

# Mapping the Implications and Potential of Generative AI in Post-Primary Education

## Introduction

Generative AI (GenAI) has become a heated topic in education both nationally and internationally. In post-primary education, it has been a topic of concern particularly for project assessments. With the Leaving Certificate on the cusp of reform, not least in the area of subject assessment, this article explores the implications and potential benefits for students of using GenAI in respect to assessment in post-primary education.

The revised syllabi for Leaving Cert that were introduced in the early 2000s are being replaced by Senior Cycle specifications. In some subjects, this has already occurred. In 2025, 12 more subjects (including Biology, Physics, Chemistry, and Business) will fall under the new Senior Cycle reform (DE, 2024a). The reform dictates that all subjects implement an additional assessment component(s) (AAC), 'designed to assess students' skills and key competencies developed through the study of their chosen subject, in a way that a final written examination cannot' (DE, 2024b). These AACs will be worth at least 40% of the available marks. Many education stakeholders are concerned that the use of GenAI may mean that the results of the project assessment will not be representative of a student's ability.

AACs are to build on existing knowledge and skills gained from classroom-based assessments (CBAs) in Junior Cycle. However, unlike CBAs, these Senior Cycle projects are worth at least 40% of a student's overall grade. Syllabus reform is a long process requiring input from many educational stakeholders. The introduction of GenAI, alongside its initial advancements and ease of access, could not have been foreseen by the National Council for Curriculum and Assessment (NCCA) and partners. One cannot predict what discoveries or



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**Leaving Certificate reform dictates that all subjects implement an additional assessment component(s), to be worth at least 40% of the available marks. Generative artificial intelligence (GenAI), while potentially transformative, is limited by certain factors, including how students use it. Though there is no concrete evidence that GenAI can achieve maximum marks with shallow engagement, this article argues that 40% assessment for projects is too high in light of GenAI.**

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technological advancements will be developed in the future, and therefore syllabus design should not be shackled to potential 'what ifs'.

It is worth noting that the Minister for Education, Norma Foley, announced this 40% AAC in September 2023, by which point GenAI capability was already relatively well established and being discussed in education circles. There is further concern among students, teachers, university representatives, and the general public over the proportion of marks to be awarded for AACs and the logistical challenges they pose (Hyland, 2024; Kennedy, 2024).

### The capabilities of GenAI

Generative AI is often described by those selling it and by tech enthusiasts as transformative in every aspect of life. This may be true to some degree, but what are the actual capabilities of GenAI in education, particularly post-primary? The truth is complex, as it usually is in education. There is currently no concrete evidence that GenAI can achieve maximum marks for a research-based assessment. So if a student were to type a project title into a GenAI software program, they would be given information, but the likelihood of them achieving maximum marks are slim.

GenAI should be seen as a tool, and as with all tools, some skill is required. The real question is: How many marks could be obtained using GenAI? This of course depends on what the topic is, to what extent GenAI is used, and, more importantly, how it is used. Some GenAI programs may also be more effective than others. Unfortunately, research is relatively limited by the newness of GenAI, and the vast majority of research to date is university-based.

GenAI can quickly generate a basic overall structure and identify some relevant points – but students need to be informed of its limitations. GenAI is dependent on the data it is trained on, so any biases in that data (or in the practices of the data programmers) will be present. Sources programmed into AI may be months or years out of date, so recent key information or developments may be missing. GenAI can 'hallucinate', or fabricate false information, although this is consistently being improved upon. Crucially, GenAI cannot understand the quality of data. AI tools cannot 'think': they cannot critically evaluate information to arrive at a conclusion, nor can they apply information to real-world contexts (University of Leeds, n.d.). These limitations are why a student would be unlikely to achieve a high result without detailed knowledge and adequate engagement when using GenAI programs.

Students may misinterpret a question, use the wrong equation, or input the wrong information. The old saying that a good craftsman never blames his tools is apt in this case. The use of GenAI is only as effective as how the student uses the program. Adolescents will still need to demonstrate skills such as critical

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thinking, to ensure they use the correct prompts; evaluation, to determine the quality of the text generated; data collection; attention to detail; and data analysis. Similarly to internet use, the better students will use GenAI as a support, whereas the less able students may use it as a crutch. Shallow engagement with GenAI should result in a flimsy assignment and will be marked as such.

## Final thoughts

Personally, I echo concerns that the 40% assessment for projects is too high in light of GenAI. It is necessary to be pragmatic about this situation. Subject specifications cannot be changed overnight, but perhaps reducing the marks awarded to 20% would alleviate the genuine concern among teachers and education stakeholders. Then, with the benefit of time, the true capabilities of generative AI in education can be established, and the marks awarded for project assessment could be discussed.

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