



GCSE and A level Design & Technology

Artificial Intelligence (AI) in Component 2

Version 2.0

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28.02.2024	1.0	Document created
07.01.2025	2.0	Document amended – latest JCQ guidance

AI in Design and Technology Component 2

In recognition of the fast-paced nature of Generative Artificial Intelligence (GAI) and its growing impact in the creative sectors, we are providing the following guidance about AI in relation to the Non-Examined Assessment (NEA) component for GCSE and A Level Design & Technology (D&T).

Teachers are recommended to read the Joint Council for Qualifications (JCQ) guidance documents (February 2024) relating to coursework malpractice, and AI, which can be found using the following links:

- [JCQ - AI-Use-in-Assessments Feb24](#)
- [JCQ - Information for Candidates - Coursework assessments](#)
- [JCQ - Understanding and avoiding malpractice](#)

What this guidance document will outline

AI is here to stay, and as such must now be accounted for when learners generate assessment evidence for 'coursework-based' assessments, which for both D&T qualifications is Component 2, the NEA. As set out within the JCQ guidance, the NEA component can be completed with access to the internet, and as such the use of AI is therefore permitted when the student can demonstrate that their final submission is the product of their own independent work and independent thinking.

AI tools cannot be used on their own to meet the descriptor requirements as set out in assessment criteria grids for Component 2, at both GCSE and A Level. The use of AI can appear alongside and influence assessment evidence that the candidate has independently created (i.e. without the use of AI tools) to meet the requirements of the assessment criteria. Candidates are required to reference each and every instance of their use of AI tools within their NEA submission - failure to do so is considered malpractice.

This guidance will provide answers to four key questions. They are:

1. How do teachers correctly declare candidate and teacher use of AI within their centre's NEA submission?
2. How do candidates correctly reference AI use within their coursework?
3. When AI tools have been used and referenced, in what instances would candidates still receive a 0 mark?
4. What can candidates use AI for?

Section 1: How do teachers correctly declare candidate and teacher use of AI within their centre's NEA submission?

The candidate declaration found on the Candidate Authentication Sheet (CAS), must be signed and dated by the candidate upon completion of their coursework evidence. This declaration was updated for 2024, to include explicit reference to AI tool use, as shown below.

Candidate declaration

I certify that the work submitted for this assessment is my own. I have clearly referenced any sources and any AI tools used in the work. I understand that false declaration is a form of malpractice.

I acknowledge that Pearson may use candidate work for the purposes of standardisation, training, and exemplar material.

Candidate signed:		Date:	
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When signing this declaration, the candidate is acknowledging that they have clearly referenced all use of AI tools within their coursework evidence. When referencing AI tool use this must meet all JCQ recommendations for referencing, which are listed in Section 2 of this guidance.

The teacher declaration shown across is also found within the CAS document and must be signed and dated by the teacher when they have completed their assessment/marking of a candidate's coursework assessment evidence. By signing this declaration, the teacher is acknowledging two points; firstly, that to their knowledge the candidate has referenced all use of AI tools within their coursework evidence, and secondly, that the teacher has not solely used AI tools to assess/mark the candidate's assessment evidence for Component 2.

Teacher declaration

I declare the work submitted for assessment has been carried out without assistance other than that which is acceptable according to the rules of the specification. I certify that to the best of my knowledge the evidence submitted for this assignment is the learner's own. The learner has clearly referenced any sources and any artificial intelligence (AI) tools used in the work. I have not solely used AI to mark the learner's work. I understand that false declaration is a form of malpractice.

Assessor name:	
Assessor signed:	
	Date

Section 2: How do candidates correctly reference AI use within their coursework?

In accordance with the JCQ guidance, the use of AI tools within any evidence that will be assessed for a qualification (e.g. the NEA component for GCSE and A Level D&T) must be sufficiently referenced, in order to demonstrate academic integrity.

Using the below format, the candidate must reference each and every instance of AI tool use:

1. Name the AI tool source used and include the web link (e.g. ChatGPT 3.5 - <https://openai.com/blog/chatgpt/>)
2. The date the AI tool was accessed (e.g. 25/01/2025)
3. A non-editable copy of the prompt used to generate the content (e.g. a screen shot of the tool with the prompt shown)
4. A brief explanation of how the generated content was used within their work (e.g. to find suitable sources of information)

It is a requirement that candidates that use AI tools within their Component 2 coursework must maintain a record of each and every instance of the use of AI tools (included in the coursework portfolio or as a separate document); in addition, the record must fulfil the four requirements set out above for each and every instance of the use of AI tools.

Section 3: When AI tools have been used and referenced, in what instances would candidates still receive a 0 mark?

AI tool use has the potential to influence the creative journey of a candidate throughout their NEA coursework; they are accessible and can be used for sources of both information and inspiration.

In the following examples, the candidate has referenced all of their use of AI tools as part of their submission and has signed the candidate declaration prior to assessment/marking.

GCSE example

AI tool use	Candidate's independent work	Mark awarded	Explanation	Solution
<i>The candidate has prompted an AI tool to generate a design specification for a product they intend to make, and has copied this onto a slide within their portfolio.</i>	<i>The candidate has not produced their own design specification.</i>	Grid 1.2 (GCSE) Specification will be awarded a 0 mark .	The candidate's evidence for Grid 1.2 was solely produced by AI. The candidate has not independently produced their own assessment evidence (i.e. written a design specification relating to their own research).	The candidate should analyse the AI tool generated design specification for possible ideas or structures, but write their own which is clearly linked to the investigation work they have completed for Grid 1.1 Investigation.
<i>The candidate has prompted an AI tool to generate a range of design ideas for the product they are designing, and used these generated images as their own design ideas.</i>	<i>The candidate has not produced any sketched, modelled or CAD design ideas of their own.</i>	Grid 2.1 Design ideas will be awarded a 0 mark .	The candidate's evidence for Grid 2.1 was solely produced by AI. Irrespective of any annotation of these ideas, or their use of the AI tool to generate the design ideas, they have not produced their own evidence.	The candidate should study the AI tool generated design ideas to understand what features (for form and function) were generated, and can use this as inspiration for their own design ideas alongside other sources of information from their coursework.
<i>The candidate has prompted an AI tool to convert their hand drawn/digitally drawn design sketches into rendered images which they will use during a review process with a user.</i>	<i>The candidate inputted their own sketches into the AI tool, and will carry out the review process with a real user.</i>	Grid 2.2 Review of initial ideas and Grid 2.4 Communication of design ideas will be awarded marks associated with the candidate's independent evidence. No marks will be awarded in either grid for the rendered images produced by the AI tool.	The candidate will not be able to gain credit for the AI tool generated rendered images, despite it being an example of a graphical technique. This is because the AI tool has generated this graphical evidence. The candidate will gain credit for the use of these images during the review work carried out with a user, where they discuss the AI tool rendered images, because Grid 2.2 is assessing the candidate's ability to analyse and evaluate, not communication techniques.	The candidate should use the AI tool rendered images to support their own rendering of their design ideas, which would count as evidence of a graphical technique for Grid 2.4.

<p><i>The candidate has prompted an AI tool to generate a STL file of a product, which they will 3D print as part of their manufacture of a prototype.</i></p>	<p><i>The candidate will set up, operate and take ownership of the use of the 3D printer to make the product, and they will do post print cleaning, trimming and inspection work.</i></p> <p><i>The candidate has not produced any other CAD/CAM files for their prototype.</i></p>	<p>Grid 3.1b Manufacture - skills and processes and Grid 3.2 - Quality and accuracy will be awarded marks associated with the candidate's independent evidence.</p> <p>No marks will be awarded for Grid 3.2 in relation to the AI tool generated STL file.</p> <p>Marks may be awarded for Grid 3.1b where there is evidence of the candidate using CAM equipment independently, safely and competently using the STL file.</p>	<p>The candidate will not be able to gain credit for the quality and accuracy of the STL, because they had no control over these aspects of the STL when using the AI tool to generate it.</p> <p>The candidate may gain credit for the skills and processes involved in their own use of a 3D printer to produce the part using the AI tool generated STL.</p> <p>They may also gain credit for the activity associated with working with the 3D printed part, including any steps to improve its aesthetic, change its form or dimension, or fitting it to the other parts in an assembly.</p>	<p>The candidate should create their own STL file using CAD software in order to gain credit for Grid 3.2.</p> <p>The candidate could critique the quality, accuracy and general performance of the AI tool generated STL or 3D printed product in order to inform their own independent use of CAD/CAM for the final prototype.</p>
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A Level example

AI tool use	Candidate's independent work	Mark awarded	Explanation	Solution
<i>The candidate has prompted an AI tool to generate an identification of possibility</i>	<i>The candidate has not created any independent work for Grid 1</i>	Grid 1 Identification of design possibility will be awarded 0 marks	The candidate's evidence for Grid 1 was solely produced by AI. Although the candidate has input some parameters, there is no independent work.	The candidate could use the generated AI identification to reflect on their understanding of their potential users and situations and working with the user, reflect and refine the user's needs, wants and values
<i>The candidate has prompted an AI tool to generate an investigation of needs and research</i>	<i>The candidate has not created any independent work for Grid 2</i>	Grid 2 Investigations of needs and research will be awarded 0 marks	The candidate's evidence for Grid 2 was solely produced by AI. Although the candidate has input some parameters, there is no independent work.	The candidate could use the AI generated research as a starting point to selecting pertinent research. They could use the AI generated research to reflect and critique the needs of the prototype, user and design needs. However, AI would still need to be used in conjunction with other sources to elicit the higher marks.
<i>The candidate has prompted an AI tool to generate a design specification for a product they intend to make, and without any editing, has copied this onto a slide within their portfolio.</i>	<i>The candidate has not created a design specification independently.</i>	Grid 3 Specification will be awarded a 0 mark . However, the candidate will not be further penalised for using their Specification	The candidate's evidence for Grid 3 was solely produced by AI. Although the candidate has input some parameters, there is no independent work.	The candidate could use the generated AI to reflect on their own thoughts and independently create their own specification points. Note – for some candidates, having an AI generated specification may aid them in getting more access to marks in the design section, manufacture and evaluation. However, it would need to be bespoke to the client (with client feedback) and have specific measurability.
<i>The candidate has prompted an AI tool to generate a range of design ideas for the product they are designing, and used these generated images as their own design ideas.</i>	<i>The candidate has not produced any sketched, modelled or CAD design ideas of their own.</i>	Grid 4 Design ideas will be awarded a 0 mark . If the candidate has gone on to annotate AI generated ideas, they can gain level 1 marks in Grid 4 and Grid 8	The candidate has limited themselves in the use of design strategies and presenting a range of varied ideas. If the candidate has gone on to annotate, marks can be considered for materials, processes, techniques and consideration of the specification/users.	The candidate could use the AI generated ideas as inspiration for their own ideas and these could be considered as a design strategy to springboard the candidate's own ideas forward.

<p><i>The candidate has prompted an AI tool to convert their hand drawn/digitally drawn design sketches into rendered images which they will use during a review process with a user.</i></p>	<p><i>The candidate inputted their own sketches into the AI tool, and will carry out the review process with a real user.</i></p>	<p>Grid 8 Communication of design ideas will be awarded marks associated with the candidate's independent evidence.</p> <p>Although no marks would be awarded for the rendered drawings, the candidate may get credit in Grid 5 or 7 if they have analysed these renderings.</p>	<p>The candidate will not be able to gain credit for the AI tool generated rendered images, despite it being an example of a graphical technique. This is because the AI tool has generated this graphical evidence.</p> <p>The candidate will gain credit for the use of these images during the review work carried out with a user, where they discuss the AI tool rendered images, because Grids 5 and 7 are assessing the candidate's ability to analyse and evaluate, not communication techniques.</p>	<p>The candidate should use the AI tool rendered images to support their own rendering of their design ideas, which would count as evidence of a graphical technique for Grid 8.</p>
<p><i>The candidate has prompted an AI tool to generate a STL file of a product, which they will 3D print as part of their manufacture of a prototype.</i></p>	<p><i>The candidate will set up, operate and take ownership of the use of the 3D printer to make the product, and they will do post print cleaning, trimming and inspection work.</i></p> <p><i>The candidate has not produced any other CAD/CAM files for their prototype.</i></p>	<p>The candidate can gain some credit for the AI generated manufacture if it is integrated into the rest of the practical. For example, parts that connect being both AI generated and created by the candidate.</p>	<p>The candidate will not be able to gain credit for the quality and accuracy of the STL, because they had no control over these aspects of the STL when using the AI tool to generate it. However, they can be created for parts that connect and how that affects quality and accuracy as a whole.</p> <p>The candidate may gain credit for the skills and processes involved in their own use of a 3D printer to produce the part using the AI tool generated STL.</p> <p>They may also gain credit for the activity associated with working with the 3D printed part, including any steps to improve its aesthetic, change its form or dimension, or fitting it to the other parts in an assembly.</p>	<p>The candidate should create their own STL file using CAD software in order to gain credit for Grids 9 and 10.</p> <p>The candidate could critique the quality, accuracy and general performance of the AI tool generated STL or 3D printed product in order to inform their own independent use of CAD/CAM for the final prototype.</p>

Section 4: What can candidates use AI for?

In short, if candidates did not use AI it would make authenticating individual work more straightforward. Nonetheless, we will see a greater use of AI in future portfolio submissions so it is pertinent to now detail how it can be used in an acceptable way. Honesty from both candidates and centre assessors promotes academic integrity - they then sign the CAS to confirm this.

Centres are advised to follow the JCQ links (above) to avoid potential malpractice and to view the short video link below with examples from the GCSE D&T portfolio submissions from summer 2024. More exemplars will be added to the Pearson website as and when they are available.

[Video with exemplars of AI use - Nov 24](#)

Areas where AI might be used:

- As a research tool
- To improve written text
- As an inspirational tool
- As a rendering tool

Considering the assessment criteria grids, the possibilities include the enhancement of:

- Research
- Specifications
- Design Ideas
- Reviews
- Communication

The important aspect to always consider is whether the assessment evidence in a portfolio is the candidate's independent work, and when AI tools have been used that this is clearly referenced with a source and date etc as per the JCQ guidance.