

Research Paper Titled

Human-Governed AI and Visible Authorship in Higher Education

Prepared by

Amaal Abdullah Aljohani

Prince Muqrin bin Abdulaziz University

Lecturer

<https://jaspss.com>**Abstract**

The use of generative artificial intelligence (AI) has become a familiar part of higher education, creating a structural challenge for digital education and EdTech governance: what are the opportunities for institutions to leverage AI as a tool for supporting students, while maintaining ownership, accountability, and academic integrity? In this paper, an interpretative documentary case study of an undergraduate General Studies course at a hypothetical university in the Gulf region is presented. Collaborative platforms, limited use of AI, scaffolding, and student-generated EPUB publications were all integrated into the course. The evidentiary corpus consisted of the platform artefacts, the assessment documents, the learning-outcome reports, and around 130 student EPUB books, selected six of which for qualitative analysis. Documentary profiling resulted in a Digital Artefact Production Rate (DAPR) of 87% and a Benchmark Exceedance Index (BEI) of +22 percentage points over the institutional benchmark. The qualitative analysis revealed four types of distinctive visible authorship: disciplinary contextualization, ethical reflection, process-product continuity and attributable design judgment. The results indicate that sustainable digital pedagogy can be realised with AI, if it is regulated, assessed, and handled by humans. The paper provides a conceptual vocabulary, a documentary approach and a reusable five-principle governance approach for digital literacy, digital citizenship and inclusive digital societies.

The keywords are: Human-governed AI, Visible authorship, Sustainable digital pedagogy, Documentary case study, Digital citizenship, EPUB, Higher education.

<https://jaspss.com>

1. Introduction

The era of Generative AI is changing Higher Education. Students can now expect large language models to provide them with brainstorming ideas, a first draft, language support, summaries, and formative feedback [1,2]. Concurrently the tools are readily available and raise fundamental questions about assessment, originality and student authorship [7-10,12]. No longer is the question “Should AI be in higher education?” but “How can institutions control AI without killing the spirit of learning support and outsourced authorship?”

This is especially tricky when using digital learning spaces as the challenge can only be really understood once a complete artefact has been submitted, where it is not always clear who made the intellectual decisions. Guidance not only on transparency, but on human oversight, and responsible use is increasing in scope [3-6] but these are high-level guidelines that are not always reflected in a workflow, platform practice or measurable evidence. This paper outlines an interpretive documentary case study of a GS undergraduate course that addresses this operational gap via collaborative tools, limited AI application, a tiered system of instructor review, and student-produced EPUB publications. The study is neither a verdict on the good or bad of AI, nor a criticism of AI, rather it is a description of how a course can be designed to ensure student contribution can be seen and evaluated throughout.

Research Questions

1. RQ1. How were collaborative platforms, bounded AI use and student-generated digital publications enacted as sustainable digital pedagogy?
2. RQ2. What are the signatures of visible authorship that are found in the student artefacts sampled?
3. RQ3. What are the implications for governance of AI-rich higher education towards digital literacy and inclusive digital societies?

Contributions

1. A conceptual vocabulary that connects the human-governed AI, the visible authorship, and the sustainable digital pedagogy.
2. A pedagogical methodology that relies on the combination of pedagogical documents, performance indicators and student artefacts.
3. A governance model that can be transferred, based on five principles: boundedness, disclosure, checkpointing, revisionary accountability, and authorship preservation.

<https://jaspss.com>

2. Related Work and Conceptual Framing

2.1 Generative AI, assessment, and the integrity problem

New studies have revealed that generative AI has not only increased concerns around integrity issues but also created new pedagogical opportunities [1,2,7-10,12]. Students brainstorm ideas, paraphrase text, summarize documents, and scaffold language using AI, potentially reducing barriers for multilingual learners to academic participation. However, the same affordances also allow shallow engagement, a hallucination of content, an unimagined borrowing, and over-dependence of the machine-generated prose [7-10]. The pedagogical challenge is then not just about banning things, but about designing the assignment, the platform, and the assessment to all make human effort visible.

2.2 Governance guidance and its boundaries

Guidance both internationally and nationally is converging on transparency, human oversight, accountability and proportionality [3-6]. These principles are, however abstract. Teachers should be provided with clear structures of assignments, stages of the assignment process, guidelines around what is acceptable, disclosure requirements and assessment frameworks to define student responsibility that can withstand moderation.

2.3 Digital platforms, digital literacy, and digital citizenship

Digital education platforms are more than just content providers, they are also creators of expectations around rules of engagement, authorship, and accountability. Digital literacy and digital citizenship are interwoven with AI governance [11,13]. The sustainable digital pedagogy calls for designs of the platform and assessment that maintain epistemic responsibility rather than only access to tools.

2.4 Study gap and conceptual position

Two gaps inspire this study: (a) the lack of empirical descriptions of AI governance in everyday courses and (b) the lack of operational modelling of sustainable digital pedagogy. Five principles were developed to frame the case, and are summarized in Table 1.

Table 1. Five principles of human-governed AI

Principle	Operational meaning
Boundedness	AI use is limited to defined stages and purposes.
Disclosure	Substantive AI assistance is acknowledged by the student.
Checkpointing	Instructor review occurs at key workflow stages.
Revisionary accountability	Students verify, adapt, and defend AI-assisted material.
Authorship preservation	The final artefact must bear attributable human judgment.

2.5 Sustainable digital pedagogy and inclusive digital societies

In this definition, sustainable digital pedagogy is a configuration that is stable in the context of the fast-paced changes in AI. It merges the integrity of assessment, the resilience of institutions, pedagogical coherence, and digital citizenship. Represented like this, AI Governance is a design challenge for the curricular instead of being an afterthought of compliance — and preparing students for inclusive digital societies is an outcome of the assessment design.

3. Methodology

3.1 Research design

This study is case-study research with interpretive approach [14]. The unit is an undergraduate course in General Studies within an anonymous university in the Gulf-region. The goal is not statistical generalization, but analytical transferability: to provide a description of a governed configuration, adequate to allow its use in other settings.

3.2 Evidentiary corpus

- Course syllabus, pedagogical planning materials and assessment rubrics.
- Reporting sheets for learning outcomes and traces on collaborative platforms.
- Records and metadata generated by authoring-platform.

<https://jaspss.com>

- Around 130 student creations of EPUB artefacts, six of which were chosen for detailed study.

3.3 Sampling logic

- To capture the diversity of disciplinary framing, choice of topic and design choices in the entire corpus of student work, maximum variation purposive sampling was used to select the six EPUB artefacts.
- Lay the groundwork for the creation of the document profile. Prepare the groundwork for developing the document profile.
- Digital Artefact Production Rate (DAPR): percentage of all enrolled students who complete the artefact that they are the author of.
- Gap between learning-outcome attainment and the institutional benchmark is known as the Benchmark Exceedance Index (BEI).
- Overall course success (pass rate): contextual indicator of overall course success.

3.4 Qualitative artefact analysis

Four categories were used to code artefacts: visible authorship, disciplinary contextualisation, ethical reflection, and continuity of process-product. The coding was done iteratively, with the discrepancies being resolved by going back to the source artefact and process traces.

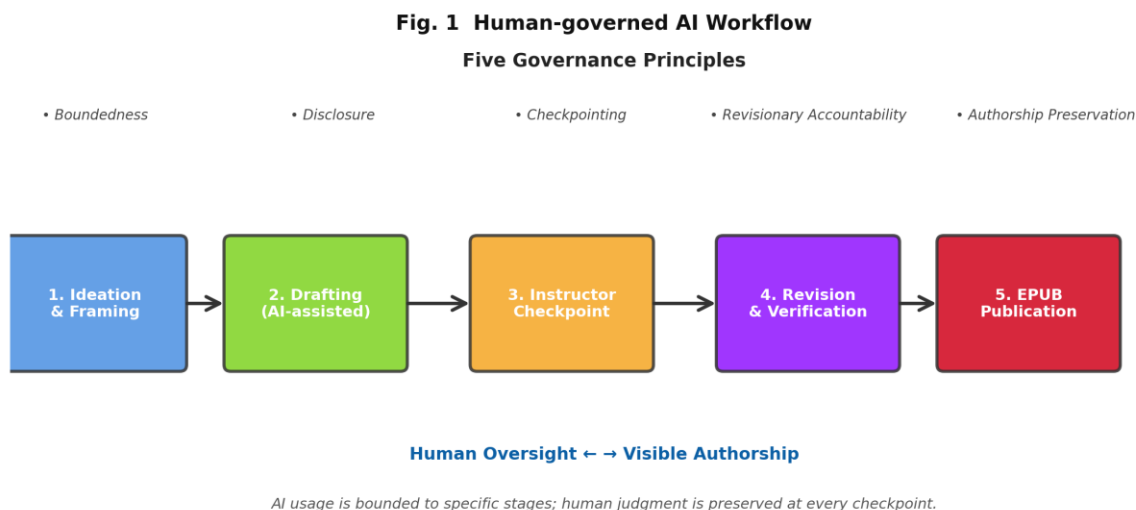


Fig. 1 Human-governed AI workflow — a five-stage pathway (Ideation → Drafting → Instructor Checkpoint → Revision → EPUB Publication) governed by five principles that keep human judgment visible at every stage.

<https://jaspss.com>

4. Results

4.1 Course design as a governed digital-education platform

The course followed a three-phase process (ideation, drafting, revision, and EPUB publication). Instead of adding a layer of AI as an optional add-on, it was integrated into the assessment structure, revealed by the students, and reviewed by the lecturer prior to publication. The use of AI was not part of an additional supplementary unit but was an integral component of the assessment process, made known by the students and verified by the lecturer before publication. This workflow is reconstructed in Figure 1 and is presented as a concrete stage of student production for each of the governance principles.

4.2 Documentary indicators

Table 2 provides a summary of the quantitative signal and it is shown in Figure 2. For an authorship-based activity, the DAPR was 87%, indicating the possibility of scaling up an authorship-based activity. Learning outcome attainment that is significantly higher than the institutional benchmark is in the range of BEI of +22 percentage points. Nearly 97% pass rate is a sign of supporting context but not a governance metric.

Table 2. Documentary indicators of course performance.

Indicator	Value	Interpretation
DAPR	87%	Authorship-bearing task viable at scale.
BEI	+22 pp	Attainment above the institutional benchmark.
Pass rate	≈ 97%	Supportive contextual indicator.

Fig. 2 Documentary Indicators of Course Performance

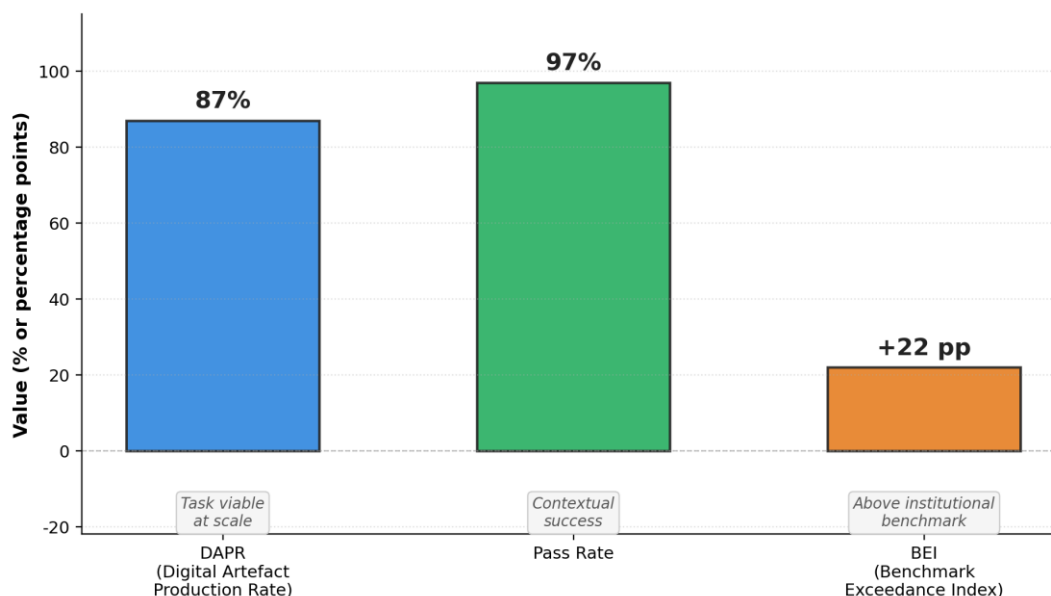


Fig. 2 Documentary indicators of course performance. $DAPR = 87\%$, $Pass Rate \approx 97\%$, and $BEI = +22 pp$ above the institutional benchmark.

4.3 Recurrent qualitative signatures of visible authorship

Four of these signatures were repeated in the six purposefully selected EPUB books. First, students used their personal or professional perspectives to frame topics, and they made intentional decisions in their design of topics in voice, examples, and layout. Second, disciplinary contextualization – themes were reworked to fit the different professional context (e.g., engineering, business, education). Thirdly, ethical reflection — books that contain evaluative comments on digital responsibility and the responsible use of AI, not just a report on the use of AI. Fourth, process-product continuity – the process of the drafts, revisions, and final chapters were coordinated in a manner that is hard to replicate with 1-shot AI generation.

Table 3. Recurrent qualitative signatures in the sampled EPUB artefacts

Signature	Evidence type
Visible authorship	Student-specific framing, layout, and voice.
Disciplinary contextualization	Themes adapted to professional/disciplinary contexts.
Ethical reflection	Evaluative statements on responsibility and AI use.
Process-product continuity	Coherent alignment across drafts and final artefact.

5. Discussion

5.1 What the case shows about sustainable digital pedagogy

It is not adoption, but governance, that is the strategic problem. However, when AI tools are used under human governance frameworks (bounded use, disclosure, checkpointing, revisionary accountability, and authorship preservation), the impact of AI can be used to enhance learning without taking it away from the student. These figures, both 87% DAPR and +22 pp BEI, imply that a hard task that demands authorship is not a pedagogical experiment in a small group but is a design that can be scaled up to a real class.

5.2 Implications for EdTech, digital literacy, and inclusive digital societies

EdTech platforms must document genuine learning in a readable manner – with a History of Staged Submissions, Revision History, and Disclosure History. Visible authorship is both a curricular imperative and a civic competency; it is an AI rich civic competency in which students are capable of being “tracable and accountable.” In Figure 3, visible authorship is shown as a pivot between sustainable digital pedagogy and inclusive digital societies.

Fig. 3 Sustainable Digital Pedagogy Framework

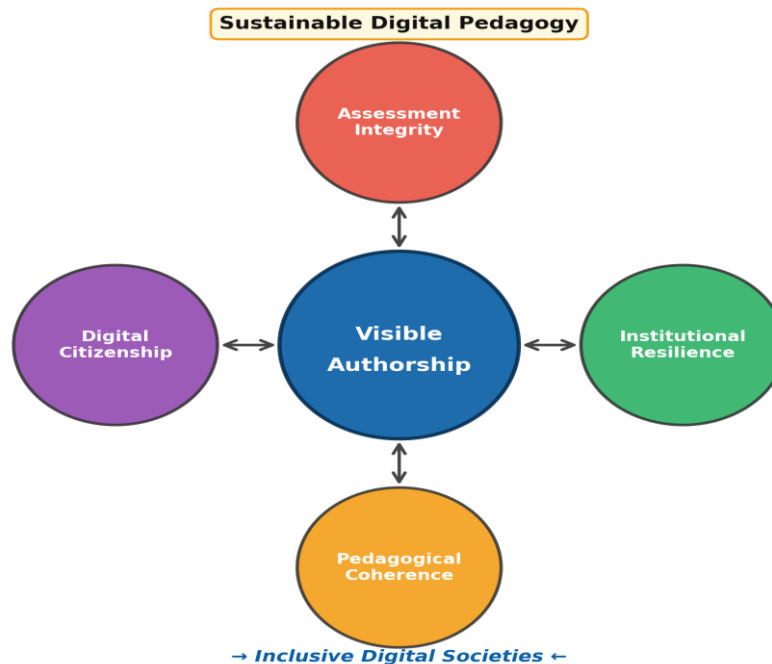


Fig. 3 Sustainable digital pedagogy framework: visible authorship connects assessment integrity, institutional resilience, pedagogical coherence, and digital citizenship — the pillars of inclusive digital societies.

5.3 Institutional and policy implications

Institutions should (i) explicitly indicate what uses of AI are acceptable for each assignment, (ii) explicitly request disclosure of substantive AI assistance, (iii) establish checkpoints to monitor the work of the instructors, and (iv) assess revisionary accountability in addition to final product. AI governance is not an issue of policing, but rather design.

5.4 Limitations

The indicators (DAPR, BEI) and signatures shown here are not statistically generalizable to other programs and are presented in an analytical fashion. Future research should expand the documentary approach to other disciplines and settings, incorporate the five principles with student self-report and teacher interviews, and examine the extent to which the five principles continue to hold sway in summative assessment settings. It might also be interesting to investigate whether visible-authorship practices were acquired in one course that transfer to subsequent courses and outside of the university, in longitudinal designs.

<https://jaspss.com>

6. Conclusion

The conditions of sustainable higher education supported by AI are human governance and visible authorship. Here are the set of concepts (human-governed AI, visible authorship) and set of documents (DAPR, BEI, four qualitative signatures) proposed in this paper along with a five-principle transferable model. Innovation and integrity don't clash as long as the pedagogical designs give visibility, disclosure and assess ability to the human element throughout the learning workflow.

<https://jaspss.com>

References

- [1] Kasneci, E., et al. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274.
- [2] Tlili, A., et al. (2023). What if the devil is my guardian angel: ChatGPT as a case study of using chatbots in education. *Smart Learning Environments*, 10(1), 15.
- [3] UNESCO (2023). *Guidance for Generative AI in Education and Research*. UNESCO, Paris. ISBN 978-92-3-100612-8.
- [4] OECD (2023). *Digital Education Outlook 2023: Towards an Effective Digital Education Ecosystem*. OECD Publishing, Paris.
- [5] TEQSA (2023). *Assessment Reform for the Age of Artificial Intelligence*. Tertiary Education Quality and Standards Agency, Melbourne.
- [6] European Commission (2022). *Ethical Guidelines on the Use of Artificial Intelligence and Data in Teaching and Learning for Educators*. Publications Office of the European Union, Luxembourg.
- [7] Cotton, D.R.E., Cotton, P.A., & Shipway, J.R. (2024). Chatting and cheating? Ensuring academic integrity in the era of ChatGPT. *Innovations in Education and Teaching International*, 61(2), 228-239.
- [8] Perkins, M. (2023). Academic integrity considerations of AI large language models in the post-pandemic era. *Journal of University Teaching and Learning Practice*, 20(2), 07.
- [9] Bearman, M., Ryan, J., & Ajjawi, R. (2024). Discourses of artificial intelligence in assessment: A critical review. *Assessment and Evaluation in Higher Education*, 49(2), 175-189.
- [10] Rudolph, J., Tan, S., Tan, S., & Chang, Z. (2023). ChatGPT: Bullshit spewer or the end of traditional assessments? *Journal of Applied Learning and Teaching*, 6(1), 342-363.
- [11] Choi, M., Glassman, M., & Cristol, D. (2017). What it means to be a citizen in the internet age. *Computers and Education*, 107, 100-112.
- [12] Selwyn, N. (2024). Generative AI and education: Digital promises, pedagogic problems. *Learning, Media and Technology*, 49(1), 1-6.
- [13] Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices. *Learning, Media and Technology*, 45(2), 107-114.

<https://jaspss.com>

- [14] Bowen, G.A. (2009). Document analysis as a qualitative research method. Qualitative Research Journal, 9(2), 27-40.
- [15] Biesta, G. (2010). Why what works still won't work. Studies in Philosophy and Education, 29(5), 491-503.
- [16] Luckin, R., Holmes, W., Griffiths, M., & Forcier, L.B. (2016). Intelligence Unleashed: An Argument for AI in Education. Pearson, London.
- [17] Holmes, W., Persson, J., Chounta, I.-A., Wasson, B., & Dimitrova, V. (2022). Artificial Intelligence and Education: A Critical View Through the Lens of Human Rights, Democracy and the Rule of Law. Council of Europe Publishing, Strasbourg.