Social Media Use and Its Effects on Academic Performance among HEI Students of Surat.

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Abstract:

There is a dramatic increase in the amount of social media usage by students, and while it's consuming a lot of their time, it is also affecting academic performance. As per Chandrasena and Ilankoon (2022), 72% and 12.6% of the students spend 2 to 5 hours and 5 hours per day respectively. Overuse has negative impacts on academic performance, sleep, mental health, attention and procrastination, and social skills. However, there are some benefits like knowledge and education, socialization and communication. The current study is designed to examine the mediating effect of time management, social media addiction, attention span/distraction, academic motivation and quality of sleep in relation to academic performance in the usage of social media. The survey was conducted using a convenience sample of 150 students from HEIs in Surat city as part of an online cross-sectional study. The data obtained were analyzed by correlation and regression analysis. The results of the study indicated that social media use affects academic achievement, significantly mediated by the variables studied.

Introduction:

In the digital world of the 21st century, Generation Z students are now regularly accessing digital platforms. Internet platforms are so ubiquitous in our daily life that they have impacted the way international university students communicate, share information and learn. Boahene et al. (2019), Alahmar (2016) and Abuzar & Hussain (2024) found social media platforms like WhatsApp, YouTube, Facebook, Instagram and We Chat are not only employed for recreation but also for academic learning and working on collaborative tasks. Research interest in this area is expanding in a variety of disciplines and research on this subject remains controversial. This has given rise to a vast amount of scholarly research, as well as empirical research, systematic reviews and theoretical analysis on the effect that students have on their academic results when using digital media. While the majority of the previous studies placed the virtual platforms primarily as a sociability or entertainment medium, more recent studies reveal that the virtual platforms have a wonderful teaching capacity as well as being a significant source of distraction. Many experts say that overuse or misuse of these devices, diverts and misleads students, causes low academic engagement and poor academic outcomes. Excessive screen time, obsessive screen checking, online multi-tasking and social media addiction are associated with decreased concentration, procrastination, less study time, and lower academic performance. However, there are some academics who feel that participation, teamwork, access to learning material, peer contact, knowledge sharing, digital literacy and student engagement would positively affect the learning environment (Masalimova et al., 2023;

Essien, 2025). The following studies show that while social networking sites may be used to enhance academic achievement, when done with purpose and aligned with academic objectives, they can lead to greater motivation and access to learning materials.

To understand the complex relationship between the use of virtual media and the achievement of students in learning, this study was carried out based on the results of previous studies, both empirical and theoretical that can be obtained from the literature reviewed, and to identify the contextual factors that play a role in determining the achievement of students in learning, especially in relation to the use of virtual media.

Literature review:

The large number of studies examining the impact of the use of virtual platforms on academic performance, including those from different fields such as health sciences, social sciences, education, engineering and information technology, and studies conducted in countries across Asia, Africa, Europe and North America, confirm the pervasiveness of digital media addiction.

When virtual resources are utilized in the teaching and learning process, scholars' achievements improve, according to Al-Rahmi (2020). There's peer support, discussion boards and educational videos to be found in social media. Learning communities contribute to collaborative learning and conceptual clarity as noted by Boahene et al. (2019) and Obiso et al. (2024). Based on the study, Dhar (2021) concludes that intentional usage will increase the academic motivation but entertainment will reduce the academic motivation. Casal (2019) and Ashraf et al. (2021) believe that networking sites can be used to help students locate other resources they can use to study, help to engage students in the peer process and help to engage students in collaborative learning. These sources often emphasize things such as improved academic self-efficacy, motivation and student-teacher communication. Understanding and cooperative learning can be enhanced by moderate educational use e.g., academic groups, YouTube lessons.

Kirschner & Karpinski (2010), Ahmed et al. (2021), Bukhari et al. (2020) and Mehmood & Taswir (2013) found negative impacts of excessive use of social media on academic performance. Bhandarkar et al. (2021) and Lukose & Agbeyangi (2025) claim that increased daily consumption is correlated with reduced study time, lower grades, procrastination, distractions and lack of academic output. Addiction indicators such as compulsive checking and not being able to unplug are very strong predictors of academic decline. Addicts give up on working productively, have difficulty paying attention, and are less engaged in class. Poor time management, according to Essien (2025), is a mediator between

social media use and academic achievement. Heavy users delay their work, do not follow a regular study routine and lack academic discipline. Azizi et al. (2019) and Oli et al. (2024) found, the use of social media at night, especially TikTok and Instagram, negatively impacts sleep quality, leading to feelings of tiredness in the morning, trouble focusing and lower academic achievement. Oli et al. (2024) state that relationship between high social media consumption and anxiety, emotional instability, and increased stress of study. Alshanqiti et al. (2023) found that distractions from social media multitasking have a negative correlation with academic achievement. This illustrates the fact that frequent multi-tasking in using social media and academic activities may result in lower learning outcomes and cognitive fatigue among learners. Negative emotions, decreased learning outcomes and mental capacity.

The uneven or ambiguous results of some of the studies suggest that the effect of using virtual platforms on academic achievement is very context-dependent. The positive, neutral or negative effects of educational social media on students' academic performance are affected by a number of factors including purpose, duration, the educational field, usage and personal self-regulation (Jin & Ibrahim, 2024; Faizee et al, 2024; Mosharrafa et al., 2024; Habes et al., 2018). Peers can promote both positive and negative behaviors, according to studies. Academic institutions favor conversation and the sharing of information, but too many group conversations, gossips online, and trends contribute to extended usage periods. The results indicate that the literature available about the effect of virtual media on students' academic achievements is different. Furthermore, there are important moderating factors such as student motivation, digital habits and levels of academic engagement.

Objectives:

- To analyze the relationship between the use of social media and academic performance of Higher education students in Surat city.
- To study the level and pattern of utilization of virtual platform used by the students of HEI in Surat.

Hypothesis:

- H1: The relationship between the extent of social media use & its addiction among HEI students is significant.
- H2: Students' competence in time management is significantly affected by using social media.
- H3: The use of social media is significantly related with distraction in academic activities.

- H4: Digital media use has significant impact on the students' academic motivation.
- H5: Students' use of social media has a significant effect on their sleep quality.
- H6: Information-seeking use of digital platforms significantly contributes to academic success.
- H7: Peer influence significantly predicts the level of social media use among HEI students.
- H8: There is association between students average daily study hours & their academic achievement.
- H9: Average daily time spent on virtual platforms and CP/GPA/Percentage attained during last exam is related.
- H10: Social media use has a significant impact on the academic performance of HEI students.

Research Methodology:

This study is quantitative descriptive – co relational. The media richness theory is the base of variable selection. Media Richness Theory (MRT) states that the channels of communication vary in the amount of rich information and understanding that they can provide. It's a rich media due to responsiveness, multimedia content, immediacy and interactivity. When used correctly, these platforms offer a great opportunity to enhance learning, collaboration, and engagement, however, they can cause cognitive overload, distraction, and poor academic performance when misused and used for purposes outside of the classroom. This theoretical framework was used to select the variables and to interpret the results. A total number of 254 students from Higher Educational Institutions (HEIs) across various disciplines of Surat city were selected and asked to fill a standardized questionnaire. The non-probability sampling technique i.e., convenience sampling was used.

In order to ensure content validity, questionnaire items from peer-reviewed research were modified and matched to the objectives and theoretical framework of the study. The reliability was assessed using Croanbach Alpha. The data was analyzed in SPSS 28. Data analysis was done using regression analysis, correlation and descriptive statistics. Both the 1% and 5% significance level were chosen.

Analysis & Discussion:

Descriptive Analysis:

There were 254 study participants. Of the 254 respondents, 50.4% (128) were male and 49.6% (126) were female with virtually an equal number in the survey. Of these who

responded, 55.6% (n = 140) were undergraduate students. Fifty (44.4%) of the participants were postgraduate students which ensured adequate representation of post and undergraduate students.

The respondents' educational background indicates that most of their courses are related to management. About 35% of the respondents were MBA students, while about 27% were BBA graduates, which accounted for almost two-thirds of the sample in the field of management education. The sample was academically diverse with approximately 12% of the courses related to commerce, 10% of the courses related to engineering and technology and 7% related to science.

Inferential Analysis:

Table 1: Reliability Testing:

Reliability Statistics		
Construct	Cronbach's Alpha	Items
Social Media Usage	0.881	5
Social Media Addiction	0.902	5
Time Management	0.909	5
Distraction	0.896	5
Academic Motivation	0.896	5
Information-Seeking	0.952	5
Peer Influence	0.859	5
Sleep Quality	0.919	5
Academic Performance	0.915	5

Cronbach's Alpha coefficient was used to check the internal consistency of the measurement scales. The reliability of all constructs is excellent with these values above the cut-off of 0.70.

A set of values for each of the constructs studied is given in Table 1. Social media usage ($\alpha = 0.881$), social media addiction ($\alpha = 0.902$), time management ($\alpha = 0.909$), academic motivation ($\alpha = 0.896$), information-seeking ($\alpha = 0.952$), peer influence ($\alpha = 0.859$), sleep quality ($\alpha = 0.919$), and academic performance ($\alpha = 0.915$) all exhibit strong internal consistency. Five items were used to measure each construct, which increased the scales' reliability and stability.

According to the results of reliability, the measuring tools applied in the study can be used for further statistical processing such as regression and correlation.

Table 2: Correlation Analysis:

Correlation			
Hypothesis	**Pearson correlation**	**p value**	**Result**
H1	0.54***	<0.001	Supported
H3	0.531***	<0.001	Supported
H8	0.133*	0.042	Supported
H9	0.019	0.770	Not Supported

The findings of the Pearson correlation analysis, which was utilized to check the connections between important study concepts, are shown in Table 2. Hypothesis 1 is supported by a rather significant positive correlation ($r = 0.540$, $p < 0.001$) between users of virtual media and HEI students who have addiction. The positive correlation between virtual media users and HEI students who have addiction is fairly large, $r = 0.540$, $p < 0.001$, which supports hypothesis 1. Similarly, there was a positive and significant association between academic distraction and social media use ($r = 0.531$, $p < 0.001$) supportive of H3. The more time people spend using social media, the more likely they are to be academically distracting.

There was a slight positive correlation between the average hours spent studying a day and academic achievement (CP/GPA/Percentage) ($r = 0.133$, $p = 0.042$) and this was statistically significant and supported H8. This shows that pupils who study for longer tend to have slightly higher attainment levels. There was a very low and statistically insignificantly correlation between the mean time spent on social media and academic achievement ($r = 0.019$, $p = 0.770$), suggesting that there is no direct correlation.

While there is a strong correlation between social media and negative behavior, such as addiction and distraction, overall correlation data indicate a very limited direct correlation between social media and academic achievement. These results highlight how important it is to look at mediating elements in order to comprehend the indirect effects of social media use on students' academic performance.

Table 3: Regression Analysis:

Regression

Hypothesis	Adjusted R2	Unstandardized coefficient	t-value	Standardized beta coefficient
H2	0.114**	0.323**	5.787**	0.343
H4	0.071***	0.263**	4.498**	0.273
H5	0.095***	0.327**	5.248**	0.314
H6	0.346***	3.237**	11.625**	0.591
H7	0.109**	0.378**	5.659**	0.336
H10	0.021**	1.008**	2.54**	0.158

The results of regression models to determine the effect of social media related factors on academic and behavioral outcomes of the HEI students are presented in Table 3. The findings are relevant to almost all of the hypotheses that were formulated, as social media use and its related factors have statistically significant effect on various dependent variables.

Based on the results of the study for H2, it can be seen that the use of social media has good positive correlation with time management problems, namely 0.343, $t = 5.787$, $p < 0.01$. The model indicates that there is an association between more social media use and more time management issues; 11.4% of the variance of time management issues is explained by more social media use (Adjusted R2 = 0.114).This shows that pupils who are more frequent users of social media have problems with time management and put off doing assignments.

The use of social media shows a significant effect on decreasing academic motivation, supporting hypothesis 4 by giving a β value of 0.273, $t = 4.498$, and $p < 0.01$. 7.1% of the variance in students' academic motivation outcomes was explained by the regression model (Adjusted R2 = 0.071). This suggests that there is a negative relationship between the desire to academic pursuits and social media use.

Hypothesis 5, which hypothesized that social media use would significantly increase sleep disturbances and decrease sleep quality was supported, with results showing that use of social media was significantly correlated with sleep disturbance (beta = 0.314, $t = 5.248$, $p < 0.001$) and sleep quality (beta = 0.207, $t = 2.935$, $p = 0.004$). The regression model accounted for 9.5% of the variance in the students' sleep related outcomes (Adjusted R2 = 0.095), meaning that the more students used social media, the poorer their sleeping habits were.

The results greatly support H6 as it shows that the use of social media for information seeking has a significant impact on academic achievement ($\beta = 0.591$, $t = 11.625$, $p < 0.001$). This model had the highest explanatory value with 34.6% of the variance in academic

performance (Adjusted R2 = 0.346), suggesting that it was helpful for students' academic achievement.

The findings reveal that peer influence positively and significantly affects the use of social media ($\beta = 0.336$, $t = 5.659$, $p < 0.01$) which supports H7. The model demonstrates that social environment has an effect on students' online behaviors and accounts for 10.9% of the variance in the use of social media (Adjusted $R^2 = 0.109$).

Finally, H10 investigated the direct link between using social media and academic performance. However the model accounts for only 2.1% of the variance in academic achievement (Adjusted $R^2 = 0.021$), but results of this model showed a significant but moderate positive effect ($\beta = 0.158$, $t = 2.540$, $p < 0.01$). This shows that while the use of social media has a direct impact on academic attainment, its impact is small and likely to be limited by other factors.

The regression analysis findings suggest that overall, social media use has important behavioral and academic consequences, with social media information seeking use having a greater effect. The less than satisfactory explanatory power of the direct social media-academic performance model highlights the importance of mediation analysis to better understand the indirect associations that exist between social media and academic performance.

Conclusion:

The current study aims to analyze the correlation between the users of social media and academic achievement for the students of Surat Higher Education Institution (HEI), and also to study about psychological and behavioral factors related to academic results. The reliability of the research instrument was obtained by using Cronbach's alpha, where the value of the Cronbach alpha was greater than 0.70, which is the criterion for the reliability of the instruments. The reliability study showed that all the measurement scales were internally consistent.

The correlation study revealed that there exists a positive correlation between the use of social media and academic distraction and moderate correlation between the use of social media and social media addiction. This indicates that there is a relationship between increased addictive behaviors and more social media use during academics. Although study hours were positively correlated with academic results, there was no direct association between time spent on social media and academic results, indicating that time spent on social media may not be sufficient to explain academic results.

Students reported strong associations between increasing social media use and having trouble with their time management, reduced academic motivation, and trouble sleeping. Specifically,

social media use for information-seeking proved to be a strong positive predictor of academic success, suggesting the benefits of the academically-oriented use of social media. It has been determined that there is a statistically significant direct effect of general use of social media on academic performance, however, this effect is very small. This indicates that the link between social media and academic performance is indirect and goes through the behavioral channels, such as motivation, distraction and sleep quality.

In conclusion, the study shows that there are two effects of using social media on the students' academic life. The deliberate, information-seeking use can positively impact on academic performance, and the excessive and frequent use can negatively impact on academic performance. The results of this study indicate that instead of outright banning social media, educators, legislators, and students should be encouraged to utilize social media in an appropriate and academic manner. Future research can explore the mediating and moderating factors to better understand how social media could be integrated into the learning environment in a higher education context.

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