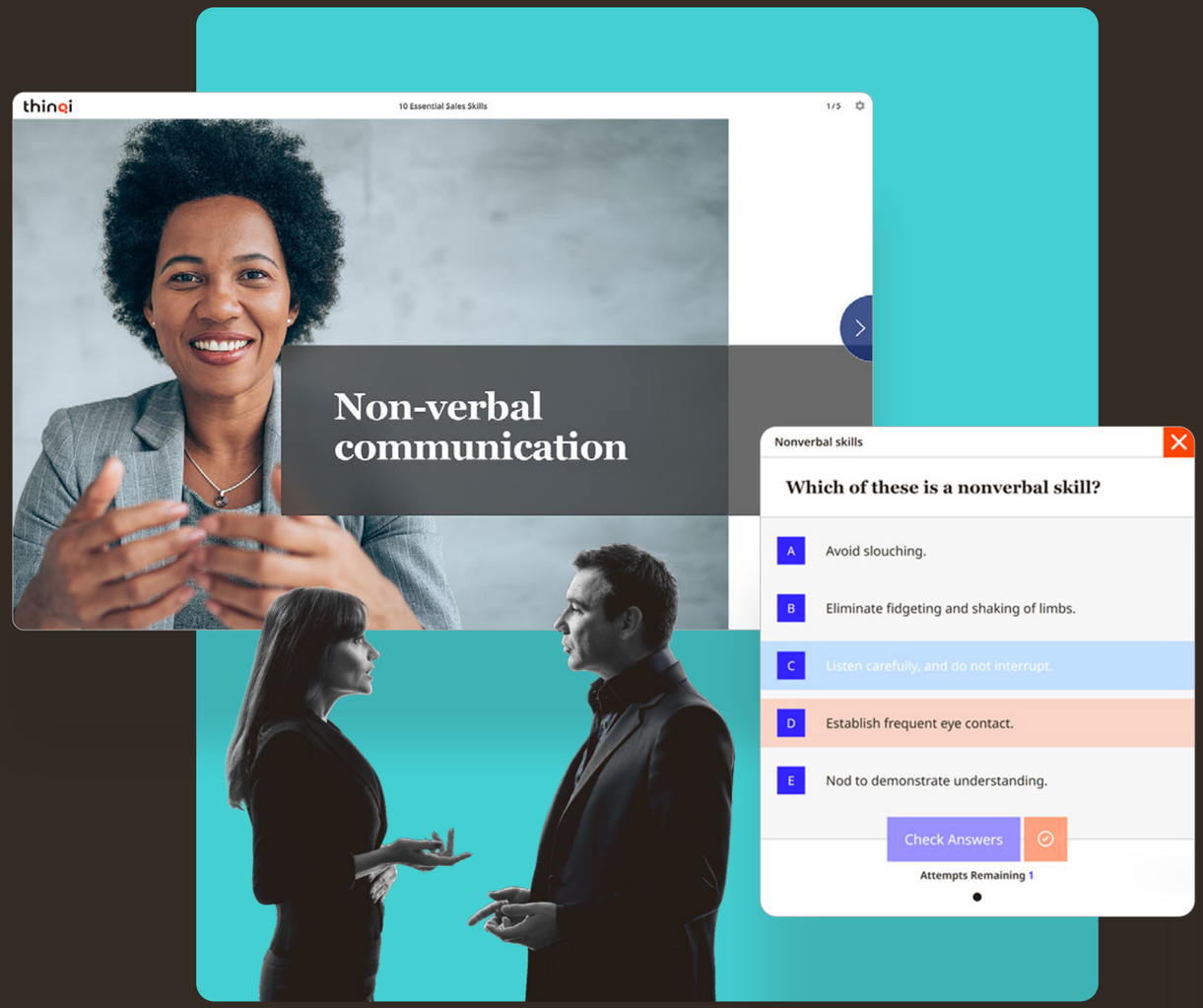
03 Try scenario-based learning

Scenario-based learning is also often linked to constructivism. A scenario-based learning task is usually a description of events that a learner is able to imagine and engage with. They can vividly evoke a setting, an activity or consequences of a decision or action. Scenarios ask learners to use their existing knowledge and their imagination to explore a topic in context and come to a conclusion or decide on next steps.

A scenario can be accompanied by questions. These questions require learners to participate and engage meaningfully with the scenario being described. The following questions are typical of those used to engage and elicit appropriate responses from learners:

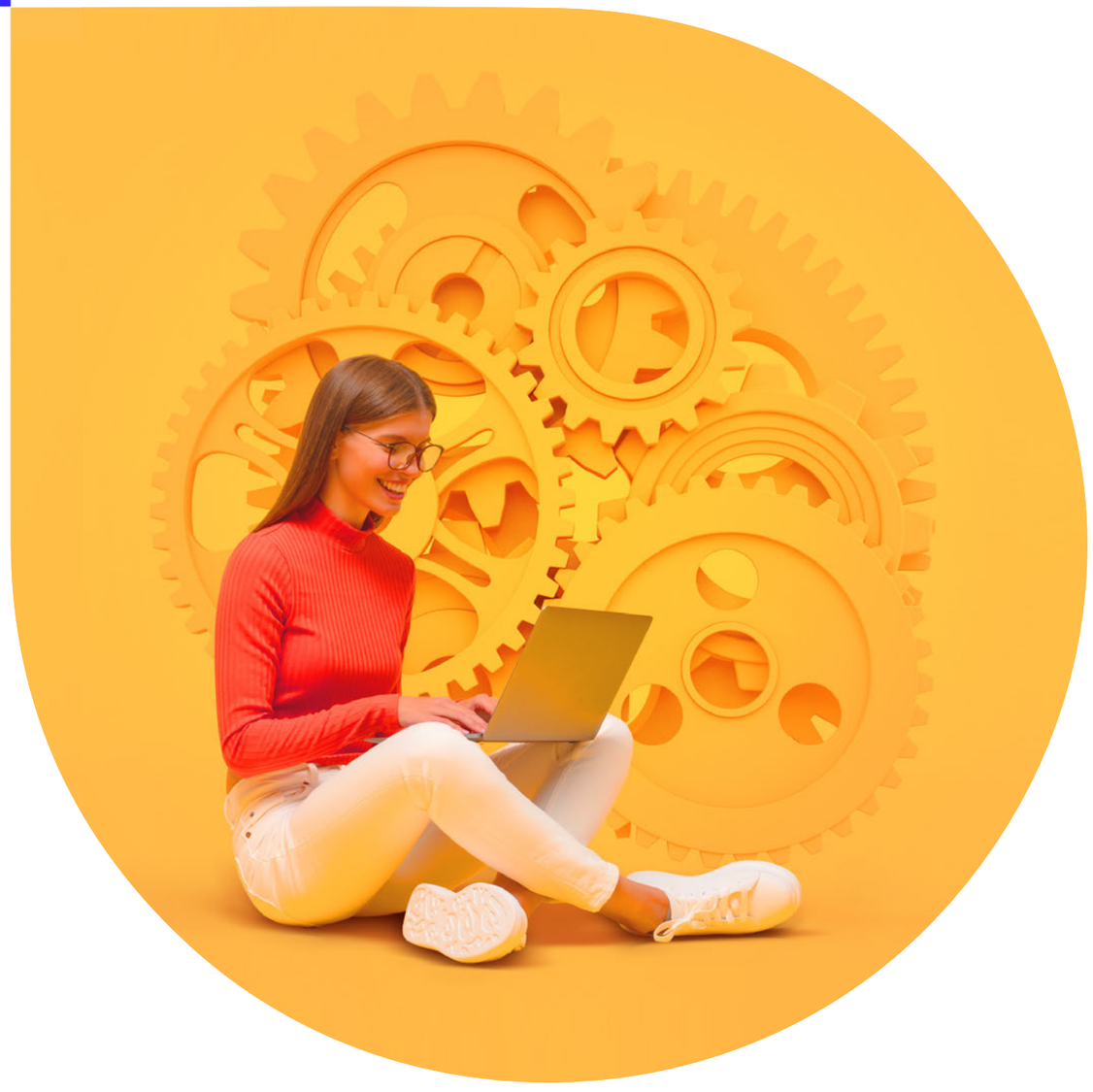
- Would you agree or disagree and what are your reasons?
- What next steps would you take and why?
- If this happened, describe how you would respond?
- Do you have an alternative solution to the problem? If so, please describe it.

Thinqi's ability to host a range of engaging multimedia—video, animation, audio and third-party content in its Playlists feature—means that scenarios can be easily brought to life. Construct a scenario by embedding multimedia in playlist pages and follow up with thought-provoking questions using a quiz template.



[6] *https://www.forbes.com/sites/luisromero/2016/01/20/what-everyoneshould-know-about-teamwork/#a3fa34363194*

08

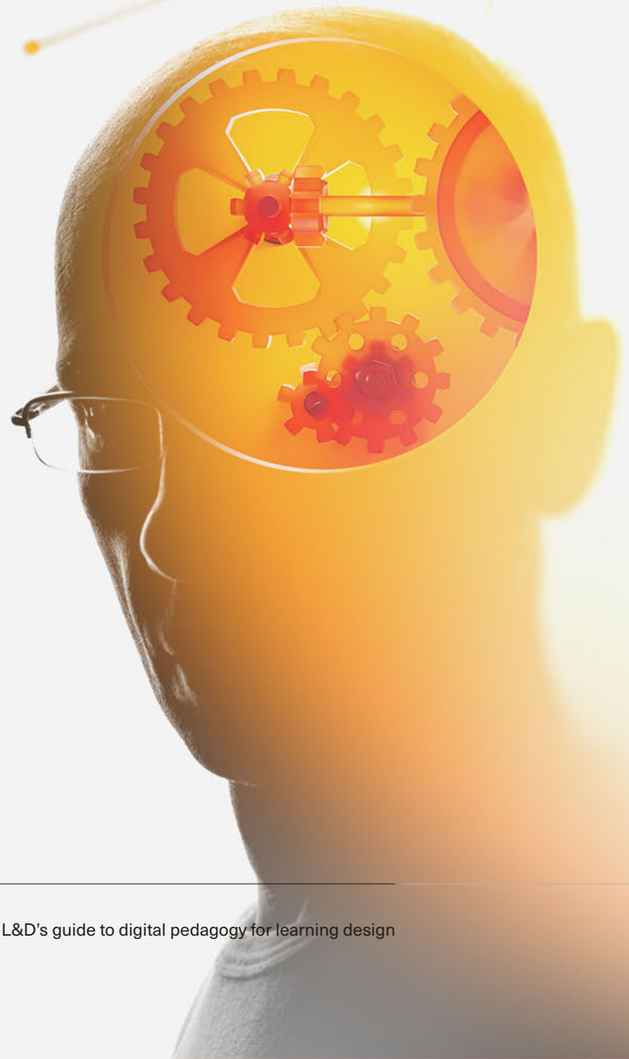


SECTION 8

Using cognitive theory to inform multimedia learning

Modern learners want and expect high-quality, relevant learning content that's available at point of need. This is where understanding how we learn can inform your digital learning design for maximum success.

Say hello to *cognitivism.*



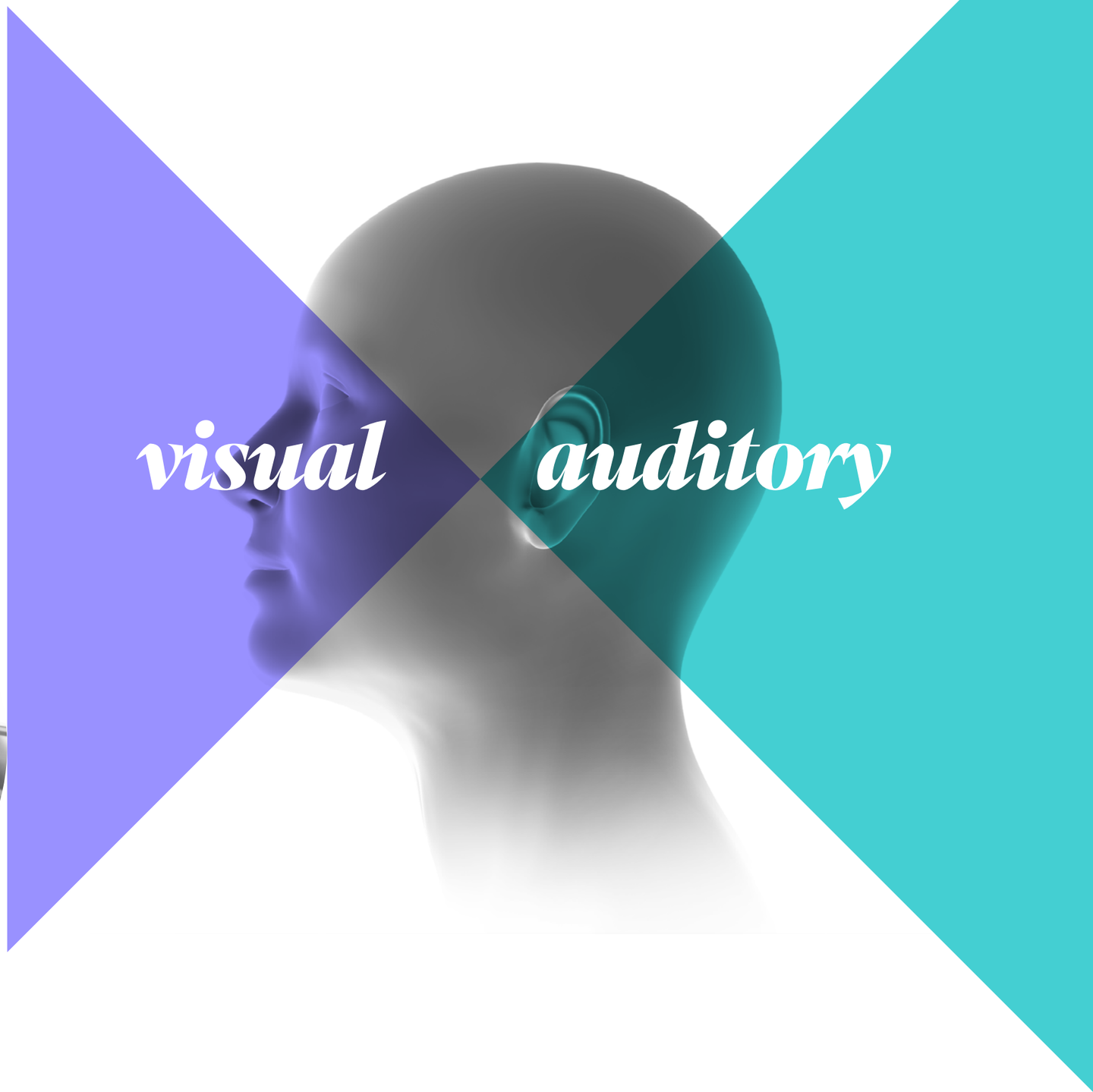
Cognitivism is a theory of learning that focuses on internal cognitive processes to explain how learning takes place. The focus tends to be on how we interpret information and make sense of it; how we process, organise and recall information.

Memory plays a significant role in this. If you understand how to create digital learning that harnesses our cognitive abilities, positive learning outcomes will follow

Working memory

Working memory is believed to have different parts that process different types of information. This includes a channel that processes visual information and a separate channel for processing auditory information.

The existence of two different channels means that we can receive and process video information at the same time, hence why we can listen to the radio and still pay attention to the road when driving a car. However, these visual and auditory components of working memory are believed to have a limited capacity. This explains why we find it difficult to listen to two conversations at the same time, for example.



In keeping with the idea of working memory having a limited amount of space, **John Sweller (1988)** went on to suggest that cognitive overload in working memory can hinder learning. Sweller identified three types of cognitive load, and suggested ways in which we can optimise learning in multimedia learning. In an already busy working environment where people's cognitive capacity for taking on new information may be limited, you can help your employees succeed in their training and development by following some simple but important rules when creating instructional training materials.

What are the benefits of online learning?

The benefits of online learning are well-documented.

Shifting from classroom-based to digital delivery can result in a **50-70% saving** for businesses, according to IOMA.

For example, the materials science company Dow Chemical reduced its training costs from **$95** per learner to just **$11** switching from traditional, face-to-face methods to online training.

To measure the ROI of your own L&D initiatives, we've got a **free expert guide** to help you prove its impact to the C-suite.

3 types of cognitive load

What are the three types of cognitive load we need to know?

Extraneous

01 Extraneous load

This refers to the cognitive load that results from the method of instruction or how content is delivered. Sweller suggests that we should aim to minimise extraneous load by delivering subject content in the most effective way.

In their book ‘e-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning (2016), Clark and Mayer discuss several ways in which to minimise extraneous load. The key is not to overload one channel when designing your resources.

For example, where audio is available and you are describing graphics or visuals, you should **“present words as audio narration rather than on-screen text”** (Clark and Mayer, 2016, p.115). This is because the visual channel of our working memory can be overloaded when simultaneously focusing on written text and graphics.

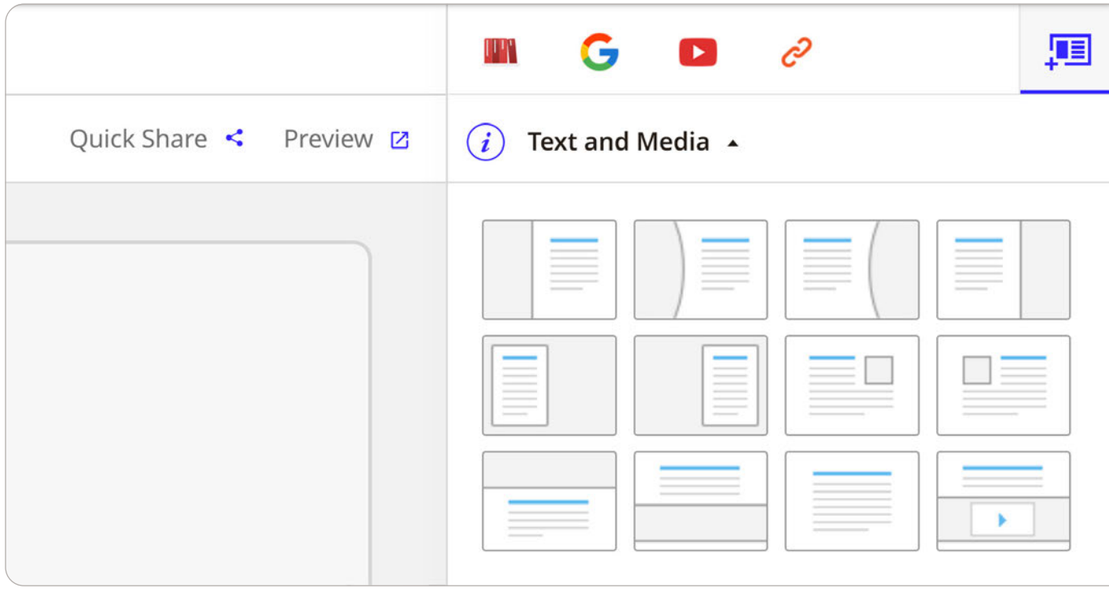
You can also avoid cognitive overload by helping your learners focus on what’s important. Displaying related graphics and text together helps your learners to piece together key concepts. Similarly, avoiding clutter and including only essential information and graphics can minimise any unnecessary cognitive processing.

How do we do this in the Thinqi learning system?

Thinqi’s Playlists feature enables you to create presentations using a wide range of effective, multimedia page templates. Choose to add audio to complement images or add text in close proximity to graphics—never cognitively overload your learners again.

It can be all too tempting to add too much detail to your instructional materials just in case your learners need it, but resist the temptation. The Playlists feature has a handy preview functionality that lets you see the materials on the screen as you create them. It’s a useful way of determining whether you are asking too much of your audience.

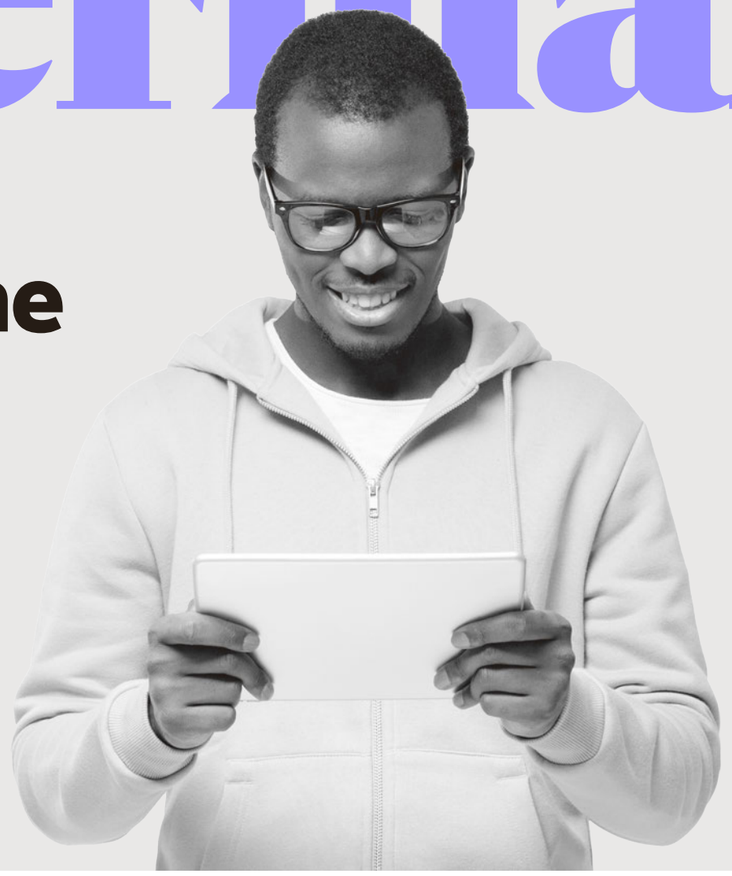
No need to scroll endlessly—less is definitely more.



Germane

02

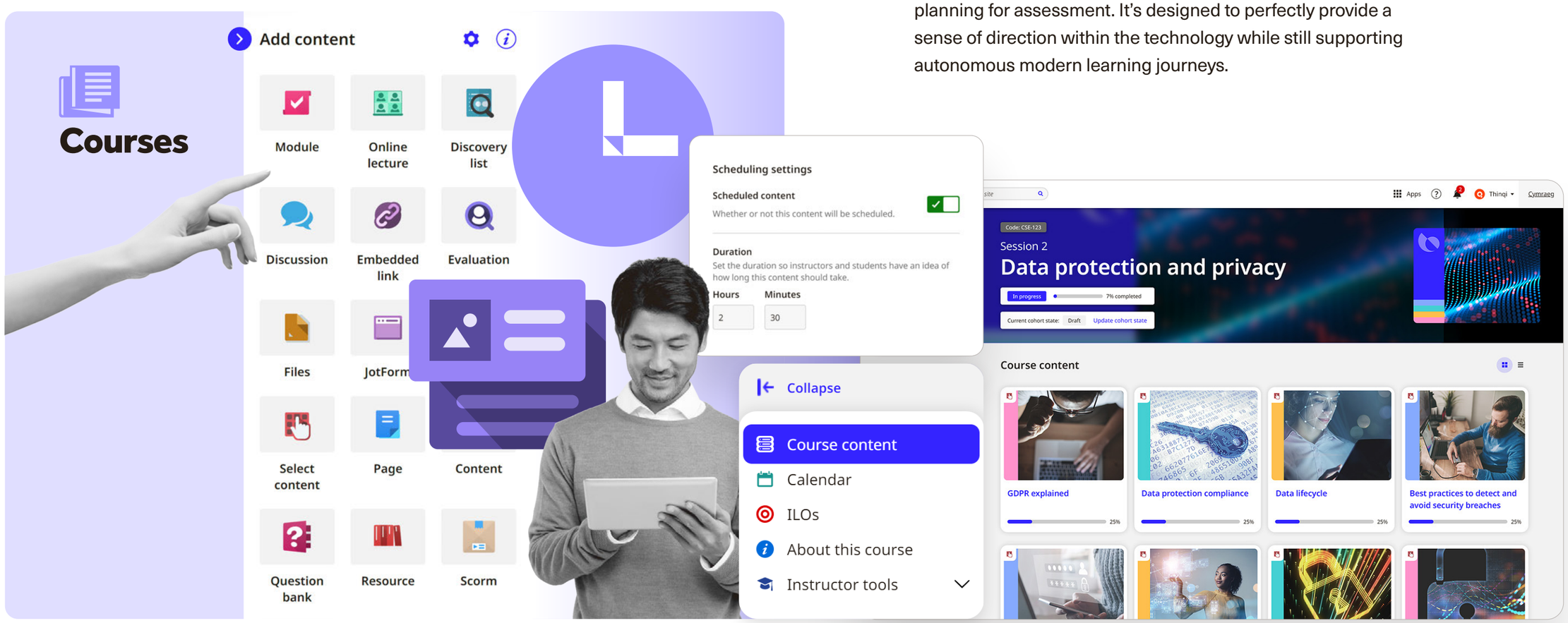
Germane load



This refers to the load that results from activities that enhance learning or the processing of information. Sweller suggested that we should aim to maximise germane load by using appropriate, focused activities to improve learning.

Take into account that not all of your training material will suit one specific format, in which case you will need to consider alternative options within your learning system. These could include:

- Online learning modules
- Discussion forums
- Articles
- Assignments
- Videos
- Audio content



How do we do this in the Thinqi learning system?

Thinqi's Courses feature enables you to plan materials and present them in a structured way. You can issue work at scheduled intervals and provide only the information you want your trainees to study in a particular session.

It facilitates timely delivery of relevant resources and activities, supports preparation for training sessions and helps structure planning for assessment. It's designed to perfectly provide a sense of direction within the technology while still supporting autonomous modern learning journeys.

$$z^5+1=(z+1)(z^2-2z\cos\frac{\pi}{5}$$

Intrinsic

03 Intrinsic load

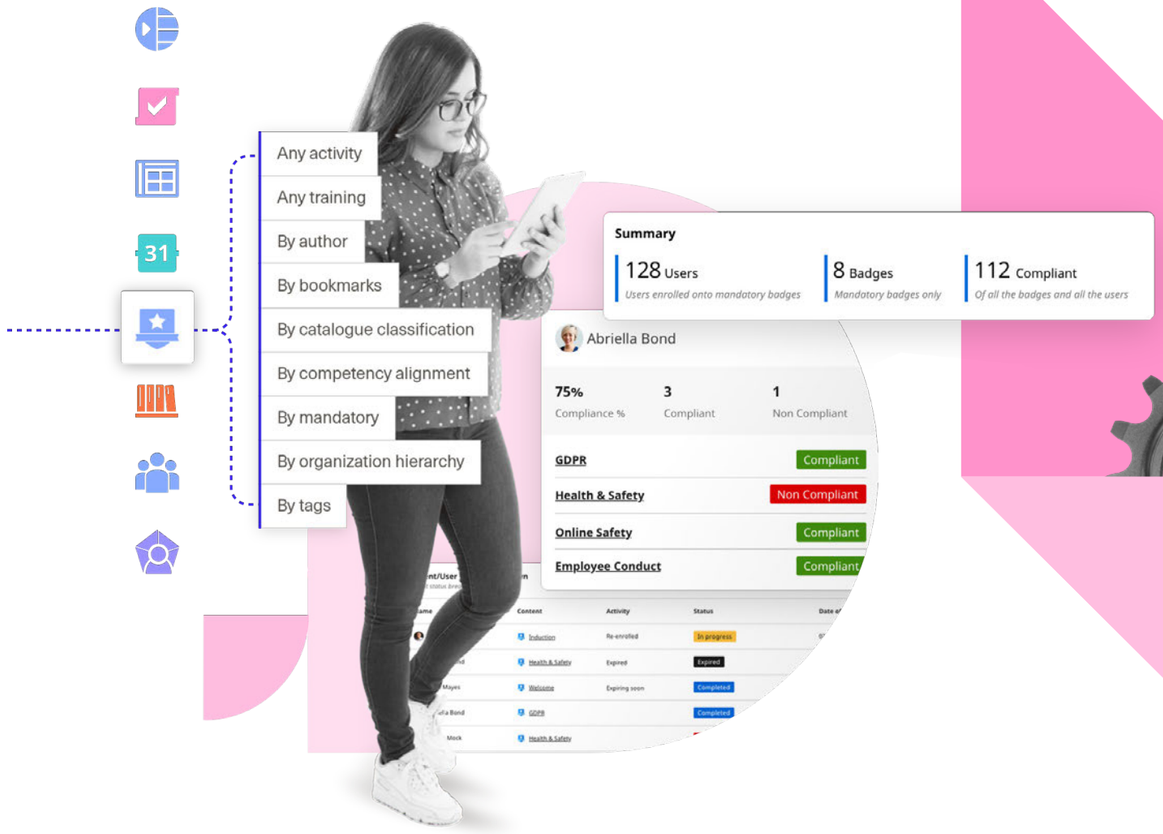
Finally, let's consider intrinsic load. This refers to the cognitive processing that occurs as a result of the inherent difficulty of the content being studied.

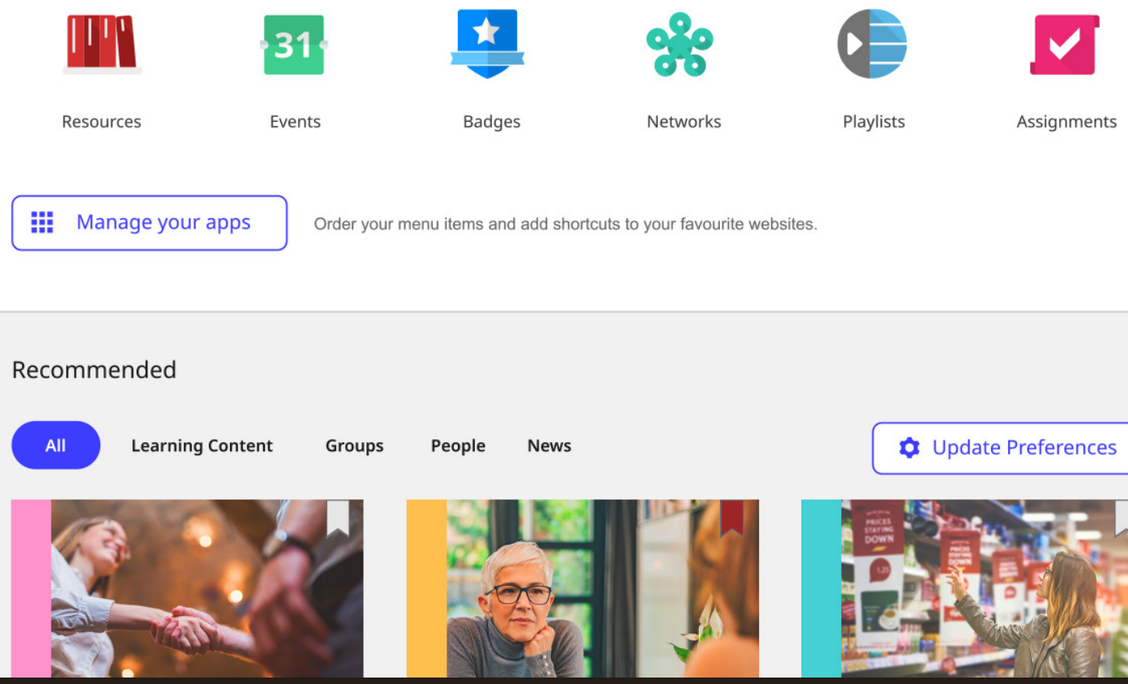
You can impact this by breaking up and ordering content effectively. The level of intrinsic load can vary depending on learners' prior knowledge, so relating new concepts to prior knowledge can help manage this.

How do we do this in the Thinqi learning system?

In Thinqi, recommendations and personalised dashboards ensure the most appropriate learning content is surfaced to learners to maintain focus and reduce overwhelm.

With in-depth analytics and reporting dashboard, you can test a variety of formats to find the most effective for a specific piece of learning content depending on how frequently the material is accessed and the average length of time spent on it (i.e. the learner's **digital body language**).

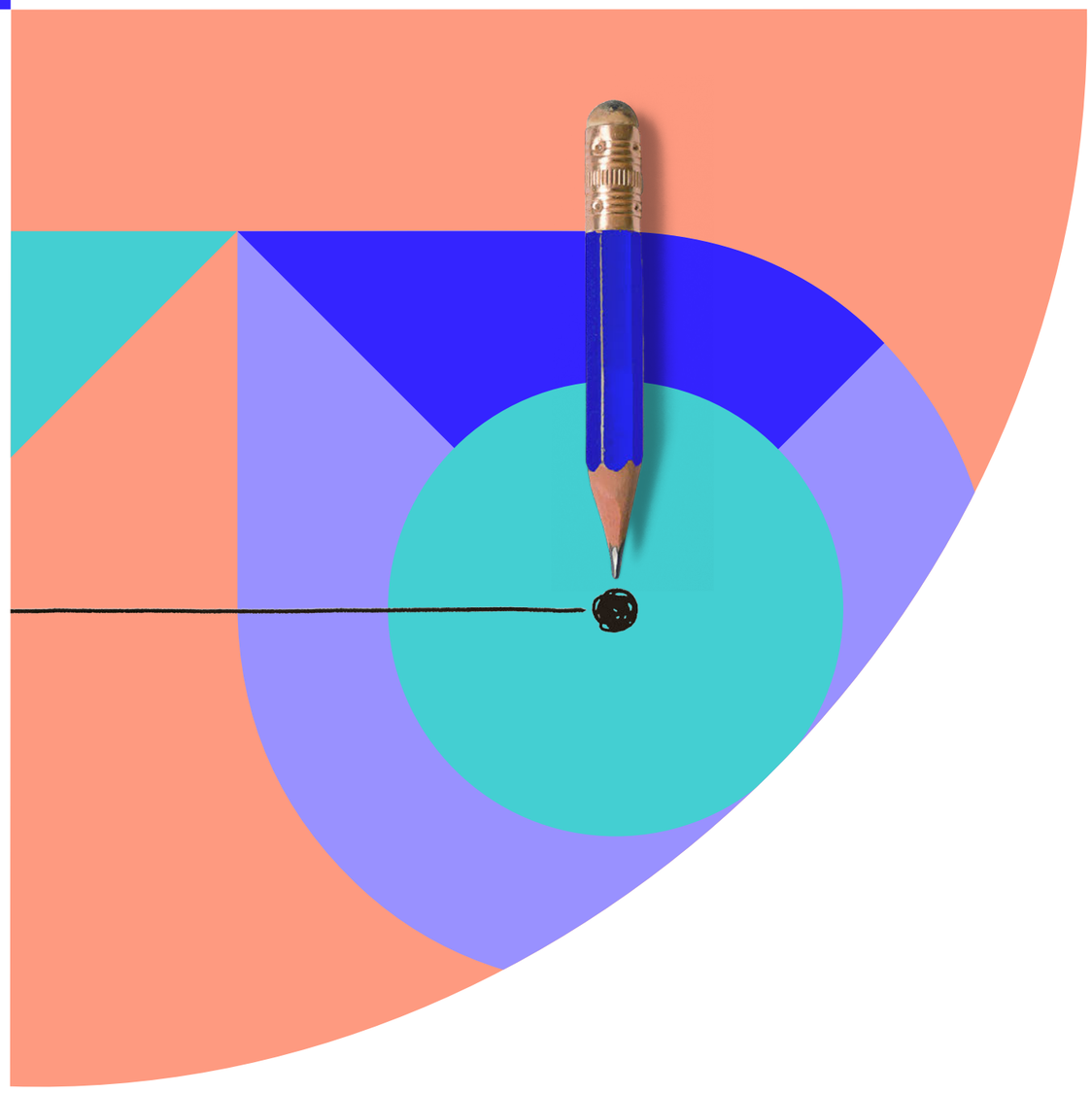




While learning technologies are constantly evolving, learning theories such as cognitivism continue to act as the foundation of successful learning design. Cognitivism posits that we can have a significant impact on learning by carefully crafting our learners' experiences to make best use of how we process, retain and recall information.

By understanding this, you can continue to design effective learning that meets the needs of modern learners.

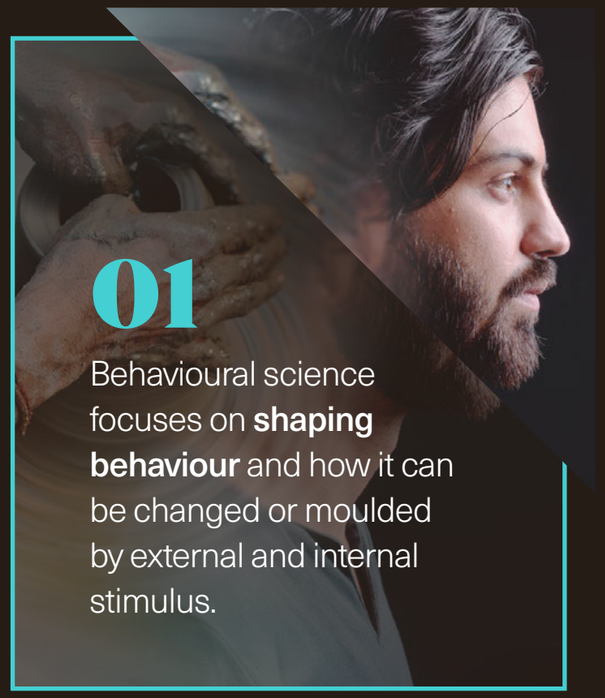
09



SECTION 9

Summary

By now you should feel as though you have a clearer understanding of a range of different learning theories and how applying these to your digital learning design can inform your method and practice for maximum success. We know it was a lot to take in, so here's a summary of what's been covered:



01

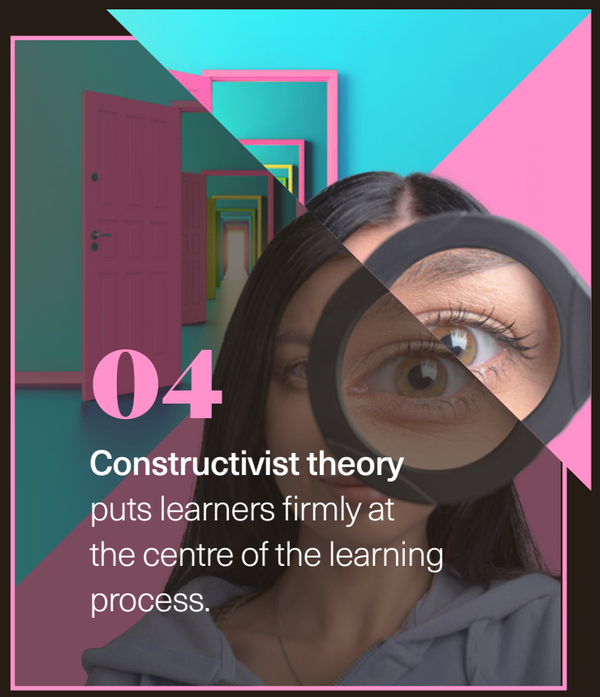
Behavioural science focuses on **shaping behaviour** and how it can be changed or moulded by external and internal stimulus.

02

Learning outcomes are an effective way to guide learners and tell them explicitly where they should be heading and how to get there.

03

Nudge theory can be used to encourage employees to learn, and to embed positive behaviours that will help improve performance.



04

Constructivist theory puts learners firmly at the centre of the learning process.

05

Cognitivism posits that we can have a significant impact on learning by carefully crafting our learners' experiences to make best use of how we process, retain and recall information.

thinqi

It’s time to design learning experiences that work.

Thinqi.com

More L&D expert guides