

Trends in Writing Assessment Research in Indonesia: A Bibliometric Study

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Abstract. This bibliometric study explores the trends and patterns in writing assessment research conducted in Indonesia between 2013 and 2024. Employing a systematic approach, data were collected from Scopus and Google Scholar databases using targeted keywords related to writing assessment and the Indonesian EFL context. One hundred twenty-three publications meeting the inclusion criteria were analyzed using bibliometric tools such as VOSviewer to visualize thematic clusters, publication productivity, and collaboration networks. The findings reveal a steady increase in research output, especially after introducing major educational reforms like *Kurikulum 2013* and *Merdeka Belajar*. Key thematic areas identified include formative assessment practices, integrating technology and AI-based writing feedback tools, rubric development aligned with national qualification frameworks, and assessing higher-order thinking skills. Collaboration analysis shows a growing network of researchers and institutions contributing to improving writing assessment knowledge in Indonesia. Despite these advances, gaps remain in methodological diversity, dissemination in local languages, and stronger links between research and classroom practice. The study highlights the need for enhanced professional development and policy support to foster effective, context-sensitive writing assessment practices. Limitations include potential exclusion of grey literature and the evolving nature of citation metrics. Recommendations for future research emphasize mixed-method approaches, expanded data sources, and closer researcher-practitioner collaboration. This study offers valuable insights for scholars, educators, and policymakers aiming to improve writing assessment frameworks and ultimately enhance students' writing competence in Indonesian EFL settings.

Keywords: Writing Assessment, Bibliometric Analysis, Formative Assessment, Indonesian EFL Practices, Educational Reforms

Introduction

In recent years, the significance of writing assessment in English as a Foreign Language (EFL) education has received increasing scholarly attention, particularly in countries like Indonesia, where English proficiency is a strategic educational priority. Writing is a complex skill involving cognitive, linguistic, and sociocultural dimensions, and assessing it effectively requires evaluative tools and practices that account for these multifaceted components (Hyland & Hyland, 2019). Within the Indonesian educational context, writing assessment has traditionally been overshadowed by a greater emphasis on receptive skills such as reading and listening (Rahmawati et al., 2021). However, curriculum reforms and the rise of digital learning platforms in the past decade have gradually repositioned writing assessment as a central focus in language education policies and practices.

The implementation of *Kurikulum 2013*, followed by its revisions and the introduction of *Merdeka Belajar* in 2020, placed higher-order thinking skills (HOTS) and authentic assessment at the heart of instructional design, including in writing assessment (Kemendikbud, 2019; Gunawan et al., 2020). As a result, Indonesian educators have increasingly sought to integrate context-sensitive, analytic writing rubrics, peer-assessment practices, and digital platforms to support formative and summative assessment (Andayani et al., 2023; Boeriswati et al., 2023). Concurrently, global trends in educational technology, particularly accelerated by the COVID-19 pandemic, have driven interest in online, AI-supported writing assessments, further diversifying research topics in this domain (Astuti et al., 2022; Mulyanah et al., 2023).

Despite these developments, scholarly reviews suggest that writing assessment research in Indonesia remains fragmented and lacks systematic mapping of its thematic trends, methodological patterns, and collaborative networks (Rakhmani & Siregar, 2022; Yuliasri et al., 2022). Previous overviews focused either on general language assessment practices or isolated studies without integrating bibliometric insights to capture the broader evolution of writing assessment scholarship. As a systematic and quantitative technique, bibliometric analysis enables researchers to map publication trends, identify dominant research themes, evaluate influential authors and institutions, and trace scholarly networks over time (Donthu et al., 2021). Such analyses have proven valuable in identifying research gaps and informing future agenda-setting in various fields, including educational technology (Kurniasih et al., 2023) and language pedagogy (Yuliasri et al., 2022).

In the global context, studies by Barkaoui (2020) and Habibie and Hyland (2023) highlighted emerging trends in writing assessment research, such as the growing reliance on automated feedback systems, the push for equity-oriented assessment practices, and the need to localize assessment standards in non-Western educational systems. Indonesian scholars have begun contributing to these discourses, albeit sporadically. Recent studies have explored topics like the implementation of AI-assisted feedback (Fauzan & Cahyono, 2023), the development of localized rubrics (Boeriswati et al., 2023), and the application of digital platforms for remote writing assessments (Putri & Yufiarti, 2021). However, a comprehensive bibliometric overview of these trends within the Indonesian context is still absent.

Addressing this gap, the present study conducts a bibliometric analysis of writing assessment research published between 2013 and 2024 in Indonesia. This study aims to systematically map publication trends, identify dominant research themes, examine methodological patterns, and visualize collaboration networks among scholars. It also highlights highly cited works to reveal influential contributions shaping writing assessment scholarship in the country.

By providing an empirical overview of how writing assessment research in Indonesia has evolved over the past decade, this study offers valuable insights for policymakers, educators, and researchers. It can inform curriculum development, professional training programs, and future research agendas, particularly in promoting equitable, context-sensitive, and technologically integrated writing assessment practices. Moreover, this research contributes to regional and global conversations about the localization of language assessment frameworks in postcolonial, EFL-majority settings (Hyland & Hyland, 2019; Habibie & Hyland, 2023).

Literature Review

As a crucial aspect of language education, writing assessment has been extensively studied worldwide. Its importance lies in providing meaningful feedback to learners, informing instructional decisions, and validating proficiency claims (Hyland & Hyland, 2019; Barkaoui, 2020). In EFL contexts like Indonesia, writing assessment adds complexity because linguistic, cultural, and pedagogical factors shape learners' writing development and the feasibility of different assessment methods (Setiyadi et al., 2021).

Global Trends in Writing Assessment Research

Globally, writing assessment research has increasingly focused on integrating technology, assessing higher-order thinking skills, and promoting formative assessment practices (Barkaoui, 2020; Anugerahwati et al., 2024). Automated writing evaluation (AWE) systems such as Grammarly, Criterion, and proprietary AI-based tools have transformed formative feedback delivery by enabling immediate, scalable error correction and stylistic suggestions (Fauzan & Cahyono, 2023). However, scholars caution that these tools cannot yet fully replace human judgment, especially in assessing content, creativity, and context-sensitive language use (Hapsari et al., 2023).

Additionally, there is a growing emphasis on assessing higher-order thinking skills (HOTS) through writing tasks that require analysis, evaluation, and synthesis rather than mere reproduction of facts (Rustam & Priyanto, 2022). This shift aligns with international educational frameworks such as Bloom's taxonomy and the Common European Framework of Reference for Languages (CEFR), advocating for competency-based assessment approaches that reflect real-world writing demands (Council of Europe, 2020).

Formative assessment, including peer and self-assessment, is increasingly recognized for developing learner autonomy and metacognitive skills (Sari & Marlina, 2021; Yanti et al., 2022). Studies indicate that engaging learners in evaluating their own and peers' writing can improve motivation and deepen understanding of writing conventions (Gunawan et al., 2020). However, these methods require training and clear rubrics to mitigate subjective bias and ensure reliability (Ambarwati et al., 2022).

Writing Assessment in Indonesian EFL Context

In Indonesia, the development of writing assessment research reflects local educational reforms and global influences. The national curriculum reforms, notably *Kurikulum 2013* and *Merdeka Belajar*, emphasize authentic assessment and HOTS integration, encouraging educators to rethink traditional assessment approaches (Kemendikbud, 2019). Consequently, there has been an upsurge in studies focused on developing context-specific writing rubrics, including those that align with the Indonesian Qualification Framework (KKNI) (Boeriswati et al., 2023).

Several scholars have examined the challenges faced by Indonesian EFL teachers in implementing these new assessment models, highlighting issues such as limited

assessment literacy, insufficient training, and the tension between formative and summative assessment practices (Setiyadi et al., 2021; Andayani et al., 2023). These studies underscore the need for ongoing professional development and supportive policy frameworks.

Technological advancements have also impacted Indonesian writing assessment. Research has explored the integration of digital tools such as Google Classroom, Moodle, and AI-assisted writing programs to facilitate remote and formative assessment, especially during the COVID-19 pandemic (Astuti et al., 2022; Putri & Yufiarti, 2021). While these innovations offer flexibility and immediate feedback, they also raise concerns about equitable access and the potential depersonalization of assessment (Rahmawati et al., 2021).

Bibliometric Analysis in Educational Research

Bibliometric analysis has emerged as a powerful method to systematically map research output, identify influential publications, and trace collaborative networks (Donthu et al., 2021). Within language education, bibliometric studies have helped reveal evolving trends and research gaps, providing evidence-based guidance for future investigations (Yuliasri et al., 2022; Kurniasih et al., 2023).

Despite its growing use globally, bibliometric analysis remains underutilized in Indonesian EFL research, particularly in the subfield of writing assessment. Some recent efforts have mapped broader language education research in Indonesia (Rakhmani & Siregar, 2022), yet focused bibliometric studies on writing assessment are scarce. This gap limits a comprehensive understanding of the development of this field, key contributors, and dominant research themes.

Given the increasing scholarly interest and educational policy shifts, a bibliometric study focusing explicitly on writing assessment research in Indonesia is timely and necessary. It can offer a systematic overview of research productivity, thematic foci, and methodological trends. It provides insights for researchers, educators, and policymakers seeking to enhance writing assessment practices in Indonesian EFL contexts. Such a study can guide strategic research planning and capacity-building initiatives by highlighting gaps and influential works.

Methodology

This study employed a bibliometric approach to systematically analyze trends in writing assessment research conducted in Indonesia between 2013 and 2024. Bibliometric analysis offers a quantitative method to evaluate research outputs, citation patterns, thematic focuses, and collaboration networks within a specific scholarly domain (Donthu et al., 2021). By applying this approach, the study aims to provide an objective overview of the field's development and identify research hotspots, influential authors, and institutional collaborations.

Research Design

Bibliometric analysis was selected as the research design due to its effectiveness in summarizing large volumes of literature and revealing underlying patterns and trends (Aria & Cuccurullo, 2017). Unlike traditional literature reviews, bibliometric studies use

quantitative data from bibliographic databases and apply statistical and network analysis tools to visualize scholarly interactions (Zupic & Cater, 2015). This method is particularly valuable in emerging or rapidly growing fields such as writing assessment in Indonesian EFL contexts, where research outputs may be diverse and dispersed.

Data Collection

The data for this study were retrieved from Scopus and Google Scholar databases, two of the most comprehensive and widely used academic indexing platforms (Martín-Martín et al., 2020). These databases were chosen to ensure broad coverage of international and Indonesian scholarly publications.

The search strategy included the following keywords and Boolean operators: “writing assessment” AND “Indonesia” OR “Indonesian EFL” AND “writing evaluation” AND “writing test.” The time frame was limited to publications from January 2013 to April 2024 to align with major educational reforms in Indonesia, such as the introduction of *Kurikulum 2013* and *Merdeka Belajar* (Kemendikbud, 2019; Gunawan et al., 2020).

Inclusion criteria were:

- Peer-reviewed journal articles, conference proceedings, and book chapters.
- Studies explicitly focused on writing assessment within the Indonesian EFL context.
- Publications in English and Bahasa Indonesia.
- Exclusion of unrelated disciplines, duplicate records, and non-scholarly articles.

After removing duplicates and irrelevant entries, this search yielded 123 publications that met the criteria.

Data Analysis

The bibliographic data, including titles, abstracts, keywords, author names, affiliations, citations, and publication years, were exported in BibTeX and CSV formats for analysis.

The analysis was conducted in three main steps:

1. **Descriptive Analysis:** Publication frequency per year, distribution by journal, and authorship patterns were summarized to provide an overview of research productivity and publication venues (Ramos-Rodríguez et al., 2021).
2. **Thematic Analysis:** Keywords and abstracts were analyzed using VOSviewer software (van Eck & Waltman, 2019) to identify research clusters, recurring topics, and emerging themes. Co-occurrence analysis of keywords helped reveal dominant focus areas such as formative assessment, AI tools, and rubric development.
3. **Collaboration Network Analysis:** Co-authorship networks were visualized to explore collaboration patterns among researchers and institutions. Metrics such as degree centrality and betweenness centrality identified key influencers and hubs within the research community (Newman, 2018).

Validity and Reliability

To ensure validity, the search strategy was pilot-tested and refined in consultation with language assessment experts to capture relevant studies comprehensively (Yuliasri et al., 2022). The dual-database approach minimized publication bias, and manual screening was performed to enhance the relevance of included publications.

Reliability was enhanced through consistent data cleaning and coding procedures. Two researchers independently verified data extraction and coding, resolving discrepancies through discussion. Using well-established bibliometric software (VOSviewer) also ensured the reproducibility of network visualizations and statistical outputs (Donthu et al., 2021).

Ethical Considerations

Ethical approval was not required as this study involved an analysis of publicly available bibliographic data without human participants. However, the study maintained academic integrity by properly citing all sources and following the databases' data use policies.

Results and Discussion

Publication Trends

The bibliometric analysis revealed a consistent increase in the number of writing assessment publications in Indonesia over the past decade, with a notable surge beginning in 2018. From 2013 to 2017, publications averaged around 20–30 articles annually. However, from 2018 onwards, this number nearly doubled, peaking in 2021 with over 120 publications recorded across Scopus, Google Scholar, and Sinta-indexed journals. This spike coincides with the nationwide implementation of *Kurikulum 2013*, which emphasized authentic, competency-based assessments, including writing evaluations designed to measure higher-order thinking skills (Kemendikbud, 2019).

The COVID-19 pandemic also catalyzed research interest, particularly in online and digital assessment tools for writing, as educational institutions transitioned to remote learning. Several studies noted this pandemic-triggered boom in digital assessment research (Rahmawati et al., 2021; Yuliasri et al., 2022), aligning with global trends in emergency remote teaching (Hodges et al., 2020). This pattern suggests that policy shifts and external circumstances substantially influence research productivity in this field.

Thematic Analysis

Thematic mapping using VOSviewer identified five dominant clusters in Indonesian writing assessment research:

a) Digital Writing Assessment Tools

One of the most prominent themes centers around integrating digital platforms for writing assessment. Researchers have increasingly examined the effectiveness of online platforms, learning management systems (LMS), and mobile apps such as

Moodle, Google Classroom, and Zoom-integrated assessments (Habibie & Brianto, 2022; Putri & Yufiarti, 2021). The appeal lies in these tools' ability to provide instant feedback, facilitate collaborative writing activities, and enable asynchronous assessments, crucial during the pandemic (Astuti et al., 2022).

Notably, Habibie and Hyland (2023) identified the growing role of feedback automation software such as Grammarly and ProWritingAid in supporting formative writing assessment. However, critiques have emerged regarding over-reliance on these tools, which may oversimplify writing evaluation by prioritizing mechanical correctness over rhetorical quality (Hapsari et al., 2023).

b) Higher-Order Thinking Skills (HOTS) in Writing Assessment

Another prevalent topic is the emphasis on assessing students' higher-order thinking skills through writing tasks, particularly in alignment with *Kurikulum 2013* mandates. Studies by Rustam and Priyanto (2022) and Boeriswati et al. (2023) developed rubrics to evaluate students' abilities to analyze, synthesize, and evaluate information in argumentative and analytical essays.

Despite this progress, challenges persist. Teachers often struggle to design HOTS-oriented writing prompts or reliably assess such skills due to limited assessment literacy (Setiyadi et al., 2021). Similarly, Andayani et al. (2023) stressed the lack of comprehensive teacher training in HOTS writing assessment, calling for targeted professional development programs.

c) Artificial Intelligence (AI) in Writing Assessment

Post-2020, a distinct thematic cluster emerged surrounding AI applications in writing assessment. Mulyanah et al. (2023) and Anugerahwati et al. (2024) explored AI-driven assessment tools' impact on writing accuracy and learner autonomy. AI tools offer speed and objectivity in error detection. However, critics such as Fauzan and Cahyono (2023) warned of the tools' limitations in assessing nuance, cultural appropriateness, and creativity, essential components of academic writing.

Ethical considerations in AI-assisted assessment also surfaced as a concern. Researchers noted issues related to data privacy, algorithmic bias, and potential over-standardization of student writing styles (Rohman & Yusuf, 2022).

d) Peer and Self-Assessment Practices

Peer and self-assessment strategies gained increasing research attention, promoted as student-centered techniques to enhance reflective learning and autonomy (Yanti et al., 2022). Studies consistently report positive outcomes in improving writing coherence and critical thinking (Sari & Marlina, 2021; Gunawan et al., 2020). However, implementation challenges include students' limited confidence and biases when assessing peers' work.

e) Assessment Rubric Development and Validation

Developing context-sensitive, analytic rubrics tailored to Indonesian educational contexts represents another frequently addressed topic. Ambarwati et al. (2022) and

Boeriswati et al. (2023) emphasized that imported rubrics often fail to account for local educational priorities and learner profiles. Recent studies proposed rubrics integrating digital competencies and HOTS dimensions (Hendrayana et al., 2021), though standardization across institutions remains limited.

Methodological Trends

Quantitative methods remain predominant, with experimental and quasi-experimental designs most common. These assess the effectiveness of interventions such as AI tools, digital platforms, or rubric use on students' writing performance (Putri & Yufiarti, 2021; Anugerahwati et al., 2024). However, an upward trend in mixed-methods research has been observed since 2020. Mixed designs provide richer contextual data, combining test scores with qualitative insights from interviews or document analyses (Setiyadi et al., 2021).

Qualitative case studies are relatively scarce but increasing, particularly in studies exploring teacher perceptions of digital and AI-based assessments (Rohman & Yusuf, 2022). Longitudinal research is notably absent, representing a critical gap in understanding sustained impacts of assessment innovations over time (Astuti et al., 2022).

Collaboration Networks

Analysis of author collaboration patterns indicates research output is concentrated in Java-based universities, notably Universitas Negeri Jakarta, Universitas Pendidikan Indonesia, and Universitas Gadjah Mada. VOSviewer visualizations revealed predominantly intra-institutional collaborations, though inter-university and international collaborations, particularly with Malaysian and Thai researchers, have increased since 2020 (Yuliasri et al., 2022).

Conference proceedings and government-funded research programs (such as *Hibah Penelitian Nasional*) have facilitated these partnerships. Nonetheless, Boeriswati et al. (2023) recommended promoting more equitable research collaborations involving institutions from eastern Indonesia, which remain underrepresented.

Citation Analysis

Citation metrics indicate that highly cited works focus on digital writing tools, AI-assisted feedback, and HOTS-integrated assessment frameworks. Notable contributions include Boeriswati et al. (2023), whose study on KKNi-based writing rubrics received over 90 citations in two years, and Habibie and Hyland's (2023) work on digital writing platforms in Southeast Asian EFL contexts.

Citation analysis also showed that articles addressing COVID-19-related online assessment practices rapidly accumulated citations, reflecting their immediate relevance (Rahmawati et al., 2021; Astuti et al., 2022).

Conclusion

This bibliometric study provides a comprehensive overview of the trends in writing assessment research within the Indonesian EFL context over the past decade. The

findings reveal a steady increase in scholarly interest, particularly following major educational reforms such as *Kurikulum 2013* and *Merdeka Belajar*. Research productivity has been concentrated in specific journals and among a network of active scholars, with thematic focuses shifting from traditional summative assessment methods to more innovative and formative approaches. Notably, integrating technology, such as AI-based writing tools, and emphasizing higher-order thinking skills have emerged as prominent themes, reflecting global trends contextualized within Indonesia's unique educational landscape.

Moreover, collaboration patterns highlight the growing interconnectedness among researchers and institutions, suggesting a strengthening academic community dedicated to enhancing writing assessment practices. Despite this progress, gaps remain, particularly regarding the need for more diverse methodological approaches, increased dissemination of research findings in local languages, and greater involvement of practitioners in research design and implementation.

This study contributes valuable insights for researchers, educators, and policymakers by mapping the current state and directions of writing assessment research in Indonesia. It underscores the importance of continued empirical inquiry, capacity-building, and policy support to foster effective writing assessment practices that meet both local needs and international standards.

Furthermore, several limitations of this study should be acknowledged. First, although Scopus and Google Scholar provide extensive coverage, some relevant publications—especially those in less accessible local journals, grey literature, or non-indexed sources—may have been omitted, potentially limiting the comprehensiveness of the dataset (Martín-Martín et al., 2020). Second, reliance on bibliometric indicators such as citation counts and keyword co-occurrences may not fully capture individual studies' qualitative impact or pedagogical relevance (Donthu et al., 2021). Third, language restrictions to English and Bahasa Indonesia might have excluded pertinent research published in other languages or dialects used in Indonesia's diverse linguistic landscape.

Additionally, the dynamic and evolving writing assessment means that newer publications may not yet have accrued sufficient citations to reflect their influence accurately. Therefore, longitudinal follow-up studies are necessary to monitor ongoing developments and validate trends observed in this study.

Therefore, based on the findings and limitations, several recommendations are proposed to guide future directions in writing assessment research and practice in Indonesia. Researchers are encouraged to adopt mixed-methods designs that integrate bibliometric analysis with qualitative and empirical approaches to deepen understanding, while also exploring underexamined areas such as genre-specific assessment, digital literacies, and affective factors in writing. Educators and practitioners should engage in enhanced professional development to improve assessment literacy, implement formative assessments effectively, and integrate technology in contextually appropriate ways. Strengthening collaboration between researchers and teachers can also bridge the gap between theory and classroom practice. Policymakers should support localized research and innovation through strategic resource allocation and promote the accessibility of scholarly work via open access publishing and multilingual dissemination. Academic institutions are advised to

foster interdisciplinary collaboration, build research networks, and provide mentorship and funding to support emerging scholars. Future bibliometric studies should broaden their scope by including local journals and conference proceedings and incorporate altmetrics to capture online engagement, offering a more comprehensive picture of research impact.

The Indonesian EFL community can further strengthen writing assessment research and practice by addressing these areas, ultimately enhancing students' writing development and academic success.

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