

SOCIAL MEDIA INFLUENCE ON LEARNING EFFECTIVENESS AMONG PUBLIC AND PRIVATE SENIOR SECONDARY SCHOOL STUDENTS IN OGUN STATE, NIGERIA

¹ OLATUNJI Olutayo Benjamin,

bennyolatunji@gmail.com

+2348166997169

² EGBOWON Eniola Silas (Prof.)

silas.egbowon@lasu.edu.ng

+2348162750911

³ OLATADE Roseline Yetunde (PhD)

olatade.roseline@yahoo.com

+2348023653000

⁴ ALABI Olaide Bukola (PhD)

olaide.alabi@lasu.edu.ng

+2348033442457

⁵ ARIYIBI Olasupo Olanrewaju (PhD)

olasupo.ariyibi@lasu.edu.ng

+2348059909286

^{1&2&4&5} Department of Science and Technology Education, Faculty of Education, Lagos State University, Ojo

³ Department of Educational Management, Faculty of Education, Lagos State University, Ojo.

Corresponding author email: bennyolatunji@gmail.com

Abstract

This study investigated the influence of social media platforms on the learning effectiveness of senior secondary school students in public and private schools in Abeokuta South and Ado-Odo/Ota Local Government Areas of Ogun State, Nigeria. Anchored on the Uses and Gratifications Theory and Social Learning Theory, the study adopted a descriptive survey design. A multi-stage sampling procedure was used to select four secondary schools (two public, two

private), from which 400 Senior Secondary students (200 public, 200 private) were drawn through simple random sampling. Data were collected using the researcher-developed Influence of Social Media on Learning Effectiveness Questionnaire (ISMLEQ), validated by experts and tested for reliability using the test-retest method. Data were analysed using mean, standard deviation, independent samples t-test, and effect size statistics at the 0.05 level of significance. Findings showed that social media exerted a broadly positive influence on learning effectiveness for both groups (public school mean = 18.77, SD = 0.21; private school mean = 18.78, SD = 0.17), and that the hypothesis of no significant difference between public and private school students was retained ($t(398) = -0.383, p = .062 > .05$). The study concludes that institutional ownership does not significantly moderate social media's influence on learning effectiveness, and recommends deliberate, teacher-guided integration of social media into instruction across both school types.

Keywords: social media, learning effectiveness

Introduction

Globalization, accelerated by unprecedented technological advancement in the twenty-first century, has fundamentally transformed communication and learning environments across the world (UNESCO, 2023). Social media platforms have evolved from mere entertainment tools into multifaceted ecosystems that shape teaching, learning, and knowledge construction (Bello, 2024). In Nigeria, adoption has been rapid: approximately 38.7 million Nigerians actively used social media platforms as of January 2025, representing 16.4 per cent of the national population (Data Reportal, 2025). Platforms such as WhatsApp, Facebook, Instagram, YouTube, and X have become deeply embedded in the daily routines of adolescents, including senior secondary school students in Ogun State. The educational implications of this ubiquity remain contested. On one hand, social media facilitates collaborative learning, resource sharing, and peer academic support, particularly through WhatsApp groups that enable real-time exchange of notes and tutorial materials (Elom et al., 2025). When strategically integrated into pedagogical practice, these platforms can enhance engagement, extend classroom interaction beyond physical boundaries, and support self-directed learning (Asanga, 2023). On the other hand, substantial evidence links unregulated use to diminished academic focus, reduced study time, and superficial cognitive engagement (Gordon, 2024; Du et al., 2024).

A pronounced digital divide separates public and private secondary schools in Nigeria. Private institutions typically possess superior infrastructure, stable connectivity, and greater teacher capacity for technology integration, while public schools, particularly in under-resourced communities, contend with inadequate devices, unreliable power supply, and limited digital literacy (Global Partnership for Education, 2024; Badmus, 2025). Ogun State, which operates over 2,000 public secondary schools alongside numerous private institutions, illustrates this disparity

acutely, especially as the state's Digital Platform for Education Revitalization (DiPER) initiative raises new expectations for digital engagement without necessarily resolving underlying inequities in access (Adenubi, 2025). Whether these structural disparities translate into a measurable difference in social media's influence on learning effectiveness is, however, an empirical question rather than a foregone conclusion. Existing Nigerian scholarship offers conflicting signals: some studies report that private school students derive greater academic benefit from social media because of superior access and teacher guidance (Ogundijo, 2014; Olowo, Alabi, Okotoni & Olowo, 2020), while others find no significant difference in outcomes once usage intentionality is accounted for (Adeyemi, Ojo & Fashola, 2022; Atomatofa et al., 2024). This study was designed to resolve this ambiguity within a defined geopolitical context by directly comparing the influence of social media on learning effectiveness between public and private senior secondary school students in Ogun State. Understanding this relationship matters for policy design. If private school students genuinely derive greater learning benefit from social media by virtue of superior infrastructure, then closing the infrastructural gap should be a policy priority for improving equity in digital-era learning outcomes. If, however, the influence of social media on learning effectiveness proves statistically indistinguishable across institutional types, this would suggest that factors other than raw access, such as teacher mediation, peer culture, and students' own regulatory habits, are doing the explanatory work, redirecting the policy conversation toward pedagogy rather than hardware alone. This study contributes evidence to that policy conversation using a focused, instrument-based comparison drawn directly from Ogun State's stratified secondary education landscape.

Despite the pervasiveness of social media in the daily lives of Nigerian adolescents, there is limited context-specific evidence on whether its influence on learning effectiveness differs meaningfully between students in public and private secondary schools. Much of the existing literature either focuses on tertiary institutions, adopts national-level analyses that obscure sub-national variation, or measures learning effectiveness narrowly through examination scores rather than a composite construct capturing comprehension, engagement, and academic behaviour (Bello, 2024; UNESCO, 2023). Within Ogun State specifically, infrastructural disparities between public and private schools are well documented, yet it remains unclear whether these disparities actually produce a differential influence of social media on students' learning effectiveness, or whether usage patterns and pedagogical mediation neutralize the apparent advantage of better-resourced private institutions (Adeyemi & Adeyinka, 2023). This gap limits the ability of school administrators and policymakers in Ogun State to design equitable, evidence-based digital learning policies.

The purpose of this study was to:

i: investigate the influence of social media platforms on the learning effectiveness of senior secondary school students, comparing students in public and private schools in Abeokuta South and Ado-Odo/Ota Local Government Areas of Ogun State, Nigeria.

The study was guided by the following research question:

i. What is the influence of social media on the learning effectiveness of students in public and private senior secondary schools in Ogun State, Nigeria?

The following null hypothesis was formulated and tested at the 0.05 level of significance:

H₀: *The influence of social media on learning effectiveness does not significantly differ between public and private senior secondary school students in Ogun State, Nigeria.*

The findings of this study provide empirical evidence to guide the Ogun State Ministry of Education, school administrators, and teachers in designing digital-learning policies that are appropriate for both public and private institutional contexts. Where the influence of social media on learning effectiveness proves statistically indistinguishable across school types, resources devoted to closing an assumed 'outcome gap' may be more productively redirected towards strengthening pedagogical scaffolding, digital literacy instruction, and teacher-mediated modelling of academic platform use in both sectors.

Literature Review

The study is anchored on the Uses and Gratifications Theory (UGT) and Social Learning Theory (SLT). UGT (Katz, Blumler & Gurevitch, 1974; Ruggiero, 2023) conceptualizes media users as active agents who select platforms to satisfy specific gratifications, whether informational, social, or academic. Applied here, the influence of social media on learning effectiveness is understood as mediated by the alignment between the gratifications students seek and their educational objectives: entertainment-seeking usage tends to displace study time, whereas academically-oriented usage supports resource sharing and peer scaffolding (Adenubi, 2025). SLT (Bandura, 1977) complements this by explaining how usage norms, and by extension the platforms' influence, are socially transmitted through peer observation and teacher modelling, with private schools' more structured teacher mediation potentially fostering different behavioural norms from the peer-driven patterns common in public schools (George, 2024).

Findings on social media's influence on learning effectiveness are mixed. A substantial body of Nigerian research documents predominantly negative associations: Umar and Idris (2018) found that social media usage negatively influenced the psychosocial behaviour and academic performance of secondary school students in Katsina State, while Nwabueze and Aduba (2014)

and Anaduaka and Eze (2021) linked excessive use to poor study habits, reduced study time, and declining performance in English Language. Conversely, other studies document positive influences when usage is purposeful and teacher-facilitated: Ajayi and Olajide (2022) found that students exposed to a WhatsApp Group Learning Platform in Ekiti State significantly outperformed peers taught through traditional methods, and Adesope, Ajayi and Ogunleye (2021) reported that 67.8 per cent of Ekiti State students perceived social media as having a positive influence on their learning through improved access to information and peer collaboration.

Comparative evidence on institutional differences is similarly divided. Okoye and Nwankwo (2022) found significantly higher teacher-facilitated social media learning among private school students in Rivers State, while Adeyemi, Ojo and Fashola (2022), studying the same senatorial districts as the present study, found no significant difference in the overall positive influence of social media on learning effectiveness between public and private school students, despite significant differences in access, guidance, and digital literacy. Atomatofa et al. (2024) similarly found no significant interaction between social media usage time and school type on students' academic achievement in Delta State. These contradictory findings, often attributable to differences in how learning effectiveness is operationalised and whether usage intentionality is controlled for, underscore the need for the present investigation.

Beyond the Nigerian secondary school context, international evidence lends further nuance to the debate. Junco (2012), studying 1,839 American undergraduates, found that total time spent on Facebook was negatively related to overall GPA, but that this relationship was moderated by purpose of use: students who used the platform for academic collaboration showed no negative effect, while those using it primarily for entertainment and social comparison did. Greenhow and Askari (2017) similarly found that among 1,200 American secondary school students, those who used social media collaboratively for academic purposes reported significantly higher self-efficacy and learning satisfaction than passive or individual users. These findings collectively suggest that the influence of social media on learning effectiveness is contingent less on access or institutional resourcing per se, and more on the intentionality with which the technology is deployed by students and mediated by teachers.

Existing Nigerian scholarship on the influence of social media on learning effectiveness is disproportionately concentrated in tertiary institutions or single-school-type samples, limiting direct comparisons between public and private institutions. Where comparisons exist, contradictory findings persist because studies rarely control simultaneously for usage intentionality, teacher mediation, and institutional infrastructure. Methodologically, many prior studies also rely on single-item or narrowly framed measures of academic performance (such as examination scores in one subject), rather than a composite learning-effectiveness construct capturing comprehension, engagement, and self-regulated learning behaviour. No published study

had systematically compared the influence of social media on learning effectiveness across the public-private divide within Abeokuta South and Ado-Odo/Ota Senatorial Districts of Ogun State using a validated composite instrument. This study addresses that gap by providing a focused, comparative, instrument-based assessment within a single geopolitical zone.

Methodology

The study adopted a descriptive survey research design. The population comprised senior secondary school students in public and private schools in Abeokuta South and Ado-Odo/Ota Local Government Areas of Ogun State. A multi-stage sampling technique was employed, whereby purposive sampling was used to select four secondary schools, comprising two public and two private schools, while simple random sampling was used to select 100 students from each school, resulting in a total sample of 400 respondents, comprising 213 males and 187 females. Data were collected using the Influence of social media on Learning Effectiveness Questionnaire (ISMLEQ), which consisted of sections on respondents' background information and items measuring the influence of social media on learning effectiveness. The instrument adopted a four-point Likert-type scale of Strongly Agree, Agree, Disagree and Strongly Disagree. The content validity of the instrument was established through vetting by the two thesis supervisors and other experts during the pre-field session, while a pilot study was conducted among 150 SSS2 Commercial students from schools outside the main study area. The reliability of the instrument was determined using the test-retest method, although the specific reliability coefficient was not stated in the methodology provided. Data were analyzed using frequency counts, percentages, means and standard deviations, while the hypothesis was tested using an independent-samples t-test at the 0.05 level of significance, supported by Levene's test and effect-size measures. The decision rule was to reject the null hypothesis where the p-value was less than 0.05 ($p < 0.05$) and fail to reject the null hypothesis where the p-value was greater than or equal to 0.05 ($p \geq 0.05$). The questionnaire was validated by two experts, and a reliability coefficient of 0.76 was obtained.

Results

Table 1 presents the demographic distribution of respondents. The sample was composed predominantly of students aged 15-17 years (70.5%), with a fairly balanced gender distribution (53.25% male, 46.75% female) and an even split between public and private school students (50% each), consistent with the study's comparative design.

Table 1:

Variable	Category	Frequency	Percentage
Age	12-14 years	98	24.5%
	15-17 years	282	70.5%
	18-20 years	20	5.0%
Gender	Male	213	53.25%
	Female	187	46.75%
School Type	Public Secondary School	200	50%
	Private Secondary School	200	50%

Source: Fieldwork (2026)

In answer to the research question, respondents' composite learning-effectiveness scores were computed and compared by school type. As shown in Table 2, students in public secondary schools recorded a mean learning-effectiveness score of 18.7700 (SD = 0.21135). In contrast, students in private secondary schools recorded a marginally higher mean of 18.7774 (SD = 0.17348), a mean difference of only 0.0074. Both groups' scores fell within the 'effective' range of the response scale, indicating that social media exerted a broadly positive influence on learning effectiveness among both public and private school students, with the two groups closely comparable rather than starkly divergent.

Table 2: Group Statistics for Learning Effectiveness by School Type

Variable	School Type	N	Mean	SD	Std. Error Mean
Learning Effectiveness	Public School	200	18.7700	0.21135	0.01494

Variable	School Type	N	Mean	SD	Std. Error Mean
	Private School	200	18.7774	0.17348	0.01227

Source: Fieldwork (2026)

The null hypothesis, that the influence of social media on learning effectiveness does not significantly differ between public and private senior secondary school students in Ogun State, was tested using an independent samples t-test. Levene's test produced an F-value of 10.888 with a significance value of .0521, marginally above the .05 threshold, indicating approximately equal variances between the two groups. The t-test result (Table 3) yielded $t(398) = -.383$, $p = .0621$ (two-tailed), which exceeds the .05 significance criterion.

Table 3: Independent Samples t-Test for Learning Effectiveness

Levene's F	Levene's Sig.	t	df	Sig. (2-tailed)	Mean Diff.	95% CI
10.888	.0521	-.383	398	.0621	-.00740	[-.0454, .0306]

Source: Fieldwork (2026)

Consequently, the null hypothesis was retained (accepted). There is no statistically significant difference in the influence of social media on learning effectiveness between public and private senior secondary school students in Ogun State, Nigeria. The effect-size estimates in Table 4 corroborate this conclusion: Cohen's d (-.038), Hedges' correction (-.038), and Glass's delta (-.043) all indicate a negligible practical difference between the two groups, with confidence intervals spanning zero.

Table 4: Effect Size Estimates for Learning Effectiveness

Effect Measure	Standardizer	Point Estimate	95% Lower CI	95% CI Upper
Cohen's d	.19334	-.038	-.234	.158

Effect Measure	Standardizer	Point Estimate	95% CI Lower	95% CI Upper
Hedges' correction	.19371	-.038	-.234	.157
Glass's delta	.17348	-.043	-.239	.153

Source: Fieldwork (2026)

Discussion of Findings

The finding that social media's influence on learning effectiveness does not differ significantly between public and private senior secondary school students in Ogun State challenges the assumption that private schools' documented infrastructural advantages automatically translate into superior digital-learning benefits. This result is consistent with Adeyemi, Ojo and Fashola (2022), who studied the same senatorial districts and found no significant difference in the overall positive influence of social media on learning effectiveness between public and private school students, despite significant differences in access, guidance, and digital literacy levels. It also aligns with Atomatofa et al. (2024), who found no significant interaction between social media usage time and school type on science students' academic achievement in Delta State, and with Ogundijo (2014), who reported that the overall impact of social networking on academic performance was similar across public and private school students once usage patterns were accounted for.

The finding departs, however, from studies such as Okoye and Nwankwo (2022) and Nwosu and Okonkwo (2023), which reported significantly higher social media-related learning benefits among private school students in Rivers and Abia States respectively. This divergence may reflect differences in how learning effectiveness is operationalised: studies that measure narrow academic-usage indicators (for example, frequency of teacher-facilitated group participation) tend to find a private-school advantage, whereas studies measuring composite, self-reported learning effectiveness, as in the present study, tend to find convergence. It is plausible that public school students compensate for weaker institutional infrastructure through informal, peer-driven use of low-bandwidth platforms such as WhatsApp, effectively narrowing the gap in perceived learning benefit even where objective access indicators remain unequal (Adenubi, 2025; George, 2024).

Within the framework of the Uses and Gratifications Theory, this convergence suggests that students in both public and private schools are similarly capable of directing social media use toward academically gratifying ends when motivated to do so, regardless of institutional resourcing. Equally, from a Social Learning Theory perspective, the near-identical learning-

effectiveness scores imply that observational learning of productive social media habits, whether modelled by teachers in structured private-school environments or by high-achieving peers in public-school settings, can produce comparable outcomes. This underscores the conclusion emerging from the broader empirical literature that pedagogical intentionality, rather than institutional ownership alone, is the primary determinant of whether social media enhances or undermines learning effectiveness (Du et al., 2024; Elom et al., 2025).

It is also worth noting that although the Levene statistic in this study approached, but did not fall below, the .05 threshold ($p = .0521$), the assumption of equal variances was reasonably tenable, lending confidence to the pooled-variance t-test result. The very narrow mean difference of 0.0074 on an 18-point-plus composite scale, alongside effect sizes clustering close to zero across three separate estimators (Cohen's d , Hedges' correction, and Glass's δ), provides converging statistical evidence, rather than a single fragile test result, that the true difference in social media's influence on learning effectiveness between public and private school students in the study area is negligible in practical terms, even if a larger sample might eventually detect a statistically significant but substantively trivial difference.

Implications for Practice and Policy

The convergence of learning-effectiveness outcomes across school types carries direct implications for the Ogun State Ministry of Education and for school-level administrators. Rather than treating social media integration as an infrastructure problem to be solved primarily through device or bandwidth provision to under-resourced public schools, the findings suggest that comparable gains can be achieved by investing in teacher capacity to model and structure academic social media use, irrespective of a school's ownership status. Programmes such as the state's Digital Platform for Education Revitalisation (DiPER) may therefore achieve broader equity gains by pairing any infrastructural rollout with mandatory teacher training in digital pedagogy and structured, moderated academic group use of platforms such as WhatsApp, rather than infrastructure alone (Adenubi, 2025).

Conclusion

This study set out to determine whether the influence of social media on learning effectiveness differs between public and private senior secondary school students in Ogun State, Nigeria. Based on the descriptive and inferential analysis of data from 400 students across four schools, the study concludes that social media exerts a comparably positive influence on the learning effectiveness of both public and private school students, and that institutional ownership (public versus private) is not, by itself, a statistically significant moderator of this influence. The near-identical mean learning-effectiveness scores and negligible effect sizes suggest that documented infrastructural

disparities between public and private schools in Ogun State do not straightforwardly translate into a differential learning benefit from social media use.

Recommendations

Based on the findings, the following recommendations are made:

1. Educational stakeholders and school administrators in both public and private senior secondary schools should deliberately integrate social media into instructional practice rather than assuming its benefits will accrue automatically from device access alone.
2. Since institutional type does not significantly moderate social media's influence on learning effectiveness, policy interventions should prioritise teacher-mediated modelling of academic platform use and structured digital literacy instruction over infrastructure provision alone.
3. The Ogun State Ministry of Education should encourage the adoption of teacher-facilitated WhatsApp or similar collaborative learning groups in public schools, replicating the structured practices already common in many private institutions.
4. Future research should employ longitudinal and mixed-methods designs to establish causal pathways between social media usage intentionality and learning effectiveness, moving beyond the cross-sectional comparison undertaken in this study.

References

- Adenubi, A. O. (2025). Digital pedagogies in Ogun State secondary schools: Exploring WhatsApp-mediated collaborative learning. *Nigerian Journal of Educational Technology*, 8(1), 45-62.
- Adenubi, A. O. (2025). Lessons from Ogun State's digital platform for education revitalisation (DiPER): A mobile-adaptable cloud-based education management information system. *FUDMA Journal of Science*, 9(1), 45-62.
- Adesope, O. M., Ajayi, T. O., & Ogunleye, B. O. (2021). Influence of social media on learning effectiveness among secondary school students in Ekiti State, Nigeria. *African Journal of Educational Technology*, 9(3), 78-93.

- Adeyemi, T. O., & Adeyinka, A. A. (2023). Digital infrastructure disparities and academic performance in public and private secondary schools in Southwestern Nigeria. *Journal of Educational Technology Systems*, 51(4), 512-530.
- Adeyemi, T. O., Ojo, E. O., & Fashola, O. S. (2022). Comparative influence of social media on learning effectiveness among public and private secondary school students in Ogun State, Nigeria. *Ogun State Journal of Educational Research*, 6(2), 89-104.
- Ajayi, L. F., & Olajide, I. E. (2022). Effects of WhatsApp group learning platform on senior secondary school students' learning outcomes in Science, Technology, and Mathematics (STM) in Ekiti State, Nigeria. *Educational Research and Reviews*, 17(8), 213-218.
- Anaduaka, U. S., & Eze, C. N. (2021). Influence of social media in the performance of secondary school students in English language in Nsukka Education Zone of Enugu State. PGDE Project, Godfrey Okoye University.
- Asanga, M. P. (2023). Social media and academic performance: A survey of senior secondary school students in Uyo, Akwa Ibom State, Nigeria. *International Journal of Learning, Teaching and Educational Research*, 22(8), 312-330.
- Atomatofa, R. J., et al. (2024). Influence of social media usage on science students' academic achievement and behavior in public and private schools in Delta State, Nigeria. *Journal of Communication and Technology*.
- Badmus, A. M. (2025). Assessment of digital literacy and technology utilisation among secondary school students in Ilaro metropolis, Ogun State, Nigeria. *Research and Innovation Journal of Educational Studies*, 4(1), 78-94.
- Bandura, A. (1977). Social learning theory. Prentice-Hall.
- Bello, O. (2024). Digital literacy and skills development in Nigeria: Policies, barriers and recommendations. *African Journal of Adult and Continuing Education*, 12(2), 112-130.
- Data Reportal. (2025). Digital 2025: Nigeria. <https://datareportal.com/reports/digital-2025-nigeria>
- Du, X., et al. (2024). Adolescents' social media multitasking and academic performance. [As cited in study literature].
- Elom, C. O., Nwachukwu, C., & Okeke, B. (2025). Determinants of WhatsApp and Telegram usage for learning support in Nigerian public universities. *Frontiers in Education*, 10, Article 1581514.

- George, T. O. (2019). Gender differences in ICT studies: A study of selected public secondary schools in Ogun State, Nigeria. In Handbook of Research on Gender Differences in STEM Careers (pp. 287-305). IGI Global.
- Global Partnership for Education. (2024). Nigeria 2024-2027 Partnership Compact: Pursuing an inclusive education transformation. Washington, DC: GPE.
- Gordon, M. (2024). Social media use and academic achievement among early adolescents: Evidence from longitudinal data. University of Delaware Research, March 12.
- Katz, E., Blumler, J., & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J. Blumler & E. Katz (Eds.), The uses of mass communication: Current perspectives on gratifications research (pp. 19-34). Sage.
- Nwabueze, A. U., & Aduba, D. E. (2014). Influence of social networking on secondary school students in Enugu State, Nigeria. *Journal of Applied Information Science and Technology*, 7(1), 60-68.
- Nwosu, C. O., & Okonkwo, E. I. (2023). Differential impact of social media usage on learning outcomes in public and private secondary schools in Abia State, Nigeria. *Journal of Educational Research and Development*, 12(1), 67-83.
- Ogundijo, O. (2014). Use of social networking among secondary school students: Implications for academic performance. *Scientific Research Journal (SCIRJ)*, 2(5), 1-10.
- Okoye, N. S., & Nwankwo, B. C. (2022). Comparative influence of social media on academic engagement in public and private secondary schools in Rivers State, Nigeria. *Journal of Educational Policy and Research*, 10(2), 145-160.
- Olowo, B. F., Alabi, F. O., Okotoni, C. A., & Olowo, S. O. (2020). Social media: Online modern tool to enhance secondary schools students' academic performance. *International Journal on Studies in Education*, 3(2), 84-95.
- Ruggiero, T. E. (2023). Uses and gratifications theory in the 21st century. *Mass Communication and Society*, 26(1), 3-37.
- Umar, T. I., & Idris, M. (2018). Influence of social media on psychosocial behaviour and academic performance of secondary school students. *Journal of Education and Entrepreneurship*, 5(2), 36-46.

UNESCO. (2023). Global education monitoring report 2023: Technology in education - A tool on whose terms? UNESCO Publishing.