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Influence of Social Networking Sites on Academic Performance of Undergraduate Students: An Analysis

Maksud Ahmed* & Prof. Ajay Kumar Singh**
*Research scholar & **Professor
Department of Education
Assam University, Silchar, 788011, Assam, India

Abstract

The growth of technology has significantly impacted education, with social networking sites (SNS) like Facebook, Instagram, Twitter, WhatsApp, and YouTube connecting people globally. This research aims to explore the use of SNS among undergraduate students, focusing on gender and locality. It also examines the relationship between SNS usage and academic performance. The Social Networking Sites Inventory, a self-developed tool, was used to measure SNS usage, while academic performance was assessed based on students' previous scores. The study included a sample of 105 students from colleges affiliated with Assam University, Silchar, selected using stratified sampling techniques. Findings revealed that among the 105 respondents, 15.2% visited WhatsApp, 4.8% visited YouTube, and another 15.2% accessed WhatsApp, YouTube, and Instagram. Most students browsed these platforms multiple times a day, spending an average of 39% of their time per visit on SNS. Additionally, 82.9% of students accessed SNS using personal smartphones, while 6.7% used laptops. Most of the participants (64.8%) used multiple SNS platforms, with WhatsApp and YouTube being particularly popular.The study found no significant differences in social networking sites usage based on gender or locality. However, the relationship between SNS usage and academic performance was positive.

Keywords: Social Networking Sites, Academic performance, Undergraduate Students.

Introduction

Education involves imparting knowledge, values, methods, skills, and beliefs to others. Technology has significantly impacted education, including online teaching and global engagement. Social networking sites (SNSs) allow people to connect globally, communicate, and grow businesses(Bishat, 2023). However, excessive use can be harmful. Social networking benefits children by helping themtolearn and discover new experiences. Users range from high school students to professionals, driven by necessity. Popular platforms like

Facebook, Instagram, Twitter, WhatsApp, and YouTube have brought the world closer and connected people globally. Students are drawn to these sites due to potential effects on their academic performance (Mishra, 2020).

Academic performance refers to a students'ability to manage their studies and complete tasks assigned by their teachers, influencing their academic success. It measures aptitude, mastery of the subject, knowledge application, and meeting short-term or long-term objectives. Grades on exams reflect both learners and teachers' success in an educational setting (Kubravi, 2022).

Significance of the study

This study investigates the influence of social networking sites on undergraduate students' academic performance, providing insights for educational institutions, students, parents, and platform developers. It aims to help students manage online behaviour, understand the effects on academic progress, and encourage responsible use of social networking sites. The findings will inform platform developers to design features for healthier usage patterns and serve as a foundation for further research in technology and education.

Review of literature

The researcher reviewed various studies on the impact of social networking sites (SNS) on academic performance. Abdellatif et al. (2023) found that students in Egypt and Saudi Arabia used SNS more than average, with excessive non-academic use leading to lower academic performance. Aun et al. (2023) studied the impact of social networking sites on academic performance in Kwara State. The study revealed that undergraduate students perceived social networking sites as valuable tools but also experienced their associated effects. Calunsaget al. (2023) similarly found that excessive non-academic use can result in lower academic performance. Mohamed et al. (2022) discovered that most students used Facebook and had a negative overall perception of SNS. Ullah et al. (2021) investigated the impact of SNS on university students in Karachi, finding that increased SNS engagement often meant less time for studying. Malik (2023) investigated the influence of social networking siteson the academic performance of college students, observing that although SNS can be advantageous for study groups, their use for academic purposes is often lacking. Lone (2023) studied

university students' attitudes towards e-learning in Kashmir, finding that most had an average attitude towards e-learning, with rural and urban students showing low engagement. Kubravi (2022) examined the impact of SNS on degree college students in Srinagar District, finding widespread daily use of SNS, with WhatsApp being the most popular.

The study aims to explore the influence of social networking sites on the academic performance of undergraduate students in Assam, focusing on their perceptions and realities in colleges affiliated with Assam University, Silchar.

Objectives of the study

- To compare the use of social networking sites by undergraduate (UG) students based on gender, and locality.
- To study the relationship between usage of social networking sitesand academic performance of undergraduate students.

Hypothesis of the study

- There is no significant difference in social networking sites usage of undergraduate students based on gender, and locality.
- There is no significant relationship between usage of social networking sites and academic performance of undergraduate students.

Methodology

This study employs primary data collected through a descriptive survey method to examine the influence of social networking sites on undergraduate students' academic performance. The population includes students from colleges affiliated with Assam University, Silchar, in Assam. A stratified random sampling technique was used, selecting a sample of 105 undergraduate students to ensure representative data.

Tools used for the study

The study investigated the influence of social networking sites on undergraduate students' academic performance using the Social Networking Sites Inventory, and CGPA from previous classes.

Data analysis

Objective no. 01

To compare the use of social networking sites by undergraduate (UG) students based on gender, and locality.

The Social Networking Sites Inventory (self-development tool) was utilized to analyze undergraduate students' use of social networking sites, focusing on gender and locality. The SNSs are divided into two sections. Section -A is related to general usage and contains 6 items that provide qualitative data. Section -B is related to the specific use of SNS for different purposes and contains 45 items.

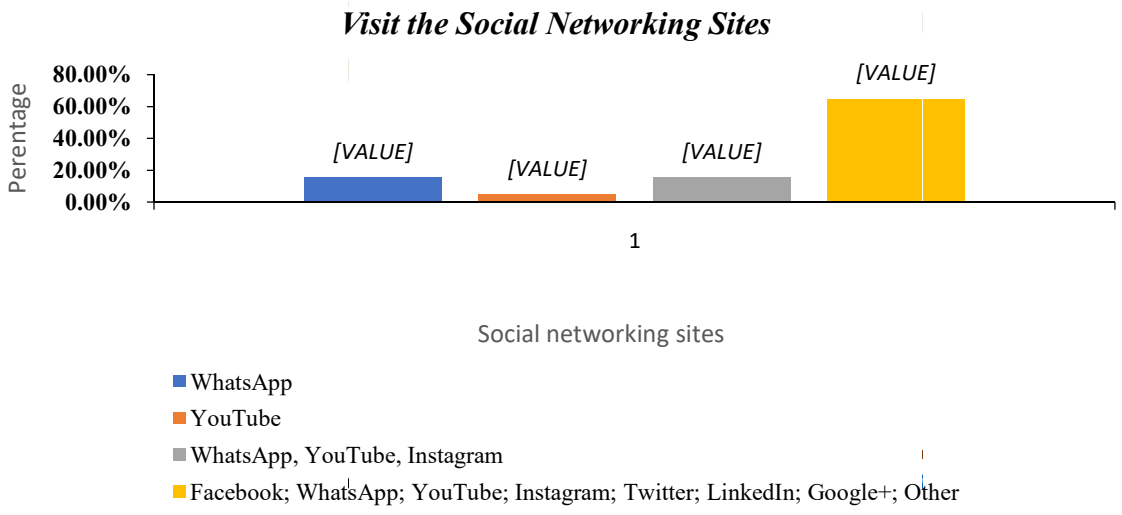
The general use of Social Networking Sites

The general usage section of SNS provides data on frequency of visits, SNSs used, devices used, and browsing time, analysed using descriptive statistics.

Visiting social networking sites-

The use of social networking sites, out of 105 respondents, 15.2% of participants reported visiting WhatsApp, 4.8% visited YouTube, and 15.2% visited WhatsApp, YouTube, and Instagram. Additionally, 64.8% visited Facebook, WhatsApp, YouTube, Instagram, Twitter, LinkedIn, and Google+. This is shown in *Figure 1.0.*

Fig. 1.0 Visit the SNS by the undergraduate students



The results from ***Fig. 1.0***indicate diverse social networking site usage among participants: 15.2% used WhatsApp, 4.8% used YouTube, and another 15.2% used WhatsApp, YouTube, and Instagram, while a majority of 64.8% accessed a wide range of platforms including Facebook, WhatsApp, YouTube, Instagram, Twitter, LinkedIn, and Google+.

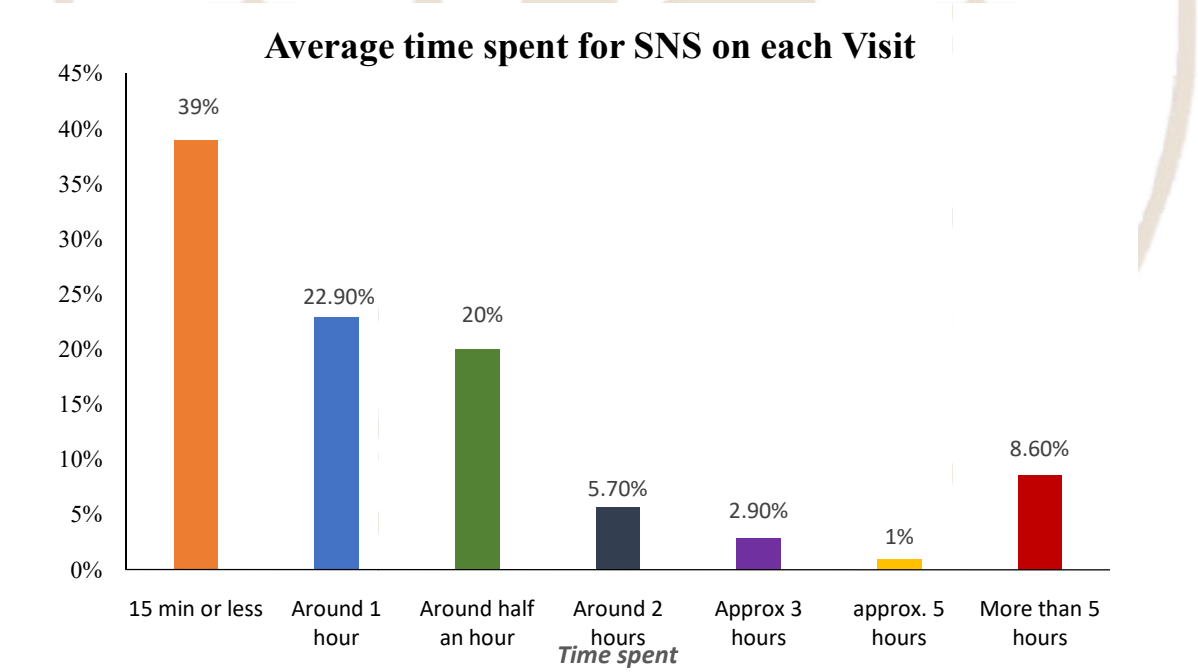
Regarding browsing of SNS

Regarding the frequency of SNS visits, the majority of students (67.6%) browse or visit multiple times a day, while 21% visit SNS multiple times a week. Additionally, 3.8% visit SNS once a week, and 7.6% visit SNS only once daily.

Regarding the average time spent on SNS per visit

Regarding the average time spent on SNS per visit, out of 105 respondents, 39% of respondents spent 15 minutes or less, 22.9% spent around one hour, 20% spent around half an hour, 5.7% spent around two hours, 2.9% spent approximately three hours, 1% spent approximately five hours, and 8.6% spent more than five hours.

Fig. 2.0 depicts the average duration of SNS visits by the undergraduate students



The **Fig. 2.0**shows that a significant portion of respondents (39%) spent 15 minutes or less per visit on social networking sites. 22.9% spent approximately one hour, 20% spent around half an hour, 5.7% spent approximately two hours, 2.9% spent around three hours, 1% spent approximately five hours, and 8.6% spent more than five hours per visit. This indicates a wide range of SNS usage durations, with the majority of users spending shorter periods per visit.

The total hours I spend browsing social networking sites daily (in a normal weekday)

When asked about the total hours spent on social networking sites daily, out of 105 respondents, 36.2% of students reported spending less than one hour, 38.1% reported spending 1-3 hours, and 13.33% reported spending 3-5 hours. Only a small percentage of students, specifically 8.6%, 1.9%, and 1.9%, reported spending 5-7 hours, 7-9 hours, and more than 9 hours per day, respectively.

The devices used for social networking sites

When asked about the devices used for social networking, the results showed that out of 105 respondents, 82.9% of undergraduate students use personal smart phones, 6.7% use personal laptops, and 10.5% use both personal smart phones and personal laptops for social networking. It is shown in Fig. 3.0

ig. 3.0 Devices used for SNS by the undergraduate students

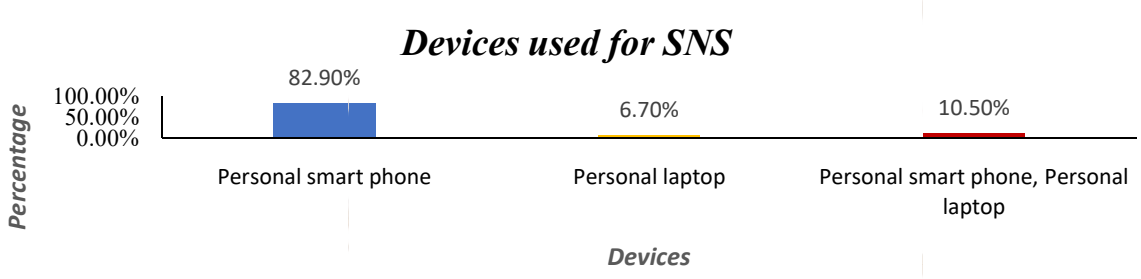


Fig.3.0 illustrates that a significant proportion of participants, specifically 82.90%, were utilizing their personal smartphones for social networking purposes, while only 6.70% were using their personal laptops, and 10.50% were using both their personal smartphones and laptops for SNS use.

Specific use of SNS by undergraduate students for different purposes

Section B of the inventory analysed the use of social networking sites (SNS) for various purposes, using descriptive and inferential statistics to determine overall and specific usage.

The level of use of social networking sites among undergraduate students

The study analysed undergraduate students' usage of social networking sites (SNS) using percentage calculations and normal distribution principles. High, average, and low scores were categorized, with a table showing usage distribution.

Table 1.0 The levels of SNS usage among undergraduate students

Level of usage of SNS	Number of respondents	Percentage
Low (45-114)	18	17.1
Average (115-183)	73	69.5
High (184-225)	14	13.3
Total 105	105	100

The above **table 1.0**shows that 17.1% of students are low-level SNS users, 69.5% are average-level SNS users, and 13.3% are high-level SNS users. From the observation table, it can be Observed that majority of undergraduate students (69.5%) are average-level SNS users, while only 17.1% and 13.3% are low and high-level SNS users, respectively.

Undergraduate students use social networking sites differently depending on their gender.

The study compared undergraduate students' social networking site usage based on gender and locality using t-tests. The analysis and comparisons are presented on the following pages.

H1: There is no significant difference in social networking sites usage among undergraduate students based on gender.

To verify the hypothesis H1, the researcher has used a t-test, and related values are given in table 3.0

Table 2.0 SNS usage between male and female undergraduate students

Groups	*N*	*Mean*	*S. D*	*t- value*	*Sig*	*Significance*
Male	50	156.46	30.301	2.235	.028	Not significant
Female	55	141.96	36.107			

*Significant at the 0.01 level

The above table 2.0 shows the calculated value of 't' is (2.235), (P=.028>0.01) is not significant. As a result, there is no significant variability or difference between the mean of use of SNS of male and female undergraduate students.It can be interpreted that male and female undergraduate students do not differ in their use of social networking sites.

The studyalso compared the uses of SNS for various purposes male and female UG students Using a t-test. Table 3.0 gives the t-ratio values on all purpose of SNS usage.

Table 3.0 Various uses of SNS shown by male and Female UG students

Use of SNS for specific purpose	**Group**	**N**	**Mean**	**SD**	**t-value**	**Sig**	**Significance**
Social	Male	50	19.68	3.133	1.507	.135	Not Significant
	Female	55	18.67	3.712			
Educational	Male	50	23.74	4.193	.110	.913	Not Significant
	Female	55	23.65	3.733			
Political	Male	50	15.46	5.246	1.514	.133	Not Significant
	Female	55	13.80	5.989			
Spiritual	Male	50	20.20	5.897	2.681	.009	Significant at 0.01 level
	Female	55	16.91	6.681			
Economic	Male	50	19.14	5.803	2.293	.024	Not

	Female	55	16.44	6.277			Significant
Entertainment	Male	50	17.56	3.850	1.180	.241	Not
	Female	55	16.44	6.277			Significant
Personal	Male	50	17.42	4.603	1.372	.173	Not
	Female	55	16.13	5.052			Significant
Sports and	Male	50	23.26	5.979	2.636	.010	Not
cultural	Female	55	19.84	7.310			Significant

*Significant at the 0.01 level

Table 3.0 clearly shows that male and female UG students use SNS for social, educational, political, economic, entertainment, personal, sports, and cultural purposes, with t values of .135, .913, .133, .024, .241, .173, and .010, respectively. All the p values are greater than 0.01 level of significance, which means there is no significance. Therefore, we can conclude that there is no significant difference between male and female students who use SNS for social, educational, political, economic, entertainment, personal, sports, and cultural purposes. In the case of spiritual purpose, the p-value is .009; it is significant at the 0.01 level. It means there is a significant difference between male and female students who use SNS for spiritual purposes.

The uses of social networking sites by undergraduate students with respect to Locality

The following hypothesis aims to investigate the differences in SNS use between urban and rural areas of undergraduate students:

H2: There is no significant difference in social networking site usage among undergraduate students based on their locality.

To verify the hypothesis H2, the researcher has used a t-test, and related values are given in table 4.0

Locality of the colleges	*N*	*Mean*	*S. D*	*t- value*	*Sig*	*Significance*
Urban	44	149.23	34.049	.092	.927	Not Significant
Rural	61	148.61	348.61			

*Significant at the 0.01 level

The *table 4.0* above shows that the calculated value of 't' is 0.092, and the p-value (P = 0.927 > 0.01) is not significant. Therefore, there is no significant variability or difference in the mean use of social networking sites between college undergraduates from urban and rural areas. It can be interpreted that the usage of SNSs does not differ for undergraduate students in urban and rural areas.

Using a t-test, the researcher has also compared how urban and rural UG students used SNS for various purposes. Table 5.0 gives the t-values on all purpose of SNS usage.

Table 5.0 t-values on specific purposes of SNS usage shown by urban and rural UG students

Use of SNS for specific purpose	locality	N	Mean	SD	t-value	Sig	Significance
Social	Urban	44	19.77	3.361	1.578	.118	Not Significant
	Rural	61	18.70	3.504			
Educational	Urban	44	23.27	4.150	-.919	.361	Not Significant
	Rural	61	24.00	3.786			
Political	Urban	44	14.86	5.622	.418	.677	Not Significant
	Rural	61	14.39	5.763			
Spiritual	Urban	44	19.05	6.023	.776	.439	Not Significant
	Rural	61	18.07	6.848			
Economic	Urban	44	17.45	5.990	.075	.785	Not Significant
	Rural	61	17.92	6.352			

Entertainment	Urban	44	16.93	4.321	-.169	.866	Not Significant
	Rural	61	17.08	4.737			
Personal	Urban	44	16.82	5.177	.132	.895	Not Significant
	Rural	61	16.69	4.667			
Sports and cultural	Urban	44	21.07	6.722	-.505	.615	Not Significant
	Rural	61	21.75	7.058			

*Significant at the 0.01 level

Table 5.0 clearly shows that urban and rural undergraduate (UG) students use social networking sites (SNSs) for social, educational, political, spiritual, economic, entertainment, personal, sports, and cultural purposes, with t-values of .118, .361, .677, .439, .785, .866, .895, and .615, respectively. All the p-values are greater than the 0.01 level of significance, indicating that there is no significance. Therefore, we can conclude that there is no significant difference between urban and rural UG students in their use of SNS for social, educational, political, spiritual, economic, entertainment, personal, sports, and cultural purposes.

Objective no 2

To study the relationship between usage of social networking sites and academic performance of undergraduate students

Table 6.0 summarises the relationship between usage of social networking sites and academic performance. The value of 'ɤ' is .182. This indicates a significantly positive relationship between the usage of SNS and academic performance. However, this value alone does not determine statistical significance.

Table 6.0 the relationship between usage of SNS and academic performance of undergraduate students

Variable Correlated	ɤ' Value	Sig

	N = 105	
Usage of SNS	.182	.063
Academic Performance		

*Statistically significant at the 0.01 level (two-tailed)

The Pearson correlation coefficient between social networking site usage and academic performance is 0.182 (P = 0.063 > 0.01), indicating a positive relationship between these variables among undergraduate students. This investigation indicates that the utilisation of social networking sites affects academic performance in this context.

From the *table6.0.* It is found that there is a positive relationship between usage of social networkingsitesandacademicperformanceofundergraduate students; that is, if the usage of social networking sites is high, then the academic performance will be high. Thus, we reject the null hypothesis that there is a significant relation between the usage of social networking sites and academic performance.

Major findings of the study

The study examined social networking site usage among undergraduate students, revealing diverse patterns. Most participants (64.8%) used multiple SNS platforms, with WhatsApp and YouTube being the most used platforms. A significant portion (67.6%) visited SNS multiple times daily, and 39% spent 15 minutes (or less) per visit. Students predominantly used smartphones (82.9%) for SNS access. SNS usage levels were mostly average (69.5%). Analysis showed no significant differences in SNS usage based on gender and locality. The study found an insignificant correlation (r = 0.182, p = 0.063) between SNS usage and academic performance, suggesting that SNS usage had significant impact on academic performance.

Educational Implications

The SNS usage is a prevalent aspect of undergraduate students' lives; educators and institutions could consider integrating these platforms into the educational process. Since students already use SNS for various purposes, including education, leveraging these platforms for academic activities could enhance engagement and learning outcomes.

However, the finding that SNS usage significantly affects academic performance suggests that while SNS can be a useful educational tool, its role should be complementary rather than central to the learning process. Educators should ensure that SNS usage is balanced with other learning methods to maintain academic performance.

Conclusion

The study highlights that social networking site usage is widespread among undergraduate students, with most students engaged in multiple platforms, primarily through smartphones. Despite SNS's frequent use for social, educational, and entertainment purposes, the study found no significant differences in usage patterns based on demographic factors such as gender and locality of the colleges. Furthermore, the research indicates that SNS usage does significantly impact academic performance, as evidenced by the insignificant correlation between SNS usage and academic outcomes.

Social networking sites can be beneficial for students, aiding academic advancement and communication. However, excessive use can restrict interaction and personal development. Teachers are recommended for strict supervision and promoting the holistic use of SNS for personal growth. To improve academic use, experts are required to supervise the students, address social issues, implement focused study groups, engage in educational content sharing, promote time management tools, and focus on projects.

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