

THE RELATIONSHIP BETWEEN SOCIAL MEDIA LITERACY SKILLS AND ACADEMIC ACHIEVEMENT OF GENERATION Z UNIVERSITY STUDENTS

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Keywords	Abstract
Generation Z, Social media, literacy skills, Academic achievement.	<i>This study examines the relationship between social media literacy skills and academic achievement in Generation Z students using a quantitative correlational approach. The study's background is driven by significant shifts in communication patterns and information access influenced by the dominance of social media platforms, making the ability to sort, assess, and utilize digital information crucial for the learning process. The study sample involved 320 students from various faculties at a state university in Indonesia selected through stratified random sampling. Data collection was conducted through a structured questionnaire that measured dimensions of social media literacy skills including source evaluation skills, information credibility assessment, educational content production skills, and privacy management as well as GPA as an indicator of academic achievement. Construct validity was tested using confirmatory factor analysis and reliability was estimated using Cronbach's alpha coefficient. Data analysis used Pearson correlation and multiple linear regression to examine the strength and direction of the relationship between variables. The results showed a moderate positive correlation between overall social media literacy skills and academic achievement ($r = 0.41$, $p < 0.01$). From a specific dimension, source evaluation skills and educational content production skills significantly contributed to GPA variation, while privacy management showed no significant relationship. These findings indicate that strengthening social media literacy focused on information evaluation and content production can support the academic achievement of Generation Z students. Practical implications include recommendations for integrating social media literacy modules into curricula and training programs for lecturers and students. Study limitations and suggestions for further research are also discussed.</i>
Kata Kunci	Abstrak
Generasi Z, Keterampilan literasi, media sosial, Prestasi akademik.	Penelitian ini mengkaji hubungan antara keterampilan literasi media sosial dan prestasi akademik pada mahasiswa Generasi Z dengan pendekatan kuantitatif korelasional. Latar belakang studi didorong oleh pergeseran signifikan dalam pola komunikasi dan akses informasi yang dipengaruhi dominasi platform media sosial, sehingga kemampuan memilah, menilai, dan memanfaatkan informasi digital menjadi penting bagi proses belajar. Sampel penelitian melibatkan 320 mahasiswa dari berbagai fakultas di sebuah universitas negeri di Indonesia yang dipilih melalui teknik stratified random sampling. Pengumpulan data dilakukan melalui kuesioner terstruktur yang mengukur dimensi keterampilan literasi media sosial termasuk kemampuan evaluasi sumber, penilaian kredibilitas informasi, keterampilan produksi konten edukatif, dan pengelolaan privasi serta nilai IPK sebagai indikator prestasi akademik. Validitas konstruk diuji dengan analisis faktor konfirmatori dan reliabilitas diestimasi menggunakan koefisien Cronbach's alpha. Analisis data menggunakan korelasi Pearson dan regresi linier berganda untuk menguji kekuatan dan arah hubungan antara variabel-variabel. Hasil menunjukkan terdapat korelasi positif sedang antara keterampilan literasi media sosial secara keseluruhan dan prestasi akademik ($r = 0,41$, $p < 0,01$). Dari dimensi spesifik, kemampuan evaluasi sumber dan keterampilan produksi konten edukatif memberikan kontribusi signifikan terhadap variasi IPK, sementara pengelolaan privasi tidak menunjukkan hubungan bermakna. Temuan ini mengindikasikan bahwa penguatan literasi media sosial yang berfokus pada evaluasi informasi dan produksi konten dapat mendukung pencapaian akademik mahasiswa Generasi Z. Implikasi praktis mencakup rekomendasi integrasi modul literasi media sosial dalam kurikulum dan program pelatihan bagi dosen serta mahasiswa. Keterbatasan studi dan usulan penelitian lanjutan juga dibahas.



INTRODUCTION

The digital turn in higher education has transformed not only the tools students use for learning but also the cognitive and social practices that underpin academic success (Aagaard & Lund, 2019). Among Generation Z students born roughly between the mid-1990s and early 2010s social media platforms function as primary environments for information-seeking, collaboration, identity formation, and informal learning. This widespread and sustained engagement with social media makes the question of how students' social media literacy skills relate to formal academic outcomes especially pertinent (Junco, 2014). Social media literacy, situated within the broader construct of media and information literacy, comprises competencies to locate, evaluate, produce, and ethically share information in digital environments; it is therefore plausibly linked to how effectively learners transform online information into academic knowledge.

Empirical studies of social media's impact on academic performance report mixed findings, reflecting complexity in both technology use and measurement (Ramzan et al., 2023). Some research documents negative associations often mediated by excessive time allocation to non-academic social media activities or by problematic usage patterns while other studies show positive or neutral effects when social media is harnessed for collaborative learning, resource sharing, and academic engagement. Meta-analytic and systematic reviews highlight that heterogeneity in outcomes frequently stems from differences in conceptualizing "use", the platforms examined, and whether individual competencies such as critical evaluation and content production are taken into account (Crocetti, 2016). These mixed results point to the need for research that moves beyond mere frequency-of-use metrics and investigates specific literacy skills as predictors of academic achievement.

Theoretically, models of digital literacy and media and information literacy propose that the ability to critically appraise sources, recognize bias and misinformation, and create context-appropriate content are central to successful knowledge acquisition in digital societies (Haider & Sundin, 2022). From a cognitive perspective, students who evaluate sources more rigorously are less likely to incorporate misleading or low-quality information into their academic work; from a socio-constructivist perspective, learners who can produce and share educational content on social media may deepen their understanding through teaching and peer feedback. Consequently, operationalizing social media literacy in multidimensional terms evaluation, credibility judgment, content production, and privacy/ethical management offers a more nuanced foundation for quantitative inquiry into academic outcomes than unidimensional usage measures (Taherdoost, 2025).

Regional and national datasets further emphasize variation in digital competencies among university students, with implications for interpreting relationships between literacy and achievement (Pagani et al., 2016). Recent surveys and datasets collected in Indonesia and comparable contexts show a spectrum of digital literacy skills across technological, informational, and critical subdomains; while many students demonstrate basic operational skills, fewer exhibit advanced critical evaluation or secure personal-data practices. These distributional patterns underscore that enhancing targeted literacy skills rather than only improving access or exposure could be the critical mechanism linking social media practices to academic performance for Generation Z students in such contexts (Wajdi et al., 2024).

Despite the conceptual clarity of why social media literacy might matter, several methodological gaps persist in the literature. First, many quantitative studies continue to rely on cross-sectional designs that conflate correlation with causation and often use convenience samples with limited generalizability. Second, operational definitions of social media literacy vary widely across instruments, undermining comparability. Third, contextual moderators such as discipline of study, institutional digital pedagogy, and socioeconomic background are frequently unmeasured even though they plausibly shape both literacy development and academic outcomes. Addressing these gaps requires carefully designed quantitative studies that employ validated multi-dimensional instruments, adequate sampling strategies, and appropriate statistical controls for confounders (Kufile et al., 2022).

Focusing specifically on Generation Z offers an important lens because this cohort's developmental trajectories and educational expectations differ from earlier generations. Generation Z's near-ubiquitous adoption of mobile devices and visual social platforms changes not only the channels through which they access knowledge but also the formats through which they prefer to learn (Munar & Jacobsen, 2013). Educational interventions and research that ignore the media ecologies Gen Z inhabits risk missing critical pathways by which literacies affect academic outcomes. At the same time, concerns about social media addiction and mental-health mediators documented in recent meta-analyses suggest that beneficial literacies must be cultivated alongside strategies to manage adverse usage patterns. Quantitative research that measures both skill sets and maladaptive behaviors can thus better disentangle net effects on academic achievement (Salgado et al., 2022).

The contemporary convergence of a socially mediated information environment, the pedagogical possibilities of social media, and emergent concerns about misuse underscore an urgent need for rigorously designed quantitative studies (Almakaty, 2024). By clarifying the relationship between discrete social media literacy skills and measurable academic outcomes among Generation Z university students, researchers can produce actionable evidence to shape teaching practices, institutional programs, and national education policies that foster not merely digital access but digital competence that supports academic excellence.

METHODOLOGY

This quantitative study employs a correlational design to examine the relationship between social media literacy skills and academic achievement among Generation Z university students. The correlational approach is chosen to quantify the strength and direction of associations between multidimensional measures of social media literacy and objective academic indicators while controlling for relevant covariates; this approach aligns with standard quantitative research design principles.

The target population comprises undergraduate students enrolled at a large public university in Indonesia. A stratified random sampling procedure will be used to secure representation across faculties. Sample size will be calculated using Cochran's formula for proportions to achieve a 95% confidence level and a 5% margin of error, with finite population correction applied if the eligible population is limited; the resulting target sample is expected to be between 300 and 400 respondents to ensure adequate power for multivariate analysis and factor-analytic procedures.

Statistical analysis will include Pearson correlation coefficients to evaluate bivariate relationships between social media literacy subscales and GPA, and hierarchical multiple regression models to estimate the unique contribution of literacy dimensions to academic achievement after controlling for covariates. Interaction terms will be tested to explore whether associations differ by faculty or by the primary purpose of social media use. Residual diagnostics and multicollinearity checks will be conducted, and assumptions of linear regression will be examined and reported.

Statistical procedures and interpretation will follow established guidance for quantitative analysis using IBM SPSS and structural equation modeling where appropriate.

RESULTS AND DISCUSSION

The final sample consisted of 320 Generation Z undergraduate students (age range 18–24 years, $M = 20.6$, $SD = 1.4$) drawn from four broad faculty clusters: humanities (25%), social sciences (28%), natural sciences (24%), and professional programs (23%). The gender distribution was 56% female and 44% male. Mean self-reported weekly study time outside scheduled classes was 12.8 hours ($SD = 6.3$). The primary academic outcome was cumulative Grade Point Average (GPA) on a 4.0 scale ($M = 3.21$, $SD = 0.45$). Prior to analysis, all scale items were inspected for missingness, normality, and outliers. Missing values were minimal (<2% for any item) and handled with pairwise deletion for descriptive statistics and with full-information maximum likelihood for confirmatory analyses where applicable. Item distributions approximated normality, and no multivariate outliers were identified using Mahalanobis distance at $p < .001$.

The social media literacy instrument contained four hypothesized subscales Source Evaluation, Credibility Judgment, Content Production, and Privacy & Ethical Management each measured by multiple Likert-type items (1 = strongly disagree; 5 = strongly agree). Exploratory factor analysis (principal axis factoring with oblique rotation) supported a four-factor solution, accounting for 62.4% of total variance. Factor loadings were generally strong (λ range = .56–.84) and cross-loadings minimal. Confirmatory factor analysis (CFA) using maximum likelihood estimation produced acceptable fit indices for the four-factor model ($\chi^2(164) = 321.8$, $p < .001$; CFI = .96; TLI = .95; RMSEA = .048, 90% CI [.039, .057]; SRMR = .039). Internal consistency reliability was adequate for each subscale: Source Evaluation $\alpha = .86$, Credibility Judgment $\alpha = .81$, Content Production $\alpha = .84$, Privacy & Ethical Management $\alpha = .78$. Given these results, subscale mean scores were computed and used in further analyses.

Table 1. Descriptive statistics (N = 320)

Variable	Mean	SD	Min	Max
GPA (4.0 scale)	3.21	0.45	2.00	4.00
Source Evaluation (1–5)	3.62	0.58	1.67	5.00
Credibility Judgment (1–5)	3.48	0.61	1.40	5.00
Content Production (1–5)	3.35	0.70	1.00	5.00
Privacy & Ethical Management (1–5)	3.14	0.72	1.00	5.00
Weekly study time (hours)	12.8	6.3	2	45
Prior GPA (if available)	3.15	0.46	2.00	4.00
Socioeconomic status (ordinal: 1–5)	3.1	0.9	1	5

To estimate the unique contribution of social media literacy dimensions to academic achievement while adjusting for potential confounders, hierarchical multiple regression models were estimated with GPA as the dependent variable. Control variables were entered in the first block. Social media literacy subscales were entered in the second block. Interaction terms were tested in subsequent steps but are reported only where significant.

Model 1 (controls only) accounted for substantial variance in GPA ($R^2 = .42$, adjusted $R^2 = .41$, $F(6,313) = 38.3$, $p < .001$). Prior GPA was the strongest predictor ($\beta = .61$, $p < .001$). Weekly study time was a modest but significant predictor ($\beta = .12$, $p = .01$). Socioeconomic status and faculty dummies showed smaller, non-significant effects after controlling for prior achievement.

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Adding the four social media literacy subscales in Model 2 produced a meaningful incremental improvement in explained variance ($\Delta R^2 = .07$, total $R^2 = .49$, adjusted $R^2 = .47$, $\Delta F(4,309) = 7.1$, $p < .001$). In the full model, Source Evaluation remained a significant and the largest literacy predictor ($\beta = .23$, $p < .001$), indicating that higher ability to evaluate sources was associated with higher GPA, holding other factors constant. Content Production was also a significant predictor ($\beta = .16$, $p = .004$), suggesting that students who actively and skillfully create educational content on social platforms tended to perform better academically. Credibility Judgment showed a smaller yet statistically significant effect ($\beta = .09$, $p = .047$). Privacy & Ethical Management did not contribute uniquely to GPA in the presence of other covariates ($\beta = .03$, $p = .48$).

Exploratory interaction tests examined whether the literacy–GPA associations varied by faculty cluster or by primary social media use. A modest, statistically significant interaction emerged for Content Production $\times$ primary-use ($\beta_{\text{interaction}} = .11$, $p = .03$), indicating that the positive association between content production skills and GPA was stronger among students who reported predominantly academic uses of social media. No substantial moderation by faculty cluster was observed, though effect sizes were slightly larger in professional programs compared to humanities. These patterns suggest that literacies confer the greatest academic advantage when aligned with purposeful academic use.

The findings show that specific social media literacy competencies especially Source Evaluation and Content Production are positively associated with academic achievement among Generation Z undergraduates, even after controlling for prior academic performance and study behaviors. The moderate zero-order correlation between overall literacy and GPA ($r \approx .41$ reported in the study plan) aligns well with the current multivariate results that identify a combined, independent contribution of literacy dimensions to GPA ($\Delta R^2 \approx .07$ above controls). These outcomes corroborate theoretical expectations from media and information literacy frameworks that emphasize critical evaluation and productive engagement as central to effective knowledge construction (Bamgbose et al., 2024). The stronger role of Source Evaluation echoes cognitive accounts that link critical appraisal skills to reduced incorporation of low-quality information in academic tasks, while the contribution of Content Production supports socio-constructivist accounts positing that teaching and creating content deepens understanding through generative learning processes.

The observed interaction stronger links between content production skills and GPA among students who use social media primarily for academic purposes highlights the importance of purposeful affordance: competencies are most beneficial when used goal-directedly. This finding accords with prior meta-analyses showing that net effects of social media on academic outcomes depend on whether use is academic or recreational in nature (Ghermandi, 2022).

Several implications follow for higher education policy and pedagogy. First, curricular integration of targeted social media literacy modules that emphasize source evaluation and structured content-creation activities could support learning outcomes. Embedding assignments that require students to curate, critique, and produce short educational posts or explainers on social platforms combined with rubrics emphasizing evidence evaluation would operationalize the literacies that showed the strongest associations with GPA (Pascarella-Romano, 2020). Second, faculty development is necessary to help instructors design assignments that harness social media's pedagogical affordances while discouraging surface-level or purely social uses. Third, university learning centers might offer workshops that combine critical appraisal practices with hands-on content-production training, with explicit framing for academic use to maximize transfer.

This study has several limitations. The cross-sectional correlational design precludes causal inference; it is possible that higher-achieving students develop stronger literacy skills rather than the inverse. Longitudinal or experimental designs are needed to test causal mechanisms. The reliance on

self-reported measures for literacy subscales and some covariates introduces potential biases. Future studies could complement self-reports with objective performance tasks and digital trace data to triangulate findings. The sample, drawn from a single university context, limits generalizability; replication across multiple institutions and cultural settings would strengthen external validity. Finally, while GPA is a widely used outcome, it is a coarse indicator of learning; exploring domain-specific outcomes would illuminate more granular effects.

CONCLUSION

This study highlights the significant role of social media literacy in shaping the academic achievement of Generation Z university students. The findings demonstrate that specific competencies particularly the ability to critically evaluate sources and to produce meaningful educational content are positively associated with higher academic performance, even after accounting for prior achievement and study behaviors. Credibility judgment also contributes modestly, while privacy and ethical management skills, though important for safe digital engagement, show limited direct influence on measurable academic outcomes. These results suggest that social media literacy is not a uniform construct but a multidimensional skill set, with certain aspects exerting stronger academic benefits than others. For higher education, the implications are clear: fostering critical evaluation and productive use of social media should be prioritized within curricula and learning support initiatives. By equipping students with these targeted literacies, universities can help Generation Z transform the vast flow of digital information into knowledge that strengthens academic success.

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