The EMPOWER Model and the Interactive Lesson Planner:
A Framework for AI-Integrated Lesson Design in Higher and Further Education

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Abstract

The EMPOWER model provides a structured, seven-phase approach to lesson design in which learners move progressively from initial engagement through to purposeful reflection. It was developed in response to a real challenge educators are facing: generative AI (GenAI) is available, powerful, and increasingly expected in learning environments, yet without a design framework it tends to flatten lessons into content retrieval exercises rather than meaningful learning experiences. This article introduces the EMPOWER phases Engage, Motivate, Prompt, Organize, Work, Evaluate, and Reflect, explaing how an interactive web-based lesson planner operationalises the model for educators across disciplines and qualification levels. The planner is not a substitute for professional judgement; it is a design scaffold that helps educators produce coherent, objective-led lesson plans while keeping student authorship, critical thinking, and reflective articulation at the centre of the process. The article draws on established frameworks in instructional design, metacognitive learning theory, and AI literacy to situate EMPOWER within the broader scholarly conversation.

Keywords: EMPOWER model; lesson planning; generative AI; instructional design; reflective learning; Bloom's Taxonomy; AI literacy; metacognition; further and higher education

1. Introduction

There is a version of AI integration in education that looks productive but is not. Students submit prompts, receive responses, and hand in the results. Work gets done, deadlines are met, but the thinking happens elsewhere. The deeper problem is not cheating or not cheating it is the quiet disappearance of the cognitive effort that makes learning stick. This is the challenge the EMPOWER model was designed to address.

Educators across further and higher education are now expected to design learning experiences that are active, evidence-based, digitally literate, and genuinely responsive to varied learner needs (Beetham & Sharpe, 2019). GenAI intensifies the complexity of this task because it can plausibly support planning, explanation, drafting, feedback, and production, while simultaneously raising unresolved questions about authorship, accuracy, assessment validity, and ethical use (Selwyn, 2023; Holmes et al., 2022). A lesson design model is therefore most useful when it helps educators decide not only what learners will do, but why they are doing it and how learning will be evidenced, regardless of which tools were used along the way.

The EMPOWER framework was originally created by Adam Fachler, an education consultant, former middle school teacher, and co-founder of the School in the Square charter school in New York. Fachler developed the model to help teachers design learning experiences grounded in research on expertise and engagement, publishing it in Planning Powerful Instruction (Wilhelm, Bear, & Fachler, 2019), a Corwin Literacy text that articulates the seven-phase sequence as a practical canvas for unit and lesson design across grade levels and subject areas. The present article extends this foundational framework into the context of AI-integrated further and higher education, adapting the EMPOWER sequence to address the specific challenges that generative AI tools now pose for educators working at MQF Levels 3–6 and in continuing professional development. Each phase retains its original instructional logic while being reframed to position AI as a deliberate pedagogical tool rather than a passive shortcut. This article describes the adapted model, explains the rationale for an accompanying interactive planner, and considers how both can be used to make AI integration purposeful rather than incidental.

2. Theoretical Background

The EMPOWER model does not emerge in isolation. It draws on several well-established traditions in educational theory and instructional design, each of which addresses a distinct problem that AI-integrated teaching must navigate.

Bloom's revised taxonomy (Anderson & Krathwohl, 2001) provides the foundational premise that learning should be planned at the right cognitive level. The six levels remember, understand, apply, analyse, evaluate, create are relevant here because GenAI collapses the effort required at the lower levels. If a student can ask an AI to recall, define, or summarise, then those tasks no longer constitute learning evidence. EMPOWER deliberately pushes lesson aims towards the upper cognitive levels, where AI can support but not replace the learner's thinking.

Constructivist learning theory (Vygotsky, 1978; Jonassen, 1999) emphasises that learners build knowledge through active engagement rather than passive reception. The model's sequence from Prompt through Organize and into Work reflects this: students are not simply presented with AI-generated content but are asked to construct, interrogate, organise, and produce. The educator's role shifts from transmitter to facilitator of that construction process.

Metacognitive theory (Flavell, 1979; Hattie & Timperley, 2007) is most visible in the Evaluate and Reflect phases. Research consistently identifies metacognitive strategies self-monitoring, self-assessment, and articulation of understanding as among the highest-yield interventions in learning (Hattie, 2009). The model builds these in as non-optional phases rather than optional extensions, on the basis that they are precisely what AI cannot do on behalf of a student.

AI literacy frameworks (Ng et al., 2021; Long & Magerko, 2020) have recently drawn attention to the need for learners not just to use AI tools but to understand how they work, when to trust them, and how to evaluate their outputs. The Prompt phase of EMPOWER is one practical response to this: it teaches students to construct purposeful, contextualised prompts rather than to accept first outputs uncritically.

3. Overview of the EMPOWER Model

EMPOWER is an acronym for Engage, Motivate, Prompt, Organize, Work, Evaluate, and Reflect. The sequence can be used within a single teaching session or distributed across a longer unit of study. Its value lies in the relationship between the phases: students are oriented towards the purpose of learning before they engage with any tool, then guided to use AI in ways that remain explicitly aligned with the lesson objective.

Table 1. The EMPOWER Model: Phases, Instructional Purposes, and Evidence of Learning

Phase	Instructional Purpose	Evidence of Learning
Engage	Activate attention, prior knowledge, curiosity, and initial questions.	Opening response, confidence rating, or initial question.
Motivate	Connect the topic to learner goals, relevance, quality expectations, and real-world value.	Reasoned explanation of why the lesson objective matters.
Prompt	Teach learners to construct precise AI prompts aligned to the lesson aim and output.	Improved prompt, prompt rationale, and evidence of critical AI use.
Organize	Structure concepts, vocabulary, workflow steps, misconceptions, and evidence requirements.	Outline, concept map, workflow, or success-criteria map.
Work	Produce an output that demonstrates the aim through application, explanation, creation, or evaluation.	Podcast, video, infographic, social post, design artefact, or combined output.
Evaluate	Apply objective-aligned criteria to judge quality, accuracy, clarity, and responsible AI use.	Rubric-based self-assessment, peer feedback, and targeted revision.
Reflect	Make learners articulate learning in their own words after lecturer-led review.	Personal reflection, short presentation, next-step plan, or learning journal entry.

Source: Adam Fachler, adapted by Nocilla (2026)

The progression across phases is intentional. The early phases establish purpose and context; the middle phases develop knowledge, skills, and critical AI use; and the final phases ensure that students can account for their own learning in ways that go beyond the artefact they have produced. This distinction matters because an impressive media output is not, on its own, evidence of learning.

4. Rationale for the Interactive Lesson Planner

A theoretical model is only as useful as its application. The interactive lesson planner was designed to reduce the gap between understanding the EMPOWER framework and actually using it to plan a lesson. Without a practical tool, educators may understand the model's phases in principle while finding it difficult to translate them into specific activities, prompts, and assessment evidence for a given subject, level, and session.

The planner addresses this by asking educators to specify a small set of contextual variables: subject or topic, course name, learner level (across a range from secondary through to Level 6 and CPD), session length, learning objectives, available AI tools, and intended output formats. From these inputs, it generates a phase-by-phase lesson plan that includes specific lecturer activities, student tasks, suggested AI prompts, practical teaching tips, and relevant tools. The output is a structured plan rather than a template, meaning it responds to the educator's specific inputs rather than producing generic suggestions (Interactive EMPOWER plan).

This approach aligns with Merrill's First Principles of Instruction (Merrill, 2002), which argue that effective instruction is problem-centred, activates prior experience, demonstrates new knowledge, requires application, and integrates learning into real-world contexts. The planner's design attempts to embed all five of these principles into the phase-by-phase structure it generates.

The planner also addresses a more immediate practical concern. Designing seven-phase lessons from scratch takes time, and educators in further and higher education typically operate under significant planning pressures. A planner that can produce a coherent, aligned starting point in a short session reduces the barrier to adopting the model while leaving the educator's professional judgement as the final arbiter of what actually happens in the room.

5. Phase-by-Phase Application in the Planner

5.1 Engage

The planner frames the Engage phase as a short, diagnostically oriented activity that connects the lesson aim to prior knowledge. Students are invited to identify initial ideas, formulate questions, and indicate confidence levels. This makes the opening useful instructional data rather than a warm-up exercise. Research on formative assessment (Black & Wiliam, 1998) consistently shows that activating prior knowledge before instruction significantly improves subsequent learning, particularly when learners with varied backgrounds are in the same room.

5.2 Motivate

Motivate asks students to connect the lesson objective to its real-world relevance and quality expectations. This is not simply about making the lesson feel interesting; it is about establishing the 'why' before the 'how.' When students can articulate why an objective matters, they tend to engage with subsequent tasks more deliberately (Ryan & Deci, 2000). The planner's suggested activities in this phase are designed to prompt that articulation rather than simply stating relevance on the student's behalf.

5.3 Prompt

The Prompt phase is where AI literacy becomes explicit. The planner structures prompts around six elements: role, task, context, constraints, output, and success criteria. Students are not simply invited to 'ask the AI'; they are guided to construct a prompt that reflects the lesson objective, specifies the expected output, and builds in quality expectations. This approach draws on emerging frameworks for effective prompt engineering in educational settings (Mollick & Mollick, 2023) and situates AI use as a critical, deliberate practice rather than an automatic step.

5.4 Organize

The Organize phase turns ideas into a plan. Depending on the subject, students may produce an outline, concept map, workflow, wireframe, investigation plan, or storyboard. The key purpose is to slow students down before production begins: the organiser acts as a visible checkpoint that reveals whether the student has understood the task and made intentional design decisions before committing to the output. This aligns with research on the value of planning activities in creative and technical disciplines (Graham & Harris, 2005).

5.5 Work

Work is the production phase. The planner encourages educators to specify outputs that genuinely demonstrate the lesson objective, rather than outputs that are technically impressive but disconnected from the learning aim. Students are asked to record how AI supported their work ideation, drafting, development, feedback, or revision and to take explicit responsibility for final decisions. This distinction between AI assistance and student authorship is increasingly recognised as central to assessment validity in AI-rich environments (Perkins et al., 2023).

5.6 Evaluate

Evaluate aligns the produced work with explicit criteria. The planner encourages assessment of accuracy, evidence of learning, clarity, audience fit, technical quality where relevant, and responsible AI use. This phase exists to protect assessment integrity while developing students' capacity to apply standards to their own work, a skill that transfers well beyond the immediate task (Boud & Molloy, 2013). Peer feedback is included here as an additional layer of evaluative dialogue.

5.7 Reflect

Reflect is intentionally different from all the preceding phases in one important respect: AI prompting is removed. After the lecturer's closing activity, students prepare a short reflection or presentation in their own words. They explain what they understand, which part of the objective they can evidence, what they verified independently, and what still requires practice. This protects student voice, produces metacognitive evidence of learning (Zimmerman, 2002), and gives the educator a direct window into the learner's actual understanding, separate from the quality of the artefact they produced.

6. Accessibility and Inclusive Planning

One of the less immediately visible purposes of the interactive planner is to encourage inclusive lesson design. By asking educators to specify learner level, session length, and output formats explicitly, it creates a small but important moment of intentional decision-making about who the lesson is for and how different learners will access it.

When output formats are selected, educators can choose media that allow students to demonstrate learning through speech, visuals, design, writing, or combined forms. This flexibility supports varied strengths while maintaining a shared learning objective and consistent assessment criteria a principle aligned with Universal Design for Learning (CAST, 2018), which advocates for multiple means of representation, action, and engagement.

The planner interface itself was designed with accessibility in mind: labelled controls, keyboard-accessible multi-select inputs, visible focus states, sufficient contrast, and clear structural hierarchy. These choices reflect a conviction that an inclusive pedagogical model should be supported by an inclusive planning environment. There is little value in a framework for equitable teaching if the tools that implement it exclude educators who rely on assistive technologies.

7. Situating EMPOWER in Broader Educational Research

EMPOWER is not the only structured model for AI-integrated teaching, but it addresses a gap that several others leave open. It is worth noting that the original EMPOWER framework (Wilhelm, Bear, & Fachler, 2019) was designed primarily for Pre-K–12 classroom teachers in the United States, with a focus on literacy-rich unit planning and engagement-driven instruction. The adaptation presented in this article adapts the framework for further and higher education in a post-generative-AI landscape, preserving the seven-phase architecture while extending its application to AI prompt literacy, multi-modal production, and metacognitive self-assessment at degree and diploma level. The widely used

SAMR model (Puentedura, 2006) describes how technology can substitute, augment, modify, or redefine tasks, but it does not provide a pedagogical sequence. The TPACK framework (Mishra & Koehler, 2006) maps the intersection of technological, pedagogical, and content knowledge, which is analytically useful but does not tell educators what to do in a lesson. Models like the Conversational Framework (Laurillard, 2012) are theoretically rich but operationally demanding to apply in session planning.

EMPOWER attempts to occupy a middle ground: theoretically grounded, but practically deployable without specialist training in instructional design. This is important in further and higher education contexts where lecturers are primarily subject experts who are expected to develop strong pedagogical competence in parallel with their disciplinary work.

The model also responds directly to concerns raised in recent literature about AI's displacement of productive struggle in learning. Researchers including Selwyn (2023), Holmes and colleagues (2022), and Perkins and colleagues (2023) have each, in different ways, argued that the risks of AI in education are not primarily about cheating but about the erosion of the effortful cognitive processes questioning, organising, evaluating, articulating through which learning is actually consolidated. EMPOWER is designed specifically to preserve those processes by building them into the lesson structure rather than leaving them to chance.

8. Conclusion

The EMPOWER model started from a straightforward observation: that lessons integrating AI tools tend to go well or poorly based not on the tools themselves but on how deliberately the lesson was designed around a clear objective. When the design is solid when students know what they are trying to understand, why it matters, and how their work will be judged AI becomes genuinely useful. When the design is vague, AI becomes a shortcut that produces the appearance of learning without much of the substance.

The interactive lesson planner was built to make solid design more accessible. It translates the seven phases of EMPOWER into a practical set of decisions: subject, level, objectives, tools, output format, session length. From those inputs it generates a full, phase-by-phase plan that an educator can use as a starting point, adapt, and iterate on. The intent is not to standardise teaching or to make lesson planning feel mechanical. It is to reduce the gap between knowing what good AI-integrated teaching looks like and actually having time to plan for it.

The educational purpose behind both the model and the planner is the same: to keep students as active, accountable authors of their own learning. AI can help a student find information faster, get feedback earlier, draft more fluently, and explore ideas they might not have reached independently. None of that is pedagogically harmful. What matters is whether the student can then organise that support into something they genuinely understand, evaluate it against criteria they can articulate, and reflect on what they have actually learned rather than what the AI produced. When those things are visible, AI integration has done its job. When they are not, the lesson needs a different design.

The EMPOWER model, and the planner that applies it, are offered as practical tools for educators who want AI in their classrooms to strengthen learning rather than substitute for it. They are not the final word on this challenge. Teaching is too context-dependent, too relational, and too genuinely complex for any framework to be exhaustive. But they represent one considered attempt to hold onto what matters in education while making room for tools that, used well, can significantly extend what both teachers and learners are able to do.

References

Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. Longman.

Beetham, H., & Sharpe, R. (Eds.). (2019). Rethinking pedagogy for a digital age: Principles and practices of design (3rd ed.). Routledge.

Black, P., & Wiliam, D. (1998). Assessment and classroom learning. Assessment in Education: Principles, Policy & Practice, 5(1), 7–74. https://doi.org/10.1080/0969595980050102

Boud, D., & Molloy, E. (Eds.). (2013). Feedback in higher and professional education: Understanding it and doing it well. Routledge.

CAST. (2018). Universal Design for Learning guidelines version 2.2. http://udlguidelines.cast.org

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. American Psychologist, 34(10), 906–911. https://doi.org/10.1037/0003-066X.34.10.906

Graham, S., & Harris, K. R. (2005). Writing better: Effective strategies for teaching students with learning difficulties. Paul H. Brookes.

Hattie, J. (2009). Visible learning: A synthesis of over 800 meta-analyses relating to achievement. Routledge.

Hattie, J., & Timperley, H. (2007). The power of feedback. Review of Educational Research, 77(1), 81–112. https://doi.org/10.3102/003465430298487

Holmes, W., Bialik, M., & Fadel, C. (2022). Artificial intelligence in education: Promises and implications for teaching and learning. Center for Curriculum Redesign.

Jonassen, D. H. (1999). Designing constructivist learning environments. In C. M. Reigeluth (Ed.), Instructional design theories and models: A new paradigm of instructional theory (Vol. 2, pp. 215–239). Lawrence Erlbaum Associates.

Laurillard, D. (2012). Teaching as a design science: Building pedagogical patterns for learning and technology. Routledge.

Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (pp. 1–16). ACM. https://doi.org/10.1145/3313831.3376727

Merrill, M. D. (2002). First principles of instruction. Educational Technology Research and Development, 50(3), 43–59. https://doi.org/10.1007/BF02505024

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. Teachers College Record, 108(6), 1017–1054. https://doi.org/10.1111/j.1467-9620.2006.00684.x

Mollick, E., & Mollick, L. (2023). Assigning AI: Seven approaches for students, with prompts. SSRN. https://doi.org/10.2139/ssrn.4475995

Ng, D. T. K., Leung, J. K. L., Chu, S. K. W., & Qiao, M. S. (2021). Conceptualizing AI literacy: An exploratory review. Computers and Education: Artificial Intelligence, 2, 100041. https://doi.org/10.1016/j.caeai.2021.100041

Nocilla, S. (2026). The EMPOWER Model and the Interactive Lesson Planner: A framework for AI-integrated lesson design in higher and further education. Malta College of Arts, Science and Technology (MCAST).

Perkins, M., Roe, J., Postma, D., McGaughran, J., & Hickerson, D. (2023). Gaming the system: Impact of ChatGPT on learner–educator trust and assessment practice. Postdigital Science and Education. https://doi.org/10.1007/s42438-023-00366-3

Puentedura, R. R. (2006). Transformation, technology, and education. http://hippasus.com/resources/tte/

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Selwyn, N. (2023). The future of AI and education: Some cautionary notes. European Journal of Education, 58(4), 620–631. https://doi.org/10.1111/ejed.12532

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Harvard University Press.

Wilhelm, J. D., Bear, R. E., & Fachler, A. (2019). Planning powerful instruction, grades 6–12: 7 must-make moves to transform how we teach—and how students learn. Corwin. https://us.corwin.com/books/empower-your-teaching-263018

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. Theory into Practice, 41(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2

Declarations

Declaration of generative AI and AI-assisted technologies in the article preparation process

During the preparation of this work, the author used OpenAI ChatGPT/Codex (GPT-5, OpenAI) to support article organisation, language refinement, policy-compliance checking, and the preparation of explanatory schematic framework figures. After using this tool/service, the author reviewed and edited the content as needed and takes full responsibility for the content of the article.

Author responsibility, authorship, and accountability statement

No AI tool has been listed as an author or co-author, and no AI tool is cited as an author. The human author remains responsible for the accuracy, originality, source verification, interpretation, and integrity of the article, including verification of references, claims, figures, and any AI-assisted text.

AI-assisted figure and artwork statement

Figures in this article are explanatory schematic diagrams that illustrate conceptual relationships and workflow logic. They are not primary research images and do not present observed, experimental, or fabricated research data. AI-assisted drafting/layout support was used for the explanatory figures, and the final concepts, labels, and academic meaning were reviewed by the author.