Social Media Usage Patterns and Academic Performance among Advanced-Level Students in Western Province, Sri Lanka

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DOI: https://doi.org/10.47772/IJRISS.2026.100600781

Received: 15 June 2026; Accepted: 20 June 2026; Published: 06 July 2026

ABSTRACT

This study investigates the relationship between social media usage patterns and academic performance of Advanced Level students in the Western Province of Sri Lanka. The study employed a quantitative research design and data was collected from 307 respondents using structured questionnaire. SPSS was used to analyze the data, with descriptive statistics, Pearson correlation, and multiple regression analysis. The results revealed a very weak relationship between social media use and academic performance. The correlation analysis showed a weak negative correlation between time spent on social media and academic performance. The nature of social media use showed a weak and non-significant relationship. However, the multiple regression analysis showed that nature of social media use and time spent on social media did not significantly predict academic performance ($R = 0.071$, $R\ 2 = 0.005$, $p > 0.05$). This suggests that the social media usage patterns have little explanatory power in students' academic performance. The study concludes that academic performance seems likely to be influenced by other academic, psychological and environmental factors, rather than by social media use alone. These results highlight the importance of promoting a balanced and responsible use of social media among students and also of promoting additional research on other determinants of academic achievement.

Keywords: Social media usage, academic performance, Advanced Level, Sri Lanka

INTRODUCTION

Sri Lanka provides a free education system from primary to postsecondary levels and mandatory schooling for children aged 5 to 16 (National Education Policy Framework, 2020). The General Certificate of Education Advanced Level (GCE A/L) (Grades 12 and 13) is quite competitive, and only a small fraction of candidates is able to gain admission to universities. The competitive environment has driven many students to rely on private coaching to enhance academic accomplishment (Jayarathne et al., 2013; Liyanage, 2013). The Western Province has the highest number of A/L candidates, and discussions on the pattern of academic performance recently have been widespread in educational reports (Ministry of Education, 2019-2022).

Worldwide, social media usage has increased significantly, with over half of the world's population actively engaging in social networking sites (Kemp, 2022). Adolescents widely use social media to communicate, for enjoyment, and for educational purposes (Kaplan & Haenlein, 2010; Kuss & Griffiths, 2017; Winstone, 2021). According to Thuseethan et al. (2014) and Weerasundera (2014) more than 2.3 million people are active social media users in Sri Lanka. Most of them are young people between the ages of 16 and 24 years. The COVID-19 pandemic has further increased the reliance on digital platforms for online education and communication (Jayasekara, 2022; Mufassiri et al., 2023). However, studies have indicated that the overusing and misuse of social media may negatively impact students' academic performances, concentration and study habits (Bozzola et al., 2022; Weerasundera, 2014; Asare, 2020). Previous studies have shown that social media can help with learning by collaborating and sharing information but overusing it can lead to distractions and less engagement

in academics (Chandrasena & Ilankoon, 2022). There is a lack of research on the impact of social media on academic performance, especially of Advanced Level students in Sri Lanka (Abbas et al., 2019). The majority of the current studies have been conducted on university undergraduates, while school level A/L students have been relatively neglected (Anees, 2014; Suganya et al., 2020; Thuseethan et al., 2014). Research done in the Western Province is also rare, yet it has the largest rate of A/L students. This study intends to evaluate the impact of usage patterns on the academic performance of advanced-level students in the Western Province by examining the social media platforms they use.

Two hypotheses guide the research. The first hypothesis proposes that the nature of social media use is related to students' academic performance. The second hypothesis is the relationship between time spent on social media and academic performance. The purpose of this research is to contribute new insights to the existing literature by providing real facts on student behavior in a Sri Lankan context. The findings may help children develop balanced social media use habits and support educators, parents, and policy makers in developing strategies to encourage responsible and productive social media use.

LITERATURE REVIEW

Social Media Use among Adolescents

There is a significant rise in the use of social media among adolescents in Sri Lanka and worldwide. A large part of the population uses the internet, and many of them are active on social networking platforms (Kemp, 2023). Students mainly use popular platforms like Facebook, WhatsApp, Instagram, and Snapchat for communication, entertainment, and sharing information (Nuskiya, 2017; Pempek et al., 2009).

The availability of smartphones and other digital devices makes it easier for students to access social media more frequently (Iorliam & Ode, 2014). Research also points to the fact that adolescents use social media several times a day, making it a regular part of their daily routine (Quan-Haase & Young, 2010). As the literature suggests, social media is strongly integrated into students' lives, particularly those in the younger generation.

Academic Performance

Academic performance refers to the degree of achievement students obtain in their studies that comprises grades, test scores, class participation, and understanding of the subject matter (Trigo et al., 2019). There are many factors that affect this such as motivation, study habits, mental health and learning environment (Lamas, 2015).

Good academic performance is important because it contributes to students' future educational and career opportunities (Steinmayr et al., 2014). Therefore, studying factors affecting academic performance is important in educational research.

The Impact of social media on Academic Performance

Research findings on the effects of social media on academic performance have been mixed. There are also studies that show its positive influence, since social media can facilitate learning by providing a channel for communication and collaboration, as well as access to educational resources (Yunus et al., 2013; Emeka & Nyeche, 2016).

But many studies also report adverse effects. Overuse of social media may distract students, reduce their study time and cause poor academic outcomes (Paul et al., 2012; Akhtar, 2013). Moreover, research has found that heavy use of social media is negatively related to academic achievement (Karpinski et al., 2013). The literature indicates that social media itself is not harmful, but it is a question of the way and the quantity of usage. While its controlled and purposeful use may promote learning, excessive and unregulated use can impair academic performance.

Purposes of Social Media Use

Students use social media for various purposes like communication, entertainment, learning and sharing information. However, research indicates that majority of students use social media for non-academic activities like chatting and entertainment while a lesser number use it for educational activities like note sharing or lesson discussion (Oye, 2012; Salvation & Adzharuddin, 2014). Moreover, research shows that students who spend more time on entertainment-based activities tend to decrease their time on academic work, which may indirectly affect their academic performance (Tamayo & Dela Cruz, 2014). This suggests an imbalance in the use of academic and non-academic uses among adolescents.

Time Spent on social media

The time spent on social media has been identified as a potential predictor in previous studies. Studies have shown that students who spend long hours on social media tend to have low academic achievement due to low study time and high distraction (Asemah & Okpanachi, 2013). Furthermore, studies show that many students spend many hours per day on social media, particularly at night (Sheldon, 2008). Poor time management and overuse patterns can contribute to diminished concentration and academic challenges (Karpinski et al., 2013). literature repeatedly suggests a negative relationship between excessive social media use and academic performance, but the magnitude of this association varies across studies.

Theoretical framework

The study is based on Social Constructivism Theory and Technology Acceptance Model (TAM). Social Constructivism Theory is based on the premise that learning is a result of interaction and social communication with others (Vygotsky, 1978). In this sense social media can support learning by enabling students to share knowledge, to communicate and to collaborate. Davis (1989) explains the Technology Acceptance Model (TAM) is why individuals use technology, perceived usefulness and ease of use. The model helps to explain why students choose to use social media platforms and how their perceptions impact their usage behavior. These theories collectively explain the educational potential of social media for students and their use of it.

Conceptual framework

The conceptual framework of this study presents the relationship between the patterns of social media usage and academic performance of Advanced Level students. It shows how the nature of social media activities and time spent on social media (independent variables) can impact students' academic performance (dependent variable). The diagram provides a visual illustration of the relationships proposed in this study.

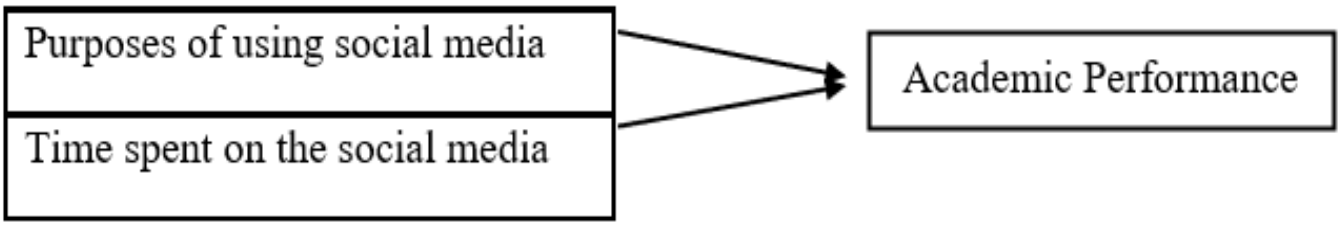


Figure 01 – Conceptual Framework

Source: Developed by the researcher

METHODOLOGY

A quantitative research design was used in this study. This study adopted a pragmatic research philosophy that is outcome-oriented and real-world context sensitive. The approach was appropriate as the effect of social media on academic performance may differ based on the context. This study used a deductive research approach. The

hypotheses on the students' social media usage and academic performance were developed using the Social Constructivism Theory and the Technology Acceptance Model (TAM).

The main research technique was a survey method. The data was collected using a structured questionnaire. The questionnaire consisted of three main parts including demographic information, social media usage patterns and Likert scale questions to measure students' perceptions of the academic impact. Data were collected using both online and paper-based methods. To improve participation and response rates, printed questionnaires were distributed to selected schools. The population of this study was Advanced Level students in the Western Province of Sri Lanka. Participants were selected by purposive sampling which is a non-probability sampling from national, provincial and private schools.

A total of 405 questionnaires were distributed, of which 307 valid responses were used for analysis. The data were analyzed with the SPSS software. The data was analysed by use of descriptive statistics such as mean, standard deviation and inferential statistics such as Pearson correlation coefficient and multiple regression analysis. The variables used in this study were operationally defined to ensure consistency in analysis and interpretation. Time Spent on social media (TSOSM) refers to the average daily duration students spend on social media platforms. Nature of Social Media Use (NOSMU) refers to the type of activities performed on social media, such as communication, entertainment, and educational use. Academic Performance (ACMP) refers to students' self-reported academic achievement levels.

Ethical Considerations

Ethical approval was obtained for this study before the collection of data as the research involved human participants. All research procedures were conducted according to the ethical guidelines and protection of the rights of the participants. Participation in the study was entirely voluntary. All participants gave their informed consent prior to data collection. Interview data were treated with strict confidentiality and anonymity, and no personal information was revealed. The participants were told that they were free to leave the study at any time without any penalty.

Conflict of Interest

The author declares no conflict of interest in this study. The research was independently undertaken for academic purposes only and no financial, personal or institutional interest influenced the design, collection or analysis of data.

RESULTS AND DISCUSSION

Table 01: Rate of responses

Category	Frequency	Percentage
Dispatched	405	100%
Returned	307	75.8%
Not returned	98	24.2%

Source: Primary data collected through questionnaire survey

A total of 405 questionnaires were distributed, and 307 were returned for analysis, giving a response rate of 75.8%. The remaining 98 questionnaires were not returned, representing 24.2%. According to Mugenda and Mugenda (2003), a response rate above 50% is acceptable for survey research. Therefore, the response rate is considered adequate for data analysis. This indicates good participation from respondents and suggests that the collected data is reliable for further analysis.

Table 02: District of respondent lives

District					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Colombo	102	33.2	33.2	33.2
	Kalutara	106	34.5	34.5	67.8
	Gampaha	99	32.2	32.2	100.0
	Total	307	100.0	100.0	

Source: Primary data collected through questionnaire survey

Demographic information helps to understand the characteristics of the respondents and provides a context for the study. In this research, the district-wise distribution was studied to confirm the proper representation of students from the Western Province. Table 2 gives the distribution of respondents by district. From the total of 307 participants, 106 (34.5%) were from Kalutara, 102 (33.2%) from Colombo and 99 (32.2%) from Gampaha. This indicates an even spread of respondents across the three districts. The sample includes all major districts of Western Province, which increases the reliability and generalizability of the findings.

Table 03: Gender Distribution of Respondents

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	166	54.1	54.1	54.1
	Female	141	45.9	45.9	100.0
	Total	307	100.0	100.0	

Source: Primary data collected through questionnaire survey

Table 03 presents the gender distribution of the respondents. Out of 307 participants, 166 were male, representing 54.1%, while 141 were female, representing 45.9%. This shows that both male and female students were fairly represented in the study, although male respondents were slightly higher than female respondents. Therefore, the sample provides a balanced gender representation for analyzing social media use and academic performance.

Table 04: School Level

School Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	National School	156	50.8	50.8	50.8
	Provincial School	105	34.2	34.2	85.0
	Private School	46	15.0	15.0	100.0
	Total	307	100.0	100.0	

Source: Primary data collected through questionnaire survey

Table 04 presents the distribution of respondents by type of school. The 307 participants were 156 students (50.8%) from national schools, 105 students (34.2%) from provincial schools and 46 students (15.0%) from private schools. This indicates that a majority of the respondents were from national schools followed by provincial and private schools. This distribution is based on the structure of the education system in Sri Lanka and guarantees representation from different school settings. Thus, the sample is representative enough to investigate potential differences in the use of social media and academic performance between school types.

Table 05: Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
0.758	27

Source: SPSS output based on primary data (questionnaire survey)

Table 05 presents the reliability statistics of the research instrument. The Cronbach's alpha value is 0.758 for 27 items, which indicates good internal consistency. This shows that the questionnaire used in the study is reliable for measuring the research variables. Therefore, the instrument is suitable for further statistical analysis in this study.

Table 06: Correlations between nature of social media usage and academic performance

Correlations			
		NOSMU	ACMP
NOSMU	Pearson Correlation	1	-.089
	Sig. (2-tailed)		.120
	N	307	306
ACMP	Pearson Correlation	-.089	1
	Sig. (2-tailed)	.120	
	N	306	306

Source: Primary data analyzed using SPSS

Table 06 presents the Pearson correlation analysis between nature of social media use (NOSMU) and academic performance (ACMP). The results show a weak negative and non-significant relationship between the two variables ($r = -0.089$, $p = 0.120$). Since the p-value is greater than 0.05, the relationship is not statistically significant. This indicates that the nature of social media activities has only a very limited association with students' academic performance. Therefore, there is no strong evidence to suggest that the type of social media usage significantly influences academic performance among Advanced Level students.

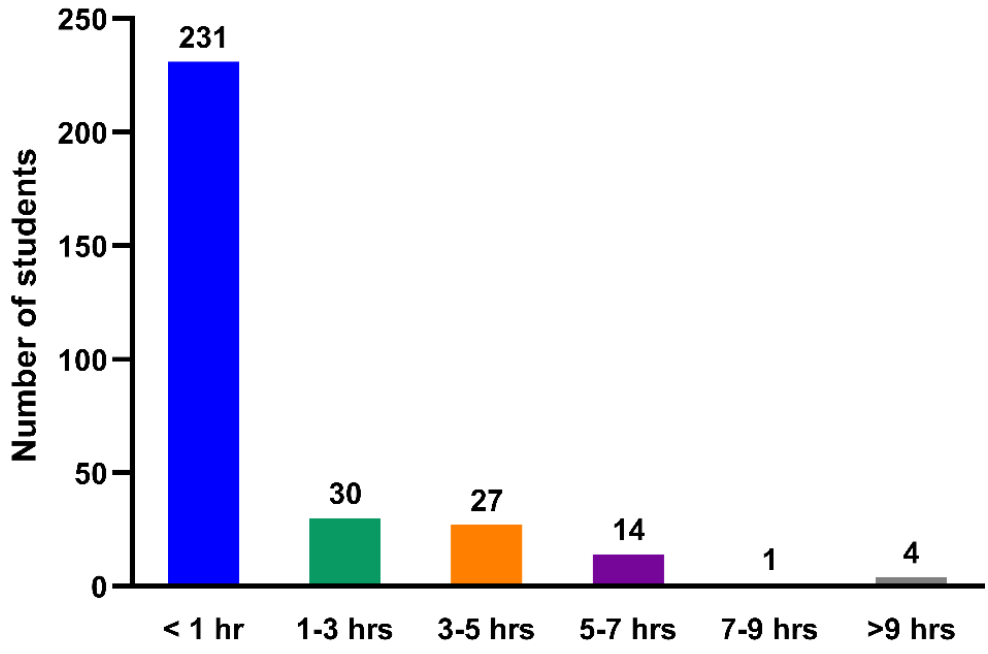
Table 07: Correlations between time spent on social media and academic performance

Correlations			
		TSOSM	ACMP
TSOSM	Pearson Correlation	1	-.117*
	Sig. (2-tailed)		.030
	N	307	307
ACMP	Pearson Correlation	-.117*	1
	Sig. (2-tailed)	.030	
	N	307	307
*. Correlation is significant at the 0.05 level (2-tailed).			

Source: Primary data analyzed using SPSS

Table 07 presents the Pearson correlation analysis between time spent on social media (TSOSM) and academic performance (ACMP). The results show a weak negative relationship between the two variables, with a correlation coefficient of r = -0.117 and a significance value of p = 0.030 (N = 307). Since the p-value is less than 0.05, the relationship is statistically significant at the 5% level. The strength of the relationship is very weak, indicating that time spent on social media has only a minimal association with academic performance. The negative direction suggests that increased social media use is slightly associated with lower academic performance, but the effect size is small. This implies that other factors may play a more important role in determining academic outcomes.

Figure 02: Daily time spent on social media (N=307)



Source: Survey Data

Figure 02 presents a simple bar chart illustrating the daily time spent on social media among Advanced Level students in the Western Province of Sri Lanka. The results indicate that the majority of respondents spend less than one hour per day on social media, representing the highest frequency category.

A sharp decline is observed as daily usage time increases, with relatively fewer students spending 1–3 hours, 3–5 hours, and higher durations on social media. Only a very small proportion of respondents' report using social media for more than 5 hours per day. The findings suggest that most students are low-intensity users of social media in terms of daily duration. This indicates that although social media is widely used among students, the time spent on these platforms is generally limited, with the majority maintaining minimal daily usage levels.

Table 08: Multicollinearity Diagnostic Test

Model	Predictor	Tolerance	VIF	Interpretation
1	NOSMU	0.936	1.068	No multicollinearity (Tolerance > 0.10; VIF < 10)
1	TSOSM	0.972	1.029	No multicollinearity (Tolerance > 0.10; VIF < 10)

Source: Primary data analyzed using SPSS

Table 09 presents the results of the multicollinearity diagnostic test of the independent variables; nature of social media usage (NOSMU) and time spent on social media (TSOSM) with academic performance (ACMP) as the dependent variable. The results indicate that the tolerance values are greater than 0.90 and the VIF values are close to 1. This indicates that there is no serious multicollinearity problem among the independent variables. Therefore, the independent variables are not highly correlated with each other and they can be safely used in the regression analysis without affecting the stability and reliability of the results.

Table 09: Multiple Regression Analysis of Factors Affecting Academic Performance (ACMP)

Variable	B	Std. Error	Beta	t	Sig.	Lower CI	Upper CI
Constant	12.281	0.798	-	15.382	<0.001	10.709	13.852
NOSMU	0.119	0.111	0.063	1.066	0.287	-0.101	0.338
TSOSM	-0.144	0.237	-0.036	-0.610	0.542	-0.611	0.322

Source: SPSS output based on primary data collected through questionnaire survey

The multiple regression analysis was conducted to examine whether nature of social media use (NOSMU) and time spent on social media (TSOSM) predict academic performance (ACMP). The results show that both independent variables have very weak and statistically non-significant relationships with academic performance. Nature of social media use shows a weak positive but non-significant relationship with academic performance ($\beta = 0.063$, $t = 1.066$, $p = 0.287$), indicating that different types of social media activities do not significantly predict academic performance.

Similarly, time spent on social media shows a weak negative but non-significant relationship with academic performance ($\beta = -0.036$, $t = -0.610$, $p = 0.542$), indicating that time spent on social media is not a statistically significant predictor of academic performance. Since both p-values are greater than 0.05 and both confidence intervals include zero, neither NOSMU nor TSOSM significantly predicts academic performance. Therefore, the regression findings indicate that social media usage patterns have very limited predictive power in determining academic performance among Advanced Level students in the Western Province.

The results of this study can also be discussed in the context of the theoretical framework. According to Social Constructivism Theory, learning takes place through interaction and communication and social media can facilitate such interactions. However, the result of this study shows that the pattern of social media usage does not result in measurable improvements in academic performance. The descriptive results indicate that most of the students spend less than one hour a day on social media. This shows that the intensity of daily use among the respondents is relatively low. Similarly, Technology Acceptance Model (TAM) explains that students may accept social media for its perceived usefulness and convenience. However, the regression results show that neither nature of social media use nor time spent on social media is a significant predictor of academic performance. This indicates that while students utilize social media as part of their daily lives, the way they use it does not necessarily result in academic benefit.

CONCLUSION

The study concluded that there is a very weak relationship between social media usage and academic performance of the Advanced Level students in the Western Province of Sri Lanka. The multiple regression analysis supports that the nature of social media use and time spent on social media are insufficiently predictive of academic performance. Both variables had very weak effect sizes and non-significant p-values indicating that social media usage patterns have no meaningful predictive impact on academic achievement. The regression model explains only a very small percentage of variance in academic achievement, which suggests that academic achievement is more likely to be impacted by other factors such as psychological, academic, environmental, and social factors and not social media use alone.

RECOMMENDATION

The study recommends that schools and educators should emphasize the development of digital literacy and responsible social media use among students, rather than overemphasizing social media as a direct determinant of academic performance. Students should be encouraged to use social media in a balanced and purposeful way, with a focus on academic priorities during study and exam periods.

Teachers and parents ought to promote effective time management skills to help students manage their daily social media usage in a structured manner. Educational institutions should also promote positive academic use of social media platforms such as group discussions, collaborative learning and sharing of educational resources. Future studies should look at other important factors that influence academic performance such as psychological well-being, motivation, study habits, family environment and digital well-being since these factors were not studied in this study and may give a broader view of student academic performance. Variables such as frequency of social media usage, sleep patterns, stress levels, and other health-related factors may also be included in future studies.

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