

# 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.

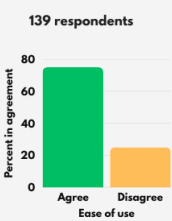
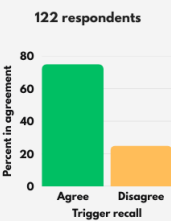
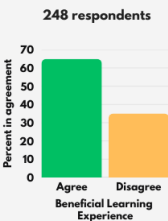
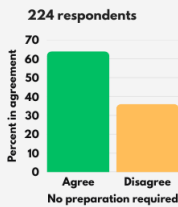
## STUDY 1: EFFICACY TEST

	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**.

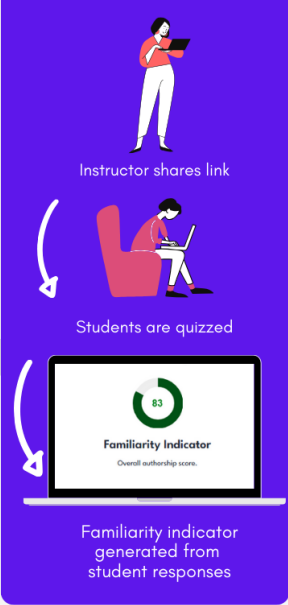


## CONCLUSION

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.



## HOW IT WORKS



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