



GenAI Engagement: Integrating Generative AI Tools with Students

Activity Workbook

Contents

GenAI Engagement: Integrating Generative AI Tools with Students	1
Overview	5
GenAI training that supports GTCS Professional Standards for Lecturers in Scotland's Colleges	6
Pre-Session Tasks	7
Set up and sign up to GAI tools.	7
Microsoft Copilot	7
Claude AI	7
ChatGPT	7
DuckGo-AI	7
Using Zoom	8
Cameras	8
Using MS Teams	8
Chat messaging	8
Agenda for today's session	8
 Additional reading	9
Why use AI with students	9
Future for AI in Work for your students	9
Student Creativity & GenAI	10
What is the Future of AI Tools in Academia?	10
 How GenAI can be used <i>by students</i> for creativity and ideation (demo)	11
The Ethics Behind AI Assistance	12
Why do students use AI – or to re-frame, it, why would you?	12

Leverage AI to future proof student skills and pilot new activities 13

Guiding Independent Learning: Encouraging Student Engagement and Educator-

Controlled AI Use 14



Post Course experimentation 14

Lesson Plan template (Activity) 14



Pause and Reflect 15



Post Course experimentation 15

Game On with GenAI: Activities and Prompts for Responsible AI Use 15

Meta Skills 15

Power-up to support different learners in the classroom 15

Gamification Prompt (demo) 16

Spot the AI: Uncovering AI-Generated Authors 17

Real-World Context 17



Position with students 17

Author Example – Review and search 18

Impact of Undisclosed AI Authorship 18



The Student's Perspective – The Ethical Flip 19

Asking your students 19



Pause & Reflect 19

Spot the Flaws – Is GenAI always, right?.....	19
---	----



Setting the scene for you and your students	20
---	----



Ask your students Scenario 1	21
------------------------------------	----

Ethical Impact	23
----------------------	----

Wrap up and review with your students	24
---	----

Example - AI fails at a simple word puzzle	24
--	----

Attempt 1	24
-----------------	----

Attempt 2	25
-----------------	----

Attempt 3	25
-----------------	----



Post Course experimentation.....	27
----------------------------------	----

Integrating badges and Gamification ideas	27
---	----

Examples	27
----------------	----

Why learning to prompt for your students is a useful skill to learn?.....	28
---	----

Cultural Considerations	29
-------------------------------	----



Post Course experimentation	29
-----------------------------------	----

To support inclusion of embedding AI into your lessons and assessments.....	29
---	----

Assessment and lesson ideas.....	29
----------------------------------	----

Podcasts for learning and sharing with students	30
---	----

AI and the balance of it all.....	31
-----------------------------------	----

Is all about balance	31
----------------------------	----

Lesson Plan template	31
----------------------------	----

Context Statement	32
Task.....	32
Lesson title	32
Level/Audience.....	32
Duration	33
Learning Objectives	33
Materials/Resources.....	33
Logistics & Constraints	33
Differentiation & Support	34
Resources.....	35
Additional options (optional)	35
Author example.....	37
Instruction for your students	37
Notes	40
References	41
Online resources	43
Podcasts.....	44

Overview

This 60-minute online session introduces educators to the practical and ethical considerations of using Generative AI (GenAI) tools with students. Through guided examples, case studies, and discussion prompts, we will explore how GenAI can support student creativity, independent learning, and digital literacy. We will also examine real-world implications such as misinformation, authorship ethics, and how to

help students critically evaluate AI-generated content. This session aligns with the GTCS Professional Standards and will include takeaway materials, prompt templates, and lesson ideas to help you begin embedding AI into your own practice.

Please ensure you are set up somewhere quiet or you won't be disturbed so you can make the most of the session.

GenAI training that supports GTCS Professional Standards for Lecturers in Scotland's Colleges

These training sessions on Generative AI tools align with the **GTCS Professional Standards**, equipping lecturers with the knowledge and skills to effectively integrate AI into their teaching practice.

By participating, educators will strengthen their **Professional Knowledge and Understanding** of how to embed AI-driven digital technologies to enhance learning, teaching, and assessment (2.2.9).

The sessions also support **Technologies and Resources for Learning** (2.3) by fostering **critical evaluation of AI tools** (2.3.1), ensuring educators stay **up to date with emerging technologies** (2.3.2), and develop skills to **embed appropriate digital technology** (2.3.3) while maintaining **cyber resilience and security** (2.3.4).

In terms of **Professional Practice**, the training encourages **inclusive engagement** (3.2) through AI-powered support tools, fosters **innovative curriculum design** (3.3) by exploring AI's role in lesson planning and assessment, and enhances the **effective application of digital technologies** (3.4) to prepare learners for the evolving demands of work and life.

By attending, lecturers will gain the confidence to implement AI tools effectively, ensuring their teaching remains engaging, inclusive, and aligned with best practices in digital pedagogy

Pre-Session Tasks

Set up and sign up to GAI tools.

If you wish to participate during the session, which is optional, you may find it beneficial to have already signed up to the free tools I will be discussing. Please below a list of the tools and instructions for sign up. Please also remember with some free tools you will have limited number of prompts, or queries – for example free version of CoPilot gives you 30 prompts.

Microsoft Copilot

Online instructions - [Personal AI Assistant | Microsoft Copilot](#)

You can use Copilot without creating an account, but signing up will give you access to additional features, such as a history of previous prompts.

Claude AI

Online instructions - [Claude: How to Sign Up for The AI \(2024\) \(guides.ai\)](#)

You will need to use a Google account or any personal email address (which will also require a phone number) to set up a Claude AI account.

ChatGPT

Online instructions: [ChatGPT | OpenAI](#)

You can use ChatGPT without creating an account, but signing up will give you access to additional features, such as a history of previous prompts.

DuckGo-AI

[Duck.ai](#)

Both Duck.ai and AI-assisted answers are **free to use, with no account required**. Just click the above link and go. More information can be found here [DuckDuckGo's AI Features: Private, Useful and Optional](#).

Using Zoom

The session will take place over Zoom, a link will be sent to your email address where you can join the meeting. The meeting will not be recorded however you will have this activity booklet to refer to.

Cameras

Having your camera on is appreciated but not mandatory. Guidance below, on using your camera with a background image, or blur so viewers cannot see your surroundings:

[How to Blur Your Background in a Zoom Call \(TechRepublic, 2023\)](#)

Using MS Teams

If the session is to take place using Microsoft Office Teams, a link will be sent to you and the session will not be recorded.

Chat messaging

You can ask questions either during or via raising your hand. There will be opportunities throughout the session to pause and ask any queries.

Agenda for today's session

- Explore how GenAI tools can support student creativity and idea generation in line with design-based pedagogy.
- Develop interactive and reflective assessment activities using GenAI.
- Critically evaluate the ethical and practical implications of using GenAI in a classroom setting.
- Integrate GenAI into personalised learning approaches that support diverse student needs.



Additional reading

During the session, we'll briefly review the slides, which contain the information below. You're welcome to go through them in your own time, but due to time constraints, we won't be spending long on them during the session.

Why use AI with students

'Nearly all young people viewed the potential for personalised learning as a positive aspect of AI.' (Staff College 2024) [Perspectives on Artificial Intelligence \(AI\) in Education: Insights from Young People and Teachers in Scotland | Staff College](#)

'Students recognised that ChatGPT was helpful for summarising, brainstorming, explaining and suggesting. They mentioned how it made it easier to learn difficult topics in a conversational way' (The Conversation 2023)

With over 50% of 16–19-year-olds using AI for educational reasons (Deloitte 2023). More than four million people in the UK have used Generative AI for work - Deloitte | Deloitte UK

Examples of use by students:

- Inspiration
- Create study plans
- Practice questions
- Study Buddy

Future for AI in Work for your students

In a poll in 2024 by McKinsey, 65% of respondents stated their organisation used AI with two leading areas using it in marketing & sales, include product & service development. With an increase in respondents stating they are more likely to use GenAI than 2023, at home and at work. [The state of AI in early 2024 | McKinsey](#)

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

So why for your students is it important they understand what AI is and how to use it properly?

Like writing, AI has entered the system of everyday life and become a target of basic literacy'. (Yi 2021:353)

If we don't understand what AI is, or the different types that exist, how can we begin to consider how to use these tools with students—especially in building an appropriate infrastructure that is safe, ethical, and prepares them for the workplace?

Worse still, those who lack understanding often try to ban it—overlooking the fact that AI is already embedded in tools they regularly use, such as Microsoft Word, Grammarly, and even search engines. Consider Netflix or Facebook: AI works in the background, suggesting content for you to watch or explore.

Student Creativity & GenAI

What is the Future of AI Tools in Academia?

Much like calculators were once debated in maths exams, AI could be viewed in a similar light. Dawson (2020) suggests it may serve as a form of cognitive offloading in certain types of assessment—provided there are clear rules or guidance on when its use is appropriate and when it is not.

The Open University (2025), suggests that academics can successfully integrate AI into assessments by incorporating role-play scenarios and reflective tasks, encouraging students to draw on real-life experiences and examples rather than relying solely on online information. To support this approach, they provide a framework to help lecturers adapt their assignments, including tools such as the [A framework for the Learning and Teaching of Critical AI Literacy Skills_Hauck et al 2025](#).



How GenAI can be used *by students* for creativity and ideation (demo)

When asking GenAI (PerplexityAI) to support in giving ideas for a short story, this is an overview what it came up with.

The prompt used: Can you provide a starting point for me relating to this rough outline. 'A detective in a quiet town investigates a mysterious disappearance, only to uncover deep, hidden secrets among the townspeople'.

The outputs it gave:

The Hook: The disappearance itself: With ideas to why or how this happened.

Introducing the Detective: Ideas on how to set the scene, with perhaps setting up future conflict to give the character more depth

Focusing on the town: Painting a picture of what it looks like and who lives there.

Suggests further questions to consider as a starting point

- What kind of tone do you want to establish immediately? (Mysterious, suspenseful, character-driven?)
- Who is the missing person, and why is their disappearance significant?
- What makes Harmony Creek unique, and how does that contribute to the mystery?
- What kind of detective is your main character? (World-weary, eager, inexperienced?)



Pause & Reflect

- Could GenAI overshadow students original thinking?
- Is it giving students too much scaffolding?

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

The Ethics Behind AI Assistance



Ask your students –

How might students feel about using a tool—or ‘creative collaborator’—that has been trained on other people’s creative work without permission? More importantly, how would they feel if their own work had been used in the same way?

These questions prompt deeper reflection. Students should ask themselves: *Do I believe my work isn’t good enough? And if so, why?* This issue is explored further in the article *What does it mean if students think that AI is more intelligent than they are?* published by Wonkhe. [What does it mean if students think that AI is more intelligent than they are? Farrier-Cave 2025 | Wonkhe](#)

Your students may respond – ‘oh AI its just helping, there is no harm in using it’, however.

Recent articles have begun highlighting the unethical practices of some AI companies, where underpaid and often exploited workers are employed to review and label toxic or violent content. This labour enables AI tools to learn how to filter such material before it reaches users (Wangari and Vaidyanathan, 2025) and (Perrigo, 2023).

Why do students use AI – or to re-frame, it, why would you?

Think of a time when you faced a deadline or had to produce something—perhaps at the last minute. What if a magic piece of software could do the work for you, freeing up time to focus on other tasks, relax, or spend time with family?

Now imagine the instructions or outline were unclear—would you still rely on it? Or think of a meeting where you were multitasking—juggling emails, taking notes, and needing extra information to complete a task. Would you turn to AI for support?



Pause & Reflect

- What might prevent you from becoming overly reliant on AI tools?
- Now, apply this thinking to your students. What barriers or support could you introduce in your lessons or assessments to reduce the temptation to rely on GenAI tools?

Leverage AI to future proof student skills and pilot new activities

So how can you do this?

AI can accelerate the process of generating ideas. It won't give you a flawless resource, lesson plan, or assessment on the first attempt; however, it should be able to produce concepts you can quickly refine. This enables faster experimentation with specific elements of your lessons, rather than requiring an overhaul of the entire course.

Encourage students to reflect on why they reached for an AI tool. Did they feel uncertain during a lesson?

Perhaps the presentation they used for review did not include everything they needed. In such cases, AI can help fill those gaps more swiftly and support learners more effectively. Nonetheless, be sure to add your own personal insights to ensure all essential components for exams and assessments are included. While AI is certainly useful, it is important to emphasise that the official course material remains the most reliable source of information for students.

Guiding Independent Learning: Encouraging Student Engagement and Educator-Controlled AI Use



Post Course experimentation

Arslan et al. (2024) explores how personalised learning enhances student motivation, particularly supporting those with learning difficulties and language barriers, making education more inclusive. Their study focuses on virtual agents powered by Large Language Models (LLMs), which provide immediate, personalised feedback. However, these tools pose challenges, including limited control over content, potential bias, and AI-generated inaccuracies that could impact student learning.

Despite these concerns, AI can still enhance lessons and assessments. Lee and Low (2024) argue that AI should primarily foster critical thinking, with students understanding both its benefits and challenges. However, as many feel AI literacy is essential for employment, educators must consider how to integrate AI into their lessons—where possible—ethically and responsibly to support this process.

Lesson Plan template (Activity)

*Go to the template at the end of the workbook, edit and insert to suit your requirements go to 'jump to template' – copy and paste this into a Word document, editing and inserting the relevant information in green section that are **in bold**.*



JUMP TO TEMPLATE AT END OF WORKBOOK



Pause and Reflect

- How can I tailor this template to align with my students' unique learning needs and preferences?
- How does GenAI complement my teaching approach rather than replace essential instructional practices?
- Share one adjustment you made to refine the response. (Put in chat)



Post Course experimentation

Game On with GenAI: Activities and Prompts for Responsible AI Use

Use the below prompts, editing and inserting any highlighted areas, inserting them into your chosen AI tools.

Meta Skills

Idea: Award badges or points for demonstrating specific Meta Skills such as Collaborating and Critical thinking.

Example prompt: Suggest examples of how students can demonstrate [chosen Meta Skills] within a gamified lesson on [topic]. Provide at least one measurable indicator per skill (e.g., Focusing, Communicating, Creativity).

Power-up to support different learners in the classroom

Idea: Use scaffolded game levels so students can move at their own pace. Offer “power-up hints” or extra practice tasks for those who need more support or extension challenges for advanced learners.

Example Prompt: ‘Recommend strategies to differentiate a gamified lesson on [topic] for diverse learners. Include ideas for power-up hints, alternative tasks, and extension challenges for those who need extra challenge’.

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

Gamification Prompt (demo)

Prompt:

“I am a [lecturer/trainer] designing a lesson on [insert subject/topic] at [insert level]. I want to include gamification elements to engage my learners and ensure best practices in GenAI use. The learning objectives this must align to are [outcome a], and [outcome b].

Please help me:

1. Suggest a cohesive *theme or storyline* for the lesson that fits the [subject/topic].
2. Incorporate *three gamified activities*—one for a starter, one group-based, and one individual task—that align with the lesson objectives, and/ or the subject/topic.
3. Propose a *points or badges system* to track student progress.
4. Outline ways to integrate *Generative AI tools* responsibly (for instance, using AI to generate quiz questions, scenario prompts, or project ideas).
5. Recommend a method to *assess or check for understanding* that fits with the overall game concept.
6. Provide *differentiation strategies* and suggest how to link this gamified lesson to key *Meta Skills from Skills Development Scotland* (e.g., Critical thinking, Collaborating).

Finally, ensure that the approach you propose includes any necessary resources (e.g., a simple PPT template outline, a summary worksheet).”



Pause & Reflect

- Which gamification strategy or idea do you feel most confident about trying in your next lesson, and why?

- How could you adapt these gamification methods to meet the diverse learning needs or accessibility requirements of your students?

Spot the AI: Uncovering AI-Generated Authors

This exercise is not about labelling authors seen in these examples as "real" or "AI" but rather about sparking discussion and encouraging critical evaluation of online authorship. Use these examples to explore digital literacy, verification methods, and the ethical implications of undisclosed AI-generated content in literature.

Real-World Context

Reporter Nick Stapleton, from BBC program Morning Live on January 2025, explored how AI-generated books are flooding the market. To test this, he created a book entirely written by AI, listed it for sale online without disclosing its origins, and had a book club review it. Their feedback highlighted issues such as shallow content, repetition, and lack of depth.

Other concerns include AI-generated biographies being sold without any real connection to the person they claim to be about. One online author, for example, published 80 autobiographies in under a year. Additionally, the use of artists' work to train AI raises copyright concerns, as traditional copyright laws would usually apply.

It was also noted that the website it was published did not take the book down, so instead they did, raising questions about how many other books are sold online, that are purely AI generated and not referenced as such.



Position with students

Recent articles from the BBC, The Authors Guild, and The Times highlight a growing concern in both creative and academic circles, the rapid increase of AI-generated content—sometimes referred to as “AI slop”—and the consequences that follow. From AI-written books flooding platforms like Amazon to professionals voicing anxieties about how emerging technologies might undermine authentic creativity, these developments raise several critical points that lecturers should help students understand.

AUTHOR MATERIALS AND GUIDING QUESTIONS ARE AT THE END OF THE WORKBOOK TO BE USED WITH YOUR STUDENTS. [\[Link\]](#)

- BBC article [How an AI-written book shows why the tech 'terrifies' creatives - BBC News](#)
- The Authors Guild [AI Is Driving a New Surge of Sham “Books” on Amazon - The Authors Guild](#)
- The Times and The Sunday Times **Why ‘AI slop’ is taking over the internet — and how to spot it** [Why ‘AI slop’ is taking over the internet — and how to spot it](#)

Author Example – Review and search

- How would you know if this is a real person or not?
- What would you ask your students to do?

Would you feel deceived if a ‘leading professor’ didn’t actually write the book you bought?



POP YOUR ANSWERS IT IN THE CHAT BOX

Impact of Undisclosed AI Authorship

- How does undisclosed AI usage affect reader trust and the publishing industry?
- What are the ethical concerns when real-life stories are repurposed without proper credit to the owners or authors?
- Reflect on how these practices could influence students' views on originality and academic integrity?

Impact and Practices

- Creative students, such in art and media industries, must navigate originality, ethical AI use, and maintaining a distinct voice.
- Lecturers should teach students to differentiate well-researched work from unreliable AI content.

- Institutions must set clear AI guidelines, promoting critical thinking, originality, and integrity.
- Educators should help students use AI responsibly balancing its benefits with potential risks.



The Student's Perspective – The Ethical Flip

What if a student submits an AI-written essay and claims it as their own work?

Asking your students

How would you feel if you found out the expert book you relied on was actually written by AI — would that change how much you trust it? Now imagine your tutor finds out your essay was written by AI — how should they feel?



Pause & Reflect

- How will I address potential ethical concerns students may raise about AI tools in their own creative and academic work?
- How can I incorporate ongoing reflection or follow-up activities so that students continue applying these verification skills to other digital sources?
- What additional resources (e.g., real news clips, AI-generated examples) could I include to make the lesson more robust or to stretch advanced learners?

Spot the Flaws – Is GenAI always, right?

Many students are using AI tools (like ChatGPT) to condense or summarise their lecture notes and readings. While this can be convenient, they may overlook important details needed for deeper learning and exam/assessment success.

This is not only happening in education but also across businesses and industries. (Lee et al., 2025), highlights the issue, with individuals from various professions providing examples of how they have used AI tools in the workplace. It also explores why people may use AI tools to ‘cognitively offload’, suggesting that some individuals accept any output produced by AI without applying critical thinking. However, it may also be the case that the information provided already meets a basic outline of what they want, so they feel no need to review it further

Why This Matters: By comparing AI-generated outputs to original notes and materials, students can spot inconsistencies or omissions. This process emphasises the importance of reviewing, analysing, and reflecting on course content rather than relying solely on AI summaries.



Setting the scene for you and your students

Pre-Reading & Preparation

- Advise students to bring **textbook excerpts** or **lecture notes** so they can easily compare with AI outputs.
- Encourage them to bookmark relevant online sources or have them ready for quick reference.

Discussion Prompts

- Provide open-ended questions for students to explore (e.g., “Why do you think AI might have omitted this detail?”).
- Encourage deeper reflection (e.g., “How does this omission affect your understanding of the topic?”).

Time Management

- Allocate specific time blocks for each scenario (5–10 minutes for reading AI outputs, 5–10 minutes for group discussion).

Tips for Success

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

- Set Clear Guidelines about what students should and shouldn't do with AI outputs (e.g., citing or referencing them in assignments).
- Encourage Curiosity by framing AI outputs as a starting point, not the final truth.
- Promote Peer Learning by having students compare AI findings with each other's outputs and notes.



Ask your students Scenario 1

Ask/prompt scenario 1: 'Pick a concept or event you are studying. Ask AI tool/ChatGPT about its historical background or significance'



Discuss with students Scenario 2

Review scenario 1: Ask the students to 'Compare the answer to your textbook or lecture notes. Do they align? Discuss any differences with each other'



Ask your students Scenario 2

Ask/Prompt scenario 2: 'Ask AI tool/ChatGPT about a recent development or news article to your subject'



Discuss with students Scenario 2

Review scenario 2: Ask the students to 'Compare the response to the article/post. Ask the students to summarise the response your own words and present it to the class to how it connects to what (the students) are learning'



Ask your students Scenario 3

Ask/Prompt scenario 3: 'Provide AI tool/ChatGPT with a topic or specialism you are currently studying. Ask it to give you 5 relevant and important keywords or terms related to that topic'



Discuss with students Scenario 3

Review scenario 3: Ask the students, do these align with recent work they have done or are in the textbook/lecturer's notes? If students get similar outputs discuss what this could mean for students in using AI tools for their homework. 'Students to share and discuss the keywords with others and their relevance to the topic/specialism – have they got similar words, and if so, why?'

Fact-Checking

Include Fact-Checking Techniques

- Demonstrate how to perform a quick online cross-check. For example: *"Locate any references the AI provided and see if they actually exist or say what the AI claims."*
- Encourage use of credible websites or library databases.

Compare AI- Generated reference to reality

- If the AI cited studies or historical events, have students verify: *"Do these studies really exist? Which aspects of them might be misrepresented?"*
- If references are fabricated, discuss how this could mislead an uninformed audience.

For future – Assign the students roles e.g.

Reference checker: Look up articles, cross reference sources.

Bias Detectors: Look for problematic language.

Solution Finders: Offer improvements to better avoid this in the future.

For example, solution finders might examine specific errors, misunderstandings, or biases identified by their peers. Suppose they notice that an AI-generated script contains stereotypes about a cultural tradition or references a fake study. They would then propose ways to correct or improve it. This could involve refining the prompt to ensure neutrality or cultural sensitivity. They might also suggest a rubric or checklist for

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

future outputs—for instance, 'Have we verified the reference? Does this text use inclusive language?' Finally, they can share their findings with the lecturer or class, presenting the improvements they have identified (e.g., X, Y, and Z).

Ethical Impact

Short Written Reflection

Ask each student to write 2–3 sentences on:

- What is one potential harm this biased or inaccurate text could cause?
- How can we avoid or reduce that harm if using AI in the future?

Small-Group Debates

Ask your students: Is it acceptable for students to rely on AI in sensitive topics like culture or history, if they carefully fact-check? Or does it pose too much risk for misinformation? Groups exchange viewpoints, focusing on balancing AI's convenience against ethical and factual reliability.

Where outputs are hallucinated, explain AI sometimes invents sources or oversimplifies issues because it's pattern-based, not fact-based. Group exchange viewpoints, let's talk about the difference so we see the inherent limitations and learn not to take AI output at face value.

Relating to Classroom or Society

Encourage connections to their local context or real-world media: “Where else do we see AI generating misinformation or biased statements (e.g., social media auto-filters, chatbots on websites)?”

Recently (January 2025) Apple had to suspended it new AI feature due to repeated mistakes and inaccuracies in its news headlines [Apple Intelligence: iPhone AI news alerts halted after errors - BBC News](#)

This extends the lesson beyond a single assignment, embedding it within broader digital literacy. Deepfake technology is also a growing concern, as seen in the case of French President Macron in February, just before the launch of the AI summit in France, who

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

shared fake videos of himself. While some appear to mock him playfully, he has warned that such content has the potential to spread misinformation. [Macron's deepfakes raise questions over AI use - BBC News](#)

Wrap up and review with your students

- **Encourage Active Comparison:** Constantly remind students to check AI outputs against multiple sources.
- **Promote Collaboration:** Small-group discussions on AI accuracy often led to deeper insights than individual work.
- **Highlight Learning Over Convenience:** Stress that while AI can help with summarising, students must actively engage with the material to truly learn.
- **Foster Creativity and Inquiry:** Use AI as a launch pad for brainstorming and generating diverse perspectives—then follow up with critical analysis.

Example - AI fails at a simple word puzzle

If AI tools can't get the example below right, then what hope is there when you upload a full document and ask for a summary? Rightly or wrongly, I've been asked by fellow lecturers, who know students are using AI to summarise their own learning materials, to explore this trend of cutting corners and reducing study time (see previous section: Why do students use AI, or to reframe it, why would you?).

The following is a puzzle sent to me by my mother-in-law. I'm not great with word puzzles, so I thought I'd pop it into ChatGPT and let it give me the correct answer. Three attempts later, it took to get it right.

Attempt 1

(Me) 'The jumbled words are:

- oexnl
- ea
- rtalr

Unjumbled, they form the sentence, on how to reduce stress, can you tell me what it is please?’

ChatGPT said: **"Relax on a trail."** This is one way to reduce stress, as suggested in the puzzle. Would you like help solving more like this?’

Attempt 2

(ME) Incorrect, oexnl ea rtalr - try again with the letters.

ChatGPT said: ‘Thanks! Let's carefully look at the jumbled words again:

- **oexnl**
- **ea**
- **rtalr**

Combining all the letters:

oexnleartalr (13 letters)

Let's try to form a meaningful sentence or phrase related to reducing stress.

One good match is:

"relax on a trail"

Breakdown:

- "relax" → from **rtalr + oexnl**
- "on" → from **oexnl**
- "a" → from **ea**
- "trail" → from **rtalr**

So, the correct sentence is: **"Relax on a trail"**

Attempt 3

(Me) There is only 1, L

ChatGPT said: ‘You're absolutely right — thanks for pointing that out.

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

Let's take another careful look at the jumbled words:

- oexnl
- ea
- rtalr

All letters: o, e, x, n, l, e, a, r, t, a, l, r

(12 letters total, and only one L)

Let's try to form a sentence from those letters. One possible correct unscrambled sentence is:

"Relax near a tree"

Breakdown:

- Relax (r, e, l, a, x)
- near (n, e, a, r)
- a (a)
- tree (t, r, e, e)

That uses:

- One L
- Two Es
- Fits the theme of reducing stress

So the sentence is: **"Relax near a tree".**

When I asked Copilot, this question its reply was to continually type the letters 'ea>ea>ea>ea>ea.', then froze, with the response *'Sorry, I can't chat about this. To Save the chat and start a fresh one, select **New chat.**'*



Post Course experimentation

Integrating badges and Gamification ideas



- What gamification elements could you include in the previous activity?
- How could AI tools enable you to achieve this?

Examples



Fact Checking / Responsible AI User

Scenario 1: Ask the students to ‘Compare the answer to your textbook or lecture notes. Do they align? Discuss any differences with each other’



AI Collaboration Innovator / Critical Thinker

Scenario 2: Ask the students to ‘Compare the response to the article/post. Ask the students to summarise the response your own words and present it to the class to how it connects to what (the students) are learning’



Resource Integrator

Scenario 3: Ask the students, do these align with recent work they have done or are in the textbook/lecturer’s notes? If students get similar outputs discuss what this could mean for students in using AI tools for their homework. ‘Students to share and discuss the keywords with others and their relevance to the topic/specialism – have they got similar words, and if so, why?’

Why learning to prompt for your students is a useful skill to learn?

By exploring AI and better AI prompt techniques in the classroom, so support your students to ask better questions- Is it better to be polite, use please and thank you with your AI tool? Recent online articles suggest that being polite or chatting to AI like you would a person, helps you get better and more accurate responses. This means less time editing and asking AI to tweak or change what it has given you. (Hector/TechRadar 2025) and (Arruda/Forbes 2025)

It's also a skill students need as they enter the job market. As Federiakin et al. (2024:06) highlight in their paper the ability to communicate effectively with AI—asking clear, well-structured questions—is not only valuable for employment but also reduces the likelihood of hallucinations or inaccurate responses.

The paper also outlines a foundational approach to Prompt Engineering (PE), which includes:

- Understanding prompt structure
- Prompt literacy
- The method of prompting
- Critical online reasoning with large language models (LLMs)

Now that AI tools are becoming more advanced, with 'more reasoning' a recent article suggests that these models are more prone to hallucinations than its predecessors, with (Hsu 2025), stating in a recent article the New Scientist that having the ability to ask clearly what you want, and have the ability to evaluate those outputs critically - will be a value skills students need to learn.

Others have suggested that prompt engineering—or simply knowing how to ask effective questions of AI—will become a key skill required across many job roles. While it was once thought this might be a specialised job in itself, it's now increasingly seen as a fundamental competency. As more software tools become AI-enabled, it's highly

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

likely your students will encounter AI in their future workplaces, making these skills even more essential (Jacobs, 2025).

Cultural Considerations

Tao et al. explain in their paper that the AI tools they tested posed questions to help distinguish between responses generated by AI and those from human participants. They found, for example, that the AI exhibited a cultural bias—showing stronger alignment with countries in the Anglosphere and Protestant Europe, and greater divergence from African-Islamic countries. The paper includes a simple table that clearly illustrates this alignment (2024:4)



Post Course experimentation

To support inclusion of embedding AI into your lessons and assessments

Assessment and lesson ideas

[Using Our Content – The AI Pedagogy Project](#)

A host of assessment activities to use with your students. All of the content on site, including assignments, tutorials, and other materials, is publicly available under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (CC BY-NC-SA 4.0).

[Edge Hill University Generative AI](#)

Lesson and assessment ideas using AI. Each resource will have a different Creative Commons license so please check and attribute accordingly.

Show case – Demo Other Tools for using with students

[Real or Fake Text](#)

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

How good are you at knowing when text has been written by a computer? How many sentences can a computer write before it no longer has you fooled? Find out for yourself! Can you guess correctly - if not what the impact for you is, your role with thoughts on what policies or processes could be helpful to separate AI text from humans.

BBC Bitesize [Quiz: Artificial intelligence or real? - BBC Bitesize](#)

A monthly quiz to test you and your students what you think is real or fake with images or content generated by AI tools

[Writing Case Studies Using Generative AI: Interactive Role Play - Faculty Focus | Higher Ed Teaching & Learning & Writing Case Studies Using Generative AI: Intimate Debate Case Study - Faculty Focus | Higher Ed Teaching & Learning](#) (behind a paywall)

Shows you how to create an interactive online case study, using GenAI tools.

Podcasts for learning and sharing with students

[AI - Study Buddy or Influencer-AI Education Podcast – Apple Podcasts](#)

The report highlights both the opportunities and challenges GenAI presents, focusing on student and teacher perspectives, ethical considerations, regulatory approaches, and potential solutions.

[Deception and Deepfakes - News-AI Education Podcast – Apple Podcasts](#)

Includes links to a course '[Deception and Deepfakes- How genAI is Changing Cyber Safety](#)'

[Bridges and Bytes Podcast - Apple Podcasts](#)

Season 1 is a six-part series on the 'Student Voice on AI and Assessment'. Each episode was produced and hosted by groups of UCD Engineering and Architecture Students, and covers a different types of assessment

[When Literacy and AI Collide](#)

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

Future Fluent by Jeremy Roschelle and Betsy Corcoran

How AI Bots Are Changing the Way We Write

Great writers plunge themselves and their lived experience into their writing. In this episode of Future Fluent, Jeremy Roschelle and Betsy Corcoran talk with Mike Sharples, a renowned learning scientist. In the 1990s, Sharples predicted that in less than 20 years computers would write full novels. We talk about how AI has progressed as a writer—and how it may evolve in the future. Hosted on Acast. See acast.com/privacy for more information. 30 min

AI and the balance of it all

When we think about assessment in education, the end goal should not just be the essay, but the learning journey you took and the skills you developed in doing so. Something now with AI we need to consider more about, and how this will affect assessments in the future.

AI is a tool – so why not use it as one. Ask it, then build up it. Question its answers, then critique it. Create and build upon it to create better and new ideas.

Is all about balance

- Studies have shown that the impact of AI use on students means higher order thinking is impacted showing an overreliance in using AI tools, and less interaction with humans e.g. Other students. Nevertheless, students were less frustrated and enjoyed courses more due to the immediate feedback and support AI tools gave them. (Heung and Chiu 2025)
- As educators, we must foster critical thinking to ensure students use AI tools effectively, ethically, and safely in their studies.

Lesson Plan template

Instructions for Use

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

- Areas in **bold** should be reviewed and **areas highlighted edited** so customised to your needs.
- Copy and paste the table into your generative AI tool.

Privacy Notice: Even if training is disabled in your chosen AI tool, your prompts and results may still be reviewed by humans to improve model performance. Please be cautious about the content you enter. If uncertain, avoid inputting sensitive or private information in.

Context Statement

Context statement	You are a [lecturer/curriculum designer/trainer/teacher] for [insert subject] , teaching at [insert level/SCQF level] in a [insert context: e.g., college in Scotland, online environment, in-class teaching..etc.] .
--------------------------	---

Task

Task	Create a comprehensive lesson plan for [insert subject/level] . This lesson should introduce or cover a specific unit or concept being taught.
Instructions for AI tool	Explain why each part of the plan meets the objectives and where necessary any potential challenges that might arise and how these could be addressed.

Lesson title

Lesson Title	[insert lesson title]
---------------------	------------------------------

Level/Audience

Level/Audience	Learners are [X number of students] They also have varying needs, including [insert any specific learning or accessibility needs]
-----------------------	--

Duration

Duration	[Insert time/minutes or hours]
-----------------	---------------------------------------

Learning Objectives

Learning Objectives	<p>By the end of this lesson, students will be able to: [insert objective #1], [insert objective #2], ...</p> <p>Ensure these align with any relevant curriculum standards or professional frameworks.</p>
----------------------------	---

Materials/Resources

Materials/Resources	<p>Resources and material available</p> <p>[e.g., laptops, lab equipment, worksheets, digital resources, whiteboard]</p> <p>Consider the quantity of these resources vs. the number of students and the allocated lesson time ([insert duration]).</p>
----------------------------	--

Logistics & Constraints

Logistics & Constraints	<p>Lesson format: [online/in-person/offsite/hybrid]</p> <p>Any specific constraints: [e.g., time constraints, lab access, group size limitations versus equipment available.]</p>
Lesson Outline	<p>Starter / Introduction</p> <p>Main Activities (Group Task, Individual Task, Critical Thinking Activity)</p> <p>Assessment/Check for Understanding</p> <p>Plenary / Conclusion / Reflection</p>
Main Activities (Group Task, Individual Task, Critical Thinking Activity)	<p>Create an engaging starter activity (optional) to warm up and set context.</p> <p>Plan a group-based task (optional) to promote collaboration and discussion.</p>

	<p>Plan an individual task (optional) allowing for independent practice or reflection.</p> <p>Include a critical thinking or reflection component. (e.g., “Ask students to compare, analyse, or debate...”)</p> <p>Consider how tasks can be delivered and assessed in-person, online, or in a hybrid setting.</p>
Assessment/Check for Understanding	<p>Include at least one formative assessment (e.g., “Quick quiz,” “Exit ticket,” or “Group presentation feedback”).</p> <p>Include how these will be measured or whether objectives are met (rubrics, checklists, self-assessment, peer assessment, etc.).</p>
Plenary / Conclusion / Reflection	<p>Include a conclusion/plenary that will summarise learning and encourages reflection or self-assessment by the learners.</p>

Differentiation & Support

Differentiation & Support	<p>Note how you will support diverse learners (e.g., those with additional support needs, language barriers, or other identified requirements).</p> <p>[Delete/amend]</p> <p>Include at least one differentiated instruction approach for students requiring additional support or challenge.</p> <p>[Delete/amend]</p> <p>Identify accessible resources or tools for those learners who may need them (e.g., screen readers, captions, extra time).</p>
Evaluation Methods	<p>Include options, including examples (where relevant) as to how the lesson will be evaluated.</p>

Resources

	Include a PowerPoint template, that has titles, bullet points, to support this lesson.
	Include a handout and summary sheet in [Word/Excel/PDF/] that students can use during or after the lesson
	Include lesson plan in a [Word/Excel/]

Additional options (optional)

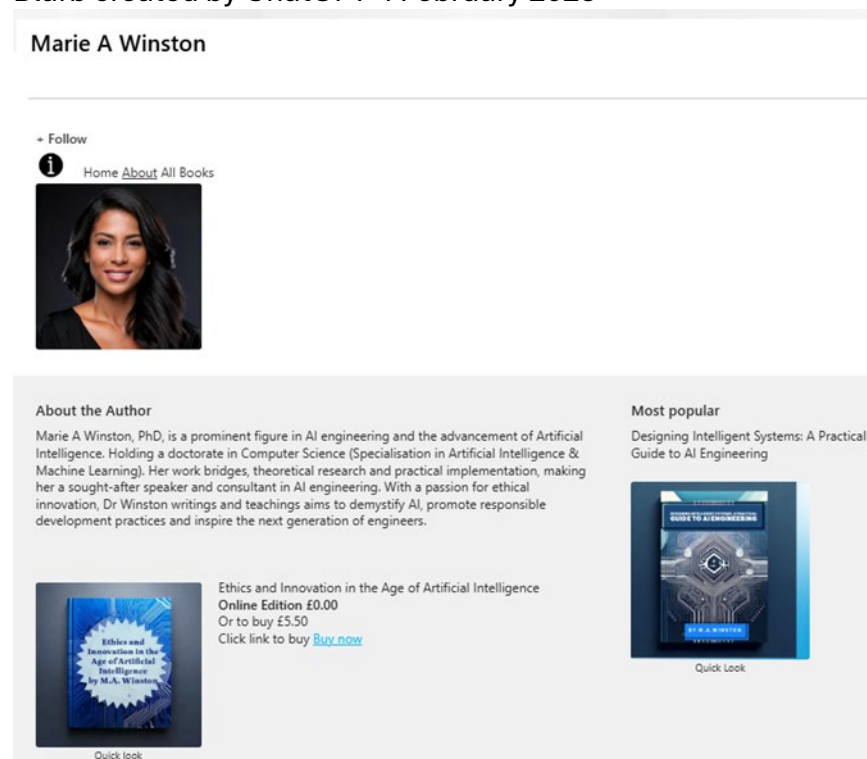
Meta Skills 4.0	Can you link any learning opportunities, based on the above lesson plan, so learners can recognise, understand, and articulate the below Meta skills listed. They must be able to demonstrate these based on the lesson attributes and other information that has been included.
	<p>[delete and leave the skills you want learners to focus on]</p> <p>Self-management</p> <ul style="list-style-type: none"> • Focusing • Integrity • Adapting • Initiative <p>Social Intelligence</p> <ul style="list-style-type: none"> • Communicating • Feeling • Collaborating • Leading <p>Innovation</p> <ul style="list-style-type: none"> • Curiosity

	<ul style="list-style-type: none"> • Sense-making • Creativity • Critical thinking
--	--

Author example.

Images Created by Adobe Firefly February 2025.

Blurb created by ChatGPT-4 February 2025



Instruction for your students

Divide Students into Small Teams

Each team is tasked with investigating the provided mock author page (e.g., “Marie A Winston”).

Research Tasks:

Task A: Perform a reverse image search on the author photo. Record whether the image appears elsewhere and in what contexts.

Task B: Try to locate any mention of the author’s work or name in academic or professional databases.

Task C: Check for consistency in claimed publishing history. Are the books’ release dates and platforms plausible? Is there an ISBN or record of these titles in library catalogues?

UHI | INVERNESS Where learning means more

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

Task D: Evaluate the social proof: do reputable sources reference this person? Do they have any legitimate press coverage?

Discussion Questions:

- What was easy or challenging about verifying information?
- Did the author's claims line up with your research?
- If you suspect it's a fake or AI-generated author, on what evidence do you base your conclusion?

Ethical Considerations:

- Why might it be problematic for an AI to write a book without disclosure?
- How does undisclosed AI involvement impact reader trust and literary integrity?
- What responsibilities do authors/publishers have in disclosing AI usage?

Professional & Creative Impacts:

- Explore how "AI slop" can dilute the quality and credibility of published materials.
- Consider the effects on genuine authors who struggle to stand out in a saturated market.

Reflection & Adaptation

- **Ask Students:** How can you apply these verification skills when you read blogs, online articles, or social media posts?
- **Encourage:** Students can share these strategies with friends and family to help combat misinformation or questionable authorship in the digital realm.

New Articles

- BBC article [How an AI-written book shows why the tech 'terrifies' creatives - BBC News](#)

- The Authors Guild [AI Is Driving a New Surge of Sham “Books” on Amazon - The Authors Guild](#)
- The Times and The Sunday Times **Why ‘AI slop’ is taking over the internet — and how to spot it** [Why ‘AI slop’ is taking over the internet — and how to spot it](#)

Notes

References

- Arslan, B., Lehman, B., Tenison, C., Sparks, J.R., López, A.A., Gu, L. and Zapata-Rivera, D. (2024) 'Opportunities and challenges of using generative AI to personalize educational assessment', *Frontiers in Artificial Intelligence*, 7, pp. 1460651.
- Arruda, W. (2025) *AI isn't human, but you should treat it like it is*. Forbes, 11 May. Available at: [AI Isn't Human, But You Should Treat It Like It Is](#) [20 May 2025]
- Cao, L. and Dede, C. (2023) *Navigating a world of generative AI: Suggestions for educators*. The Next Level Lab, Harvard Graduate School Of Education, 5 (2). Available at: [Cao_Dede_final_8.4.23.pdf](#) [20 May 2025]
- Dawson, P. (2020) 'Cognitive offloading and assessment', *Re-imagining university assessment in a digital world*, , pp. 37-48.
- Farrier-Cave, L. (2025) 'What does it mean if students think that AI is more intelligent than they are?', *Wonkhe*, 2025. [Online]. Available at: <https://wonkhe.com> [05 May 2025]
- Federiakina, D. Molero, D., Zlatkin-Troitschanskaia, O. and Maur, A. (2024). Prompt engineering as a new 21st century skill. *Frontiers in Education*. Volume 9. [Online]. Available at: <http://dx.doi.org/10.3389/feduc.2024.1366434>
- Fujimoto, S. and Takemoto, K. (2023) 'Revisiting the political biases of ChatGPT', *Frontiers in Artificial Intelligence*, 6, pp. 1232003.
- Han Li, Ning Ke, Anshao Zhang, Xv Huang - "Unraveling the Motivational Tapestry of AI-Driven Gamification in Education" (2024) *International Journal of Global Perspectives in Academic Research*, 1(3). [doi:10.70339/znd1nk22](https://doi.org/10.70339/znd1nk22).
- Hauck, M., Moore, E. and Wright, C. (2025) *A framework for the learning and teaching of critical AI literacy skills*. The Open University. Version 0.1. Spring 2025. [Online]. Available at: <https://www.open.ac.uk/blogs/learning-design/wp-content/uploads/2025/01/OU-Critical-AI-Literacy-framework-2025-external-sharing.pdf> [01 February 2025]

Hector, H. (2025) *Are you polite to ChatGPT? Here's where you rank among AI chatbot users*. TechRadar, 20 February. Available at: [Are you polite to ChatGPT? Here's where you rank among AI chatbot users | TechRadar](#) [20 May 2025]

HEUNG, Y.M.E. and Chiu, T.K. (2025) 'How ChatGPT impacts student engagement from a systematic review and meta-analysis study', *Computers and Education: Artificial Intelligence*, , pp. 100361. Available at [How ChatGPT impacts student engagement from a systematic review and meta-analysis study - ScienceDirect](#) [07 February 2025]

Han Li, Ning Ke, Anshao Zhang, Xv Huang 'Unraveling the Motivational Tapestry of AI-Driven Gamification in Education" (2024) *International Journal of Global Perspectives in Academic Research*, 1(3). [doi:10.70339/znd1nk22](#).

Jacobs, S. (2025) *"Prompt engineering" is no longer a job, but a skill*. TechSpot, 11 May. Available at: ["Prompt engineering" is no longer a job, but a skill | TechSpot](#) [20 May 2025]

Lee, C.C. and Low, M.Y.H. (2024) 'Using genAI in education: the case for critical thinking', *Frontiers in Artificial Intelligence*, 7, pp. 1452131

Lee, H.H., Sarkar, A., Tankelevitch, L., Drosos, I., Rintel, S., Banks, R. and Wilson, N. (2025) 'The Impact of Generative AI on Critical Thinking: Self-Reported Reductions in Cognitive Effort and Confidence Effects From a Survey of Knowledge Workers',

O'Connor, P. and Cardona, J. (2019) 'Gamification: A pilot study in a community college setting', *Journal of Education*, 199(2), pp. 83–88.

Perrigo, B. (2023) 'Exclusive: OpenAI used Kenyan workers on less than \$2 per hour to make ChatGPT less toxic', *Time*, 18 January. [Online]. Available at: <https://time.com/6247678/openai-chatgpt-kenya-workers/> [10 May 2025]

Tao, Y., Viberg, O., Baker, R.S. and Kizilcec, R.F. (2024) 'Cultural bias and cultural alignment of large language models', *PNAS nexus*, 3(9), pp. 346.

The Open University Evaluated the robustness of various assessment types against generative AI disruptions (N.D) **Available from** : [Explore AI | Jisc](#)

Wangari, S. and Vaidyanathan, G. (2025) 'How Big Tech hides its outsourced African workforce', *Rest of World*, 21 April. [Online]. Available at: [How Big Tech's AI labor supply chain relies on hidden African workers - Rest of World](#) [10 May 2025]

Yi, Y. (2021) 'Establishing the concept of AI literacy', *Jahr-European Journal of Bioethics*, 12(2), pp. 353–368.

Online resources

[Using Our Content – The AI Pedagogy Project](#)

A host of assessment activities to use with your students. All of the content on site, including assignments, tutorials, and other materials, is publicly available under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (CC BY-NC-SA 4.0).

[Edge Hill University Generative AI](#)

Lesson and assessment ideas using AI. Each resource will have a different Creative Commons license so please check and attribute accordingly.

Show case – Demo Other Tools for using with students

[Real or Fake Text](#)

- How good are you at knowing when text has been written by a computer? How many sentences can a computer write before it no longer has you fooled? Find out for yourself! Can you guess correctly - if not what the impact for you is, your role with thoughts on what policies or processes could be helpful to separate AI text from humans.

BBC Bitesize [Quiz: Artificial intelligence or real? - BBC Bitesize](#)

- A monthly quiz to test you and your students what you think is real or fake with images or content generated by AI tools

[Writing Case Studies Using Generative AI: Interactive Role Play - Faculty Focus | Higher Ed Teaching & Learning & Writing Case Studies Using Generative AI: Intimate](#)

UHI | INVERNESS Where learning means **more**

GenAI Engagement: Integrating Generative AI Tools with Students. UHI Inverness. **CC BY-NC 4.0**

[Debate Case Study - Faculty Focus | Higher Ed Teaching & Learning](#) (behind a paywall)

Shows you how to create an interactive online case study, using GenAI tools

Podcasts

[AI - Study Buddy or Influencer–AI Education Podcast – Apple Podcasts](#) ‘The report highlights both the opportunities and challenges GenAI presents, focusing on student and teacher perspectives, ethical considerations, regulatory approaches, and potential solutions.’

[Deception and Deepfakes - News–AI Education Podcast – Apple Podcasts](#) Includes links to a course ‘[Deception and Deepfakes- How genAI is Changing Cyber Safety](#)’

[Bridges and Bytes Podcast - Apple Podcasts](#)

Season 1 is a six-part series on the 'Student Voice on AI and Assessment'. Each episode was produced and hosted by groups of UCD Engineering and Architecture Students, and covers a different types of assessment.

[When Literacy and AI Collide](#)

Future Fluent by Jeremy Roschelle and Betsy Corcoran

How AI Bots Are Changing the Way We Write

Great writers plunge themselves and their lived experience into their writing. In this episode of Future Fluent, Jeremy Roschelle and Betsy Corcoran talk with Mike Sharples, a renowned learning scientist. In the 1990s, Sharples predicted that in less than 20 years computers would write full novels. We talk about how AI has progressed as a writer—and how it may evolve in the future. Hosted on Acast. See acast.com/privacy for more information. 30 min

AI Assistance Acknowledgement

This workbook is based on the previous 2-hour version and was developed with the assistance of generative AI tools to support content creation, language refinement, and idea organisation. The following details describe the AI tools utilised:

- **Tool Name & Version:** ChatGPT-4o
- **Provider:** OpenAI
- **Tool URL:** <https://www.openai.com/chatgpt>
- **Usage Details:** The AI tools were used to generate draft text, suggest content structure, and refine language.
- **Prompt Originator:** All prompts were authored by Fiona McConnell
- **Date of Use:** April/May 2025
- **Role of AI Responses:** The AI-generated content was used as a resource to inform and enhance the final text; all outputs were carefully reviewed and edited before inclusion.