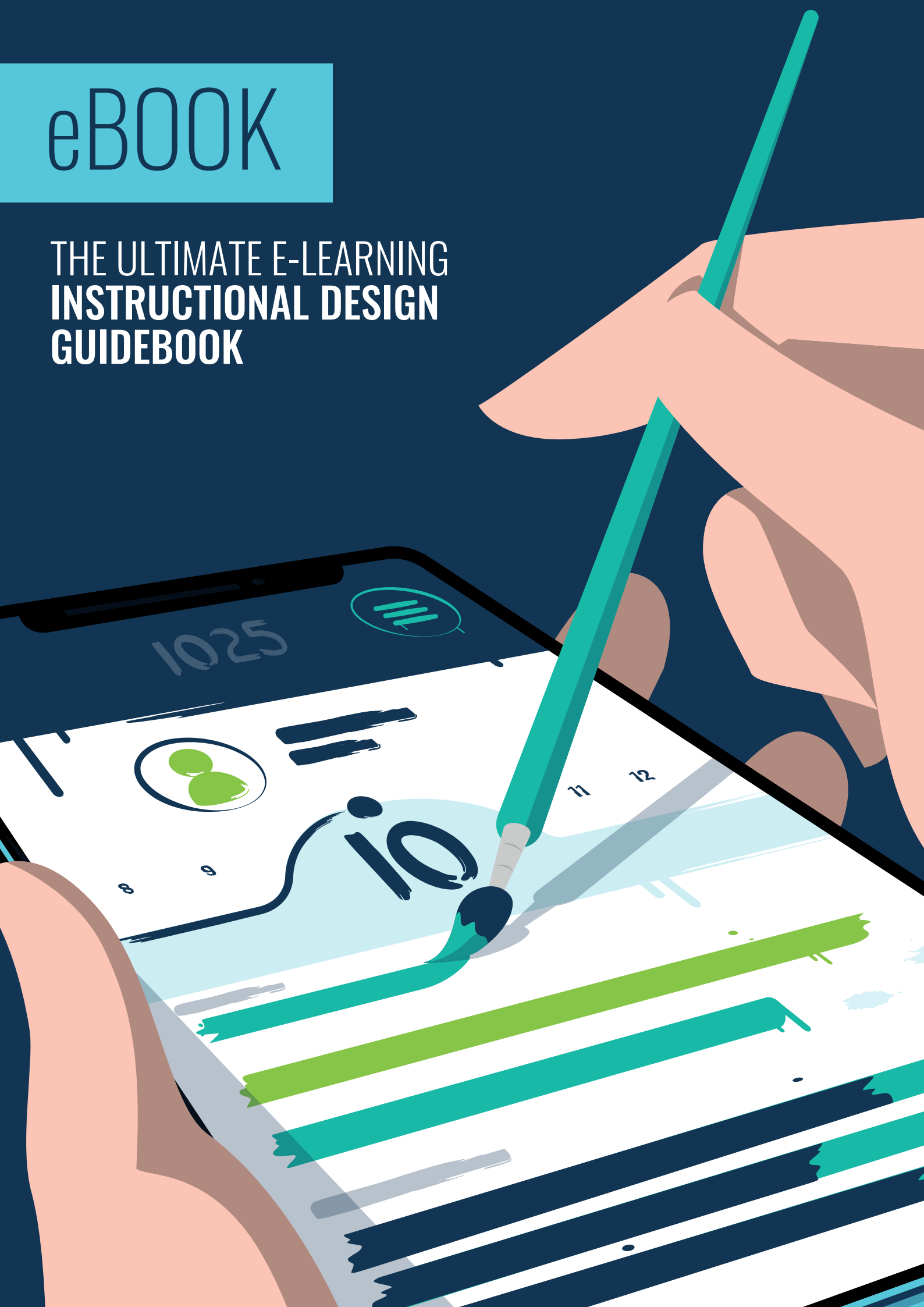
eBOOK

THE ULTIMATE E-LEARNING **INSTRUCTIONAL DESIGN GUIDEBOOK**



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Instructional design is a noble and fulfilling pursuit. But it's not easy. To be successful, you have to master multiple disciplines, work well with others (including busy subject matter experts) and embrace a variety of complex digital tools and technologies. Most importantly, you need an inherent understanding of what makes learning engaging. After all, if you can't keep your audiences' attention, then you can't possibly achieve your learning objective.

In other words, you will become a wearer of multiple hats and a plate-spinning pro! You may also find yourself burning some midnight oil (although with careful planning, this can often be avoided).

Thankfully, there are numerous digital tools out there that can support you in your efforts to create engaging learning experiences. There are also numerous resources that can help you to succeed. Here at Growth Engineering, we wanted to pull together as much of this information as possible to create something truly comprehensive.

To do this, we've used our 16-years of experience in creating engaging online learning solutions and have drawn from our work alongside innovative L&D teams in organisations like L'Oréal, HP, Cisco and The World Health Organization. We've also scoured the research and have spoken to a variety of experts.

The result is **'The Ultimate eLearning Instructional Design Guidebook'.** We hope you find it useful. Here's what we have in store for you.

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What Is Instructional Design?

Instructional design is the art of creating engaging training experiences. It helps make information more digestible and improves the efficiency of learning. Instructional design is the difference between delivering training experiences and hoping your audience will extract the relevant learning from it, and guiding your learners through your content with a clear structure, such that they can't help but glean the information you want them too.

This is important. After all, when learning is easy, it means your audience (whether they are employees, students or customers) can learn more, in less time. If learning is enjoyable, it means your people will proactively seek out training. This helps ensure knowledge is retained and behaviour is changed.

What do the Experts Say?

According to Robert Reiser[1], "Instructional design is defined as a systematic process that is employed to develop education and training programs in a consistent and reliable fashion".

This systematic element is key. To facilitate good learning, you need good instruction. And for good instruction, you need a systematic approach that has been informed by years of research. This methodological approach focuses on accomplishing three things:

- **Effectiveness:** Instructional designers seek to achieve knowledge transfer and meet learning objectives as effectively as possible. They ensure that information is retained and not lost over time.
- **Efficiency:** Instructional designers seek to achieve knowledge transfer at pace. They strive to meet learning objectives as quickly as possible and with no wasted energy.
- **Engagement:** Instructional designers understand that efficiency should not be achieved at the expense of engagement. After all, effective learning requires an engaged audience.

When put like this, it's clear that instructional design can be a tool for changing the culture of your organisation. This brings us to another question.

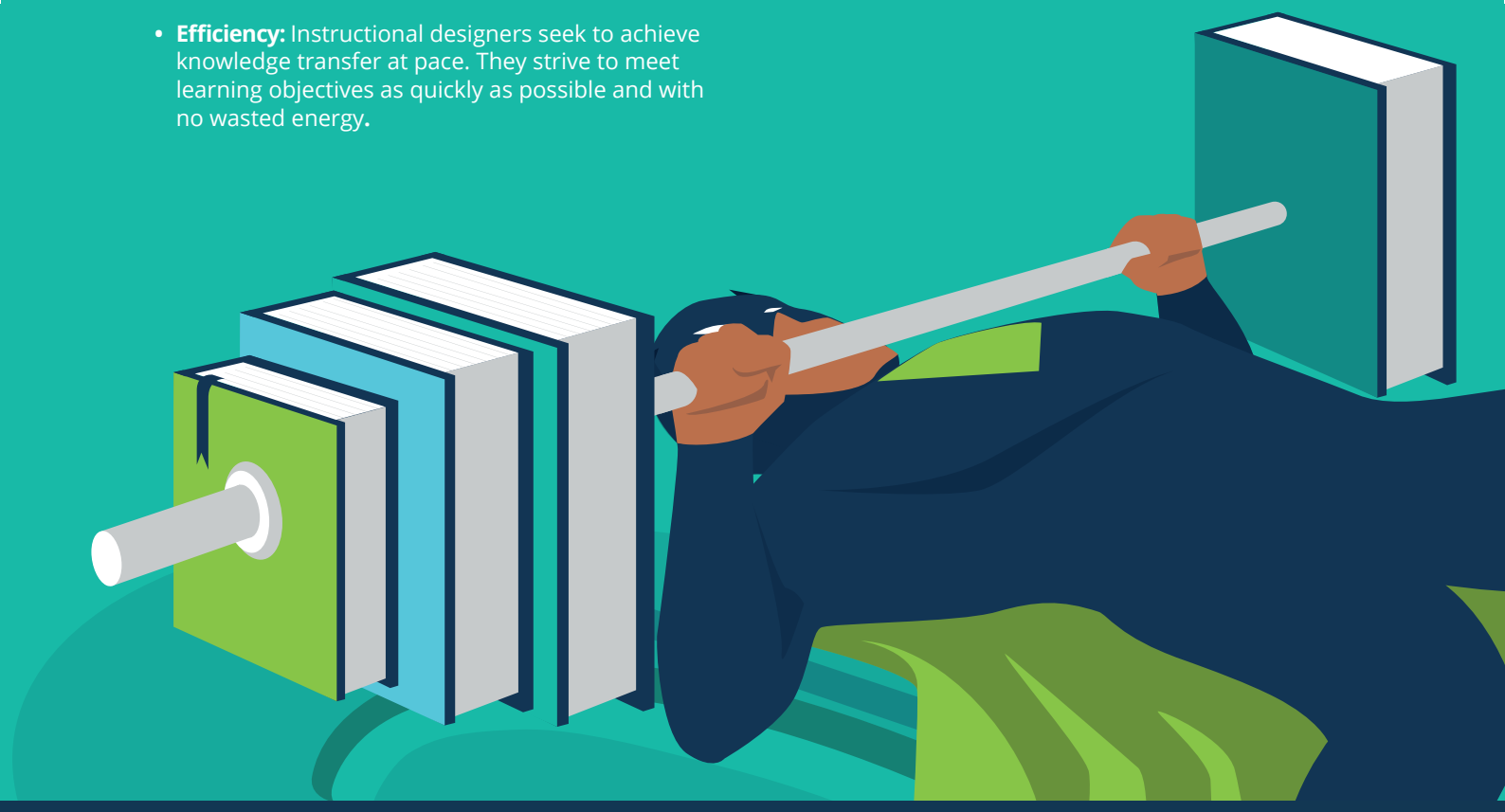
What is an Instructional Designer?

Instructional design matters. Just think, what would you do if you had the power to change the culture of your organisation? Instructional design can help you reach that goal. This makes it one of the very best investments an L&D team can make! And yet, it might surprise you to find out that only 49% of organisations[2] have the instructional design resource they need.

With everyone wanting to get in on the action and hire an instructional designer, it's worth asking: what are they and what do they do?

Well, to start, they're trained professionals with a keen understanding of educational psychology. This means they understand how people learn and they put that knowledge to good use by creating training content that is engaging and effective.

Of course, this isn't all they do. They also oversee the design process from start to finish. Most will start with a training needs analysis process (more on this to come later in the guidebook), to work out what organisational knowledge is missing. Following this, they'll then work through a series of steps until the learning campaign finishes with an evaluation that checks knowledge intake and application.



Instructional design has existed, in some shape or form, for as long as humanity has been designing learning experiences. But it was formalised in the 1940s, when training models adopted by the US Air Force were developed based on an understanding of human behaviour and instructional principles.

This systematic approach proved to be remarkably effective. Indeed, instructional design is a field that continues to flourish to this day. The Bureau of Labor Statistics forecasted an 11% growth[3] in instructional design positions between 2016 and 2026. It would also be unsurprising if COVID-19 facilitated quicker growth than these projections suggest.

What are the Challenges Facing Instructional Design?

The world of L&D is developing at breakneck speed. This means that new challenges are popping up all over the place. So, what are the challenges that instructional designers should be ready to face?

1. One Man Team

The world is changing faster than ever and learning and development professionals have to work hard to keep pace. Instructional designers need an increasingly diverse skill set to keep up.

They might need to know any or all of the following:

- Project Management
- Research
- Evaluation & Data Handling
- Stakeholder Management
- Learning Theory & Instructional Strategies
- Learning Design
- Coding
- Graphic/Video/Game Design

The Solution?

Finding someone who can spin each of these plates is near impossible. Instead, instructional designers need to have a developed understanding of their own strengths. They'll then be able to find colleagues who can support them or software that can aid them. For example, using Genie[4], Growth Engineering's authoring tool, allows instructional designers to create best in class eLearning without any coding knowledge.

2. Staying Current with Educational Technology

New technologies are popping up faster than you can say 'augmented reality enhanced deep learning experience'! What's an instructional designer to do? Staying ahead of the curve is harder than ever!

The Solution?

Technology may be changing faster than ever, but the human brain isn't. Learning best practice will still apply, whatever new technology throws at us. If you continue to take this as your guiding principle, you should be able to adapt and thrive, regardless of how technology evolves over the coming years.

3. Combatting Disengagement

Ever since Gallup found that 87% of employees[5] are disengaged at work, engaging your people has become business-critical. With training known to be an effective route[6] to staff employee engagement, instructional designers are on the front line in the war against dull online learning.

The Solution?

Engaging learners is no easy feat. It takes real expertise to perfect the recipe for irresistible learning. When it comes to engagement a combination of gamification, personalisation and social learning is guaranteed to engage your staff if you get it right. We'll return to this topic later in the guidebook.

If instructional design can overcome these challenges then it has an exciting future ahead of it. But what's in store?

What is the Future of Instructional Design?

In recent years, instructional design has matured. Whilst it was still finding its feet, the focus was on working out how to deliver training effectively with little thought about how to make it engaging.

These days, there are plenty of tools at your disposal known to increase engagement: gamification, social learning, personalisation and microlearning are all sure-fire winners. But there's a lot to look forward to. For instance:

Learning Campaigns

Learning doesn't happen in one single event. It's a journey that takes place over time as information is absorbed, contextualized and put into practice. A campaign-based approach to training will maximise both engagement and knowledge retention.

Campaign learning focuses on engaging learners by drip-feeding training interventions over time to create a continuous learning experience that transforms behaviour.

A Change in Learner Attitudes

Organisational training has a reputation for being dull and boring, but it doesn't have to be this way. We're confident that as instructional designers join us in our mission, more and more learning will include gamification, personalisation, social learning, microlearning, campaign learning and storytelling techniques.

Over time, learners will come to realise that organisational training is not only engaging, it's helping them become the person they want to be. There are already signs that the tides are turning. According to a 2019 paper from the International Medical Journal[7], learners now prefer online learning to classroom-based learning.

This change in mindset helps to highlight how essential instructional designers are when it comes to organisational success.

A Brave New World

Instructional design is your tool for organisational change. With it, you can engage your staff, change behaviour and transform the culture of your company.

Gone are the days of training content that breeds learner discontent. With gamification, social learning and microlearning on offer, it's easier than ever for instructional designers to create content that learners want to complete. And when instructional design is about engaging learners, it's better for the learner, the organisation and the instructional designer.

12 Must-Have Characteristics for Instructional Designers

Now, more than ever, good instructional design matters. We face a period of significant change. New training needs rear their head every day. New learning environments are being embraced. Who better to help us usher in this new age than those who specialise in designing effective learning experiences? Instructional designers have all the characteristics we need to adapt to our 'new normal'.

But what makes a good instructional designer? Let's break down the twelve must-have characteristics of these learning strategists.

1. Learner-focused

First and foremost, instructional designers are empathetic souls. They put themselves in their learners' shoes and design instructional experiences for them. Instructional designers recognise that every learning experience has a specific audience. As such, the more tailored the experience is to that audience, the better the learning outcomes.

2. Consultative

Instructional design is by its very nature, a consultative process. We can't begin to design a good learning experience if we haven't consulted with key stakeholders to understand their training needs. To be effective as an instructional designer, you must navigate these relationships nimbly.

3. Well Organised

Instructional designers are known for bringing a systematic approach to learning design. To be truly effective, however, they should also bring a similar mindset to their own workload. Instructional designers often have to work at pace towards tricky deadlines. They also have to wear many different hats throughout the design process.

4. Data-Driven

The importance of data in any learning intervention cannot be underplayed. Without access to this data, instructional designers are left in the dark. They will not know if the experience they created was effective or not. Once they do get access, they must be equipped to interpret the data and glean insights.

5. Theory Driven

Instructional designers bring a methodological approach to learning design. To do this, they need a detailed knowledge of learning theory, instructional principles and best practice. They should also be familiar with frameworks like ADDIE, so they can add a clear structure to their development process.

6. Detail Oriented

Effective instruction often requires corralling information from a variety of different sources. Instructional designers need to be able to hold all this detail in their minds and communicate it effectively. It's important to remember that inaccuracies can have a real business and / or educational impact.

7. Imaginative

Communicating complex ideas in simple ways isn't easy. Different approaches can be effective in different contexts. In this sense, instructional design is a creative enterprise. Those who can match a fierce imagination with core instructional principles are most likely to succeed.

8. Storytellers

Instructional designers recognise that facts and figures alone are not enough. If we want information to stick, then we have to weave a narrative pathway throughout all our communications. Stories help to transform information into something more meaningful. This, in turn, makes it more difficult for us to forget what we've learned.

9. Tech-savvy

As more and more learning experiences move online[8], instructional designers need to embrace new characteristics and be prepared to move with the times. Technology can facilitate effective learning experiences that have a positive impact on learners, businesses and educational institutions alike.

10. Concise (When Necessary)

A recently published study[10] from the Technical University of Denmark suggested that our collective global attention span is narrowing. As such, modern instructional designers need to start adjusting their approach to this new mindset. They need to be masters at breaking up complex ideas and topics into easy to digest microlearning experiences.

11. Visually Minded

Training materials must be visually engaging if they are to be effective. There's no quicker way to lose a learner's interest than to present them with a wall of text. You don't need to be a master designer. But you should be willing to learn basic graphic design skills and keep up to date with relevant trends.

12. Passionate

Last but certainly not least, instructional designers need to be passionate about what they do. This is not the kind of role that you can do on auto-pilot. Every aspect of instructional design requires careful consideration and skilled craftsmanship. Without passion to fuel you, it's all too easy to lose your way.

Mastering The Balancing Act

Instructional designers aim to craft learning experiences that achieve the three ‘E’s. These experiences need to be effective, efficient and engaging. In order to do this, instructional designers need a variety of different characteristics. After all, creating a learning experience is a delicate balancing act. Instructional designers need to combine knowledge of their audience, stakeholder input, instructional theory and learning analytics to create experiences that have a real impact.

Additionally, modern instructional designers also have to be savvy visual designers, embrace new tech and find creative ways to explain complex ideas. Indeed, to be an instructional designer is to embrace continuous learning. Luckily, they should be well adjusted for this precise purpose.

A Comprehensive History of Instructional Design

Now we know the characteristics of a good instructional designer, we can start to evaluate the techniques, approaches and theories they utilise within their work. But before we take a detailed look at this, we should first seek to understand how instructional design has changed over the years. This will help to ground our understanding of learning theory and show how certain approaches have evolved (or remained remarkably consistent) over time.

Instructional design has a long and storied history, dating back to the 1940s. The course of time has given rise to a variety of systems, methodologies and frameworks that are designed to help facilitate good learning experiences. Our growing knowledge of human psychology and technological advances have forced these models to shift and evolve at pace.

With this in mind, let's begin our journey through the history of instructional design.

The 1940s: Learning Takes Flight

Humanity has been designing instructional experiences for millennia. But it wasn't until World War II that we began to adopt a more systematic approach. The war brought with it a slew of training needs that required a methodological approach. To help meet this need, the US Air Force began setting up research centres in 1944. Their aim was to find the most efficient way of training up new pilots, navigators and other crewmen.

Following the success of this applied training methodology, the world started to pay attention. Indeed, by 1946, Edgar Dale had outlined his 'Cone of Experience'[10]. This model details a hierarchy of instructional methods, organised by how effective each approach is. However, Dale was quick to note that it was not the result of scientific research and should not be taken too seriously.

The 1950s: Instructional Design in Full Bloom

The field of instructional design hit its stride a decade later thanks to the contributions of Benjamin Bloom and Donald Kirkpatrick. In 1956, educational psychologist Benjamin Bloom devised the first version of his now famous taxonomy. 'Bloom's Taxonomy' aimed to place learning objectives within specific categories based on complexity. This would help instructors to understand the associated level of educational achievement linked to each task.

Later in the decade, Donald Kirkpatrick first published his renowned four-level training evaluation model. This gave instructional designers a way to objectively analyse the impact of their learning interventions. These four levels also placed new emphasis on behaviour change and achieving targeted outcomes over and above simple knowledge acquisition.

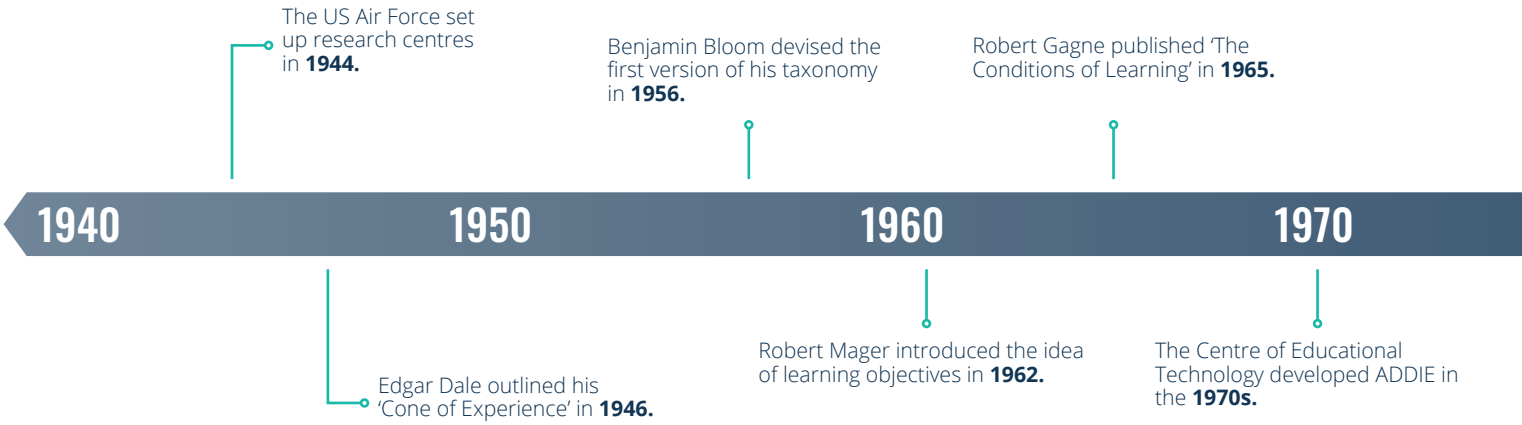
The 1960s: Learning With Real Structure

Throughout the swinging sixties, instructional design methodology began to take a more formal shape. Robert F. Mager introduced the idea of 'learning objectives' in his 1962 article, 'Preparing Objectives for Programmed Instruction'. These objectives detail what learners will be able to do at the end of an instructional experience as a result of the learning that has taken place.

In 1965, Robert Gagne published 'The Conditions of Learning'. This text detailed a number of foundational instructional principles. His most popular model is 'The Nine Levels of Learning'. This model shows us that there are numerous different steps within the learning process. It also suggests that higher-order learning often requires acquiring requisite skills.

The 1970s: The Rise of ADDIE

The 70s were notable for a proliferation of new instructional design models. First and foremost among this bumper crop, was ADDIE. The Centre for Educational Technology at Florida State University developed this instructional design framework for the US Army. To this day, it remains popular within the corporate learning space.



The ADDIE framework describes the five different phases of the learning design process. It's also an acronym. ADDIE stands for Analysis, Design, Development, Implementation and Evaluation. This structured approach gives instructional designers a clear process for managing the production of effective learning experiences.

The 1980s: The Slow Down

Whilst the preceding decades saw rapid changes within the instructional design space, things slowed down significantly during the 1980s. Indeed, a Wikipedia article[11] on the topic even notes that there was 'little evolution of instructional design' throughout this decade. But that's not to say that the decade was a complete washout.

Rapid developments in computer technology led to the birth of computer-based instruction. For the first time ever, personal computers began to play a role within the classroom. 'Edutainment' computer games like Gertrude's Secrets[12], Math Rabbit[13] and Mavis Beacon Teaches Typing[14] began to rise in popularity. The seeds for what would eventually become eLearning had been sown.

The 1990s: Constructing New Experiences

Throughout the 1990s, constructivist theory[15] began to exert its influence over instructional design methodology. This theory recognises that our previous experiences help to inform our worldview. In fact, we use these experiences to 'construct' our own knowledge. This means that we play an active role in the knowledge acquisition process.

This would eventually lead to the popularisation of experience as a learning tool. This was achieved through scenario-based learning and both virtual and real-world learning environments. As Peter Senge noted in his 1990 book, The Fifth Discipline[16]: "Learning only has good effects when learners have the desire to absorb the knowledge. Therefore, experiential learning requires the showing of directions for learners".

The 2000s: Online Learning Powers Up!

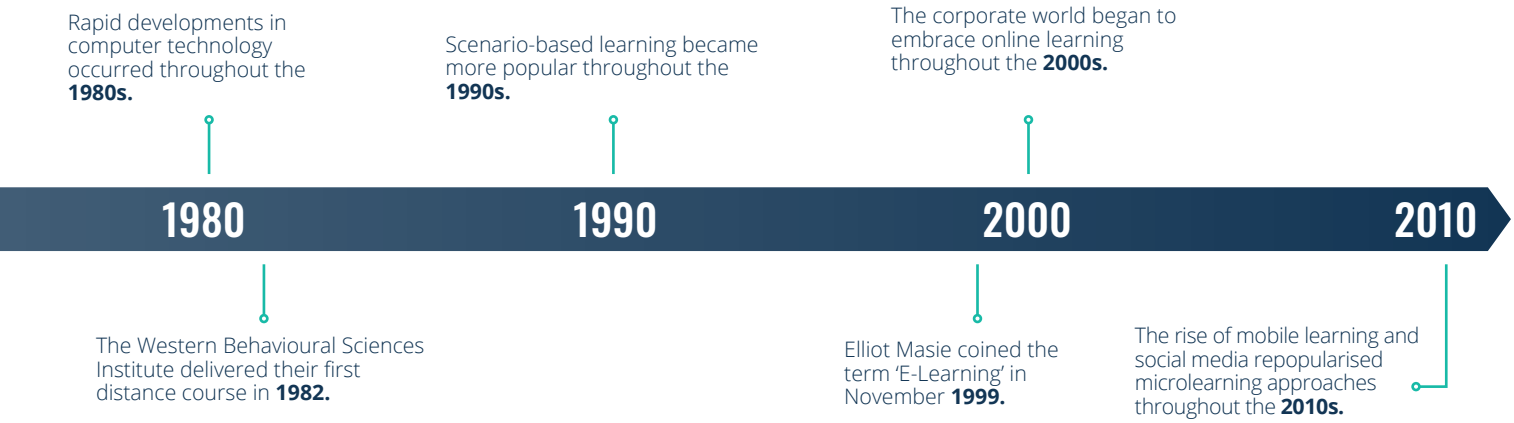
Online learning first emerged in 1982.[17] This is when the Western Behavioural Sciences Institute in California delivered their first 'distance education' programme. Business executives progressed through the course via computer conferencing. From there, online learning saw steady growth in the education space. Eventually, in November 1999,[18] educational technology expert Elliott Masie coined the term 'E-Learning'.

From then on in, there was no looking back. Throughout the early 2000s, the corporate world joined educational institutions in embracing online learning as a means to removing geographical barriers to training and reducing cost.

The 2010s: The Mobile Movement

By the 2010s, online learning was everywhere. This ubiquity bred a mixed reputation. The online learning of ten years ago was known for being simple, bland and boring. It was considered by many to be a 'tick-box exercise'. Organisations often rushed content into production without following instructional design best practice.

Over the years, the quality of online learning has improved dramatically, both from a visual and an instructional design perspective. At the same time, the size of courses has started to shrink. This is because the rise of mobile learning and social media helped to repopularise microlearning approaches.



An Amazing Journey

Instructional design methodology has changed a lot over the last 70 years. Technology has become more sophisticated and our understanding of human behaviour has advanced. Instructional designers have reshaped and modernised their approaches. What's perhaps more remarkable, however, is how durable many instructional design approaches have proven to be.

Bloom's Taxonomy was first postulated in 1956. Kirkpatrick created his four-level training evaluation model in 1959. Gagne's Nine Levels of Learning were first set down in 1965. Instructors still adopt these three theories to this very day. The US Army popularised ADDIE in the 1970s and it's still the most popular instructional design framework.

As such, the time seems right for an instructional design shake-up. Just as World War II provided a spark for instructional designers to spring into being, perhaps the global crisis created by the COVID-19 pandemic will facilitate a similar shift.

One thing's for sure. Instructional designers could not be better placed to respond to our learning needs in whatever 'new normal' we arrive in. The history of instructional design has already been written, but the future is up for grabs.

9 Learning Theories You Have to Know!

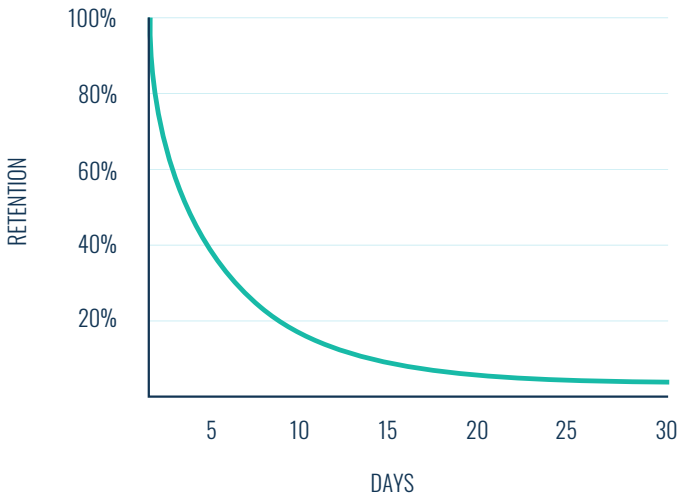
As we've seen, instructional design has changed significantly over time. But many of the key theories and methodologies have managed to maintain their allure. In this section of the guidebook, we'll be exploring nine theories that have real staying power. They are the kind of theories that fundamentally alter the way we think about and approach learning and development.

Learning theories are sets of principles that explain how we best absorb, process and retain information over time. Understanding this process helps us to design effective learning experiences. Better still, some learning theories provide us with practical frameworks that we can use as a template for success.

Whilst they are just theories, rather than scientific fact, they are often based on rigorous research and supporting evidence. So, without further ado, let's start by exploring our first theory.

The Forgetting Curve

Hermann Ebbinghaus's Forgetting Curve shows us how information is lost over time if you don't make an effort to retain it. In the latter half of the 19th century, Ebbinghaus ran a series of tests[19] on his own memory. These tests saw him memorising nonsense syllables and repeatedly testing himself after various time periods and recording the results. By plotting the results on a graph, he created the 'Forgetting Curve', as shown below.

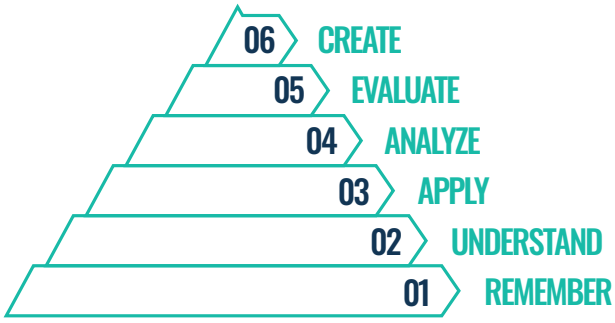


Ebbinghaus's early research has since been replicated under more stringent modern conditions.[20] The research shows us that we forget 50% of all information within an hour of learning it. And a week later, we'll have forgotten 90% of everything we've learned. In that sense, all learning activities could be characterised as a battle against The Forgetting Curve.

But it's not all bad news. Ebbinghaus was also able to show that every time you reinforce information, the rate of decline decreases. This shows us the importance of spaced repetition within a learning context.

Bloom's Taxonomy

Educational psychologist Benjamin Bloom[21] devised the first version of his now famous taxonomy in 1956. His aim was to place learning objectives within specific categories based on complexity. These categories help us to understand the associated level of educational achievement linked to every learning task. The taxonomy was revised back in 2001 and is now structured as below.



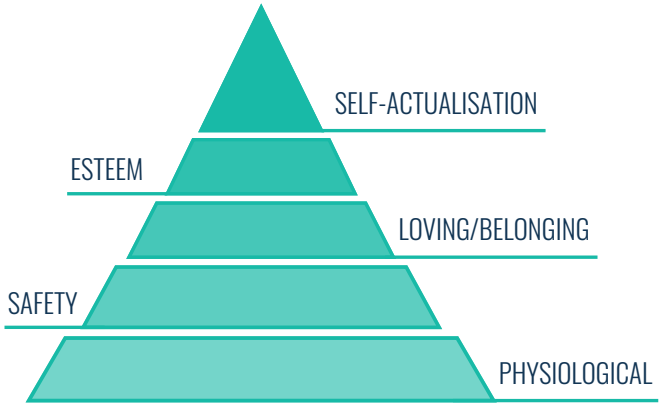
The taxonomy is formulated like a pyramid. Students start with basic learning and move their way up through each level until they have mastered the subject at hand. The learning experience becomes more active as they progress. What begins with rote memorisation ends with creative applications of what you've learned.

Bloom's taxonomy has many uses for teachers, instructors and corporate trainers. First and foremost, it allows you to assign learning objectives or tasks, based on your audience's competency level. You can also use the taxonomy to assess the level of your audience's educational achievement over time.

Maslow's Hierarchy of Needs

In 1943, Abraham Maslow[22] published a paper called A Theory of Human Motivation. This paper contained his 'Hierarchy of Needs', a model that would transform the way we think about motivation and goal attainment. The hierarchy is presented in pyramid format, with five levels.

The four lower levels are physiological needs. The fifth and top level is a 'growth' need. In order for our growth needs to influence our behaviour our lower level needs must first be satisfied.

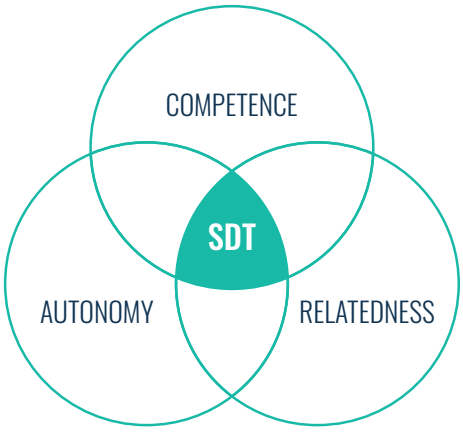


1. **Physiological Needs:** Things like air, food, water, sex and sleep.
2. **Safety Needs:** Things like our health, property, the environment and our employment status.
3. **Belongingness Needs:** Things like love, friendship and family.
4. **Esteem Needs:** Things like self-esteem, status, achievement and confidence.
5. **Self-actualisation Needs:** Thinks like our sense of morality, creativity and problem-solving acumen

This hierarchy helps us to understand what drives our learners and enables us to prioritise accordingly. It also helps us to understand how physiological factors may affect our learners' capacity for effective learning.

Self-Determination Theory

Self-determination theory tells us the psychological ingredients required to 'determine' an action. Think of it as a recipe for creating motivation and driving activity. The theory was created by psychologists Richard Ryan and Edward Deci back in the 1970s.[23] It's useful in a learning context because it shows us the criteria that need to be satisfied for students to fully embrace a learning experience.



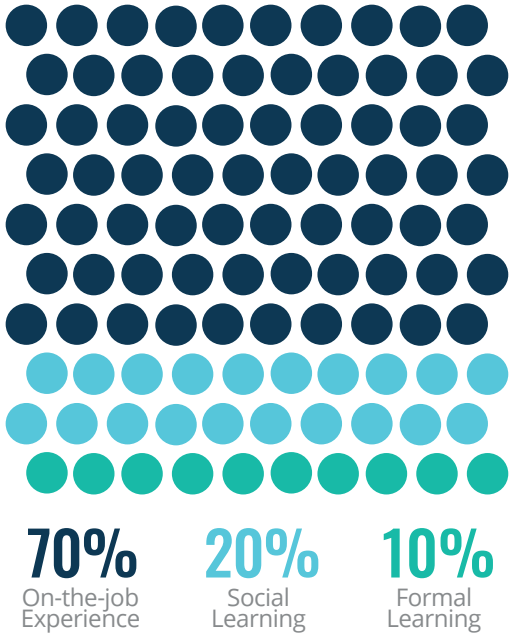
The three psychological needs that must be met before we are motivated to act are as follows:.

- **Competence:** We must feel confident that the action we take will be effective. Any uncertainty or fear of inadequacy may temper our motivation.
- **Relatedness:** We must believe our action will carry weight within a wider community. Motivation is hard to come by within a social vacuum.
- **Autonomy:** We must believe we are free to act. Compromise this freedom in any way and engagement levels are likely to plummet.

The 70:20:10 Theory

The 70:20:10 model is useful for learning professionals, as it shows us how we take in information about the world around us. As a result, it can help us to prioritise our initiatives accordingly. The model was created in the 1980s by Morgan McCall and the Centre for Creative Leadership.[23] Their research found that:

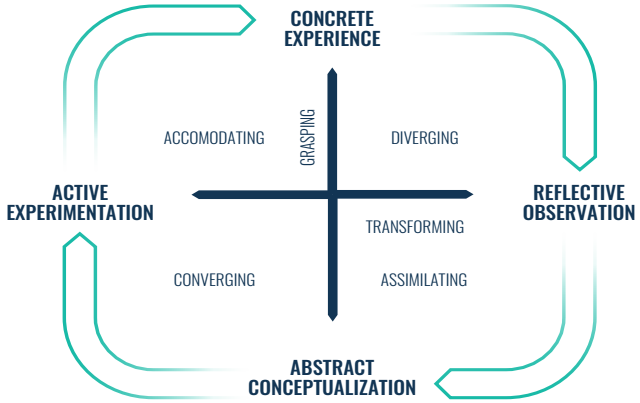
- Only **10%** of what we learn happens through formal training. That's things like pre-set curricula, classroom events, dusty textbooks and so on.
- **20%** of what we learn happens through developmental relationships. In other words, through a social context between two or more people.
- And a whopping **70%** of what we learn happens through on-the-job experience. This is a significant slice of the overall learning pie!



Accordingly, this information helps us to understand where we should apply our focus. Relying too heavily on formal training interventions will slow you down considerably. Instead, you should create an environment where informal, social and experiential learning thrive!

Kolb's Experiential Learning Cycle

Educational theorist David Kolb[24] published his learning styles model back in 1984. This was our first introduction to the experiential learning cycle. The cycle is based on his belief that "knowledge results from the combination of grasping experience and transforming it". It has four different stages:



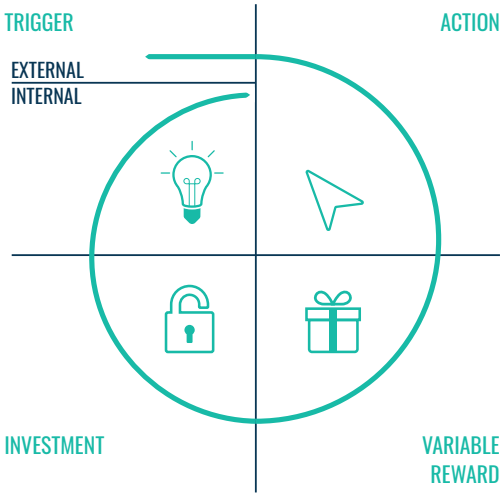
- **Concrete evidence:** Personal hands-on experiences that we can learn from. After all, it's through experience that we learn from our successes and failures.
- **Reflective observation:** Once we've had the experience, we need to pause and reflect on it. What did we do right? What could we improve?
- **Abstract conceptualisation:** Now that the analysis is complete, we can make a plan for future success. At this stage, you should consider how you would change your approach.
- **Active experimentation:** We've had the experience, we've analysed it and we've strategized accordingly. Now it's time to act! After all, if we don't try it, we won't know if it works.

As this is a cycle, completing the action takes us right back to stage one. We then repeat the process again and again, improving as we go. This model is useful to learning professionals as it can help us to structure our training interventions accordingly. It shows us that practice really does make perfect!

The Hook Model

The Hook Model, as formulated by author Nir Eyal,[26] is a four-phase process for creating new habits. Understanding this process can help us to drive behaviour change. After all, when an activity becomes habitual, we start to do it automatically and without too much thought. Imagine what you could achieve if you turned learning into a habit?

The Hook Model shows us that there are four steps required to forge a new habit:



- **Trigger:** A prompt to action. This could be an external trigger (for instance, an email) or an internal trigger (for instance, a craving).
- **Action:** The desired behaviour. In other words, the act prompted by the trigger.
- **Variable Reward:** A reward for completing the activity or displaying the right behaviour. By varying the reward[27] you are appealing to your learners' innate sense of curiosity.
- **Investment:** By moving through the first three steps, your learners are making a time and effort-based investment into the hook cycle.

This investment makes it easier to go through the hook cycle again (and again). After all, the learners have already made a commitment of sorts. Repeat the cycle enough and voila: a new habit will have been formed!

BJ Fogg's Model for Behaviour Change

All learning initiatives worth their salt have a common goal in mind: behaviour change. Unfortunately, this is no easy task. It's much easier to stick to what we know than it is to embrace new approaches. That's where BJ Fogg[28] comes in.

Back in 2009, he and his team at the Persuasive Technology Lab at Stanford University published a practical framework. In short, this framework shows us how to drive behaviour change throughout an audience. The model suggests that behaviour change requires three things:

- **Motivation:** We must understand the benefits relating to the action or new behaviour. This in turn must make us want to act.
- **Ability:** We must be able to complete the action. Time, money and physical effort may act as detractors here.
- **Trigger:** The final piece of the puzzle requires prompting your learners to spring into action.

Gagne's Nine Levels of Learning

Robert Gagne[29] was an American educational psychologist who helped to pioneer the science of instruction and learning. In 1965, he published Conditions of Learning, which set out the nine steps that learners should experience when they are being taught something.

The 'Nine Levels of Learning' help trainers and educators of all sorts to structure their learning materials in the right way. In addition, the model provides a framework for creating instructional activities and a way of thinking about learning progress. Let's break down the nine steps involved:

- **Gaining attention:** You can't teach someone anything if they're not paying attention.
- **Informing learners of the objective:** Establish what the learning intervention will cover.
- **Stimulating recall prior to learning:** Ask the learner to reflect on their previous experiences relating to the subject matter.

- **Presenting the stimulus:** Present the learner with new information relating to the learning objective.
- **Providing learning guidance:** Reinforce the information presented with alternative approaches.
- **Eliciting performance:** Get your learners to demonstrate their new-found knowledge.
- **Providing feedback:** Communicate any feedback necessary to help your learners to improve.
- **Assessing performance:** Test your learners' knowledge and understanding.
- **Enhancing preparation and transfer:** Show your learners how they can apply their knowledge to different contexts and situations.

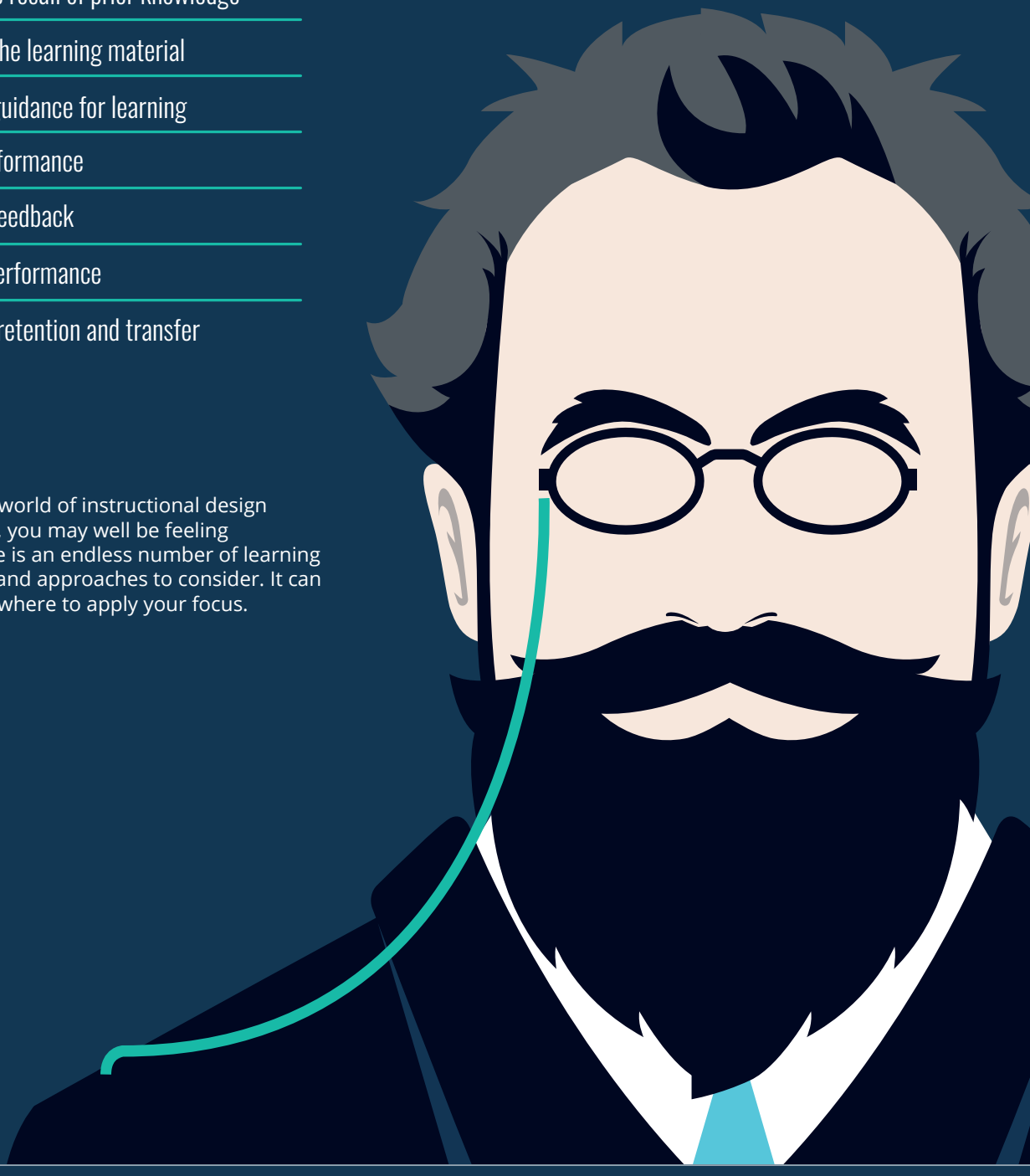
1. Gain attention
2. Inform learner of objective
3. Stimulate recall of prior knowledge
4. Present the learning material
5. Provide guidance for learning
6. Elicit performance
7. Provide feedback
8. Assess performance
9. Enhance retention and transfer

Where to Start?

If you're new to the world of instructional design or learning theories, you may well be feeling overwhelmed. There is an endless number of learning theories to explore and approaches to consider. It can be difficult to know where to apply your focus.

At this stage, you should train your focus on your audience. After all, you can't design an effective training experience if you don't understand the needs of your learners. Once you have this knowledge, you can then alter and fine-tune your approach accordingly.

Maybe you'll focus on combating The Forgetting Curve by using campaign learning. If motivation becomes an issue, you could look to Self-Determination Theory or BJ Fogg's Behaviour Change Model. You have a bounty of information at your fingertips. How and when you apply it, is up to you and your learners.



How to Conduct a Training Needs Analysis

Now we know what an instructional designer does and some of the key theories and methodologies that they work with, you're almost ready to get to work. But before you can start creating training content, there's something you need to do first.

A **training needs analysis** is one of the most important things that you can do as a learning professional. But why is that?

Training can transform your business. It can give your people the skills and know-how they need to thrive. It can even be the edge your organisation needs to stay ahead of the competition. A great training programme will entice top-talent[30] to join your company, and it will keep them there once they've joined.

This means that training needs analysis (TNA) is supremely important. It's your chance to plot the route to training success. If you get it right, you'll deliver the right training, in the right way, to the right people. On the other hand, skipping a training needs analysis altogether is the L&D equivalent of trying to pin the tail on the donkey whilst blindfolded.

What is a Training Needs Analysis?

When you strip it right back, a training needs analysis is a process which helps you review the state of your organisation's training. With it, you can identify the knowledge-gaps your organisation needs to fill. Once you know what's missing, you can outline your priorities and shape your L&D strategy.

The Importance of a Training Needs Analysis

A training needs analysis is arguably the most decisive stage in any training campaign. But what are the objectives? It's all about getting your priorities in order:

1. **Work Out The Areas of Greatest Need**
   It will help you understand the skills and behaviours your organisation needs to advance. You can then identify which of these skills and behaviours are lacking.
2. **Avoid Wasting Time on Irrelevant Training**
   It gives you a clear understanding of the big picture. With this understanding, you'll be able to pinpoint training that's not needed, saving you time and money.
3. **Increase Your ROI**
   Once you've identified the areas of greatest need and pinpointed surplus training, you can refine your L&D strategy. This helps ensure you're funnelling investment into the areas that will deliver the best return. It also means you will stop wasting your budget on ineffective training.

How to Conduct a Training Needs Analysis

Step 1: Imagine

The best place to start with any training needs analysis is with your organisation's mission and values. These will help you get to the core of why your organisation exists. Once you understand the mission, take a deep breath and close your eyes. Imagine what your organisation would be like if it was fulfilling every aspect of this remit. Ask yourself:

- What would your company culture be like if your values were being lived all day, every day?
- Which groups of people are key to delivering your organisation's mission?
- What behaviours do your people need to deliver this mission?

This organisation, the one you're imagining, is the one you need to bring to life. Your training needs analysis is your strategy to do so.

Step 2: Assess

You now have your ultimate goal in focus. With this clear vision, you now know what behaviours you need in your organisation. This means it's time for you to work out how to get your people to adopt them.

Behaviours

BJ Fogg's Behaviour Model outlines a path to behaviour change. His model explains that to affect behaviour change, you need three things: motivation, ability and a trigger. With this in place, you can inspire learners to achieve anything!

Of particular importance for a training needs analysis is the ability of your learners to change their behaviour. This means you need to understand what knowledge and support your learners require.

Research

Finding out what knowledge and support your people need calls for research. L&D professionals use lots of different techniques to do this, everything from focus groups to hiring consultants. The most common technique is the use of surveys. This requires a form with a long list of capabilities. Learners would then self-report on these capabilities.

Scrutinise

Now that you have a full survey of your organisation's talents, you can plot them according to the departments they sit in. With this information, you'll be able to identify skills which are lacking and where in the organisation they're most needed. You can then sort through all the skills gaps you've identified and rank them according to importance.

Step 3: Plan

With all the detailed information you've gathered from your research, you have all the data you need to craft a training strategy. This strategy should prioritise the skills which are lacking and critical to success. After addressing these core skills gaps, you can work your way down the priority ladder until you've run out of budget, or run out of skills gaps.

You can then decide how you want to deliver your training and how you will reinforce it so that your training leads to long-lasting behaviour change.

You'll now be in a strong position to start working out your expected ROI. You can begin by working out how much money you've saved by cutting unnecessary training. Then, you can set metrics to measure the success of future training.

Three Different Types of Training Needs Analysis

You now know what a training needs analysis is and how to do one. But one training needs analysis can be very different from another. There's a good chance you'll never do one training needs analysis that's exactly like another. This is because the training needs of organisations change rapidly in response to a changing workforce and a changing world. But, broadly speaking, training needs analyses fall into three categories:

Type 1: Initial training needs analysis

Before you even start designing your learning programme, you need to find out what you want your learners to take away from it. A training needs analysis at this stage uncovers what skills and expertise your learners currently have. At the same time, it flags up areas where skills and knowledge might be lacking.

This is invaluable information for you because it pinpoints any priority areas which are screaming out for some training! You can focus your training programme on filling these skill gaps, and work on creating content for them before moving onto things which are already better understood.

Essentially, you'll be crafting a training programme which has been personalised to suit your specific learners.

Type 2: Training needs analysis for new learners

As you flesh out your learning programme, you'll end up building an impressive library of training content, covering absolutely anything your learners will ever need to know!

But with so much content to choose from, how can you make sure that your learners receive easy access to the things they need? After all, nothing turns off learners quicker than being forced to study something they already know inside out.

Once again, training needs analysis comes to the rescue! You can set up a simple questionnaire for new learners to take right at the start of their journey. The results reveal their individual needs and allow you to build a personalised learning pathway to suit them.

With an LMS, this process can even be automated. As learners answer questions, their skill gaps are revealed. The system then pushes relevant training content directly to the learner, giving them instant access to exactly what they need!

Type 3: Training needs analysis for long-term learners

Holding regular training needs analyses can also be a brilliant way to help measure the effectiveness of your training programme. For example, you might repeat the process every six months to find out whether you've effectively plugged the skills gaps you were aiming for.

In this way, you're able to keep an eye on the skillset of your workforce and adapt your training programme if you spot new areas which need attention.

It also helps you to uncover the hidden champions amongst your learners. These emerging experts can be utilised as ambassadors to help out other learners who might be struggling. They are shining examples of the value a little learning can deliver!

Eleven Top Tips To Improve Your Training Needs Analysis

Now that you're clear on the importance of a training needs analysis, you understand how to do one and you're clear on the different contexts in which it could be useful... Do you have any skills gaps left for us to fill? Well, here is a list of our eleven top tips to help you on your way!

1. Prioritise effectively

As you gather your data and get closer to defining where your training needs lie, you'll start to notice particular groups and departments that are in greater need of training than others. There's no single reason why these training gaps open up and your circumstances will likely be unique to your company. Some examples of reasons might include:

- Rapid business growth
- An ever-changing product list
- Previous reluctance to provide training
- Lack of employee engagement

Only you can tell why this need for training has grown, but the important thing is that you've defined who the struggling employees are. Now all you need to do is focus your efforts in these areas and ensure that those with the greatest need get the help they deserve.

2. Identify Subject Matter Experts

So, where are you going to find the information that your learners need to succeed in their jobs? You could Google it, but there is a more efficient way to harvest expertise and it's right there on your doorstep.

You need to discover who the subject matter experts are within your organisation. They don't just know their topic inside-out, but they know what it means within the context of the company. Generally speaking, the SME's input to the training will be an additional duty on top of their already-busy working day.

You'll need to consider how much time each potential SME can commit to the project. You may find that the person with the most expertise has the least amount of time. The savviest SME in the world is useless to you if they can't get around to answering their emails!

3. Pick the perfect delivery tool for your organisation

What form is your training going to take? There are a lot of options available to you ranging from classroom sessions to manager-led, face-to-face training, to online training solutions. What you choose will largely be dictated by budget and time constraints but the big question you need to ask yourself is which method will deliver the best return on your investment.

For example, classroom training may be easy to arrange and relatively uncomplicated, but with the additional costs that surround it (venue booking, travel & lunch expenses, etc.), the total investment can become substantial. The effectiveness of this type of training can also be difficult to measure, which can make calculating the return on investment quite tricky.

An online training solution requires more forethought and planning which can delay your training programme. Once this solution has been implemented, however, you'll have a much clearer picture of how effective each piece of learning collateral is. This also opens the door for a blended training solution that lets you plan and manage classroom training within your online learning platform.

4. Review roles and competencies

Your business is like a big machine – a machine with a lot of moving parts. Take some time to look at the various roles in your organisation and how these roles interact with one another. Many of your day-to-day processes rely on a chain of different roles working towards the same goal. If one link in that chain is a little weaker, it affects all of the others.

If, for example, your TNA process has illustrated a widespread lack of knowledge at an associate level, you might discover that this is the result of poor communication at a management level. This essential competency must be addressed as a matter of priority since its impact is so large.

5. What form will your content take?

At some stage, you'll need to get down to the content of your training programme. By now, you know where the gaps are and where your efforts should be focused. If your learners are lacking in product knowledge, for example, you need to find the most effective way of giving them that knowledge, so that it is absorbed and retained.

Here, we're hitting on the biggest challenge that training professionals face today – engaging their learners. It's quick and easy to put a document or a slideshow together, but learners today demand something more interactive.

There isn't a training manager alive who wouldn't want to pour time and thought into training content that's both informative and engaging for the learner, but deadlines and budget constraints usually get in the way. An online authoring tool could be the ideal solution. With the right tool, you can quickly build eLearning without the need for an eLearning developer.

6. Figure out the big picture

It's important that you identify what your company is trying to achieve. Let's say your organisation is a marketing agency that provides several services. It's possible that their video production service costs the business too much money and time, and they'd prefer to focus on web design. If you don't know this from the outset, you could waste a lot of time plotting a training programme that's wholly irrelevant to the company's chosen direction.

7. History is a great teacher

Before you go off making a bunch of mistakes, review your company's previous approach to training. Here you'll find a whole repository of lessons that can shape your training programme. You can also discover what has produced great results in the past. Then you can take these ideas and approaches and put your spin on them.

8. What problems can you solve?

Nobody's perfect, and any company will have a giant wish-list of needs that cover all aspects of the business. You need to know which of these needs can, and should, be addressed by training. If ancient IT equipment and clunky processes are making things difficult, it's not your job to fix them. Always ensure that you're creating a training programme that's appropriate for the company you have – not the one you wish you had.

9. Keep your finger on the pulse

We've all been there, right? You spend weeks creating some training for an IT system only to discover that, whoops – that system is due to be replaced any day now. That's not only frustrating – it's a complete waste of your time. Time you could be spending creating an awesome training programme that actually works. If your training content is going to get the best return on investment, you need to make sure that you know about any recent or upcoming changes in processes or procedures.

10. Know your toolkit inside-out

It'd be great to have access to a neural reprogramming ray that can instantly zap any information into your learners' grey matter. Unfortunately, such a device doesn't exist...yet (we're working on it). To get the most out of your training, you need to make the best use of the tools you have at your disposal.

Maybe that defunct video department can be turned into an in-house training machine. You might not have a learning management system,[31] but perhaps your intranet could be a way of delivering your content. The effectiveness of your training might just hinge on how well you utilise your existing resources.

11. Personalise every step of the journey

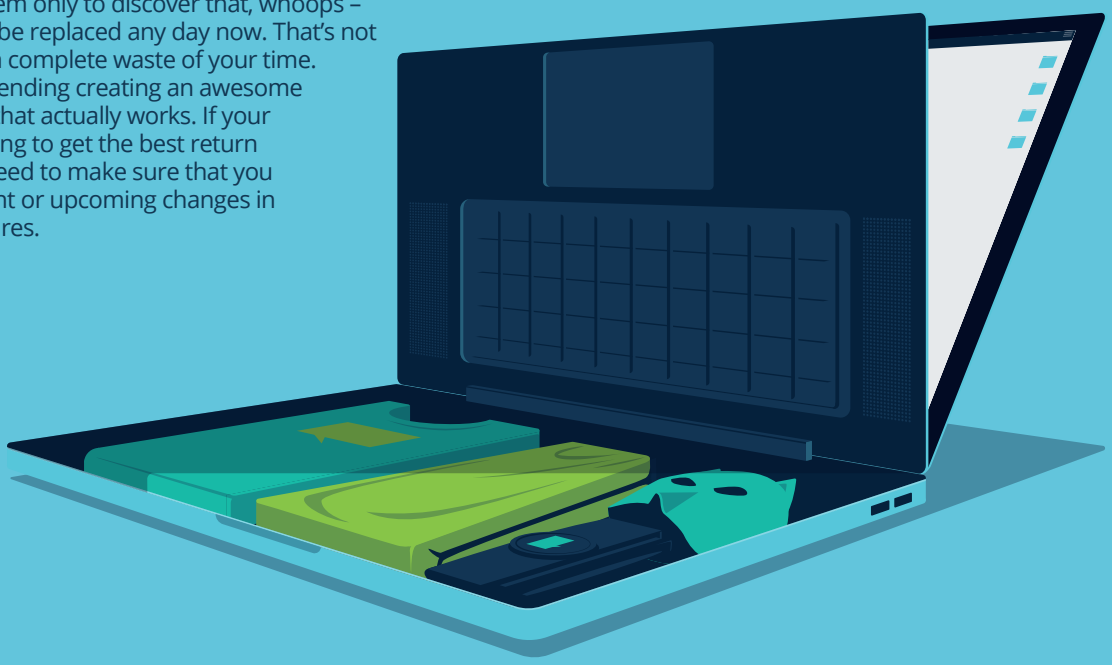
The very best thing about a training needs analysis is that it helps you to deliver relevant content to your learners. Nobody wants to complete content that's out of date or not helpful for their role. This can be disengaging for your learners. It seems like you don't care about them.

On the other hand, if you deliver content that's useful to them, it shows you care. It's a very powerful way to engage your learners.

The Next Step

Once you've been through and completed a full training needs analysis, what's left? Well, it's time to put your plan into action. Every journey starts with a single step. When it comes to L&D, that first step is a training needs analysis.

And what a great first step it is too! As you've seen, when you undertake a thorough training needs analysis, it gives you all the data you could need. This helps ensure that your training programme goes off without a hitch. If you use this data to its full potential, your chances of an interstellar ROI will shoot up!



What is an Authoring Tool?

Once you've conducted your training needs analysis, you'll then need to find the best possible way to deliver your training content. In many cases, classroom based training may be the most effective route to success. Oftentimes, however, online learning will provide you with a cost-effective and super efficient solution. This brings us neatly to the subject of the next section of this guidebook: authoring tools.

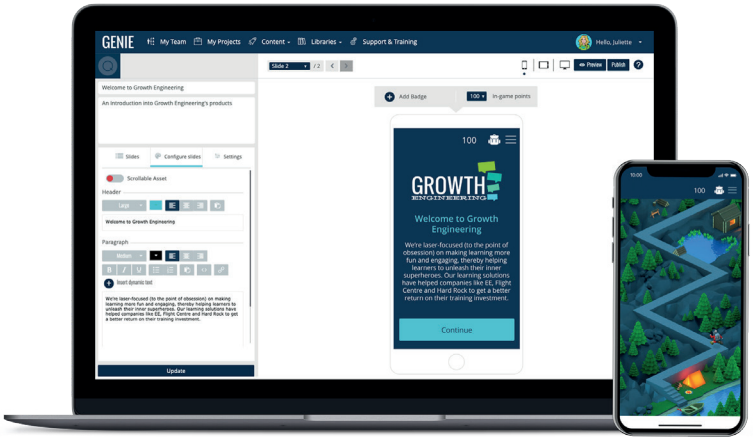
Authoring tools play a vital role in the learning technology ecosystem. Without them, our learning management systems would be barren wastelands. Producing new training content would be an expensive and painstaking process. Thankfully, we do not live in this digital learning dystopia. Authoring tools have expanded our ability to produce high-impact eLearning courses without technical expertise.

We've authored this section of the guidebook to help you become an authority on authoring. You'll learn what an authoring tool is used for, how they work and the output they produce. We'll also build a case for why you should consider investing in your own authoring tool.

The Definition

The term 'author' conjures up images of novelists, playwrights and other professional writers. But it also has a broader meaning. Frank Magill offered an open-ended definition in his 1973 work, Cyclopedia of World Authors.[32] He suggests that authors are people 'who originated or gave existence to anything'. We are all creative souls and therefore, we are all authors in our own right.

The term 'authoring tool' also has a broad definition. Indeed, understanding of what an authoring tool is and the purpose it serves will vary depending on the industry that you work in. But let's narrow our focus. Within the learning technology space, authoring tools empower us to exercise our creative muscles and produce eLearning courses. By using an authoring tool we can create and organise our training content within a standardised digital course structure.



These eLearning courses are typically highly interactive. They present the learner with a variety of multimedia instructional content (including text, images, videos and so on) as they progress. You've doubtless consumed numerous eLearning courses in the past. Perhaps you've taken some vocational courses. Maybe you've taken online courses in service of your own personal development. Either way, an authoring tool was likely used to create the content in question.

In short, authoring tools are software that you can use to develop your own eLearning courses. This means we really can all be authors in our own right, regardless of our experience level or technical expertise.

How Do They Work?

In the early days of online learning, producing eLearning courses was a costly and time-consuming process.[33] As all courses had to be produced from scratch, it was necessary to involve subject matter experts, designers and programmers as part of the process. Authoring tools were designed to open the production process up to a wider audience by removing the need for any technical expertise.

Authoring tools have a simple user interface and a range of functionality that can be operated without any technical know-how. In other words, you don't need to be a master coder to produce instructive digital content. Of course, there is still a learning curve associated with using an authoring tool. This is true for any software. But it's significantly easier to learn how to use an authoring tool than it is to learn how to code.[34]

What's more, your authoring tool will ensure that your course is developed in line with industry compatibility standards. These standards are technical specifications that enable you to upload, access and report on your courses via a learning management system. Failing to meet these standards is like trying to squeeze a videotape into a DVD player. Thankfully, if you use an authoring tool, you won't need to worry about compliance issues.

What's The Process?

Whilst authoring tools all serve the same purpose, they often do so in different ways. No two authoring tools are exactly alike. They offer different feature sets and unique focuses. For instance, some authoring tools focus on rapid content development, whilst others look to deepen the level of interactivity you can provide through your eLearning courses.

To help you understand how authoring tools typically work, we will now walk you through a simple step-by-step guide to creating eLearning courses using Genie.[35] Genie is Growth Engineering's very own authoring tool. Its intuitive builder and template system empowers you to create gamified and game-based content in record time — with no technical expertise required.

- **Step 1:** Gather and upload all your instructional assets (videos, images, audio, questions, etc.) to your Genie instance.
- **Step 2:** Use these assets to populate your content slides. You will see a preview of your content as you start building.
- **Step 3:** Start to layer game mechanics into your content to drive engagement. You can add experience points, badges, leaderboards and timers.
- **Step 4:** Select a game template or use a standard training template. This helps to define the look and feel of your course.
- **Step 5:** Review and export your content. You can select from a variety of different formats, including SCORM 1.2, SCORM 2004, xAPI and cmi5.

Sharing Your Courses

You use an authoring tool to create eLearning courses. That is where their utility ends. They are not designed to help you share your newly developed courses with your audience. However, they will enable you to export your content, so you can upload it to another compliant system and distribute it to your learners. In most cases, this will be a learning management system, such as The Academy LMS.[36]

TOTAL RECALL MENTAL BLOCKS SPACE BLOCKS

To do this, you will need to export your course in a format that you know is compatible with your learning system. Your export should create a .ZIP file that you can upload to your LMS. By meeting compatibility standards, you ensure that your course will run smoothly on your platform and produce any reporting data that you may require.

eLearning Outputs:

As previously noted, there are a variety of standards and specifications for eLearning courses. These specifications define the communication between your course and the host system (such as a learning management system). Your authoring tool should enable you to export your content to meet a variety of specifications.

We have detailed the key standards below.

- **AICC:**[37] This stands for Aviation Industry Computer-Based Training Committee. If an eLearning course is AICC compliant, then it meets the guidelines and recommendations that were set by this committee back in 1993. Unfortunately, the AICC no longer updates or maintains this specification.
- **SCORM:**[38] This acronym stands for Sharable Content Object Reference Model. The United States Department of Defense created this specification back in 1999. Both SCORM 1.2 and 2004 remain very popular to this day, despite the rise of newer and more advanced specifications.
- **xAPI:**[39] This is a relatively new specification for eLearning courses. It stands for Experience API. You may also hear it referred to as 'Tin Can API'. It captures more data than SCORM and includes the ability to record information relating to informal learning experiences. It also helps to make learning data more portable, as it can be easily transferred to different Learning Record Stores.
- **Cmi5:**[40] This is the new kid on the block! It stands for 'computer managed instruction'. Many see cmi5 as the bridge between the rigid formality of SCORM and the flexible informality of xAPI. This simplified modern specification continues to increase in popularity.

Before selecting your output, you should check which file formats your learning management system is compatible with. Select the most appropriate format and you are good to go!

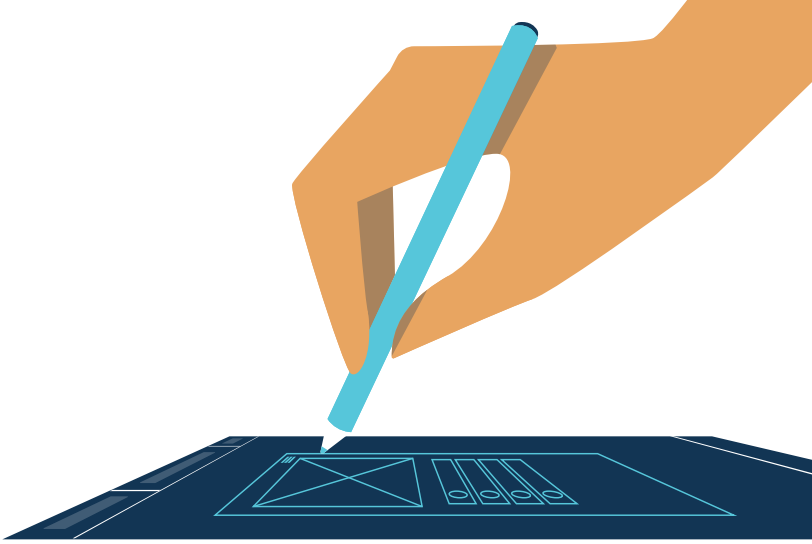
Why Should I Use an Authoring Tool?

Authoring tools democratise the eLearning production process. Before they were introduced, creating eLearning courses was an expensive and time-consuming business. Very few organisations could afford to make this kind of investment. Thankfully, authoring tools soon arrived to level the playing field.

They put control back in the hands of learning professionals, instructors, teachers and subject matter experts everywhere. These individuals no longer had to rely on programmers and tech wizardry to make progress. Authoring tools make course creation and customisation simple. Exporting your new content out of your authoring tool is also a simple process.

Whilst many organisations may choose to rely on third-party courses, or bespoke eLearning development services, those who wish to cut costs and remain truly agile should consider purchasing an authoring tool. It could be the best decision your learning and development department ever makes.

How to Build a Flawless eLearning Production Process



Even with a good authoring tool in place, creating truly great eLearning content isn't easy. It requires bright minds coming together, executing a project plan and following a defined process. Unless you've created online learning courses in the past, it can be difficult to know where to start.

But don't despair. We've mapped out our unique eLearning production process below, so you can see how we approach this challenge.

This model has never steered us wrong. It's allowed us to create super-engaging online learning content for a wide variety of global clients. It's also helped us to remain fleet-footed whilst maintaining the quality of our work. But before we share our eLearning production process, let's start with a definition. We'll then seek to understand why following a production process is so critical.

What is an eLearning Production Process?

Sadly, good eLearning units don't grow on trees. Creating high-quality online courses requires a clear and replicable production process. This process contains all the steps and actions you need to achieve your learning goal and develop your online courses.

It also gives your approach structure, so that you know exactly where you are in the production journey at all stages. In other words, it provides you with a foundation for true learning greatness. How does that sound?

Why Is It Important to Have an eLearning Production Process?

There is no clearly defined path to eLearning production success. Whilst most modern eLearning production models are a variant of ADDIE, they all tend to have their unique quirks. Because each project contains so many variables, it's often necessary to alter your approach.

You will often find yourself working alongside different personnel, using new tools and creating content for a variety of audiences. With so many moving parts to keep track of, having a process to follow and fixed rules can feel limiting.

But processes drive efficiency.[41] Every time you work through a process loop you become more effective. You apply what you learned from the previous loop to your current experience. Soon enough, you learn to reuse tools and templates to your advantage. You'll also come to see the value that clear goals and milestones offer. Finally, you learn to communicate meaningfully[42] with team members and stakeholders. Together, you start to develop a common language.

We're about to explore the ten-step model that we use to create engaging online learning content here at Growth Engineering. This approach has served us well in the past. We recommend using it as a template for your approach and adapting it as necessary to suit your needs. We'll start by exploring the different steps involved before comparing it to the ADDIE framework.

Step 1. Build a Project Plan

First things first, you'll need a battle plan. Before embarking on any real work, you should create a clear Project Plan. This can be done as a customisable document, or by using project management software.[43] Your project plan should include the following details.

- Project scope and goals
- Key roles and responsibilities
- Major milestones and deliverables
- Work breakdown structure
- Associated budget
- Communications plan
- Risk management plan

You may need to make slight variations to this structure, based on who is involved in the project. For instance, if you are the lead and have final sign-off on the content, then you may be able to scale back your communications plan section significantly.

Your Project Plan is the backbone of the process. With this in place, everybody involved in the project will know what to expect and when to expect it. This will ease any anxiety and make it easier for stakeholders to arrange time to review, amend and sign off your eLearning content.

Step 2. Conduct Training Needs Analysis

Once you've nailed your Project Plan it's time to set a goal. At this stage, you should conduct a full training needs analysis. As previously mentioned, this process will help you to determine the training and development needs of your audience. It will enable you to understand what skills and behaviours they will need to advance.

It will also give you clear visibility of their current capability. With this big picture understanding, you'll be able to focus your efforts in the right way to save time, money and effort. Ultimately, it will help you to funnel investment into areas that will deliver the best possible return. By the end of the needs analysis, you should be able to clearly articulate the learning objective(s) you will be focusing on during this intervention.

Step 3: Create a Specification Document

Now that you know where you need to go and how quickly you need to get there, it's time to create a blueprint for success. Your goal at this stage should be to create a 'Specification Document' that will act as a design plan for your online course. It should contain the following details:

- **Instructional strategy:** What techniques will you embrace to achieve your learning objectives? How will you present information to your learners? Where will you focus your efforts? Will you utilise any game mechanics?
- **Design strategy:** What will your content look like? Will it follow a set of clear brand guidelines? If possible, you should create a mock-up so all parties involved have a clear vision of what's to come.
- **Hardware & software requirements:** Consider how your learners will access your content. Ensure it is developed in such a way that it will allow the content to run smoothly on their devices and prevent technical issues.
- **Localisation options:** Establish whether your content will need to be translated into multiple languages. Determine your process for doing this.
- **Course tracking:** Ensure you are clear on how you will report on the success of your course. How will you gather feedback? Will you have access to all the data you need?
- If you are creating this course alongside other stakeholders, make sure they are given an opportunity to review, provide feedback and sign-off your Specification Document. This document sets the tone for everything that is to come, so it's essential that you get it right. If you put in the work at this stage, everything else should be smooth sailing.

Step 4: Create a Content Outline

It's time to get your creative hat on and flex your instructional muscles. At this stage, you'll be creating a 'Content Outline' document. This document will list all the different stages that learners will go through as they complete your online learning content. In turn, it helps all parties involved to understand how your courses will be structured, what assets will be required and how learning objectives will be met. Your Content Outline should include a breakdown of the following:

- Titles of slides
- Purpose of slides
- Format of slides (text & image, video, quiz, etc.)
- Duration of slides
- Game mechanics incorporated
- Total number of slides
- Total duration

Once you've created this document, ensure any relevant stakeholders have had an opportunity to review it. This will help you to identify any critical omissions and ensure you are on the right track.

Step 5: Build a Prototype

At this stage in the eLearning production process, we recommend that you give all parties involved a feel for what your final course will look like. Fire up your authoring tool and create a short demonstration unit that contains a few prototype screens. Try and create at least one example slide for every different slide type you will use in your course.

This prototype unit should be created in line with your Specification Document. Any variations should be documented and explained as necessary. Your prototype is important because it gives everybody an opportunity to provide actionable feedback early on in the production process. This can save you a significant amount of time and effort in the review stages later on.

Step 6: Storyboard Your Content

Now it's time for you to roll your sleeves up and demonstrate your content mastery. The Storyboard stage is the most time-consuming step in the eLearning production process. At this stage, you will need to map out every single element of your course in painstaking detail. This document will outline all visuals, text, audio, video and interactions that will be included within your course.

Once it has been approved it will act as the blueprint for any designers or developers who will be supporting you in building the course. You should ensure other parties are given ample time to review your storyboard. This will prevent issues later in the process. After all, it's significantly easier[44] to change a video script than it is to update or amend a completed video.

Step 7: Create the Alpha Build

You now have everything you need to start creating your content. This is where the fun begins. Load up your authoring tool and start building. Use your Storyboard and Specification documents to guide your work. Add your text, drop in any required assets and layer in game mechanics to drive engagement. Give your course a thorough review before handing it over to any other parties involved to seek further feedback. The Alpha Build of your course is now complete.

Step 8: Create the Beta Build

There's nothing too complicated about this stage. Simply take the feedback you received from the Alpha Build and make any necessary amendments to your content. When you've finished, your Beta Build will be ready. You should give it another review and then reissue this to any stakeholders involved in the process. This will be their last opportunity to provide you with actionable feedback.

Step 9: Create the Gold Build

Collect any feedback you receive from sharing the Beta Build of your course and make any further necessary changes to your content. Generally speaking, you should not be making major revisions at this stage. This is simply an opportunity to check that the amendments made to create the Beta Build were satisfactory. If there are no further changes necessary, then your final eLearning package is ready. This is called the 'Gold Build'.

Step 10: User Acceptance Testing & Signoff

You're approaching the finishing line now. You should upload your course into your learning environment and check that it works as expected. If it performs well, then we would recommend that you conduct a User Acceptance Test[45] (UAT).

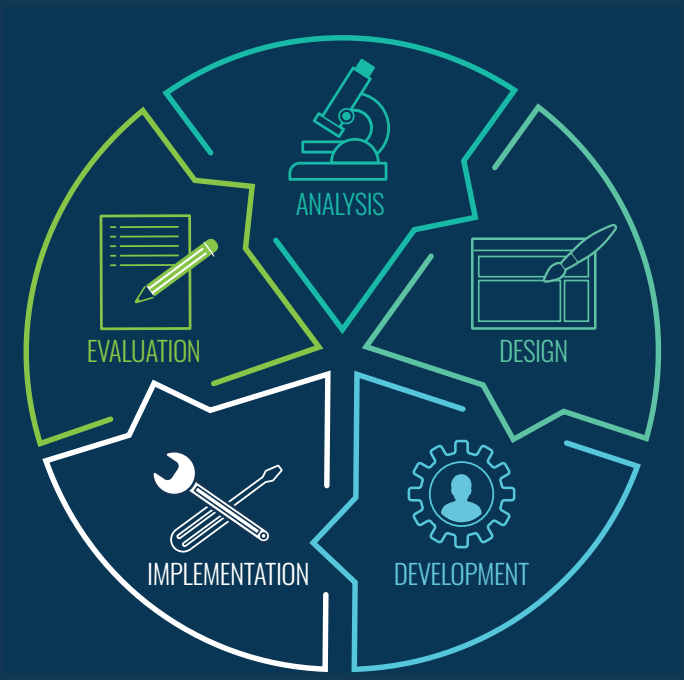
In this process, you will select a small group of users to run through the content and confirm that it works as described in your Specification Document. You can also use this opportunity to collect detailed feedback about your course. This feedback could be used to inform future projects.

If your test users are happy, then you're ready to push your content out to the rest of your audience. Congratulations, you've done it! Your online course is ready to rock. Now you just need to prepare yourself for a flood of positive feedback!

Similarities to ADDIE:

The eLearning production process outlined above is an adapted version of ADDIE. This popular instructional design framework has helped instructors to produce effective learning experiences for decades. It was first formulated by the US army in the 1970s and remains popular to this day within the corporate learning space.

Each letter within ADDIE signifies one of the steps in the overall process. We've detailed each step below and how it links to our production approach.



- **Analysis:** During the first stage of ADDIE, you analyse the training needs of your audience and pull together your learning objectives. This is very similar to our production process, although it skips over the all-important project planning stage.
- **Design:** During this second stage, you start to design a workable learning solution. In our production process, this is where you would create all the supporting documentation. This includes the Specification Document, Content Outline and Storyboard.
- **Development:** During the third stage of ADDIE, you roll your sleeves up and start building your learning experience. In our production process, this is where you would produce the Beta, Alpha and Gold Builds of your online learning course.
- **Implementation:** During stage four, you share your content with your chosen audience. In our process, this is where you would upload the course to your learning environment and provide access to your end-users.
- **Evaluation:** The final step of ADDIE involves gathering feedback relating to your learning experience. This is also the final stage of Growth Engineering's production process

Embracing Iterative Prototyping

Some have argued that ADDIE is too rigid and time-consuming[46] to work within a modern learning and development context. They suggest that this approach prevents rapid content production from taking place. But this is only true if you don't adapt ADDIE and add in opportunities for iteration and optimisation. This is how we came to create our own production process model.

There are multiple opportunities for stakeholders to review and provide feedback throughout our eLearning production process. Over time, these tasks become second nature and you're able to start using existing documents as templates for future documents. As a result, every element of the course is iterated and optimised until it achieves the targeted learning objective in the most effective manner.

A Scientific Method

Creating truly effective online learning content is a science, not an art form. Exercising your creativity can have amazing benefits. But, the secret to success lies in following a clearly defined process. Once established, you'll soon find that your production process helps you to be both more efficient and more effective. The result is online learning content that's high impact and drives real business impact.

Our eLearning production process is a variant of the popular ADDIE framework that provides plenty of opportunities for iteration and optimisation throughout. It incorporates traditional training needs analysis, key planning documents, three different build stages, implementation and evaluation. It's clear and easy to follow, with numerous stages where we can seek feedback to optimise our approach.

Why not try it for yourself and see how effective it is?

Your Guide to eLearning Course Structure

With a production process in place, you can start to think about how you will construct your courses. Whether you're a seasoned instructional design veteran or a complete content creation greenhorn, your eLearning course structure matters. In fact, a good structure is often the difference between learning success and complete and outright failure. The stakes are high.

After all, a good course structure helps to guide your learners through your content. It provides milestones, progress markers, regular breaks and plenty of variety. This ensures your learners arrive at their destination satisfied and well informed.

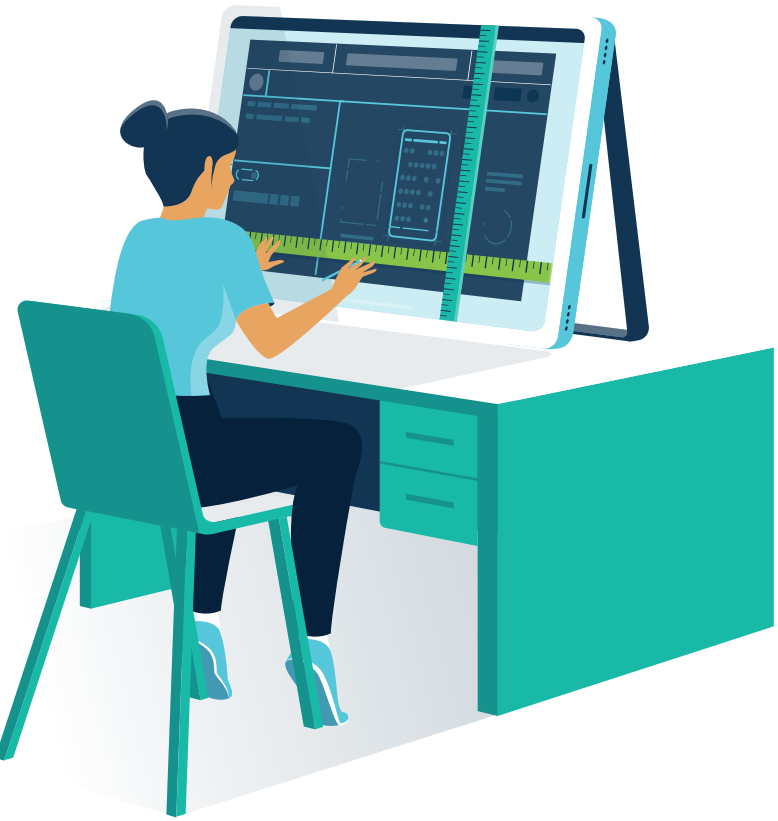
In this sense, a good course structure acts like Virgil guiding Dante through the Nine Circles of Hell. We just hope that's not a suitable point of comparison for your content.

You'll be pleased to hear that we've also put some thought into the structure of this section of the guidebook. As we progress, we'll provide a definition of course structure, discuss why it matters and share some examples that we've found to be effective.

What is Course Structure?

What do we mean when we talk about the structure of an online learning course?

Structure refers to the arrangement or organisation of interrelated elements within a complex system or object of some kind. In other words, the structure of your online courses is determined by how you have arranged your topics, sub-topics and individual learning elements in relation to each other.



As the folks at Carnegie Mellon University[47] put it, 'course structure refers to the choice of topics and the organisation and sequencing of course content'. As such, when you move a content slide within your unit, you are making a structural change to your course.

Why Does Course Structure Matter?

The structure of your course helps to determine how your learning objectives will be met. If your course is poorly structured, it may be difficult for your learners to achieve these objectives. After all, if a bridge is poorly constructed, travellers may be unable to get from one side to another.

eLearning helps learners to retain 25-60%[48] of content, compared with just 8-10% in face-to-face training. This is because your eLearning course structure can be used to keep pulling learners back in with engagement features and interactivity.

As a content creator or instructional designer, your goal should be to guide your learners through your course with as little friction as possible. In turn, you should also use your course structure to deliver clear educational outcomes.

Imagine trying to read a book without a beginning, middle or an end. You'd likely lose track of the plot pretty quickly (if you managed to grasp it in the first place). Likewise, watching a film that demonstrates a complete disregard for narrative structure can often be a painful experience.

Whilst there are exceptions to this rule, success can usually be found by holding firm to conventional structures and forms. We believe there are four key reasons why the structure of your course matters. Let's break them down.

1. Course Structure Guides Your Learners

To successfully communicate an idea, you need to present it in a certain way. This usually involves a welcoming and informative introduction[49] that sets the learner up for success. This is then followed by a series of coherent learning materials that are presented in a logical sequence.

This sequence should allow knowledge to build over time. Any new information presented, should help to develop the learner's mastery over the topic at hand. Finally, you will need a purposeful conclusion to help wrap things up.

Without this simple structure, your course will feel illogical to your learners and it may be difficult for them to make progress. Your course structure should take your learners by the hand and guide them through the journey, regardless of how tricky it may be.

2. Course Structure Maintains Learner Engagement

There's more to your course structure than simply laying out your learning materials in a logical flow. You also need to ensure that you maintain your learners' attention throughout. With a variety of distractions to attend to, this can often be difficult. That's why it's so vital that your course has an engagement focus.

To prevent your learners from tuning out, you should ensure your course contains a variety of multimedia assets. Don't rely too heavily on text and images to communicate your ideas. Ensure you also incorporate video content (however basic it may be), interactive elements and quiz questions to check your learners' progress.

If you find yourself sticking to one learning approach too often, then that's a sure sign that you need to mix things up. After all, variety is the spice of life.

3. Course Structure Carves an Efficient Path

The structure of your course serves another critical role. It should ensure that information is delivered to your learners in the most efficient manner possible. Remember, your learners are busy people[50] with many responsibilities to attend to. As such, it's important that your course communicates its core ideas in a streamlined and dynamic fashion.

This means that you should avoid treading over old ground (unless you are intentionally attempting to reinforce information) or meandering away from key learning points. You can achieve this goal, by ensuring that you have a clearly stated learning objective and challenging yourself to achieve this ambition in the shortest time frame possible.

4. Course Structure Provides Suitable Breaks

Last but not least, your course structure should prevent your learners from ever feeling overloaded with information. As John Sweller noted when developing Cognitive Load Theory,[51] our working memory only has a limited capacity. It can only hold four to five pieces[52] of new information at any one time.

As such, we need a tailored instructional approach that presents information in an easy to digest format. This is partly achieved by efficiently communicating information.

But your course structure should also ensure regular breaks[53] are programmed into the learning journey. This can be easily accomplished by breaking your content down into topics and focused sub-topics. This limits the size of your course and makes your learning objectives easier to achieve.

Where to Start?

Now we know why course structure matters, we are in a better position to begin developing course structures of our own. But where's the best place to start?

The structure of your course will vary depending on the nature of the content you are covering. For instance, a course that covers health and safety protocols for your organisation will have a different structure than a course that covers presentation skills. There is no one-size-fits-all course structure.

As such, you should start by conducting a full training needs analysis. Your analysis should enable you to develop a clear learning objective for your course. You can then start thinking about the most efficient route to achieve this goal.

By keeping the objective in mind, you can make informed decisions about which content to include, which instructional methods to use and how you'll check that your learners have taken the information on board.

Make It Micro

Did you know that the average adult loses focus after just seven minutes?[54] You have limited time with your learners. As such, it's important that you make good use of it. Where appropriate, we recommend breaking your course content down into the smallest possible microunits.

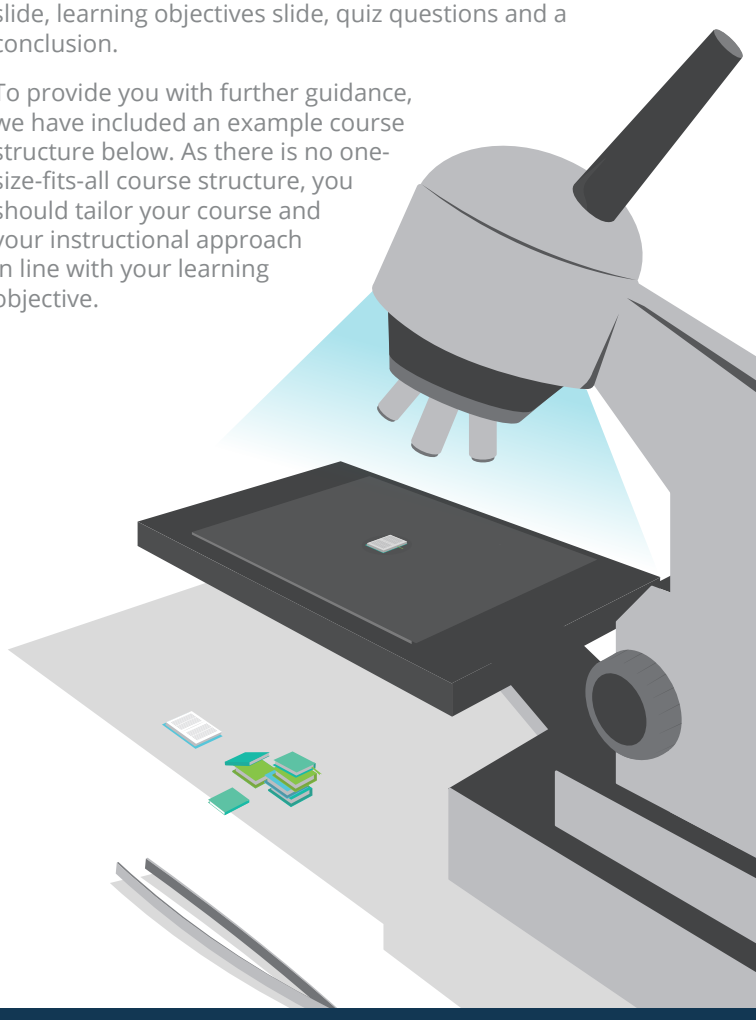
To do this, you should take your overarching topic and divide it into subtopics, each with their own unique learning objective. You can then map a logical content flow to each subtopic. Challenge yourself to communicate your ideas in a more efficient and engaging manner. Keep iterating and fine-tuning your course structure until it's the best possible version of itself.

Whilst a microlearning approach places limitations on the amount of information you can present to your learners, it does provide other advantages. It couples neatly with a campaign learning approach to help aid spaced repetition. It's also more engaging, offers more flexibility and it's easier to digest. This usually results in higher knowledge retention among your learners. What's not to love?

Setting The Structure

If you've followed the steps above, then your course structure should come together in a natural and organic way. You should ensure that you've included a title slide, learning objectives slide, quiz questions and a conclusion.

To provide you with further guidance, we have included an example course structure below. As there is no one-size-fits-all course structure, you should tailor your course and your instructional approach in line with your learning objective.



An Example Course Structure

- Title Slide: This is the first slide learners will see when they launch the course. Your title slide should articulate the focus of the content. It should also drive anticipation and excitement about the upcoming learning journey.
- Setup Slide: Your next slide should inform your learners about any requirements relating to your course. This is your opportunity to encourage learners to optimise their learning environment.
- Learning Objectives Slide: You should state the goal of your course upfront, so your learners understand where this journey will take them. This provides useful context for your learners as they navigate through your content.
- Introduction Slide: You're now ready to launch into your content. You should start by introducing the topic with a broad overview. A good introduction identifies the topic, provides context and provokes interest.
- Discovery Method Slide #1: Ask your learners what they expect to get out of the course. This approach helps your learners to set their own goals, which can increase their buy-in. Within the Genie Content Authoring Tool, this can be achieved by using the 'Discovery Method'[55] question type.
- Content Slides: You will use these slides to communicate the ideas and concepts that will drive your audience towards your pre-set learning objective. Remember to offer a variety of multimedia assets to maintain your learners' interest.
- Quiz Questions: Quizzes offer learners an opportunity to review[56] what they've learned and ensure they understand the key concepts of your course. We recommend including 3-5 quiz questions at the back-end of your course.
- Discovery Method Slide #2: Before you wrap things up, be sure to check back in with your learners. Ask them if they got everything they wanted from the course. Prompt them to reflect on what they've learned. This is a great way to drive home the information you've presented.
- Conclusion Slide: You've made it! Your conclusion should briefly restate the main points of your course. We also recommend including a final thought that highlights the significance of what's been learned and a call to action that spurs your learners on.

Your Framework for Success

This brings us neatly to the conclusion of this section of the guidebook.

Your eLearning courses are not formless masses. They have a meaningful shape and structure to them. By taking the time to develop a good structure for your courses, you are working to ensure you can deliver against your learning objectives. This process fine-tunes the learning experience for your knowledge-hungry audience.

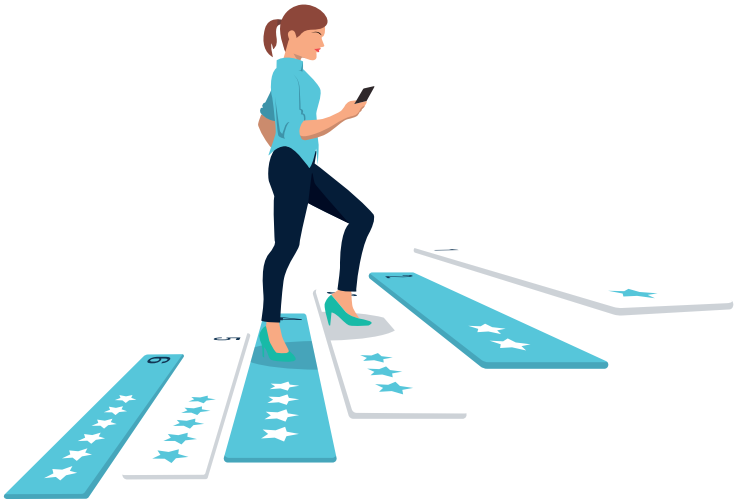
Part of this undertaking involves breaking your content down into easily digestible chunks. This microlearning approach makes your content easier to consume and helps to improve learning outcomes.

Plotting your course structure is a continuous process. It often requires iteration and optimisation. But you must get it right. A good course structure provides a framework for learning success. Without it, you're leaving everything up to chance.

Instructional Design Best Practice: 6 Essential Tips

If you don't follow instructional design best practice, then knowledge transfer simply won't happen. As a result, your learners won't change their behaviour and your course won't leave a lasting impact. This has a damaging knock-on effect. According to a recent report,[57] large businesses lose an average of $47m in productivity every year because knowledge is not shared efficiently among team members.

On the other hand, following instructional design best practice can have a transformative effect. You can help your learners to understand and apply new concepts, pick up new skills and embrace new (and more effective) ways of working. Over the course of this section of the guidebook, we'll outline six different instructional design best practices that you can adopt to start creating better learning experiences. The holy grail of meaningful learning impact will soon be within your reach.



Tip 1: Communicate The Benefits

All learning experiences represent a time investment on the part of your audience. Your learners have many different responsibilities to juggle. It can be difficult to set aside dedicated time for professional development. To justify this investment, your learners will want to know: 'what's in it for me'?

For your content to be 'sticky', learners need to instantly grasp why it matters to them, their colleagues and their organisation. The benefits of applying what they are about to learn in your workplace should be made as clear as possible. You should ensure you have communicated your key learning objectives and any associated benefits.

Where possible, these benefits should inform the rest of your content. For instance, don't title your content something generic like, 'Health & Safety 101'. Call it, 'How to Stay Safe & Healthy at Work'. This will help to motivate your learners into action and drive their focus throughout the learning experience.

Tip 2: Keep Your Learners Active

We learn best by doing. As learning expert Cathrael Kazin puts it:[58] 'learning and engagement are intertwined' and 'passivity is the death knell of engagement'. In other words, it's tough to make progress when you're sitting still. You can't learn to ride a bike without actually riding a bike.

There is a bounty[59] of[60] evidence to suggest[61] that active learning experiences result in better educational outcomes. For instance, a 2014 study[62] found that students in a traditional lecture course are 1.5 times more likely to fail, than students undergoing active learning experiences.

This means that instructional designers can't get away with simply delivering information. You must encourage your learners to get active. To do this, try asking open questions and encouraging your audience to apply what they've learned to different contexts. Use quiz questions and scenario-based learning to regularly check their knowledge. Better still, encourage group activities or challenges through social streams or web conference break-out rooms.

Tip 3: Tell a Story

We are programmed to remember more information if it's delivered in a story format. Indeed, if you can forge an emotional connection between your content and your learners, you'll soon craft learning experiences that linger long in the memory.

According to studies by noted psychologist Jerome Bruner,[63] you're twenty times more likely to remember information if it's delivered in narrative format. As instructional designers spend their lives doing battle against 'The Forgetting Curve', they must use every possible weapon to their advantage. Utilising the power of narrative can help you to turn the tide.

Bruner's research is also supported by organisational psychologist, Peg Neuhauser.[64] Her studies found that we remember stories not just more accurately, but also for longer than simple facts and figures. Weaving a narrative pathway through your content is often the difference between retention and attrition.

Tip 4: Embrace Mobile Magic

Did you know that we touch our phone screens an average of 2,617[65] times a day? Worse still, we spend an average of four hours a day[66] glued to our devices. We are well and truly hooked. There's even a word for the sense of anxiety we feel when we are without our phones: nomophobia.[67] Whilst this may trigger existential despair for some, the addictive relationship we have with our phones does come with some benefits.

For example, the ease and accessibility of mobile devices make them the perfect medium for delivering transformational learning experiences. Indeed, according to Towards Maturity,[68] 64% of learners find accessing content from their mobile device *essential*. They don't *just* see it as important, or beneficial. They see it as fundamental and indispensable to the overall learning experience.

When you are creating your content, ensure it is fully mobile responsive and accessible on your learners' devices. Ideally, your learners should be able to download the content to their phones, complete it offline and sync the results up when they have a live connection. This convenience factor will help to improve uptake, increase engagement and produce meaningful results.

Tip 5: Gamify Your Content

Engagement and online learning often seem like two opposing forces. Luckily, it is possible to create online courses with real educational value that also happen to be fun. If you've followed our tips, you should have already concocted a learning experience that engages and delights your learners. Now you can supplement this further by introducing game mechanics into the mix.

Gamification is the application of gaming mechanics to non-gaming environments to make difficult tasks more palatable. Common game mechanics include Experience Points, Badges, Levels and Leaderboards. Incorporating these game elements into your learning experience allows you to tap into some powerful human emotions.

We all love to collect things. We also love to compete against others. And we love to see indicators of our progress. Game mechanics are known to trigger the release of dopamine.[69] This feel-good hormone will encourage your learners to keep coming back for more. Ultimately, gamification makes your learning experience more fun, more engaging and more effective.

Tip 6: Remember to Reinforce

The Forgetting Curve is a truly merciless adversary for instructional designers. According to Herman Ebbinghaus's research, we forget 50% of everything we learn within just 24 hours. The only way to combat the curve is to regularly reinforce the information you present to your learners. To do this, you can use techniques like spaced repetition to construct a simple and effective programme of reinforcement.

By drip-feeding microlearning units to your learners, you help to space out the learning experience and reinforce key concepts. You should also use follow-up quizzes and assessments to ensure information is retained over time.

Furthermore, we recommend using a social stream within your learning platform to set challenges for your learners. Perhaps you could ask them to upload video evidence of them putting what they've learnt into action, in return for Badges and Experience Points.

It can also be helpful to introduce an element of competition. Here at Growth Engineering, we use 'Battles'[70] to supercharge the reinforcement process. Battles are player-vs-player quizzes based on the topics that matter most to your organisation. Most assessments only ever get completed once. Battles, on the other hand, are completed multiple times as learners strive to prove their mastery over a specific subject matter.

Now You're Ready to Make a Real Difference!

Creating an engaging and transformational learning experience isn't easy. Unfortunately, there is no one-size-fits-all approach to instructional design that results in meaningful learning impact.

However, there are things you can do to help sway the odds in your favour. By following instructional design best practice you can make a real difference. Start by assessing your audience and establishing their needs. You'll then be well placed to fine-tune your learning experience until it's perfectly optimised.

Once you've done this, you should take care to craft active learning experiences. Don't let your learners rest on their haunches. Embrace the power of narrative and produce content that is short and sweet. If possible, ensure your content is accessible via mobile devices and use game mechanics to incentivize your learners into action.

If you can pull all this off, you should end up with a potent learning cocktail. One sip and your learners will fall in love. Then you can sit back and watch your audience embrace new behaviours and ways of working that generate the results that you want to see.

Over the course of this guidebook, we've defined instructional design, explored its history and assessed the common characteristics of the very best instructional designers. We've done a deep dive into the most popular learning theories and discussed the importance of conducting a rigorous training needs analysis. We've also shared our production process, alongside a recommended course structure and other best practice tips.

We believe that this will give you all the tools you need for success. You are now ready to create content with true instructional value. Content that is efficient, effective and engaging.

This won't necessarily be an easy process, but it will be a rewarding one. And when you've finished, you can rest secure in the knowledge that you've made a real impact in both the lives of your learners and on your organisation as a whole. Now that's what true success looks like.

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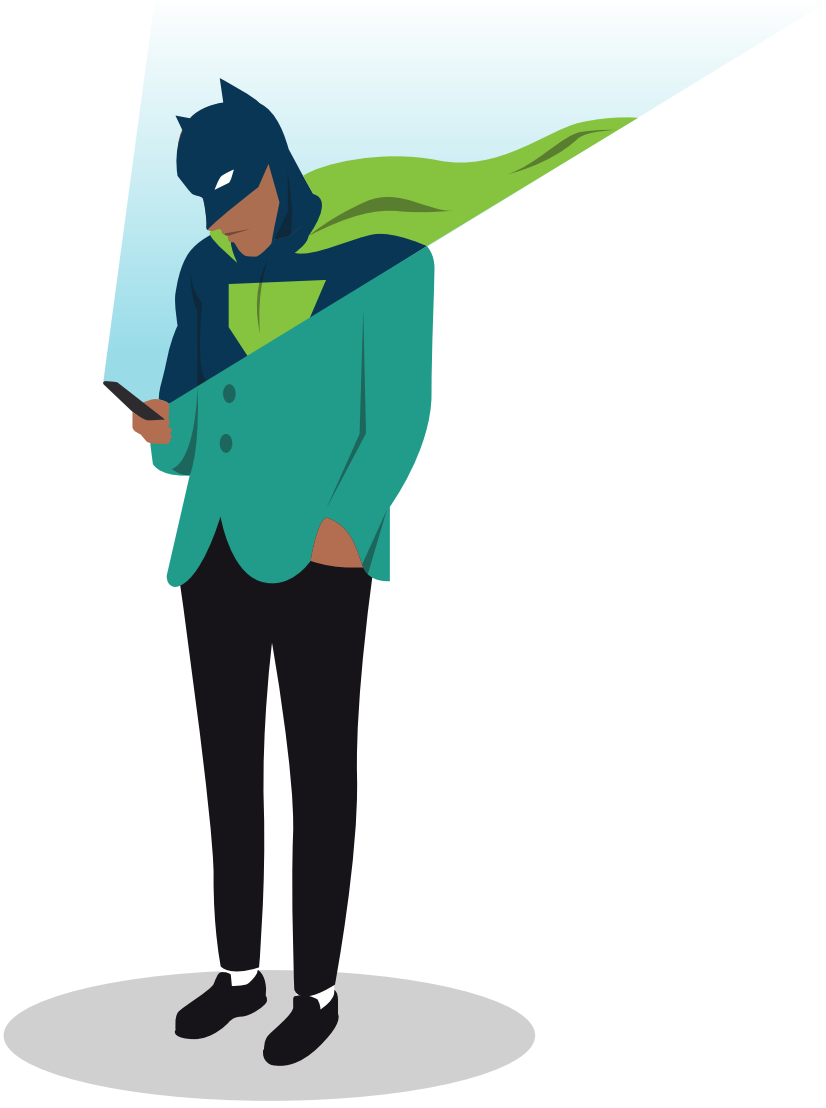

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