

# Rethinking authorship after generative AI: assessment design, academic integrity, and linguistic evidence in Indonesian higher education

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## ABSTRACT

**Background:** Generative AI has unsettled conventional authorship in Indonesian higher education by blurring boundaries between legitimate writing support, linguistic development, and academic misconduct. **Objective:** This study examines how authorship after generative AI is constructed through assessment design, academic integrity governance, and linguistic evidence in Indonesian higher education. **Method:** Using qualitative corpus-based document analysis, this study analyses 17 publicly accessible policy, pedagogical, contextual, and scholarly documents through coding categories on accountability, assessment orientation, and language-based authorship judgement. **Results:** Findings show that human-accountability centred authorship dominates corpus documents, indicating that students remain responsible for claims, sources, reasoning, and final submissions even when AI assistance is permitted. Findings also reveal that assessment responses increasingly privilege process-based evidence, pedagogical guidance, oral explanation, prompt documentation, and source verification over detector-only control. **Implication:** Linguistic evidence is positioned as supportive rather than conclusive, because polished academic English may reflect EFL development, translation, feedback uptake, or AI-mediated revision. **Novelty:** This study offers a novel assessment-ecology perspective by integrating authorship accountability, integrity design, and contextual linguistic judgement as a defensible framework for evaluating AI-assisted academic writing in multilingual higher education.

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## 1. INTRODUCTION

Generative AI has transformed academic writing from a private act of composition into a contested site of authorship, accountability, and institutional judgement. The social scale of this shift is difficult to dismiss: ChatGPT was estimated to have reached 100 million monthly active users in January 2023, only two months after its public release, making generative AI a mass educational technology rather than a marginal writing aid [34]. In Indonesian higher education, this disruption intersects with longstanding pressures around English academic writing, thesis completion, citation literacy, and unequal access to high-quality feedback. AI tools now assist students in brainstorming, translating, paraphrasing, revising, and polishing academic prose, yet these practices unsettle conventional distinctions between legitimate support and academic misconduct. The crucial issue is not simply whether students use AI, but how universities can assess authorship when textual fluency, linguistic accuracy, and polished argumentation may no longer reliably indicate independent intellectual labour.

Recent scholarship has already examined AI-assisted writing, academic integrity, assessment redesign, and institutional policy responses. Studies in Indonesian contexts show that students and lecturers perceive AI writing tools as useful for idea development, language improvement, feedback, and confidence building, while also recognising risks related to dependency, shallow comprehension, and ethical ambiguity [1], [2], [3], [4]. International research has likewise mapped institutional guidelines, AI assessment frameworks, transparency mechanisms, and academic integrity concerns in higher education [5], [6], [7], [8], [9]. However, much of this literature remains divided between technological detection, policy compliance, and pedagogical opportunity. Less attention has been given to how authorship can be evaluated through linguistically informed evidence in Indonesian multilingual and EFL settings, where student voice, grammatical variation, translation practice, and AI-mediated revision may overlap in complex ways.

This study investigates how authorship after generative AI can be rethought through the interrelation of assessment design, academic integrity, and linguistic evidence in Indonesian higher education. It asks how institutional and pedagogical documents define acceptable and unacceptable AI use, how assessment tasks distribute responsibility between students, lecturers, and AI tools, and what forms of evidence are considered legitimate when judging academic authorship. Rather than treating AI use as a binary distinction between cheating and innovation, this study examines the conditions under which AI-assisted writing becomes transparent, accountable, and educationally defensible. This study also asks how Indonesian EFL writing contexts complicate dominant assumptions about originality, fluency, and textual ownership. These questions are necessary because AI-generated or AI-assisted prose may resemble competent academic English, while non-AI student writing may appear formulaic, uneven, or linguistically mediated by translation and feedback.

This study advances the argument that academic integrity after generative AI cannot be secured through detection-centred assessment alone. AI detectors and similarity tools may provide limited signals, but they cannot independently establish intention, authorship, understanding, or misconduct, especially in multilingual writing environments [10], [6]. A more defensible approach requires assessment designs that make writing processes visible through staged drafting, reflective disclosure, prompt documentation, source verification, oral explanation, and discipline-sensitive rubrics [11], [12], [13]. In this view, linguistic evidence should support academic judgement rather than replace it. Authorship is therefore understood not as untouched textual purity, but as accountable participation in knowledge production. This study tests that proposition by examining how Indonesian higher education can move from suspicion-based integrity management toward assessment ecologies that evaluate responsibility, reasoning, and learning process.

## 2. LITERATURE REVIEW

### 2.1. Authorship after generative AI

Authorship after generative AI can no longer be defined only as individual textual production. In conventional academic writing, authorship implies intellectual ownership, responsibility for claims, and accountable participation in disciplinary knowledge-making. Generative AI unsettles this definition because students may use machine assistance for ideation, translation, organization, stylistic revision, or even argument construction. Bozkurt (2024) [15], Hau (2025) [16], Pereira (2026) [17], and Slimi (2026) [18] argue that AI-assisted authorship should be understood through responsibility, disclosure, and human judgement rather than textual originality alone. However, Velez and Rister (2024) [14] caution that institutional anxiety often collapses diverse AI-supported practices into suspicion. Authorship therefore becomes a relational and ethical category.

The main indicators of AI-era authorship include intentionality, disclosure, intellectual contribution, revision control, source responsibility, and capacity to defend one's work. Nguyen et al. (2024) [11] show that human-AI collaboration in academic writing varies from surface-level editing to deeper co-composition, making authorship difficult to infer from final text alone. Perkins and Roe (2023) [36] similarly note that publisher and institutional guidelines increasingly require transparency but differ in how they define permissible AI involvement. In Indonesian contexts, studies by Malik et al. (2023) [1], Utami et al. (2023) [2], Andriyanti et al. (2025) [3], and Mali (2026) [19] indicate that students often value AI for feedback and language support, yet ethical boundaries remain unevenly understood.

### 2.2. Academic integrity

Academic integrity in generative AI contexts is best understood as an ecosystem of values, policies, pedagogies, and assessment practices rather than a narrow system of misconduct detection. Yeo (2023) [20], Song (2024) [21], Al-Hajaya (2025) [22], Bittle and El-Gayar (2025) [9], and Maleki (2026) [23] agree that AI has intensified concerns about plagiarism, ghostwriting, fabrication, and unacknowledged assistance. Yet they differ on whether integrity should be protected primarily through regulation, technological control, or educative redesign. Detection-oriented approaches promise procedural certainty but risk overclaiming evidence. More pedagogical approaches frame integrity as teachable practice, requiring students to understand why transparency, citation, process evidence, and accountability matter.

Indicators of integrity-oriented assessment include task authenticity, staged drafting, reflective disclosure, oral explanation, prompt documentation, citation verification, and rubric-based judgement. Moorhouse et al. (2023) [5], Perkins et al. (2023) [6], Lye and Lim (2024) [7], Xia et al. (2024) [8], and Furze et al. (2024) [25] argue that assessment should be redesigned so that AI use becomes visible, bounded, and pedagogically meaningful. Ardito (2023) [10], (2024) [35] further warns that AI detection cannot reliably function as sole evidence of misconduct, especially when student writing is linguistically diverse. Evangelista (2025) [12], Peters and Angelov (2025) [24], and Pérez-Pérez et al. (2026) [13] therefore support transparency mechanisms that evaluate learning process, not only textual product.

### 2.3. Linguistic evidence

Linguistic evidence refers to textual and process-based indicators used to interpret whether student writing reflects accountable academic authorship. It may include coherence, lexical sophistication, syntactic control, citation behaviour, register shifts, drafting traces, metalinguistic explanation, and consistency between written work and oral defence. However, linguistic evidence must be distinguished from linguistic suspicion. Amirjalili et al. (2024) [26] show that AI-generated and human academic writing may overlap in surface features, while J. and Afandi (2024) [27] demonstrate that human and ChatGPT performance cannot be reduced to simple textual binaries. For Indonesian higher education, this distinction is crucial because EFL writing involves translation, revision, feedback uptake, and uneven fluency.

The most relevant indicators of linguistic evidence are therefore interpretive rather than deterministic. Writing fluency, grammatical accuracy, and polished cohesion should not automatically be treated as signs of AI authorship, just as errors should not automatically prove authenticity. Indonesian studies on AI-assisted academic writing report that students use AI to improve vocabulary, grammar, confidence, and organization, but also face risks of dependency and reduced critical engagement [28], [29], [30], [31], [32]. This study therefore positions authorship as accountable process, integrity as assessment ecology, and linguistic evidence as contextual academic judgement.

## 3. METHOD

The unit of analysis in this study is the publicly accessible document that defines, regulates, discusses, or contextualises generative AI use in Indonesian higher education. The corpus includes national guidelines, institutional policies, faculty-level rules, lecturer and student guides, official announcements, and peer-reviewed studies on AI-assisted academic writing, academic integrity, and assessment. Each document was treated as a bounded textual unit, while excerpts, visual elements, institutional context, and coding categories were stored separately to preserve traceability. This unit is appropriate because authorship after generative AI is not only expressed in student writing, but also constructed through policy language, assessment instructions, disclosure rules, and academic integrity discourse.

This study uses a qualitative corpus-based document analysis design. This design is suitable because this inquiry examines how authorship, integrity, and assessment are discursively organised across public documents rather than measuring behavioural effects. It also avoids causal claims that cannot be supported by document data. Methodologically, this design follows recent work arguing that generative AI in higher education must be studied through policy, pedagogy, task design, and transparency mechanisms rather than through technical detection alone [5], [6], [7], [8]. This design therefore positions documents as evidence of institutional reasoning and pedagogical governance.

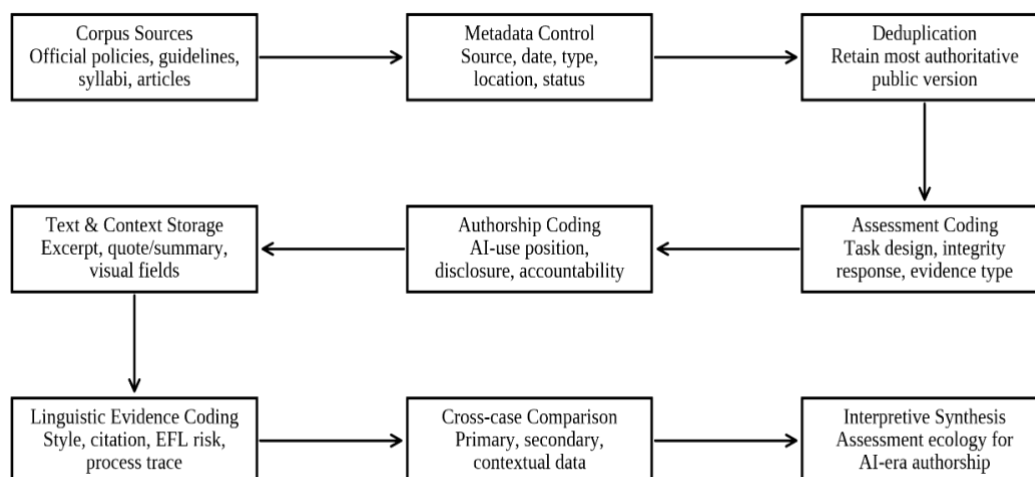
Information sources were divided into primary, secondary, and contextual data. Primary data consisted of official guidelines, regulations, and institutional rules that directly define acceptable or unacceptable AI use. Secondary data consisted of peer-reviewed studies on Indonesian students' AI-assisted writing, misconduct, academic writing strategies, and EFL learning conditions [1], [2], [33], [32], [4]. Contextual data consisted of official announcements and public institutional communication that explained how AI policies were introduced. This layered structure enabled this study to distinguish prescriptive rules, empirical scholarship, and institutional framing.

Data collection followed a systematic public-source procedure. Searches used Indonesian and English keywords, including “generative AI higher education Indonesia,” “pedoman AI perguruan tinggi,” “integritas akademik AI,” “AI academic writing Indonesia,” “ChatGPT EFL writing Indonesia,” and “assessment AI higher education.” Documents were included when they were publicly accessible, relevant to Indonesian higher education, and connected to authorship, assessment, integrity, or linguistic evidence. Items were excluded when they lacked verifiable source information, duplicated a retained document, or discussed AI without relevance to academic writing or assessment. Metadata, excerpts, URLs, document type, publication date, context, and visual fields were stored in separate CSV files.

**Table 1.** Composition of dataset

| Code        | Data Type | Source                                             | Location                    | Period      | Count | Characteristics                    |
|-------------|-----------|----------------------------------------------------|-----------------------------|-------------|-------|------------------------------------|
| IDN-AI-P001 | Primary   | National GenAI guideline archived by UGM Library   | National/Yogyakarta archive | 2024        | 1     | Higher education AI-use guide      |
| IDN-AI-P002 | Primary   | FISIPOL Universitas Gadjah Mada                    | Yogyakarta                  | 2025        | 1     | Doctoral dissertation guide        |
| IDN-AI-P003 | Primary   | Faculty of Sharia, UIN Antasari                    | Banjarmasin                 | 2025        | 1     | Faculty AI ethics guide            |
| IDN-AI-P004 | Context   | UIN Antasari institutional news                    | Banjarmasin                 | 2025        | 1     | AI guideline announcement          |
| IDN-AI-P005 | Primary   | LSPR student GenAI guideline                       | Jakarta                     | 2025        | 1     | Student-facing AI policy           |
| IDN-AI-P006 | Primary   | LSPR lecturer GenAI guideline                      | Jakarta                     | 2025        | 1     | Lecturer-facing AI policy          |
| IDN-AI-P007 | Primary   | FISIP UPR AI ethics guide                          | Palangka Raya               | 2024        | 1     | Department-level AI ethics guide   |
| IDN-AI-P008 | Primary   | STEI SEBI AI ethics guide                          | West Java                   | n.d.        | 1     | Institutional AI ethics guide      |
| IDN-AI-P009 | Context   | Faculty of Engineering, Universitas Indonesia      | Depok/Jakarta               | 2025        | 1     | Seminar/news on AI ethics          |
| IDN-AI-P010 | Primary   | National academic integrity regulation archive     | National/Jakarta            | 2021/2025   | 1     | Integrity regulation reference     |
| IDN-AI-P011 | Context   | Ministry announcement on digital/AI guidance       | National/Jakarta            | 2026 access | 1     | Policy-context announcement        |
| IDN-AI-S001 | Secondary | Nusantara: Jurnal Pendidikan Indonesia             | Indonesia                   | 2025        | 1     | AI in syllabi/LMS materials        |
| IDN-AI-S002 | Secondary | World Journal of English Language                  | Indonesia                   | 2025        | 1     | Academic writing misconduct        |
| IDN-AI-S003 | Secondary | JOLLT                                              | Indonesia                   | 2025        | 1     | Postgraduate writing challenges    |
| IDN-AI-S004 | Secondary | AL-ISHLAH                                          | Indonesia                   | 2026        | 1     | EFL students' AI perceptions       |
| IDN-AI-S005 | Secondary | Contemporary Educational Technology                | Indonesia                   | 2023        | 1     | Indonesian students' AI perception |
| IDN-AI-S006 | Secondary | International Journal of Educational Research Open | Indonesia                   | 2023        | 1     | AI in academic essay writing       |

Data analysis proceeded through three linked stages. First, authorship was coded by examining how documents positioned students, lecturers, AI tools, disclosure, responsibility, and intellectual ownership. Second, assessment design was coded by identifying whether documents emphasised process evidence, oral defence, staged drafting, prompt logs, source verification, detection, sanctions, or reflective disclosure. Third, linguistic evidence was coded by examining references to writing style, citation validity, language accuracy, EFL conditions, and false-positive risk. Coding was interpretive and comparative, not automated. This strategy follows cautions by Ardito (2023) [10], (2024) [35] and Perkins et al. (2023) [6] that AI-detection evidence requires academic judgement and contextual validation.



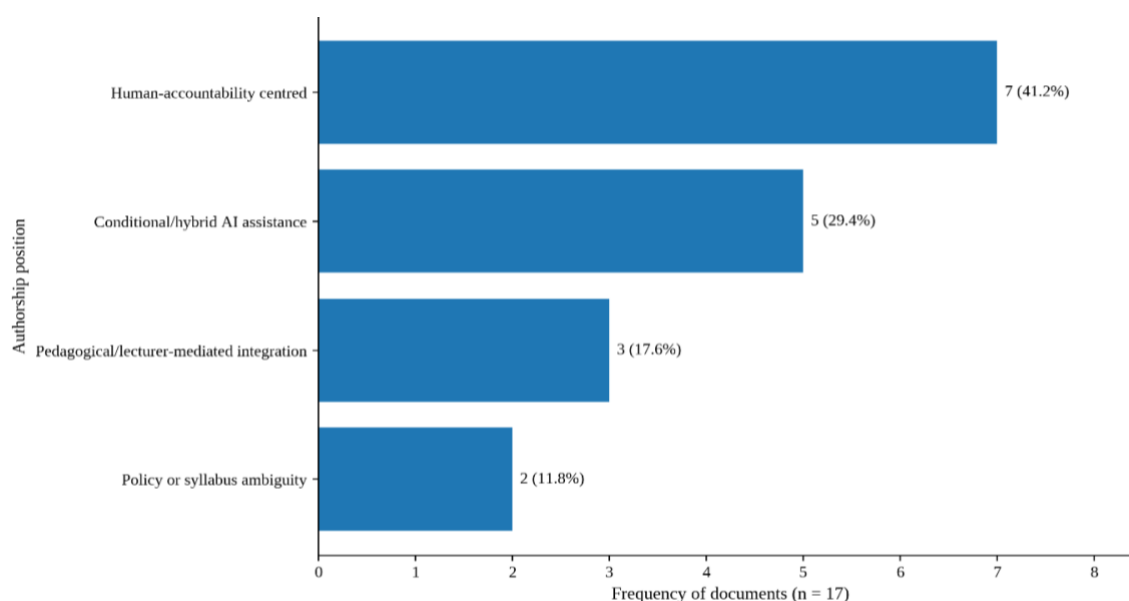
**Figure 1.** Operational matrix for corpus-based analysis

## 4. RESULTS

### 4.1. Authorship is not treated uniformly

Authorship is not treated uniformly across the corpus; it is organised through a continuum that moves from human responsibility to conditional hybrid practice and, in fewer cases, unresolved policy ambiguity. The strongest pattern is the repeated insistence that students, researchers, lecturers, or institutions remain accountable for intellectual work even when AI tools are used. This emphasis corresponds with recent debates that reject both naïve prohibition and unrestricted AI co-writing, arguing instead for authorship as responsibility, transparency, and defensible human judgement [15], [16], [17], [18]. The corpus therefore shows that authorship after generative AI is being redefined not as the absence of machine assistance, but as the capacity to disclose, justify, revise, and defend academic work.

The dominant pattern is human-accountability centred authorship, which appears in 7 of 17 documents, or 41.2% of the corpus. Conditional or hybrid AI assistance follows with 5 documents, or 29.4%, indicating that AI is frequently accepted as a bounded writing aid rather than an autonomous author. Pedagogical or lecturer-mediated integration accounts for 3 documents, or 17.6%, while policy or syllabus ambiguity appears in 2 documents, or 11.8%. Objectively, this distribution suggests that Indonesian higher education documents and related studies are moving toward responsible-use language, but operational clarity remains uneven. Disclosure, source verification, proportionality, and lecturer mediation appear more often than fully elaborated criteria for judging authorial contribution.



**Figure 2.** Distribution of authorship position in the corpus



**Table 2.** Authorship and accountability patterns in generative-AI-related documents

| Main Category                                | Subcategory                                     | Indicator                                                                                                          | Frequency | Percentage | Data Variation                                                                                                      | Example / Evidence Marker                                                                        | Data Code                                                                                 | Initial Interpretation                                                                                   |
|----------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------|------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Human-accountability centred authorship      | Student or human remains principal author       | Student, researcher, or institution remains responsible for argument, data, originality, and final submission      | 7         | 41.2%      | Appears in national guideline, doctoral guide, faculty policy, integrity regulation, and Indonesian writing studies | Student remains main actor; AI cannot replace conceptual, analytical, or ethical responsibility  | IDN-AI-P002; IDN-AI-P003; IDN-AI-P007; IDN-AI-P010; IDN-AI-S002; IDN-AI-S003; IDN-AI-P004 | Authorship is framed less as textual purity than as accountable control over intellectual work           |
| Conditional or hybrid AI assistance          | AI permitted as bounded support                 | AI may assist brainstorming, revision, language improvement, or feedback when use is transparent and proportionate | 5         | 29.4%      | Found in institutional guides, national guidance, official announcements, and student-facing AI documents           | Responsible use, disclosure, source checking, and proportionality are repeatedly foregrounded    | IDN-AI-P001; IDN-AI-P005; IDN-AI-P009; IDN-AI-S004; IDN-AI-S006                           | AI assistance is not rejected outright, but legitimacy depends on disclosure and human judgement         |
| Pedagogical or lecturer-mediated integration | AI use becomes part of teaching and supervision | Lecturers, course design, and learning aims mediate acceptable AI use                                              | 3         | 17.6%      | Appears in lecturer guide, student perception study, and national digital-learning context                          | AI is positioned as learning support when aligned with pedagogy, supervision, and student agency | IDN-AI-P006; IDN-AI-S005; IDN-AI-P011                                                     | Authorship is distributed through pedagogy, but final responsibility remains attached to academic actors |
| Policy or syllabus ambiguity                 | AI authorship remains under-specified           | Documents refer to originality, similarity thresholds, or pending AI rules without detailed authorship criteria    | 2         | 11.8%      | Appears in a pending institutional guide and study of syllabi/LMS materials                                         | AI-related authorship is absent, implicit, or reduced to originality threshold                   | IDN-AI-P008; IDN-AI-S001                                                                  | Ambiguity creates risk because authorship is judged without clear disclosure or process standards        |

Theoretically, these patterns support a shift from originality-centred authorship to accountability-centred authorship. This interpretation aligns with Nguyen et al. (2024) [11], who show that AI-assisted writing involves different degrees of human–AI collaboration, and with Perkins and Roe (2023) [36], who argue that disclosure policies vary across academic systems. In this corpus, authorship is not simply located in the final text, because polished language may result from editing support, translation, feedback, or generative assistance. For Indonesian EFL and multilingual contexts, this distinction is especially important because textual fluency cannot be equated automatically with independent authorship or misconduct. This study therefore positions authorship as an auditable relation among student agency, AI mediation, pedagogical guidance, and institutional accountability.

#### 4.2. Assessment responses to generative AI

Assessment responses to generative AI are distributed across five orientations, with the strongest emphasis placed on process-based evidence and pedagogical guidance. Both orientations appear in 5 of 17 documents, or 29.4% each, showing that integrity is increasingly framed as something that must be designed into assessment rather than enforced only after submission. This pattern resonates with Moorhouse et al. (2023) [5], Perkins et al. (2023) [6], Lye and Lim (2024) [7], and Xia et al. (2024) [8], who argue that assessment after generative AI should make learning processes, AI boundaries, and student reasoning more visible. The corpus therefore indicates a movement from suspicion-centred control toward assessment designs that combine documentation, supervision, and academic judgement.

The dominant pattern is not detector dependence, although detector-related control remains visible. Process-based and multi-evidence assessment includes prompt logs, appendix evidence, source validation, oral discussion, and writing-style comparison. Pedagogical guidance includes lecturer mediation, AI literacy, ethical instruction, and classroom integration. Governance and sanction mechanisms account for 4 documents, or 23.5%, indicating that institutional legitimacy remains important, but not sufficient by itself. Threshold or detection-oriented control appears in only 2 documents, or 11.8%, while one document remains under-specified. Objectively, this distribution suggests that Indonesian higher education documents do not simply reject AI; instead, they attempt to regulate AI use through a mixture of rules, evidence, pedagogy, and procedural caution.

Theoretically, these findings strengthen the argument that academic integrity after generative AI should be understood as an assessment ecology. Ardito (2023) [10], (2024) [35] and Perkins et al. (2023) [6] warn that AI-detection systems can produce uncertain or context-insensitive judgements, particularly when writing is shaped by multilingual learning, translation, and revision support. For this reason, detector evidence must be subordinated to broader academic judgement. Evangelista (2025) [12], Peters and Angelov (2025) [24], and Pérez-Pérez et al. (2026) [13] similarly argue that transparency, task redesign, and reflective disclosure are more defensible than punitive detection alone. This study therefore interprets integrity as an interaction among task design, policy clarity, lecturer mediation, and student accountability.

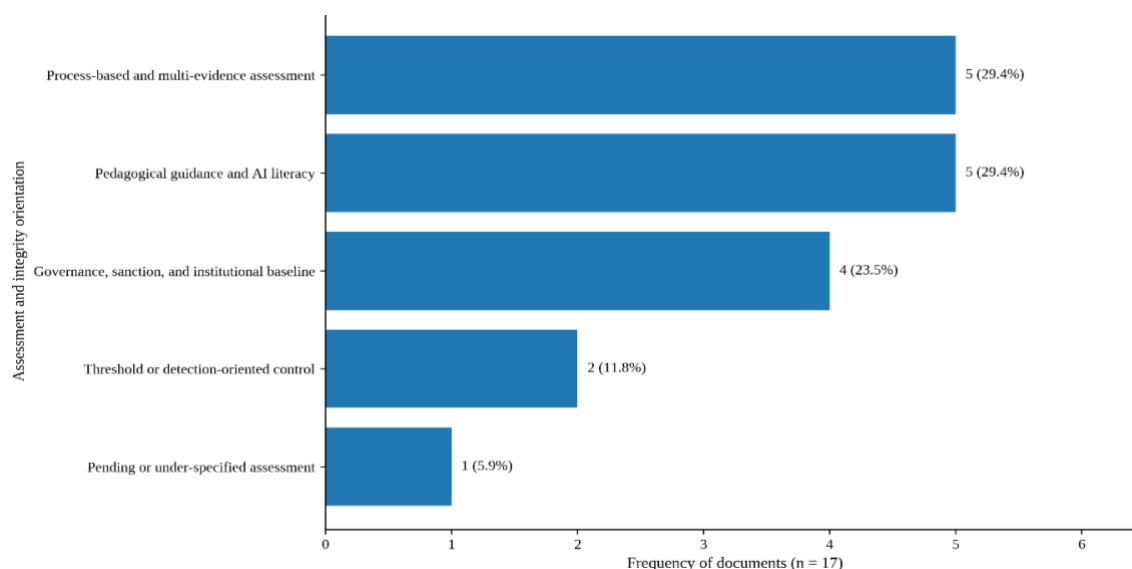


Figure 3. Assessment and integrity orientations

**Table 3.** Assessment and academic integrity design across the corpus

| Main Category                                    | Subcategory                                  | Indicator                                                                                                         | Frequency | Percentage | Data Variation                                                                                                                           | Example / Evidence Marker                                                         | Data Code                                                                   | Initial Interpretation                                                                  |
|--------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------|------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Process-based and multi-evidence assessment      | Writing process as integrity evidence        | Prompt logs, appendix evidence, citation practice, oral discussion, source validation, writing-style comparison   | 5         | 29.4%      | Appears in national guidance, dissertation assessment, student-facing AI guide, writing misconduct study, and postgraduate writing study | Integrity judgement depends on more than final-text inspection                    | IDN-AI-P001;<br>IDN-AI-P002;<br>IDN-AI-P005;<br>IDN-AI-S002;<br>IDN-AI-S003 | Assessment begins to shift from product policing to auditable writing process           |
| Pedagogical guidance and AI literacy             | AI use as supervised learning practice       | Lecturer guidance, ethical instruction, AI literacy, classroom design, perception mapping, policy need            | 5         | 29.4%      | Appears in faculty ethics guide, lecturer guide, qualitative EFL study, student perception study, and academic essay study               | AI is framed as a learning issue requiring guidance rather than prohibition alone | IDN-AI-P003;<br>IDN-AI-P006;<br>IDN-AI-S004;<br>IDN-AI-S005;<br>IDN-AI-S006 | Integrity is strengthened when assessment is tied to pedagogy and student understanding |
| Governance, sanction, and institutional baseline | Institutional control and regulatory framing | Policy socialisation, peer review, sanction procedure, violation categories, national guideline context           | 4         | 23.5%      | Appears in institutional announcements, academic integrity regulation, seminar discourse, and governance context                         | Integrity is framed through institutional authority and procedural responsibility | IDN-AI-P004;<br>IDN-AI-P009;<br>IDN-AI-P010;<br>IDN-AI-P011                 | Regulation gives legitimacy, but it requires translation into assessment practice       |
| Threshold or detection-oriented control          | Similarity or detector-based assessment      | AI detector percentage, plagiarism prevention, originality threshold, similarity control, LMS assessment criteria | 2         | 11.8%      | Appears in department-level policy and syllabus/LMS analysis                                                                             | Textual thresholds are used as administrative signals                             | IDN-AI-P007;<br>IDN-AI-S001                                                 | Detection can support review but remains weak if treated as final proof                 |
| Pending or under-specified assessment            | Incomplete assessment rule                   | Pending policy, absent criteria, unclear evidence hierarchy                                                       | 1         | 5.9%       | Appears in one institutional guide still requiring fuller operationalisation                                                             | AI-related authorship and assessment are not yet fully specified                  | IDN-AI-P008                                                                 | Ambiguity may expose students and lecturers to inconsistent judgement                   |

#### 4.3. Linguistic evidence and authorship judgement across

Linguistic evidence in the corpus is organised less around detecting machine authorship than around verifying academic responsibility. The strongest category is citation and source-verification evidence, appearing in 5 of 17 documents, or 29.4%. This pattern indicates that language-based judgement is often linked to whether students can validate references, explain claims, and avoid unsupported or fabricated information. Such emphasis is consistent with recent concerns that generative AI may produce fluent but unreliable academic prose [6], [20], [9]. In this sense, linguistic evidence is not merely stylistic. It functions as a bridge between authorship, knowledge accountability, and academic integrity.

The second dominant pattern consists of writing-process and metalinguistic defence, found in 4 documents, or 23.5%, and EFL/multilingual writing support, also found in 4 documents, or 23.5%. These categories show that authorship is assessed through students' capacity to explain drafts, revisions, prompt use, language choices, and source decisions. Detector or style-shift caution appears in only 2 documents, or 11.8%, while implicit or absent linguistic criteria also appears in 2 documents, or 11.8%. Objectively, this distribution suggests that linguistic evidence is present but unevenly operationalised. Some documents require source verification and process explanation, while others still rely on broad originality language without specifying how language features should be interpreted.

Theoretically, this pattern supports a contextual view of linguistic evidence. Amirjalili et al. (2024) [26] and J. and Afandi (2024) [27] show that AI-generated and human academic texts cannot be separated reliably through surface features alone. Indonesian EFL writing studies further show that students use AI to improve grammar, vocabulary, organisation, confidence, and revision quality [28], [29], [30], [31], [32]. Therefore, polished academic English should not be treated automatically as evidence of misconduct. This study interprets linguistic evidence as supportive judgement that must be triangulated with process records, oral explanation, citation validity, and EFL learning context.

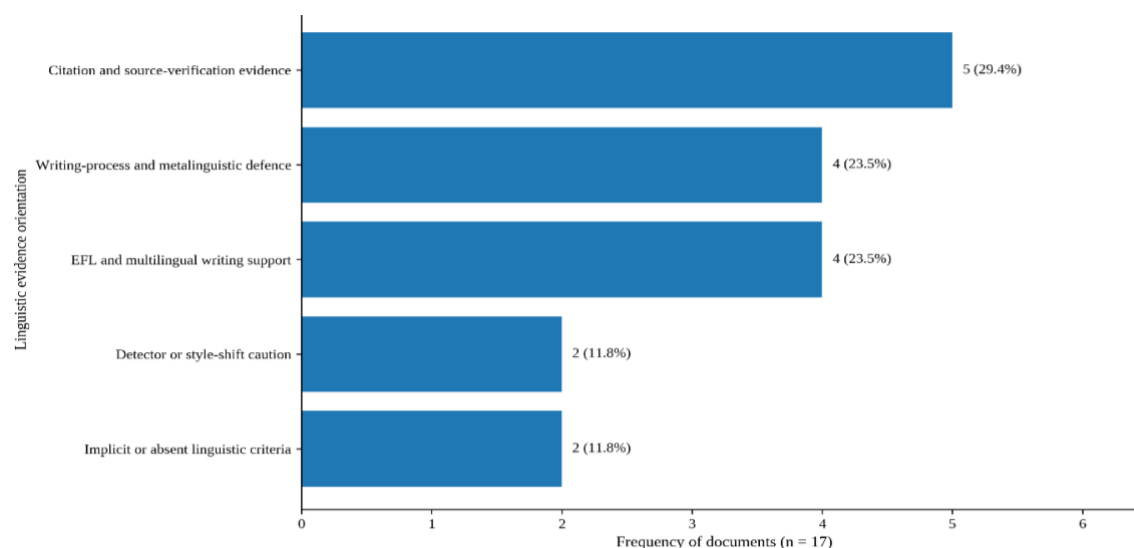


Figure 4. Bar chart of linguistic evidence orientations in the corpus

**Table 4.** Linguistic evidence and authorship judgement across the corpus

| Main Category                              | Subcategory                               | Indicator                                                                                                          | Frequency | Percentage | Data Variation                                                                                                   | Example / Evidence Marker                                                                                | Data Code                                                       | Interpretation                                                                                |
|--------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------|------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Citation and source-verification evidence  | Reference validity as authorship evidence | Source checking, citation accuracy, reference verification, avoidance of fabricated sources                        | 5         | 29.4%      | Appears in national guidance, doctoral guide, student AI guide, misconduct study, and postgraduate writing study | Students must be able to verify sources and defend cited claims                                          | IDN-AI-P001; IDN-AI-P002; IDN-AI-P005; IDN-AI-S002; IDN-AI-S003 | Linguistic evidence is tied to epistemic responsibility, not only language form               |
| Writing-process and metalinguistic defence | Explanation of writing decisions          | Oral discussion, draft comparison, prompt documentation, revision rationale, authorial explanation                 | 4         | 23.5%      | Found in institutional guidance, faculty policy, student guide, and lecturer-facing document                     | Students are expected to explain how text, argument, and AI assistance were produced                     | IDN-AI-P001; IDN-AI-P003; IDN-AI-P005; IDN-AI-P006              | Authorship judgement becomes stronger when textual evidence is combined with process evidence |
| EFL and multilingual writing support       | AI as language-development aid            | Vocabulary support, grammar revision, translation assistance, coherence improvement, confidence building           | 4         | 23.5%      | Appears mainly in Indonesian AI-writing studies and student-perception research                                  | AI is used to improve academic English, but improvement does not automatically remove student authorship | IDN-AI-S004; IDN-AI-S005; IDN-AI-S006; IDN-AI-S003              | Linguistic polish must be interpreted in relation to EFL learning conditions                  |
| Detector or style-shift caution            | Surface fluency as uncertain evidence     | Sudden style change, overly polished prose, detector score, similarity signal, inconsistency with previous writing | 2         | 11.8%      | Appears in policy-oriented and syllabus/LMS-related materials                                                    | Textual irregularity may trigger review but cannot stand alone as proof                                  | IDN-AI-P007; IDN-AI-S001                                        | Linguistic suspicion requires triangulation with process, context, and student explanation    |
| Implicit or absent linguistic criteria     | Undefined language-based judgement        | No clear linguistic indicators, general originality language, broad ethical statement                              | 2         | 11.8%      | Appears in one institutional guide and one contextual policy communication                                       | Criteria for judging AI-mediated language remain implicit                                                | IDN-AI-P008; IDN-AI-P011                                        | Absence of linguistic criteria may create inconsistent or unfair authorship evaluation        |

## 5. DISCUSSION

The authorship pattern identified in this study matters because it reframes generative AI from a simple threat to originality into a test of academic accountability. When most documents position humans as responsible authors despite AI assistance, authorship is no longer reducible to whether a sentence was generated manually or algorithmically. Its function becomes ethical: students must remain answerable for claims, sources, reasoning, and final submission. This aligns with Bozkurt (2024) [15], Hau (2025) [16], Pereira (2026) [17], and Slimi (2026) [18], who argue that AI-era authorship should be judged through responsibility, disclosure, and intellectual control. Yet this shift also creates dysfunction when policy language affirms human accountability without explaining how responsibility should be evidenced. Velez and Rister (2024) [14] warn that institutional anxiety may turn ambiguous authorship into suspicion. Thus, this study suggests that accountability-centred authorship is promising, but only when supported by operational criteria.

This pattern appears because generative AI exposes a structural weakness in older authorship models: they assume that final text is a reliable proxy for individual intellectual labour. That assumption becomes unstable when AI can help generate fluent prose, reorganise argument, translate ideas, and polish citations. Indonesian higher education adds another layer because students often write across Indonesian, English, local languages, translation tools, peer feedback, lecturer correction, and now generative AI. Nguyen et al. (2024) [11] show that human–AI collaboration ranges from surface editing to deeper co-composition, while Perkins and Roe (2023) [36] show that guidelines differ in how they classify such involvement. The correlation between AI assistance and authorship ambiguity therefore emerges not from technology alone, but from assessment systems that have long overvalued textual product. Authorship becomes difficult to judge because intellectual agency, linguistic mediation, and machine support are entangled within one submitted artefact.

The assessment pattern carries a major implication: academic integrity becomes more defensible when assessment is designed around process evidence rather than post-submission suspicion. The corpus shows stronger attention to staged drafting, prompt documentation, oral explanation, source verification, and lecturer guidance than to detector-only control. This supports arguments by Moorhouse et al. (2023) [5], Perkins et al. (2023) [6], Lye and Lim (2024) [7], Xia et al. (2024) [8], and Furze et al. (2024) [25], who call for assessment redesign that makes AI use visible and bounded. Its function is pedagogical as well as regulatory: students learn how to use AI responsibly while lecturers gain richer evidence for judgement. However, dysfunction remains when process evidence becomes bureaucratic rather than meaningful. Prompt logs or disclosure forms may become performative if they are not connected to reasoning, revision, and disciplinary standards. Integrity therefore depends on assessment literacy, not documentation alone.

This assessment pattern can be explained by a structural tension between institutional control and pedagogical adaptation. Universities need visible mechanisms to protect credibility, but generative AI makes purely punitive mechanisms fragile. Detection-oriented tools promise procedural certainty, yet Ardito (2023) [10], (2024) [35] and Perkins et al. (2023) [6] caution that such tools cannot independently establish intention, authorship, or misconduct. Conversely, pedagogical redesign requires lecturer time, rubric revision, student training, and institutional consistency. The findings indicate that Indonesian higher education is negotiating this tension by combining governance, guidance, and process-based evidence. Evangelista (2025) [12], Peters and Angelov (2025) [24], and Pérez-Pérez et al. (2026) [13] support this direction because transparency mechanisms can reduce ambiguity without criminalising all AI use. Still, this balance is structurally difficult: institutions want scalable rules, whereas fair judgement requires contextual interpretation. The underlying issue is not AI itself, but mismatch between mass assessment systems and complex writing processes.

The linguistic-evidence pattern is especially important because it prevents academic integrity from becoming linguistically unjust. The corpus positions citation verification, metalinguistic defence, and EFL writing support as stronger evidence than surface fluency alone. Its function is to shift judgement from “Does this text look AI-generated?” to “Can this student explain, verify, and defend this academic work?” This matters in Indonesian higher education, where students may use AI for grammar, vocabulary, translation, coherence, and confidence without necessarily surrendering authorship. Studies by K., Ahmad, Latif, Arafah, and Suryadi (2024) [28], Wahyuningsih (2024) [29], Putri et al. (2025) [30], Heriyawati and Romadhon (2025) [31], and Yusra and Hanifa (2025) [32] show that AI is often integrated into language-development practices. However, linguistic evidence becomes dysfunctional when polished English, sudden fluency, or formulaic structure is treated as misconduct. Such assumptions risk penalising successful learning, intensive revision, or multilingual mediation.

This linguistic pattern exists because authorship judgement is shaped by a deeper conflict between textual appearance and writing process. AI-generated prose and human academic prose may overlap in

coherence, lexical sophistication, and conventional structure, as shown by Amirjalili et al. (2024) [26]. J. and Afandi (2024) [27] further complicate simplistic comparisons between students and ChatGPT by showing that performance cannot be reduced to binary textual categories. In Indonesian EFL contexts, linguistic development is itself mediated by dictionaries, translation tools, peer comments, lecturer feedback, templates, and now AI writing systems. Therefore, a correlation between polished prose and AI use may exist, but it cannot justify a causal claim of misconduct. This study instead indicates that linguistic evidence should be triangulated with citation validity, draft history, prompt records, oral explanation, and students' ability to articulate choices. The deeper implication is that fair authorship assessment requires linguistic expertise as much as policy enforcement.

## 6. CONCLUSION

This study concludes that authorship after generative AI in Indonesian higher education should be understood as accountable academic participation rather than untouched textual production. Its central lesson is that integrity cannot be judged fairly through final-text inspection alone, because AI assistance, EFL development, translation, feedback, and revision may produce overlapping linguistic traces. This study contributes by linking three domains often treated separately: assessment design, academic integrity governance, and linguistic evidence. Methodologically, it strengthens corpus-based document analysis by aligning policy, pedagogical, and research documents within one coding architecture, thereby renewing debates on authorship through process evidence, disclosure, source verification, and context-sensitive academic judgement.

This study is limited by its reliance on publicly accessible documents, which means it cannot capture hidden classroom negotiations, lecturer decision-making, student intentions, or actual writing-process histories. Its corpus also privileges institutional and textual evidence rather than ethnographic observation, interview data, or longitudinal tracking of AI-assisted writing development. Future research should therefore combine document analysis with classroom observation, student draft histories, prompt logs, oral defence data, and lecturer assessment practices across different disciplines and university types. Comparative studies between Indonesian, regional Southeast Asian, and global higher education contexts would also clarify how multilingual academic writing reshapes authorship, integrity, and fairness in AI-mediated assessment.

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## AUTHOR CONTRIBUTIONS STATEMENT

**Achmad Ilham Firmahdi:** conceptualization, methodology, formal analysis, writing – original draft, writing – review and editing.

## CONFLICT OF INTEREST STATEMENT

Author states no conflict of interest.

## AI USE DECLARATION

The author used artificial intelligence tools to assist with the generation of illustrative figures and with the formatting and layout of this manuscript. AI was not used to generate the substantive content, conceptualization, data, analysis, or conclusions of the research, all of which remain the sole responsibility of the author.

## INFORMED CONSENT

Not applicable – this study did not involve direct human participants. Data consisted solely of publicly accessible policy, pedagogical, contextual, and scholarly documents.

## ETHICAL APPROVAL

This research did not involve human or animal subjects; it analyzed publicly accessible policy, pedagogical, contextual, and scholarly documents, and therefore no institutional review board approval was required. Where research does involve human subjects, the author affirms that such research would be conducted in full compliance with all relevant national regulations and institutional policies, in accordance with the tenets of the Declaration of Helsinki, and would be approved by the author's institutional review board or equivalent committee.

## DATA AVAILABILITY

The corpus of documents analyzed in this study are publicly accessible and available from the corresponding author upon reasonable request.

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