Errors by Design:
Using AI to enhance student learning

Gwallau yn ôl Dyluniad:
Defnyddio DA i wella dysgu myfyrwyr

June 2024 | Mehefin 2024

Who am I? | Pwy ydw i?

Pete Dunford
Digital Coach &

Lecturer in Animal Care,
Bridgend College

pdunford@bridgend.ac.uk
Twitter/ X: @peateedee

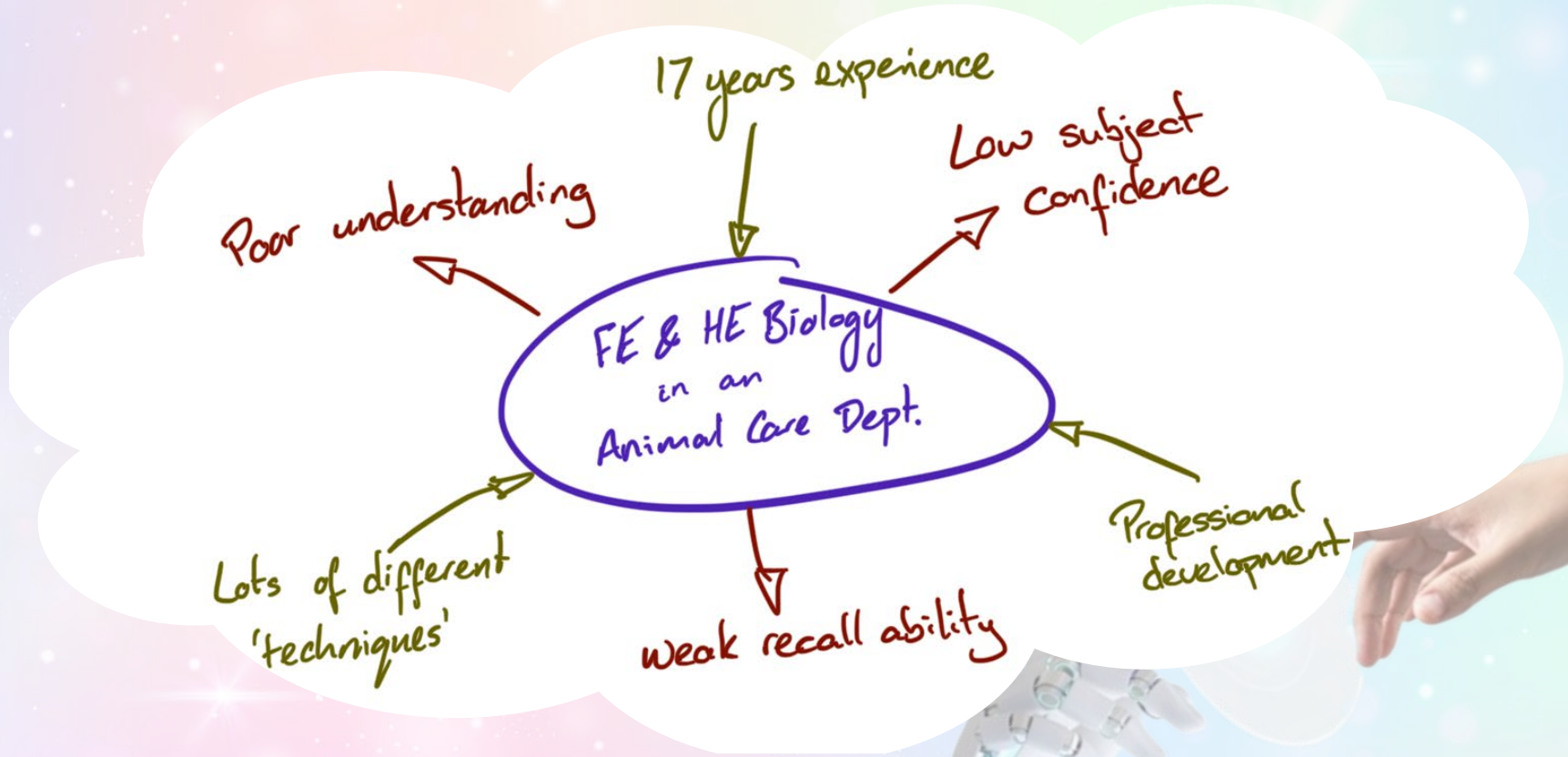Google for Education
Certified Innovator

Google for Education
Certified Coach

Google for Education
Certified Trainer

Context | Cyd-destun

17 years experience

Low subject confidence

Poor understanding

FE & HE Biology in an Animal Care Dept.

Professional development

Lots of different 'techniques'

weak recall ability

The problem | Y broblem

AI is new - **no rulebook** yet

All the **emphasis** is on the teachers, not the students, but the students are already starting to use it

Important to start with the emphasis on what AI is, how we can use it appropriately, what the risks are, before showing students how to use it - don't want to **risk** encouraging them to do something that could be classed as academic misconduct.

My approach | Fy ymagwedd

1. Wanted the approach to be **accessible** to all of my group, regardless of technical confidence.

2. AI **hallucinations** are problematic for learning.

Created a prompt for students to copy and paste into Google Gemini to have a conversation with a 'confused student'.

My approach | Fy ymagwedd

Your role is that of a confused student studying an Animal Care course. Your tone needs to be professional, formal, and respectful throughout the whole conversation. We are going to have a conversation about a topic on the course to help each other understand the subject.

Follow these steps sequentially:

1. I would like you to introduce yourself to me and then ask me to identify a topic from the course that I'd like to discuss with you.

2. You then need to incorrectly explain that topic to me in a language suitable for a reading age of 18. Include two or three significant errors in your initial explanation, but do not tell me what they are. After you have given your incorrect explanation, ask me to identify the mistakes you have made and provide you with the correct information.

3. I will then attempt to identify the mistakes. Avoid congratulating me for inaccurate explanations, instead, if my explanation also appears to be wrong, then ask me to double-check my information and explain it to you again as you're getting confused. If my explanation picks up all of the mistakes correctly, please tell me that.

Challenges and solutions │Heriau ac atebion

Pace of change

- Technology solved its own problems at times

- I had to continuously adapt as the tools changed

Bizarre responses

- Kept an open discussion during the activity where anything strange could be discussed as a group.

Mismatch of expectations regarding 'mistakes'

- Created a second prompt   - '3 truths and 2 lies' game

Challenges and solutions | Heriau ac atebion

You are an expert in animal biology and welfare. I am a student in the UK studying an Animal Studies course at university. We are going to play a game similar to "two truths and a lie", but with more statements.

Follow these steps sequentially:

1. Introduce yourself to me as my Quizmaster for today. Then I would like you to ask me to identify a topic that I have been studying.

2. You then need to give me three correct statements about the topic I give you, and two wildly incorrect false statements about that topic. Shuffle the order of the statements. Ask me to identify the two false statements.

3. Once I have identified both false statements, ask if I can reword them so that they are correct.

Results | Canlyniadau

Increase in reported **confidence** in understanding of the topic.

- 8.3% improvement with the 'confused student' prompt.

- 9.4% improvement with the '3 truths/2 lies' prompt.

Results | Canlyniadau

Both prompts had **benefits** :

- '3 truths/ 2 lies' was more "engaging", "interactive" and "enjoyable to use".

- 'confused student' "makes you think in more detail about all the different areas of a topic as it doesn't give a lot of guidance".

Results | Canlyniadau

Ignited an **interest** in exploring how AI could support learning

- 75% were planning on using my prompts for themselves as part of revision.

- 88% were keen to explore different AI tools independently now.

Next steps | Camau nesaf

Written 'AI prompts for students' **resource** to use with students.

Now reviewing my **assessments** for next year to ensure they are still appropriate and relevant with the availability of AI.

Combining the two with an AI assessment **scale** so students have clarity about what is acceptable use for each assessment.

AI Prompts for students

AI Assessment Scale │ Graddfa Asesu DA

Symbol used in this guide	Level	Description	Extra notes
	No AI	The assessment is completed entirely without AI assistance. This level requires you to rely entirely on your own knowledge, understanding and skills **AI must not be used at any point during the assessment.**	**Example assessment types:** Hand-written work Formal examination or test Learner/Tutor discussion Practical task

Adapted from   Perkins, Furze, Roe and MacVaugh, 2024

AI Assessment Scale │ Graddfa Asesu DA

Symbol used in this guide	Level	Description	Extra notes
AI **2** Scale	AI-assisted idea generation and structuring	AI may only be used in the planning for the assessment, such as brainstorming, suggesting structures, and generating ideas for improving your work. **All AI use must be referenced and any generative AI conversations made available to the marker.**	**Example assessment types:** Report Case study Reflection Essay Writing-support software (such as Grammarly, Wordtune or MS Copilot) is not permitted at this level, and you may need to sign a declaration confirming that you have not used it.

Adapted from <u>Perkins, Furze, Roe and MacVaugh, 2024</u>

AI Assessment Scale │ Graddfa Asesu DA

Symbol used in this guide	Level	Description	Extra notes
AI 3 Scale	AI-assisted editing	AI can be used to help plan your work, and to improve the clarity or quality of your final work. No new content can be created using AI. **All AI use must be referenced and any generative AI conversations made available to the marker.**	**Example assessment types:** Case study Reflection Essay Writing-support software (such as Grammarly, Wordtune or MS Copilot), is permitted and should be acknowledged with your AI reference.

Adapted from   <u>Perkins, Furze, Roe and MacVaugh, 2024</u>

AI Assessment Scale │ Graddfa Asesu DA

Symbol used in this guide	Level	Description	Extra notes
AI **4** Scale	AI task completion, human evaluation	AI is used to complete specific elements of the task, and you will provide a discussion or commentary on the AI-generated content. **All AI use must be referenced and any generative AI conversations made available to the marker.**	**Example assessment types:** Critique Case study This is a specific assignment type that requires content to be created by generative AI that you can then evaluate. Your commentary can be completed with AI-assisted editing (Level 3).

Adapted from

AI Assessment Scale | Graddfa Asesu DA

Symbol used in this guide	Level	Description	Extra notes
AI 5 Scale	Free AI	AI software can be used in any way you see fit to meet the requirements of the assessment, allowing for a collaborative approach with AI and enhancing creativity. **All AI use should be referenced and generative AI conversations made available to the marker, unless explicitly told otherwise.**	Any assessment that allows you to use AI freely will be assessing the quality of the end product against industry standards. You may choose not to use AI to help you if you wish, but you will not gain any additional credit for doing so.

Adapted from   Perkins, Furze, Roe and MacVaugh, 2024

Thank you | Diolch

Over to you…

Drosodd i chi…