

Assessing and promoting authentic authorship with AI

INTRODUCTION

AI is becoming fundamental to how students in Higher Education (HE) learn. If AI is used without deference to academic integrity there are implications for **grade inflation**, **devalued qualifications** and **skill shortages**. The global HE sector has a duty to avoid such a credibility crisis.

To help HE overcome this crisis, we use AI to help students re-engage with their written content in a novel way: to quiz students on their own writing via AI and use their answers to calculate a 'familiarity indicator'. The quizzing framework builds upon the Hayes-Flower Cognitive model of Theory of Writing which understands writing 'as a set of distinctive thinking processes' which writers orchestrate or organize during the act of composing [1].

This poster presents results of two independent studies, which had the following objectives:

1. Investigate the efficacy (in a live setting) of AI based personalised 'cognitive' quizzing as a technique to promote responsible AI usage among students.
2. Gather student feedback to distinguish whether cognitive-based quizzing achieves its goal of encouraging self-reflection.

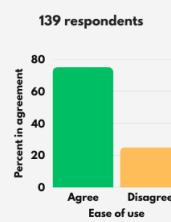
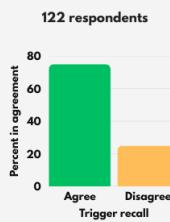
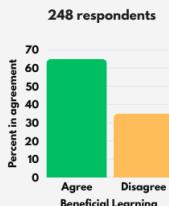
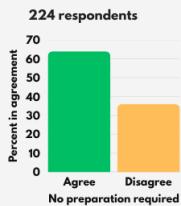
STUDY 1: EFFICACY TEST

	AI Generated	Own Assignment
Poor familiarity indicator	27 (87%)	8 (40%)
Good familiarity indicator	4 (13%)	12 (60%)
Total		31
		20

51 test submissions were collected in an in-class setting. A significant majority (87%) of students obtained poor Auth+ familiarity indicators when being quizzed on AI generated content. Contrastingly, when quizzed on their own submitted assignment, a majority (60%) obtained good familiarity indicators.

STUDY 2: EXPERIENTIAL TEST

Experiential survey data were collected from 256 students across five international universities including 17 courses representing a range of disciplines. 97% of student respondents were English as Second Language (ESL) speakers from Pakistan, and 3% were native English speakers from the UK. Students were surveyed on their experiences of using Auth+ authorship quizzes. Questions focused on: **preparation**, **beneficial learning experience**, **recall**, and **ease of use**.



CONCLUSION

The study provides strong proof of concept for Auth+. Over 70% of students reported that reading answer options reminded them of writing the text, while 65% found the quiz beneficial for learning. Moreover, 87% showed low familiarity with AI-generated content, suggesting promise for AI-generated quizzing as an additional feedback layer in addition to traditional plagiarism-detection tools.



[1] Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition & Communication*, 32(4), 365-387.

HOW IT WORKS



Instructor shares link



Students are quizzed



Familiarity indicator generated from student responses