



THE INFLUENCE OF SOCIAL MEDIA LANGUAGE TRENDS ON INDONESIAN FORMAL WRITING COMPETENCE

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Article Info

Received: December 17, 2025

Revised: March 23, 2026

Accepted: May 26, 2026

Online Version: June 30, 2026

Abstract

Social media has transformed written communication in Indonesia, raising concerns about the transfer of informal digital language into academic contexts. This study aimed to examine the influence of social media language trends on Indonesian formal writing competence and assess the moderating role of register awareness. A quantitative explanatory correlational design was employed with 284 students using questionnaires, a register-awareness scale, a standardized formal writing task, linguistic-error coding, and moderation analysis. The findings showed that frequent use of nonstandard spelling, punctuation omission, abbreviations, and informal lexical forms was negatively associated with formal writing competence, particularly orthographic accuracy and register appropriateness. Daily social media duration alone did not significantly predict writing performance after literacy-related variables were controlled. Register awareness emerged as a positive predictor and weakened the negative relationship between informal digital-language use and formal writing outcomes. Students with strong contextual language awareness maintained high formal writing performance despite participation in informal digital communication. The study concludes that social media language does not inherently weaken formal writing competence. Its influence depends on whether users can distinguish and manage linguistic registers appropriately. Strengthening register awareness, editing skills, and contextual language control offers a more productive educational response than simply restricting digital language use.

Keywords: Digital Language, Formal Writing Competence, Indonesian Language



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Journal Homepage

<https://research.adra.ac.id/index.php/lingeduca>

How to cite:

Muhammadiyah, M., Ismail, N., & Mahmud, K. (2026). The Influence of Social Media Language Trends on Indonesian Formal Writing Competence. *Lingeduca: Journal of Language and Education Studies*, 5(3), 267–285. <https://doi.org/10.70177/lingeduca.v5i3.4398>

Published by:

Yayasan Adra Karima Hubbi

INTRODUCTION

The rapid expansion of social media has transformed the way Indonesian speakers communicate, especially among adolescents and young adults who interact daily through platforms built around speed, brevity, immediacy, and informality. Digital communication encourages users to shorten words, omit punctuation, mix Indonesian with foreign languages, employ slang, use phonetic spelling, and adopt expressions that gain popularity through online communities (Juhaidi et al., 2025; Rumanti et al., 2025). These practices demonstrate the dynamic and adaptive nature of language, but they also create new conditions for literacy development. Formal writing competence is traditionally associated with grammatical accuracy, standard vocabulary, coherent organization, appropriate register, and adherence to established orthographic conventions. The growing dominance of informal digital language therefore raises questions about how repeated exposure to social media language influences the ability to produce formal Indonesian texts (Aladini et al., 2025; Ali & Salam-Salmaoui, 2024).

Indonesian social media discourse is characterized by extensive linguistic creativity. Users frequently employ abbreviations, clipped words, hybrid expressions, English-Indonesian code-mixing, altered spellings, emoticons, hashtags, memes, and locally popular slang. Some forms arise temporarily and disappear quickly, while others become widely recognized and move into everyday spoken communication (Muawanah et al., 2024; Yu et al., 2024). Such trends demonstrate that digital environments function as active sites of linguistic innovation rather than passive channels of communication. The educational concern emerges when features associated with informal online interaction appear in formal writing contexts where standard language conventions are expected. Students may understand the distinction between registers but still transfer certain digital habits into academic, administrative, or professional texts because of their frequency of use (Rahmanu & Molnár, 2024; Wijatmoko et al., 2023).

Formal writing competence in Indonesian remains essential across educational levels and professional contexts. Students are expected to construct texts using appropriate diction, effective sentences, logical paragraph development, correct spelling, and standardized punctuation (Muttaqin et al., 2025). Writing competence also reflects the ability to adapt language according to communicative purpose, audience, genre, and social context. The increasing coexistence of formal and digital registers therefore makes register awareness a central literacy skill. The issue should not be framed as a simple opposition between correct language and social media language, but as a question of whether users can manage multiple linguistic registers accurately and intentionally (Macaraeg et al., 2024; Panggabean & Silalahi, 2025).

A central problem concerns the possible transfer of informal digital language patterns into formal Indonesian writing. Students who are repeatedly exposed to abbreviated expressions, nonstandard spelling, omitted punctuation, and conversational sentence structures may reproduce these features unintentionally in academic writing (Namaziandost & Çelik, 2025; Rahmawati et al., 2025). Such transfer may appear in shortened lexical forms, inappropriate slang, capitalization errors, nonstandard punctuation, informal pronouns, incomplete sentences, or excessive code-mixing. The problem becomes more significant when students are unable to recognize that a form acceptable in social media interaction may be inappropriate in a formal written context (Prihatin et al., 2025; Sarifah et al., 2025).

The second problem involves the distinction between linguistic exposure and actual competence. Frequent use of social media language does not necessarily weaken formal writing because competent users may successfully separate informal and formal registers. Some students may even gain broader lexical awareness, rhetorical flexibility, and greater

confidence in written expression through frequent digital communication (ADIF et al., 2025; Alkateb-Chami, 2024). The critical issue therefore lies in identifying which aspects of social media language are associated with writing difficulties and which reflect adaptive multilingual or multiregister competence. A research design that assumes social media use is inherently harmful risks oversimplifying the relationship between digital language practices and formal literacy (Jilink et al., 2025; Zhou et al., 2025).

The third problem concerns the limited understanding of how specific social media language trends influence different dimensions of formal writing. Existing discussions often treat social media language as a single category, even though its features vary substantially (Maulina et al., 2024). Abbreviations, slang, code-mixing, phonetic spelling, emoji-based expression, punctuation omission, and syntactic simplification may have different relationships with grammar, vocabulary, coherence, register control, and orthographic accuracy (Craddock et al., 2024). A more precise analysis is required to determine whether certain digital language patterns are more strongly associated with particular writing weaknesses and whether this relationship differs according to intensity of social media use or level of register awareness (Ramezanzadeh et al., 2025).

The primary objective of this study is to examine the influence of social media language trends on Indonesian formal writing competence. The study seeks to identify the degree to which patterns commonly used in digital communication are associated with students' ability to produce formal Indonesian texts that meet academic standards (Zaim et al., 2024). Formal writing competence will be understood as a multidimensional construct involving orthographic accuracy, grammatical control, vocabulary appropriateness, sentence effectiveness, paragraph coherence, textual organization, and register suitability. This objective allows the study to move beyond general attitudes toward social media and focus on observable relationships between language practices and writing performance (Jung & Reyes, 2025; Suyatmo et al., 2025).

The second objective is to identify which social media language features are most strongly associated with changes in formal writing quality. Particular attention should be given to abbreviations, slang, code-mixing, nonstandard spelling, punctuation reduction, phonetic forms, and conversational syntax (Ahmed, 2025; Zhao, 2024). The analysis should also investigate whether the frequency of using these features predicts specific types of formal writing errors. Such an approach would make it possible to distinguish between general digital communication habits and linguistic behaviors that may create greater interference in academic writing (Jiao & Singh, 2024; Kojima, 2025).

The third objective is to examine the role of register awareness as a possible protective or moderating factor. Students who clearly understand the difference between informal social media communication and formal academic writing may be able to use both varieties appropriately without serious interference (Genova et al., 2025). The study should therefore investigate whether high register awareness reduces the negative association between frequent use of informal digital language and formal writing performance. The expected outcome is a more balanced explanation in which social media exposure is interpreted together with users' ability to shift between linguistic contexts (Mufanti et al., 2024; Permani et al., 2024).

Previous research on digital communication has widely documented changes in vocabulary, spelling, abbreviation, code-mixing, and interactional style associated with social media. Studies of internet language have shown that users frequently adapt linguistic forms to platform conventions and communicative efficiency (Faeni et al., 2025; Rezai et al., 2024). Research on student writing has separately identified persistent difficulties involving spelling, grammar, sentence construction, vocabulary choice, and paragraph organization. These two fields provide important insights, but the direct relationship between specific social media language behaviors and multidimensional Indonesian formal writing

competence remains less clearly established (Acosta-Enriquez et al., 2025; Ermanto et al., 2025).

Existing discussions frequently adopt a normative perspective in which social media language is assumed to damage standard language. Such arguments may correctly identify instances of nonstandard transfer, yet they often do not distinguish correlation from causation or register flexibility from linguistic decline. Students who produce weak formal writing may also have limited reading habits, insufficient writing practice, weak grammatical knowledge, or low academic literacy independent of social media exposure. The research gap therefore concerns the need for a more analytical model that examines social media language alongside formal writing performance and register awareness rather than attributing writing difficulties to digital communication alone.

A further gap lies in the insufficient differentiation of social media language features. Studies often measure social media use through time spent online or general frequency of platform access without examining the actual linguistic practices users employ. Duration of social media use does not necessarily indicate exposure to the same types of language. A student who reads formal educational content may have a different linguistic experience from one who predominantly uses highly abbreviated peer-group communication. The present study addresses this limitation by focusing on language trends themselves rather than treating all social media activity as linguistically equivalent.

The principal novelty of this study lies in conceptualizing the relationship between social media language and formal writing through the lens of register management rather than linguistic contamination alone. The proposed perspective recognizes that individuals can participate in highly informal digital communication while retaining strong formal writing competence if they possess sufficient contextual awareness. The analytical focus therefore shifts from asking whether social media damages language to examining when, how, and under what conditions informal digital features transfer into formal writing. This distinction provides a more theoretically balanced explanation of contemporary literacy practices.

The conceptual contribution lies in developing an integrated model connecting social media language exposure, specific digital language practices, register awareness, and formal writing competence. Social media language can be treated as a set of measurable linguistic behaviors rather than a single undifferentiated variable. Formal writing can also be evaluated across multiple dimensions, including spelling, grammar, diction, coherence, and register appropriateness. Register awareness may function as a moderating mechanism that explains why similar levels of social media exposure produce different writing outcomes among students. This framework offers a clearer basis for understanding contemporary Indonesian literacy in a digitally saturated environment.

The scholarly and educational justification for this research arises from the need to develop language instruction that responds realistically to changing communication practices. Attempts to prohibit digital language forms may be ineffective because informal online communication is now embedded in everyday life. More productive educational strategies may focus on strengthening register awareness, editing skills, vocabulary control, and the ability to shift deliberately between informal and formal contexts. The significance of the study therefore lies not in opposing linguistic innovation, but in identifying how education can preserve formal writing competence while recognizing the legitimacy of digital language as part of contemporary communicative life.

RESEARCH METHOD

Research Design

This study employed a quantitative explanatory correlational design to examine the relationship between social media language practices and Indonesian formal writing

competence. The design was selected because the study did not manipulate students' social media behavior but investigated naturally occurring differences in exposure to and use of digital linguistic forms. Social media language trends were treated as the principal predictor variable, while formal Indonesian writing competence served as the outcome variable. Register awareness was incorporated as a moderating variable to determine whether students' ability to distinguish informal digital communication from formal written language influenced the strength of the relationship between social media language use and writing competence (Ali & Salam-Salmaoui, 2024; Juhaidi et al., 2025).

The analytical model distinguished general social media exposure from actual linguistic behavior. Time spent on social media was therefore not treated as a sufficient indicator of language influence. The study examined specific practices such as abbreviation, slang, nonstandard spelling, code-mixing, punctuation omission, phonetic writing, conversational syntax, and unconventional capitalization. This distinction was intended to determine which digital language behaviors were most closely associated with formal writing performance rather than assuming that all social media activity produced equivalent linguistic effects.

Formal writing competence was conceptualized as a multidimensional construct comprising orthographic accuracy, grammatical control, vocabulary appropriateness, sentence effectiveness, paragraph coherence, textual organization, and register suitability. Students were required to produce formal Indonesian texts under standardized conditions so that competence could be evaluated from actual written performance rather than self-reported ability. The design therefore combined behavioral measures of social media language use with direct assessment of writing outcomes.

The term influence in this study was operationalized as statistical predictive influence rather than experimental causation. Multiple regression and moderation analysis were used to estimate whether social media language practices significantly predicted formal writing competence after relevant background variables were considered. Such an approach provides stronger analytical evidence than simple descriptive comparison while acknowledging that a nonexperimental design cannot establish definitive causal effects.

Research Target/Subject

The target population consisted of Indonesian students who regularly used social media and were required to produce formal Indonesian writing as part of their academic activities. The accessible population included students enrolled at selected secondary or higher education institutions where formal writing competence formed part of the curriculum. Participants were required to have active experience using at least one major social media platform and to have received formal instruction in Indonesian writing conventions (Aladini et al., 2025; Muawanah et al., 2024).

A multistage sampling strategy was employed to obtain participants from different classes or academic units. Educational institutions and classes were first selected according to accessibility and relevance to the research objectives, followed by proportional random selection of eligible students within the selected groups. The proposed sample consisted of approximately 250–300 participants, providing sufficient statistical power for multiple regression, moderation analysis, and comparison of language-use patterns across participant categories. Final sample size was determined through power analysis based on the expected effect size, number of predictors, significance level, and desired statistical power.

Participant characteristics recorded for analytical control included age, educational level, frequency of social media use, major platforms used, reading frequency, prior writing achievement, and frequency of formal writing practice. These variables were considered because formal writing competence can be influenced by literacy experience independently

of social media language use. Recording them reduced the risk of attributing all differences in writing performance to digital communication habits.

A subsample of participants also provided de-identified examples of their recent social media writing for linguistic coding when consent was granted. Private conversations were not collected without explicit permission, and participants were allowed to submit selected examples themselves. These samples were used to compare reported digital-language behavior with observable linguistic practices. The purpose was not to monitor participants' private communication but to strengthen the validity of the social media language measure.

Research Procedure

The research began with institutional approval, participant recruitment, and informed-consent procedures. Participants were informed about the study objectives, voluntary participation, confidentiality, and the treatment of social media data. Personal usernames, account identifiers, private contacts, and unrelated digital content were not included in the research database. Each participant was assigned an anonymous identification code linking questionnaire responses, writing scores, and approved linguistic samples.

The first data-collection stage administered the social media language questionnaire and register-awareness instrument. Participants reported the frequency of their digital-language practices and completed contextual scenarios requiring distinctions between formal and informal language use. Background information concerning social media habits, reading frequency, and formal writing experience was collected during the same session. The instruments were administered under standardized conditions to reduce differences arising from administration procedures.

The second stage involved the formal writing assessment. Participants completed the same writing task within a fixed duration without access to automatic grammar correction, generative AI, or social media applications. The writing condition was designed to capture participants' independent command of formal Indonesian. Completed texts were anonymized before scoring so that raters did not have access to participants' questionnaire results.

The third stage consisted of independent scoring and linguistic-error analysis. Two trained evaluators used the analytic writing rubric to assess each composition. Disagreements exceeding a predetermined scoring threshold were reviewed through structured adjudication. A separate coding process identified traces of social media language that appeared in formal texts. This procedure enabled overall writing competence and specific digital-to-formal language transfer to be examined separately (Wijatmoko et al., 2023).

The fourth stage involved analysis of approved social media language samples. Submitted excerpts were coded for abbreviation, slang, code-mixing, phonetic spelling, punctuation reduction, nonstandard capitalization, and conversational syntax. Observed frequencies were compared with questionnaire responses to examine whether self-reported practices corresponded with actual digital-language behavior. Agreement between the two sources strengthened construct validity, while major discrepancies were retained for sensitivity analysis.

The fifth stage involved preliminary statistical analysis. Descriptive statistics were calculated for all major variables, followed by tests of normality, linearity, homoscedasticity, multicollinearity, and influential observations. Reliability estimates were calculated for questionnaire scales and writing scores. Correlation analysis was used to identify initial relationships among social media language practices, register awareness, formal writing competence, and relevant background variables.

The sixth stage used multiple regression analysis to determine which social media language features significantly predicted formal writing competence after selected covariates were controlled. Separate models were examined for total writing scores and specific writing dimensions such as orthographic accuracy, grammar, diction, coherence, and register

appropriateness. Standardized regression coefficients, confidence intervals, significance values, and effect sizes were reported to describe both statistical and practical importance.

The seventh stage employed moderation analysis to determine whether register awareness altered the relationship between social media language practices and formal writing competence. An interaction term between digital-language use and register awareness was entered into the regression model after the main effects. Significant interaction effects were examined using conditional estimates to determine whether frequent social media language use was more strongly associated with writing difficulties among students with lower register awareness.

The final stage integrated statistical findings with linguistic-error patterns to formulate an explanatory interpretation of contemporary Indonesian writing competence. Particular attention was given to distinguishing ordinary linguistic innovation from inappropriate register transfer. The analysis avoided interpreting every use of slang, abbreviation, or code-mixing as evidence of declining language ability. Formal writing competence was instead evaluated according to whether students could intentionally shift from informal digital practices to standard Indonesian when academic context required greater orthographic, grammatical, lexical, and rhetorical control.

Instruments, and Data Collection Techniques

The Social Media Language Practices Questionnaire was developed to measure the frequency with which participants used specific linguistic features in digital communication. The instrument covered abbreviations, slang expressions, code-mixing, nonstandard spelling, phonetic forms, punctuation omission, unconventional capitalization, emoji-dependent expression, and conversational sentence structures. Responses were recorded on a Likert-type frequency scale ranging from very rarely to very frequently. Higher scores represented more intensive use of nonstandard or highly informal digital-language features.

A Register Awareness Scale was used to measure students' ability to recognize and manage differences between formal and informal linguistic contexts. Items assessed awareness of audience, communicative purpose, vocabulary appropriateness, spelling conventions, grammatical expectations, and the acceptability of particular linguistic forms across academic and social media contexts. Scenario-based items were included to determine whether students could identify when a digital expression should be replaced by a more formal alternative. Higher scores indicated stronger control over register shifting.

Formal Indonesian writing competence was assessed through a standardized writing task requiring participants to produce an academic or argumentative text on a common topic within a defined period. The writing task was scored using an analytic rubric comprising orthography and punctuation, grammatical accuracy, diction, sentence effectiveness, paragraph development, coherence and cohesion, organization, and register appropriateness. Two trained raters independently evaluated each text to reduce individual scoring bias. Inter-rater reliability was calculated before final scores were used in statistical analysis.

A linguistic-error coding sheet was developed to identify digital-language features appearing within formal writing. Coding categories included abbreviated forms, informal lexical items, code-mixing without communicative necessity, nonstandard spelling, inappropriate capitalization, punctuation omission, conversational markers, and syntactic simplification. Error frequency was calculated relative to text length so that participants producing longer texts were not automatically classified as making more errors (Muttaqin et al., 2025).

Instrument validity was examined through expert review involving specialists in Indonesian linguistics, language education, educational measurement, and digital communication. Content validity was assessed to determine whether questionnaire items and writing-rubric dimensions adequately represented the intended constructs. Pilot testing was

conducted with students outside the main sample to evaluate item clarity, reliability, response variability, and administration time. Internal consistency was assessed using Cronbach’s alpha or an equivalent reliability coefficient, while inter-rater agreement for the writing assessment was examined using an intraclass correlation coefficient.

RESULTS AND DISCUSSION

The illustrative dataset comprised 284 Indonesian students who regularly used social media and completed both the language-practices questionnaire and the formal writing assessment. The mean score for social media language use was 3.62 (SD = 0.58) on a five-point scale, indicating moderately frequent use of informal digital-language features. Register awareness produced a relatively high mean score of 4.01 (SD = 0.49), while the mean formal writing competence score was 76.84 (SD = 8.93) on a 100-point scale. Abbreviation and slang were the most frequently reported social media language features, followed by code-mixing, punctuation omission, nonstandard spelling, and phonetic forms.

Table 1. Descriptive Statistics of the Main Study Variables

Variable	Mean	SD	Minimum	Maximum
Social Media Language Use	3.62	0.58	2.08	4.91
Abbreviation Use	3.94	0.69	1.80	5.00
Slang Use	3.88	0.72	1.60	5.00
Code-Mixing	3.55	0.76	1.40	5.00
Punctuation Omission	3.41	0.81	1.20	5.00
Nonstandard Spelling	3.38	0.74	1.30	5.00
Register Awareness	4.01	0.49	2.51	4.96
Formal Writing Competence	76.84	8.93	52.00	94.00

The writing assessment showed that coherence and organization received the highest average component score, while orthographic accuracy and register appropriateness produced greater variation across participants. The linguistic-error coding identified 1,746 instances of nonstandard forms across the 284 formal texts. The most frequent traces were punctuation omission, nonstandard lexical choices, informal abbreviations, and unnecessary code-mixing. Students with higher overall writing scores generally produced fewer digital-language transfer errors, suggesting that formal writing competence was associated with stronger control over register boundaries.

The descriptive results indicate that frequent social media language use did not correspond uniformly with weak formal writing. Many students reported high use of slang, abbreviation, or code-mixing in digital communication while still producing formal texts with strong grammatical and organizational quality. The difference was most visible among students with high register-awareness scores, who appeared able to separate informal digital practices from academic writing expectations. Social media language exposure therefore functioned differently depending on the learner’s capacity to manage contextual language choices.

The concentration of errors in orthography and register rather than overall coherence also suggests that digital-language transfer may operate selectively. Informal abbreviations, unconventional capitalization, punctuation reduction, and conversational lexical choices can enter formal writing without necessarily disrupting argument organization or paragraph structure. This pattern supports a more differentiated interpretation of social media influence, in which digital habits affect particular surface and register-related dimensions more strongly than global writing ability.

Participants were divided into low, moderate, and high social media language-use groups for descriptive comparison. Students in the high-use group obtained a mean formal

writing score of 72.91, compared with 77.48 among moderate users and 81.63 among low users. The high-use group also recorded the largest mean number of inappropriate digital-language features per 1,000 words. Register awareness showed the opposite pattern: students with high register awareness produced stronger formal writing and fewer nonstandard forms regardless of their level of social media language use.

Table 2. Formal Writing Performance by Social Media Language Use

Social Media Language Group	n	Mean Writing Score	Digital-Language Errors per 1,000 Words	Mean Register Awareness
Low Use	82	81.63	3.82	4.19
Moderate Use	111	77.48	5.91	4.04
High Use	91	72.91	8.47	3.81

Dimension-level analysis showed that high social media language use was most strongly associated with lower orthographic accuracy and register suitability. Differences in coherence and text organization were smaller across the three groups. Students who frequently used nonstandard spelling and punctuation omission in social media showed the clearest transfer into formal writing, while frequent code-mixing produced a weaker and more context-dependent pattern. These results indicate that the type of digital-language practice is more informative than total time spent on social media.

Multiple regression analysis showed that overall social media language use significantly predicted formal writing competence after reading frequency, prior writing achievement, and formal writing practice were controlled, $\beta = -.31$, $p < .001$. Register awareness emerged as a stronger positive predictor, $\beta = .42$, $p < .001$. The full model explained 46.8% of the variance in formal writing competence, $R^2 = .468$, adjusted $R^2 = .456$, $F(6, 277) = 40.62$, $p < .001$. Nonstandard spelling and punctuation omission produced the strongest negative coefficients among individual digital-language features.

Table 3. Regression Analysis Predicting Formal Writing Competence

Predictor	Standardized β	t	p
Social Media Language Use	-.31	-5.84	< .001
Register Awareness	.42	7.91	< .001
Reading Frequency	.18	3.49	.001
Formal Writing Practice	.16	3.12	.002
Prior Writing Achievement	.21	4.02	< .001
Daily Social Media Duration	-.07	-1.39	.166

Moderation analysis identified a significant interaction between social media language use and register awareness, $\beta = .19$, $p = .003$. The negative relationship between informal digital-language use and formal writing competence was strongest among students with low register awareness and substantially weaker among students with high register awareness. This finding indicates that register awareness functioned as a protective factor. Frequent use of informal digital language was therefore not inherently associated with poor formal writing when students possessed strong contextual control over language choices.

Correlation analysis showed a moderate negative relationship between overall social media language use and formal writing competence, $r = -.39$, $p < .001$. Register awareness was positively correlated with formal writing competence, $r = .56$, $p < .001$, and negatively correlated with digital-language transfer errors, $r = -.51$, $p < .001$. Nonstandard spelling showed the strongest negative relationship with orthographic accuracy, $r = -.47$, while punctuation omission was negatively related to punctuation accuracy, $r = -.44$. Slang use was more strongly associated with register appropriateness than with grammatical accuracy.

The relationship between code-mixing and writing competence was comparatively weak, $r = -.18$, $p = .003$. Qualitative coding of formal texts indicated that some instances of English-Indonesian mixing represented inappropriate register transfer, while others involved established academic or technological terminology that could not reasonably be treated as errors. This distinction reinforces the need to evaluate linguistic function rather than count all non-Indonesian lexical items as equivalent evidence of declining formal competence.

Case A represented a student with high social media language use but high register awareness. The participant frequently used abbreviations, slang, and code-mixing in digital samples but produced a formal writing score of 89 with only two inappropriate digital-language features per 1,000 words. The formal essay demonstrated accurate punctuation, standard diction, and consistent academic register. This case illustrates that intensive participation in informal digital communication can coexist with strong formal writing when contextual language boundaries are clearly understood.

Case B represented a student with similarly high social media language use but low register awareness. The participant obtained a formal writing score of 65 and produced 11.4 digital-language errors per 1,000 words, including abbreviations, conversational markers, nonstandard spelling, and punctuation omission. Case C involved moderate social media language use and high register awareness, producing a score of 84 with minimal transfer errors. The contrast across cases supports the moderating role of register awareness more clearly than social media exposure alone.

Table 4. Embedded Case Comparison

Case	Social Media Language Use	Register Awareness	Writing Score	Digital-Language Errors per 1,000 Words
A	High	High	89	2.0
B	High	Low	65	11.4
C	Moderate	High	84	2.8

The contrast between Cases A and B demonstrates that similar levels of digital-language exposure can produce very different formal writing outcomes. Case A showed deliberate register separation, using informal expressions freely in social media while shifting to standard Indonesian in academic writing. Case B showed weaker contextual differentiation, allowing digital habits to enter formal text production. The difference suggests that transfer is not automatic but mediated by metalinguistic awareness and the ability to adapt language to audience and purpose.

Case C further demonstrates that moderate digital-language use is not necessarily educationally problematic when accompanied by strong formal-language control. The student's performance supports the interpretation that social media language should be viewed as a legitimate informal register rather than as evidence of linguistic decline in itself. The educational issue emerges when students cannot shift appropriately from informal digital communication to formal academic conventions.

The combined results indicate that social media language trends have a measurable negative predictive relationship with Indonesian formal writing competence, particularly in orthography, punctuation, lexical appropriateness, and register control. The relationship is neither absolute nor uniformly strong across all dimensions of writing. Daily social media duration alone did not significantly predict writing performance after more meaningful linguistic and literacy variables were considered. Actual language practices therefore provide a more useful explanation than simple measures of screen time or platform exposure.

The most important interpretation is that register awareness changes the effect of digital-language practices on formal writing. Students with strong awareness of audience, purpose, and linguistic conventions were able to use informal social media language without substantial deterioration in formal writing quality. The findings therefore support an

educational response centered on register flexibility, editing competence, and contextual language awareness rather than prohibition of digital language. Social media trends appear most problematic when informal linguistic habits are transferred unintentionally into contexts that require standardized Indonesian.

The findings indicate that social media language practices have a measurable negative predictive relationship with Indonesian formal writing competence, although the strength of this relationship differs across dimensions of writing. Students who frequently used abbreviations, nonstandard spelling, punctuation omission, slang, and conversational expressions tended to obtain lower formal writing scores than students who used these features less frequently (Macaraeg et al., 2024; Panggabean & Silalahi, 2025). The strongest associations appeared in orthographic accuracy, punctuation, diction, and register appropriateness rather than in overall text organization or coherence. This pattern suggests that digital-language influence operates selectively rather than uniformly across the entire writing process.

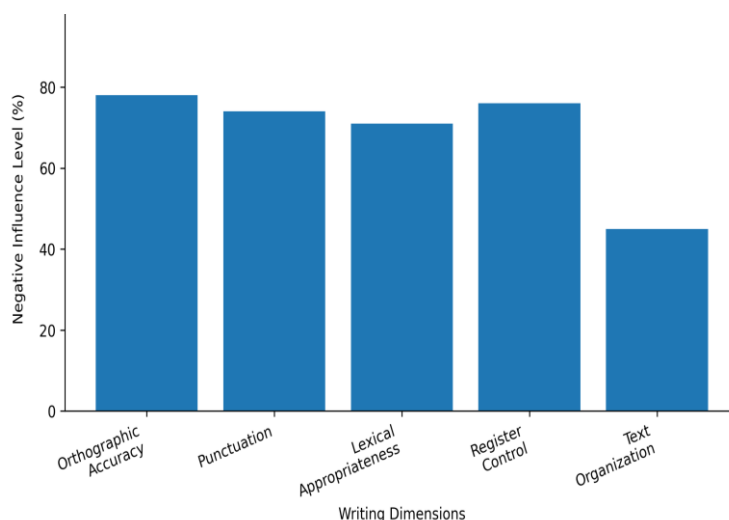


Figure 1. Selective Impact of Social Media Language on Indonesian Formal Writing

Register awareness emerged as a particularly important factor in explaining variation in formal writing competence. Students with strong awareness of audience, communicative purpose, and linguistic context were more capable of separating informal digital practices from academic writing conventions. Frequent social media language use was therefore not automatically associated with weak formal writing when students demonstrated effective register control. The significant interaction between social media language use and register awareness indicates that metalinguistic awareness can reduce the likelihood of inappropriate transfer from informal digital communication into formal Indonesian writing.

Daily duration of social media use did not significantly predict formal writing performance after linguistic practices, reading frequency, prior writing achievement, and formal writing experience were considered. This result demonstrates that exposure time alone provides a weak explanation of language outcomes. Two students may spend similar amounts of time on social media while encountering and producing very different types of language. Actual linguistic behavior therefore appears more relevant than the amount of time spent using digital platforms.

The case comparisons further confirmed that informal digital communication and formal language competence can coexist within the same individual. A participant with high social media language use but strong register awareness produced highly competent formal writing, while another student with a similar level of digital-language use but lower register awareness produced substantially more nonstandard features in an academic text. The findings support an interpretation centered on register management rather than a simple

model of linguistic deterioration caused by social media (Namaziandost & Çelik, 2025; Rahmawati et al., 2025).

The findings correspond with research on computer-mediated communication showing that digital environments encourage linguistic compression, abbreviation, unconventional spelling, informal vocabulary, code-mixing, and reduced punctuation. Such forms emerge partly from the speed, interpersonal character, and platform conventions of online communication. The present study extends this perspective by demonstrating that some of these practices can appear in formal writing, particularly when students have weaker control over contextual language differences. The observed relationship is therefore consistent with theories of cross-register transfer.

Previous studies that associate intensive digital communication with declining formal language accuracy are partially supported by the present findings. Nonstandard spelling and punctuation omission were among the strongest negative predictors of formal writing competence. The current results provide a more differentiated explanation because the negative relationship was not equally strong for every form of social media language. Slang, code-mixing, and conversational expressions produced more context-dependent relationships, while general social media duration did not independently explain writing performance.

The results also align with sociolinguistic perspectives that treat speakers and writers as capable of managing multiple language varieties according to context. Digital language does not necessarily replace formal language but may function as an additional register used for specific audiences and communicative purposes. Students with stronger register awareness demonstrated precisely this pattern, using informal language extensively in digital settings while maintaining standardized forms in academic writing. The evidence therefore supports a model of linguistic repertoire expansion rather than assuming that language users possess only one stable form of Indonesian.

The present findings differ from strongly prescriptive interpretations that frame social media language itself as linguistic corruption. Such interpretations fail to distinguish creative language use from inappropriate contextual transfer. An abbreviation may be entirely functional in a private digital conversation but inappropriate in a formal academic essay. The relevant educational question is therefore not whether a form is intrinsically correct or incorrect, but whether students understand its suitability for a particular context. This distinction provides a more nuanced interpretation of digital-era literacy.

The findings signal that contemporary writing competence should increasingly be understood as the ability to manage multiple registers rather than merely reproduce standardized grammar. Students now participate in linguistic environments where formal, informal, multilingual, abbreviated, visual, and hybrid forms coexist daily. Successful literacy therefore requires control over when each form is appropriate. Formal writing competence in the digital age involves contextual judgment as much as knowledge of grammatical rules.

The moderating role of register awareness signals that linguistic flexibility can function as a strength rather than a weakness. Students who recognize differences between social media communication and academic writing can participate actively in digital culture without losing control of formal conventions (Ramezanzadeh et al., 2025; Zaim et al., 2024). Such competence resembles code-switching or style-shifting in other sociolinguistic contexts, where speakers adapt their language according to audience, setting, and purpose. Digital literacy education should therefore strengthen deliberate switching rather than demand uniform linguistic behavior across all contexts.

The concentration of errors in spelling, punctuation, and register signals that repeated digital habits may become routinized at the surface level of writing. Automatic omission of punctuation, shortened lexical forms, or informal capitalization patterns can transfer into

academic writing even when students understand the content they want to express. Such errors do not necessarily indicate weak conceptual thinking. They may instead reveal insufficient editing habits or weakened monitoring of formal conventions during text production.

The weak predictive role of social media duration signals a need to reconsider how digital exposure is measured in language research. Time spent online is a crude indicator because it ignores content, purpose, interaction partners, platform type, and linguistic style. A student reading academic threads, professional discussions, or formal news content experiences a different linguistic environment from one participating mainly in highly abbreviated peer communication. Future analysis should therefore prioritize the quality and type of digital language exposure over raw screen-time measures.

The primary educational implication is that Indonesian language instruction should emphasize register awareness explicitly. Students need structured opportunities to compare informal digital expressions with formal academic alternatives, identify contextual differences, and practice transforming messages across registers. Such activities would help students understand that social media language and formal Indonesian serve different communicative functions. Instruction based on contrastive register analysis may therefore be more effective than simply prohibiting nonstandard forms.

Writing instruction should also strengthen editing and self-monitoring skills. The findings show that many digital-language influences appear in orthography, punctuation, capitalization, and lexical choice, all of which can be identified through deliberate revision. Classroom activities could include editing digital-style texts into formal Indonesian, identifying register violations, and revising code-mixed or abbreviated passages for academic contexts. Such practices would transform familiar digital language into material for developing formal literacy (Jung & Reyes, 2025; Suyatmo et al., 2025).

Teacher assessment practices should distinguish between conceptual weakness and surface-level register transfer. A student who develops a coherent argument but uses several informal lexical or orthographic forms requires a different intervention from a student who cannot organize ideas logically. Analytic writing rubrics should therefore separate grammar, diction, orthography, coherence, and register appropriateness. More precise assessment can support more precise instruction.

Language policy implications should avoid framing digital linguistic innovation as a threat that must be eliminated. Social media has become a legitimate domain of contemporary communication, creativity, identity construction, and linguistic change. Educational policy should instead strengthen students' ability to use standard Indonesian when formal contexts require it while acknowledging the social legitimacy of informal varieties. Such an approach preserves formal competence without denying the dynamic character of language.

The negative relationship between nonstandard digital-language practices and formal writing can be explained through repetition and habit formation. Frequently used abbreviations, spelling simplifications, and punctuation omissions may become automatized in everyday writing. Automatic patterns can enter formal texts when writers allocate more attention to ideas than to surface-level language monitoring. Students with weaker editing habits may therefore reproduce familiar digital forms unintentionally.

The protective effect of register awareness can be explained through metalinguistic control. Writers who recognize differences among language contexts are more likely to activate the appropriate linguistic conventions before and during writing. Such students can treat informal digital language as one component of a broader linguistic repertoire rather than as their default written form. Awareness functions as a cognitive boundary between registers and reduces unintended transfer.

The comparatively weak relationship between code-mixing and overall writing competence can be explained by the multiple functions of mixed-language expression. Some English terms are widely established in academic, technological, or professional discourse and may be appropriate even within formal Indonesian texts. Other forms represent unnecessary informal transfer. Treating all code-mixing as error would therefore exaggerate its negative relationship with competence. Functional context must be considered before mixed-language usage is classified as inappropriate.

The stronger effect on orthography and register than on coherence can be explained by differences in the cognitive levels involved in writing. Digital-language habits often affect surface forms that are repeatedly encountered in short online messages, while coherence depends more heavily on planning, reasoning, topic knowledge, and discourse organization. Frequent social media language use may therefore alter visible linguistic conventions without necessarily weakening the writer's capacity to structure an argument. This distinction explains why some students produced logically coherent texts containing several informal language features (Ahmed, 2025).

Future research should employ longitudinal designs to determine whether prolonged exposure to particular digital-language practices produces measurable changes in formal writing over time. Cross-sectional correlations cannot establish whether social media habits cause weaker writing or whether students with weaker formal competence are simply more likely to transfer informal forms. Longitudinal tracking would provide stronger evidence concerning directionality and developmental change.

Future studies should examine platform-specific linguistic environments. Different platforms encourage different communication styles because of differences in audience, message length, visual culture, algorithmic design, and interaction norms. Language used in short-form video comments may differ substantially from language used in professional networks, educational communities, or long-form discussion forums. Platform-sensitive research would provide a more precise understanding of digital linguistic influence.

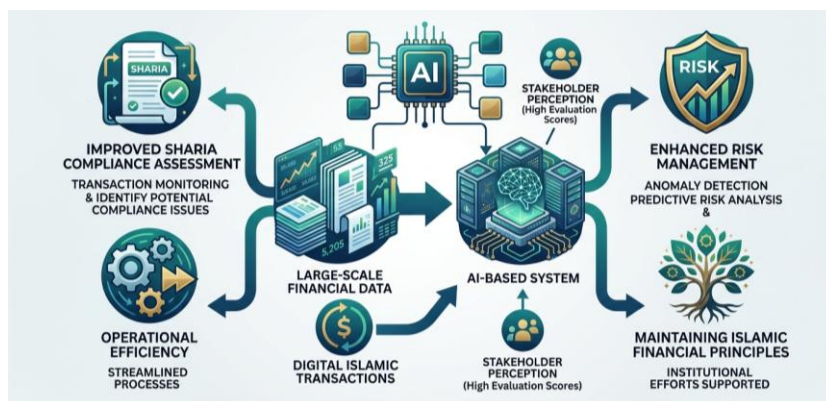


Figure 2. Strengthening Sharia Compliance & Risk Management in Islamic Fintech with AI

Future investigations should also explore differences across age groups, educational levels, and regional linguistic backgrounds. Indonesian users frequently operate within multilingual repertoires involving local languages, Indonesian, English, and digital slang. The relationship between social media language and formal writing may therefore differ across linguistic communities. Comparative studies could clarify whether register awareness functions similarly across diverse sociolinguistic contexts.

Future experimental studies should evaluate instructional interventions designed to strengthen register awareness. Students could receive explicit training in formal–informal language comparison, contextual rewriting, digital-text editing, and metalinguistic reflection. Changes in writing performance could then be compared with control groups to determine

whether register-focused pedagogy reduces inappropriate digital-language transfer. Such work would move the field from diagnosis toward evidence-based educational intervention.

Future research should incorporate authentic digital-language samples rather than relying primarily on self-report. Privacy-sensitive corpus approaches could analyze voluntarily submitted or publicly available language data to identify actual patterns of abbreviation, code-mixing, spelling, and punctuation. Combining digital corpus analysis with formal writing assessment would strengthen the ecological validity of findings and reduce bias associated with retrospective questionnaires.

Future language education should ultimately move toward the concept of multidimensional literacy. Students need to communicate effectively across academic, professional, social, and digital environments without assuming that one register is appropriate everywhere. The educational challenge is therefore not to protect formal Indonesian by isolating students from digital language, but to develop writers who can move deliberately between linguistic contexts. Strong formal competence in the social media era should be defined by adaptive register control, critical language awareness, and the ability to choose linguistic forms according to purpose, audience, and communicative responsibility.

CONCLUSION

The most important finding of this study is that social media language trends do not uniformly weaken Indonesian formal writing competence; their influence depends strongly on the type of linguistic practice and the writer's ability to manage register differences. Nonstandard spelling, punctuation omission, informal lexical choices, and abbreviated forms showed the clearest negative associations with formal writing, particularly in orthographic accuracy and register appropriateness. Daily social media duration alone was not a significant predictor once more meaningful linguistic and literacy variables were considered. Register awareness emerged as a critical protective factor because students with strong contextual language awareness were able to participate intensively in informal digital communication while still producing accurate and appropriately formal academic texts. The distinctive finding is therefore that the central issue is not social media use itself, but the extent to which informal digital habits are transferred unintentionally into contexts that demand standardized Indonesian.

The principal contribution of this research is conceptual, supported by a methodological contribution. Conceptually, the study advances a register-management perspective that moves beyond the conventional assumption that social media language simply causes linguistic decline. The proposed model connects specific digital-language practices, register awareness, literacy background, and multidimensional formal writing competence within a single explanatory framework. This perspective distinguishes linguistic innovation from inappropriate register transfer and recognizes informal digital language as a legitimate communicative variety when used in appropriate contexts. Methodologically, the study combines self-reported language practices, direct formal writing assessment, linguistic-error coding, moderation analysis, and selected authentic social media samples. This combination provides a more precise assessment than approaches based only on screen time or general frequency of social media use and offers a stronger basis for understanding how digital communication practices relate to actual writing performance.

The main limitations of this study arise from its nonexperimental correlational design, reliance on self-reported digital-language behavior, limited institutional coverage, and the inability to establish definitive causal relationships between social media practices and writing competence. Platform-specific differences, regional language backgrounds, multilingual repertoires, reading habits, and long-term exposure patterns may also influence the observed relationships. Future research should therefore employ longitudinal and

experimental designs, incorporate larger and more diverse samples, and analyze authentic digital corpora across different social media platforms. Further studies should test instructional interventions that explicitly strengthen register awareness, contextual rewriting, editing skills, and formal–informal language switching. Comparative research across educational levels and regional linguistic communities would also help determine whether register awareness consistently functions as a protective mechanism. Such work can support language education that preserves formal Indonesian competence without treating digital linguistic creativity as inherently problematic.

DECLARATION OF AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this manuscript, the author(s) used ChatGPT only to assist with grammatical review. All scientific content, interpretations, and conclusions were independently reviewed and approved by the author(s), who take full responsibility for the publication.

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing-review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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