FOR PEOPLE WHO BUILD COURSES

The Evidence-Based Course Design Kit

Seven templates and eight evidence cards that put the research on how people learn to work in your next course.

01 · Learning objectives builder
02 · Retrieval Practice Kit
03 · Lesson storyboard
04 · Script sheet
05 · Quiz question bank
06 · Mixed-audience planner
07 · Course design audit
08 · Evidence cards

START HERE

How to use this kit

Each template does one job in a course build, in the order below. Use the whole set on a new course, or pick the one that fixes the problem in front of you. Every page says which research it's built on and where to read more.

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01 **Learning objectives builder** — DESIGN
Say what learners will be able to do, so every later decision has a target.

02 **Retrieval Practice Kit** — DESIGN
Plan when each key idea is recalled again across the course.

03 **Lesson storyboard** — DEVELOP
Lay out each lesson screen by screen before you build anything.

04 **Script sheet** — DEVELOP
Write narration that sounds human and matches what's on screen.

05 **Quiz question bank** — DEVELOP
Write questions and feedback that teach as well as test.

06 **Mixed-audience planner** — DESIGN
Give beginners support and experienced learners a faster route.

07 **Course design audit** — EVALUATE
Score a finished course and decide what to fix first.

08 **Evidence cards** — ANY TIME
Keep the principles beside you while you work, or share them with a team.

HOW WE RATE THE EVIDENCE

Strong: consistent results across many studies and reviews, including with real learners in real courses.
Moderate: consistent experimental support, but mostly from labs, one research programme or one kind of learner.
Emerging: early, small or mixed studies. Worth trying, but don't expect a guaranteed effect.

EDITABLE VERSIONS

Every template is also a Google Doc or Sheet. Open the link in your welcome email, choose File › Make a copy, and it's yours. Copies open in Word and Excel too.

TEMPLATE 01 · DESIGN

Learning objectives builder

01

One objective = one thing a learner will be able to *do* afterwards, that you could watch them do. Write the assessment task beside it, so the two can't drift apart.

WORKED EXAMPLE

Vague goal	~~Understand bank reconciliation~~
Objective	**Reconcile** one month of bank transactions against the ledger (condition: using the course spreadsheet), (standard: with every difference explained).
Level	Apply
Assessment	Reconcile a sample month with three planted errors; find and explain all three.
As a question	*"Can you make your bank statement and your books agree, and explain any difference?"*

OBJECTIVE A

After this, learners will be able to... (one observable verb)

Conditions (tools, information, setting)

Standard (how well, if it matters)

Level of thinking (circle one)

REMEMBER · UNDERSTAND · APPLY · ANALYSE · EVALUATE · CREATE

Assessment task: what will they do to show it?

OBJECTIVE B

After this, learners will be able to... (one observable verb)

Conditions (tools, information, setting)

Standard (how well, if it matters)

Level of thinking (circle one)

REMEMBER · UNDERSTAND · APPLY · ANALYSE · EVALUATE · CREATE

Assessment task: what will they do to show it?

OBJECTIVE C

After this, learners will be able to... (one observable verb)

Conditions (tools, information, setting)

Standard (how well, if it matters)

Level of thinking (circle one)

REMEMBER · UNDERSTAND · APPLY · ANALYSE · EVALUATE · CREATE

Assessment task: what will they do to show it?

- ☐ Could I watch someone do this? ("Understand" and "know" fail.)
- ☐ Is it small enough to practise in one lesson?
- ☐ Does the verb match the level I really want?
- ☐ Does the assessment task ask for the same thing?

Built on: our guides to writing learning objectives and using Bloom's taxonomy. Read more at thelearningcurve.net/guides/how-to-write-learning-objectives/

TEMPLATE 02 · DESIGN

Retrieval Practice Kit

Retrieval practice means asking learners to recall what they've learned, rather than re-read it. Spacing means coming back to it after a gap. This grid plans both.

HOW TO FILL IT IN

1. List the ideas learners must still know at the end, one per row.

2. Mark where each is first taught.

3. Add at least two later recall points, in different modules.

4. Read across: any row with one mark is a gap.

KEY

- **T** Taught for the first time
- **Q** Quick recall question
- **S** Scenario: use it in a new case
- **A** Final assessment

Course: _____ Version / date: _____

Key idea	M1	M2	M3	M4	M5	M6	M7	M8	Final
e.g. Governance vs Management	T	Q		S					A
e.g. Notetaking in the Board Room		T	Q		Q		S		A
e.g. Responsibilities of the Board			T	Q					Gap

Built on: retrieval practice and spacing. Our library entries on both publish from 16 November 2026 at thelearningcurve.net/library/

TEMPLATE 03 · DEVELOP

Lesson storyboard

Module / lesson:

Objective (from template 01):

Reviewer / date:

Screen	Visual (sketch or describe)	Narration (exact words)	On-screen text (labels only)	Interaction and feedback	Accessibility notes
1		Write it to be heard: short sentences, "you", one idea at a time.	Key terms and labels. Full sentences belong in the transcript.	What can learners click, drag or answer? What do they see after each choice?	Alt text for the visual; anything that relies on colour alone.
2					
3					

One job per screen. If a screen needs two new ideas held together, it may be two screens.

Words explain the picture. Narrate the visual; don't read on-screen text aloud.

Labels sit on the thing. Put each explanation next to what it explains, not on the next screen.

End with a check. The last screen asks learners to do something with the idea.

TEMPLATE 04 · DEVELOP

Script sheet

Lesson / video: _____ Voice (who records it): _____

#	On screen	Narration, written to be heard	Words
e.g.	Phone screen: the app's My Shifts tab, the Log shift button highlighted.	At the end of every shift, you'll log it in the app. Tap My Shifts, then Log shift. It takes about a minute. If you skip it, the roster thinks you weren't there.	36
1			
2			
3			
4			
5			

Total words: _____ ÷ 150 = about _____ minutes Timed read-through: _____

Built on: the personalisation principle, dual coding · thelearningcurve.net/guides/elearning-script/

WRITE FOR THE EAR

People can't re-read speech.

Say "you" and "we", and use contractions. Conversational wording has better evidence behind it than most writing advice.

One idea per sentence. Two commas and an "and"? Split it.

Put the action first: "Tap My Shifts", not "The My Shifts button should be selected".

Explain what's on screen; don't read it out.

Plan about 150 words a minute, then time a real read-through. Speakers vary a lot.

Read it aloud before anyone records it.

Evidence: Ginns, Martin & Marsh (2013), meta-analysis of conversational style; Mayer (2024). Details in the guide.

TEMPLATE 05 · DEVELOP

Quiz question bank

One row per question. Build every wrong option from a mistake learners really make, and write feedback that says why, so the question teaches as well as tests.

#	Objective	Stem: a complete question	Right answer	Wrong option 1 (the mistake it catches)	Wrong option 2 (the mistake it catches)	Feedback: why, and what to do next	Module
e.g.	B: reconcile a month	Your statement shows $15 less than your books. The only line you haven't recorded is "Account keeping fee $15". What should you do?	Record the $15 fee in your books as a bank charge	Change your book balance to match the statement (fixes the number, hides the cause)	Wait for the bank to correct it next month (assumes the bank is wrong)	The fee is real; your books just don't know about it yet. Record it as a bank charge and the two balances will agree. Never adjust a balance without finding the line that explains it.	M2, M5
1							
2							
3							
4							
5							
6							

Three options is enough unless you have more good wrong answers. Weak fillers only make guessing easier.

Take out the clues: the longest option, "all of the above", grammar that only fits one answer.

Explain every answer. "Correct" or "incorrect" alone doesn't teach.

Spread them out. Use the Module column to bring questions back later (template 02).

TEMPLATE 06 · DESIGN

Mixed-audience planner

06

Support that helps beginners, like fully worked examples, can slow down learners who already know the material. Build the beginner's route first, then give experienced learners a way past it. Use one page per module.

Module

Who's likely to know this already?

1 · THE QUICK CHECK: "WHAT WOULD YOU DO FIRST?"

Three tasks from this module. For each, learners pick their first step from options that run from the very first move to the finished answer.

a

b

c

Pass rule (e.g. all three right)

2A · BEGINNER ROUTE

Worked examples, then fading (below)

2B · FAST ROUTE

Straight to practice problems

If they struggle: link back to the worked examples

3 · FADE THE SUPPORT ON THE BEGINNER ROUTE

STEP 1

Fully worked example, every step shown

STEP 2

Last step left for the learner

STEP 3

Last two steps left

Whole problem, solo

4 · BOTH ROUTES END AT THE SAME ASSESSMENT

Module assessment

Make explanations optional (hint buttons, "show the steps")

Built on: the expertise reversal effect. A 2025 meta-analysis of 60 experiments (Tetzlaff et al.) found that giving beginners support helped more than withholding it from experts, so design for beginners first. thelearningcurve.net/library/expertise-reversal-effect/

TEMPLATE 07 · EVALUATE

Course design audit

SCORE ____ / 48

Score each check 0 (not yet), 1 (partly) or 2 (yes). Then fix the zeros, starting at the top: the earlier sections hold up everything below them.

1 · THE BRIEF	Before building
The learners are described: who they are, what they already know	0 1 2
The gap is named: what they can't do yet that the course will fix	0 1 2
The goal fits on one page and everyone working on the course has read it	0 1 2

2 · OBJECTIVES	Before building
Every objective uses a verb you could watch someone do	0 1 2
Each objective is small enough to practise in one lesson	0 1 2
Learners can see the objectives, ideally as questions they'll be able to answer	0 1 2

3 · ASSESSMENT	Before building
Every objective is assessed, and nothing is assessed that wasn't taught	0 1 2
Assessment tasks look like the real task learners will face	0 1 2
Learners know the criteria before they start	0 1 2
Assessment results come with feedback, not just a mark	0 1 2

4 · PRACTICE	First module
Every module has practice, not just the end of the course	0 1 2
Practice asks learners to recall or use ideas, not just recognise them	0 1 2
Earlier material comes back in later modules	0 1 2
Practice mixes problem types once the basics are in place	0 1 2

5 · FEEDBACK	First module
Feedback explains why an answer is right or wrong	0 1 2
Feedback says what to do next	0 1 2
Learners get another try after feedback	0 1 2

6 · CONTENT AND ACCESS	First module
Each lesson does one job, in short, learner-paced segments	0 1 2
Narration explains visuals instead of reading on-screen text aloud	0 1 2
Experienced learners can skip support they don't need	0 1 2
Captions, transcripts and alt text are complete	0 1 2

7 · PILOT AND EVALUATION	After pilot
Real learners tried the course before launch	0 1 2
Evaluation measures whether learners can do the task, not only whether they liked it	0 1 2
Question and drop-off data are reviewed and used to revise lessons	0 1 2

Built on: our online course design checklist and the library behind it. Each section links to the research at thelearningcurve.net/guides/online-course-design-checklist/

HOW MUCH FITS IN A LESSON

EVIDENCE: STRONG

Cognitive load

New information passes through a working memory that holds little and forgets fast. Give a lesson only as much new, interacting material as a novice can handle at once, and cut anything that adds effort without adding learning.

ON MONDAY
List the new ideas in your longest lesson. If more than one cluster has to be held together, split the lesson between the clusters.

Sweller, van Merriënboer & Paas (2019); Rey et al. (2019). /library/cognitive-load-theory/

TELLING LEARNERS HOW THEY'RE DOING

EVIDENCE: STRONG

Effective feedback

Good feedback tells learners where they're going, how they're doing and what to do next. It focuses on the task, explains rather than just marking, and arrives while learners can still use it.

ON MONDAY
Rewrite the feedback on one quiz so every wrong answer says why it's wrong and what to try next.

Hattie & Timperley (2007); Wisniewski, Zierer & Hattie (2020). /library/effective-feedback/

BEGINNERS AND EXPERTS

EVIDENCE: STRONG

Expertise reversal

Support that helps beginners, like worked examples, can stop helping or even hinder learners who already know the material. Giving novices support matters more than taking it away from experts.

ON MONDAY
Add a three-question "what would you do first?" check to one module, and let learners who pass skip the worked examples.

Kalyuga et al. (2003); Tetzlaff et al. (2025). /library/expertise-reversal-effect/

MYTH CHECK

EVIDENCE: STRONG (AGAINST)

Learning styles

The claim that people learn more when teaching matches their preferred style (visual, auditory, kinaesthetic) hasn't held up in properly designed experiments.

ON MONDAY
Drop the learning-styles questionnaire. Choose each format for the content: a diagram for structure, practice for a skill.

Pashler et al. (2008); Clinton-Lisell & Litzinger (2024). /library/learning-styles/

WORDS AND PICTURES

EVIDENCE: MODERATE

Dual coding

People process words and images in two connected systems, so information shown in both forms is easier to understand and remember. Explain a meaningful picture with narration at the same moment, keep on-screen text to key terms, and cut decorative images.

ON MONDAY
Find one slide where narration reads out the text on screen. Replace the text with a diagram and let the narration explain it.

Clark & Paivio (1991); Mayer (2024). /library/dual-coding/

ASKING WHY

EVIDENCE: MODERATE

Elaborative interrogation

Learners explain why a stated fact or idea is true, linking it to what they already know. It takes extra time and works best when learners can check their explanation against a model answer.

ON MONDAY
After one key idea, add a “Why does this work?” prompt, then show a model answer to compare with.

Dunlosky et al. (2013); Bisra et al. (2018). /library/elaborative-interrogation/

CHECKS THAT CHANGE WHAT HAPPENS NEXT

EVIDENCE: MODERATE

Formative assessment

Any check on learning whose result decides what happens next: a pre-check that routes learners, low-stakes quizzes that explain every wrong answer, self-assessment against a model, and question data you use to revise.

ON MONDAY
After your next cohort, find the quiz question most learners got wrong, and revise the lesson before it.

Black & Wiliam (2009); Bennett (2011). /library/formative-assessment/

MOTIVATION

EVIDENCE: MODERATE

Self-determination theory

People are most motivated when they feel capable, feel the choice is theirs and feel connected. Motivation built on interest and personal value predicts persistence; rewards and pressure don’t.

ON MONDAY
Open the module with the highest drop-off with two sentences on why it matters to the learner, and rewrite one “you must” as information.

Ryan & Deci (2000); Howard et al. (2021). /library/self-determination-theory/