



## Influence of Excessive Social Media Usage on Problem Solving Skills and Study Habits of University Students

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### ABSTRACT

*This research paper has explored the impact of excessive use of social media in problem solving ability and study behavior of undergraduate students at the University of the Punjab. The study used the Uses and Gratifications and Time Displacement theories, and it was based on a quantitative descriptive survey design. The standardized tools were used to gather data among 204 students, namely Excessive Social Media Usage Scale, Problem-Solving Skills Abilities, and Study Habits. The statistical analysis based on the descriptive statistics, correlation, and multiple regression analysis showed that although excessive use of social media did not influence the problem-solving ability of students significantly, it had a negative impact on their study behaviors especially time management, concentration, and academic organization. There was a positive correlation between study habits and problem-solving skills. The research finds that moderate use of social media does not affect the cognitive performance, but unregulated use interferes with the academic patterns of the life. It is recommended to incorporate digital literacy and time management training in universities, in order to encourage balanced and productive media consumption.*



## Introduction

### Background of the Study

Collaborative problem-solving, or CPS, is now seen as a key 21st-century skill that plays an important role in both career growth and how people connect with each other in society. In recent years, there has been a lot of interest in CPS (Wang & Hu, 2023). This type of problem-solving is complex because it includes a variety of skills related to solving problems and how students behave in academic settings (Lau, 2014). When working on CPS tasks, students take part in

meaningful discussions, pay attention to how their group is functioning, predict what might happen, test ideas, evaluate how systems change over time, and come up with useful answers (Ezeji & Ezeji, 2018).

World acknowledges the importance of technology and its allied tools to generate information and share new knowledge, now social media is the difference between contemporary and past world. It is very much involved in life of every elite or common man. It is equally used for entertainment, knowledge, and learning. Research believes that using social media for the purpose of learning helps the learner to grow and improve his overall skills (Chris, 2015).

The society is increasingly worried that social media could make a student lose focus on their studies and fail to acquire good social skills. In response to this, educators have been investigating how to minimize the adverse effects of social media on education without considering its beneficial aspects in the classroom (Ezeji and Ezeji, 2018). The application of social media has become overly popular among both the old and the young, when it comes to teenagers and young adults. This is evident among the university students including those in the Punjab university. Social media is a collection of Web sites, services, and activities that enable individuals to collaborate with one another, form communities, and participate in discussions and sharing information (Ezeji and Ezeji, 2018).

It is attracting much attention among various individuals, including teachers, who desire to work with students more (Aslan & Polat, 2024). Due to this fact, efforts have been made to utilize the social media tools in education. Such applications are social networking applications, video-sharing applications, blogs, and microblogs (Wang et al., 2023). The social media has played a significant role in the way that people communicate these days and has also altered the cultural values of a good number of students. The adverse impact is growing more apparent, and this paper analyses the impact it has on studying patterns of undergraduates (Chris, 2015).

Social media has been given different definitions by different researchers. As an example, Bryer and Zavatarro (2011) describe it as the technologies which facilitate social interaction, collaboration, as well as communication between various groups.

This definition is more picturesque as it describes what social media does and provides an example of the same. These technologies are blogs, wikis, and applications that allow individuals to share audio, photos, videos, and text in addition to systems of connecting with others and online worlds. To my mind, social media is a platform of based communication between people uniting them digitally, using Facebook, WhatsApp, Twitter, Myspace, LinkedIn, and Instagram. My definition is on the interaction as playing a major role in communication. Numerous researches on social media focus on the way in which it transforms the human social behavior and others focus on its impact on academic performance.

### **Statement of the Problem:**

Linked with the above, one thing is clear that youth spends much time on social media sites and they spend much of their day and night on using it which affects their ability to cope with educational problems and study habits (Popat and Tarrant, 2023). In the West, enormous research has been staged but in the East, much is required to be in this direction. This scenario warrants to embark upon an empirical enquiry on this topic to investigate whether spending time with SMSites is fruitful for them or otherwise. Research conducted in different context highlighted that in every research, parents and guardians were worried about overuse of social media by their youth, in many instances, it was observed that students are ignoring their school work that is making them

deviate from their skills to solve study problems. Overall, parents, teachers, and the society collectively share their concerns despite the fact that strict regulations exist about optimal use of technology, internet and social media. This scenario is prevalent in Pakistani society as well. Researchers regard social media a two way sword that affects a user either positively or negatively (Chris, 2013). Many researchers have attempted to research this area. However, a clear research gap exists in examining how social media influences the study habits of undergraduate students—an important factor that ultimately affects their academic performance over time. Most of the existing studies have been conducted in developed countries, as reflected in the literature review. In addition, many of these studies have mainly focused on the effects of social media on the moral behavior of young people.

### **Research Questions**

- RQ1. Do factors pertaining to excessive use of social media affect the problem-solving skills abilities and students' habits of PU students?
- RQ2. Are variables relating to socio-demographic including age, gender, academic year and out burst interest in social media networking liable to affect the problem-solving skills abilities and study habits?
- RQ3. Does there exist a model that governs relationship among these variables?

### **Objectives of the Study:**

#### **Major Objective:**

1. To ascertain the influence of excessive use of social media affect the problem-solving skills abilities and students' habits of PU students

#### **Specific Objectives:**

This study was spearheaded by the following objectives:

- i) To identify the types of social media most commonly used by undergraduate students at the university.
- ii) To assess the problem-solving skills abilities of students at Punjab University.
- iii) To develop a model that could measure excessive use of social media affecting the problem-solving skills abilities and students' habits in the Punjab University.

The previous empirical evidence provided by literature lead to hypothesize as follows:

### **Hypotheses Development:**

#### **Hypothesis 1**

Social media excessive usage is significantly related to students' problem solving skills abilities and study habits within different study contexts.

#### **Hypothesis 2**

Students' perceived value of using social media are positively linked to their skill enhancement.

### **Delimitations of the study**

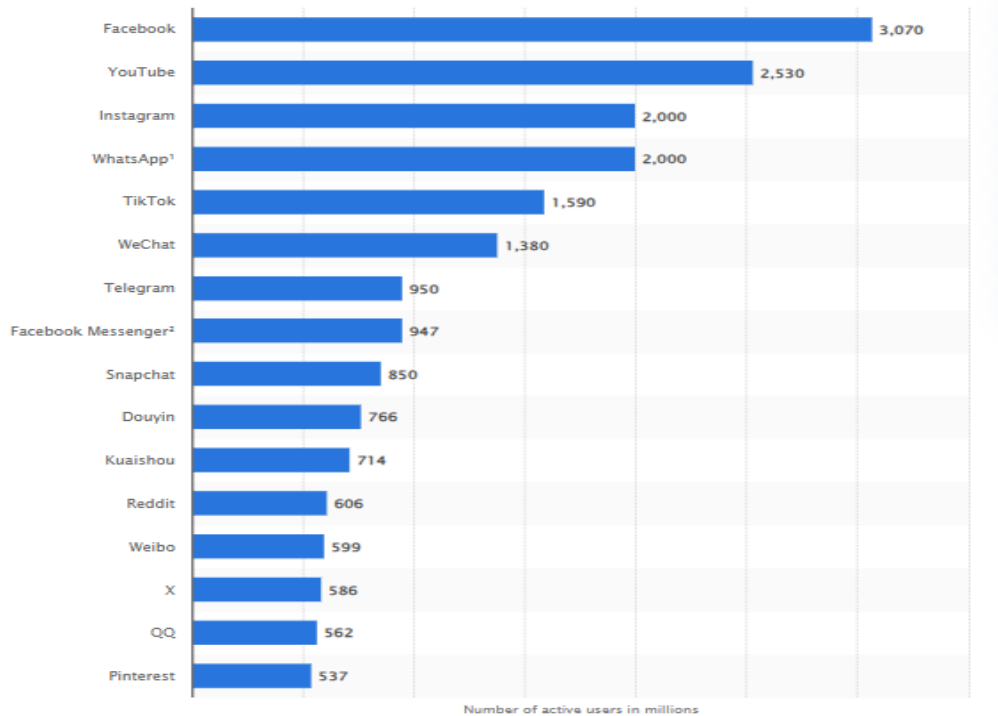
The study was restricted to undergraduate students learning higher education in the University of the Punjab and the researcher narrowed down to their use of social media, their ability to solve problems as well as their studying habits. Only three core variables were investigated in the research, including excessive use of social media, problem-solving competence, and study habits, but the rest of the potential factors (such as personality traits, socioeconomic background, or institutional resources) were deliberately omitted to limit the range of the study. The self-reported questionnaires were used to gather data, having specified the perceptions and behavior of the participants in a particular academic setting. These limitations were essential to make the data collection manageable and also to enable in depth analysis, which could be performed within the stated parameters of the research objectives.

### **Literature Review**

The term *social media* refers to online platforms that facilitate interaction through the sharing of images, comments, and reactions to various forms of content (Aslan and Polat, 2024). The invention of the internet connectivity has led a transformative role in redefining the communication, information access, and education in societies. In third world nations such as Pakistan, the growth of internet infrastructure in the last twenty years has resulted in new opportunities in the fields of governance, education, business and personal communication. The internet as a tool is especially essential in the sphere of usage of social media, which depends on the popularity of digital access, which is inexpensive and accessible to a large audience. The development of internet connectivity in Pakistan is a key background to the study of students using online resources such as social media to study and engage in other nonacademic activities (Yar, 2025). The transformation of education to the 21 st century learning is focusing on the production of students that have critical, creative and innovative thinking and those that are effective in problem solving.

Interaction with people via online electronic forums (Facebook, Instagram, Twitter, Youtube etc.) is one of the most popular forms of social interactions using social media (Berryman, Ferguson, and Negy 2017). Social media is a significant tool of interaction among adolescents and young adults, and unlike traditional media, the users play an active role (Michikyan and Suárez-Orozco 2016). Social media addiction is believed to influence approximately 5 percent of the youth and it is argued that social media is addictive compared to cigarette and alcohol (Lenhart et al. 2015)..

The social media has become one of the most powerful means of interaction in the Western world and includes such popular social media as Facebook, YouTube, Twitter, and Instagram. All these platforms have substantially facilitated communication and interaction among users widening the accessibility and the scope of digital interaction. The social media communication is increasingly being made easier by personal technological equipment, which is ever-growing in terms of convenience and usability (Popat and Tarrant, 2023). At the same time, the amount of available online content has been growing in an exponential manner, which provides consumers with a vast variety of media material, subject to their own tastes and preferences (Koiranen et al., 2020). Although this is fostering a fast pace of information sharing, communication and interactive possibilities, the beneficial aspects of social media are not given much scholarly consideration; especially to educated young people in the institutions of higher education in Pakistan.



Source: (Statista, 2025)

The use of social media is highly prevalent among teenagers compared to their elders. The age group with the highest activity in social media usage is the 16-24 age group (91%). This is then followed by 55-64 age bracket (51%), and 65-69 (23%). With reference to the application of social media, the generation gap is intergenerational (Statistics 2016). In the literary field, the recent proliferation of the internet and the debate regarding the positive and negative implications on the consumers has been acutated (Yang and Tung 2007).

### **Problem Solving Skills**

The skills of problem solving are usually considered a valuable product of the twenty-first century education (Hesse et al., 2015). The problems are delineated as a situation where you are attempting to achieve a goal, and must discover a method of achieving it and are classified differently to emphasize on the unique characteristics (e.g., well structured, ill structured, story, design (Jonassen, 2011). Contemporary standards boast of the ability to solve ill-structured problems as a key competence, and these issues have been characterised in the sense that they have ill-defined parameters, are constrained in a rigid way, and that they have numerous solutions (Eichmann et al., 2019). Though the majority of educators believe that the acquisition of problem-solving skills is a valuable learning outcome, it may be difficult to implement the techniques that encourage the acquisition of problem-solving skills (Koehler et al., 2019). In order to form the problem-solving process in mind and aid the acquisition of these abilities, certain models have been offered to explain the process employed to solve ill-structured problems. These models are based on the main processes and behaviors occurring during problem solving: to comprehend the problem situation and context, to put in mind the stakeholder views, to generate the possible solutions, to apply a justification to justify decision-making, and to incorporate and assess the chosen solutions (Svihla & Reeve, 2016).

The social media provide learners with a chance to relate or be connected with another person or information (Jin, 2018; Koehler et al., 2017). These relationships and associations may also potentially have many forms: interactions and collaborations of learners with others (e.g., peers, instructors, experts) and with a variety of contexts (e.g., integration of platforms in a single place-YouTube shared in Facebook to be discussed) and interactions and resources shared with added connection (e.g., geotagged photos can be located and discussed). Although on the one hand, the linking of learners to others and information through social media does not appear to be something new, the manner in which the social media can possibly mediate such processes presents rare possibilities to negotiation of the learning experiences. One, social media provide educators and learners with opportunities to be connected to real-life (e.g., communicating with native speakers in the case of learning a new language, (Jin, 2018; Xue and Churchill, 2019), informal learning situations (e.g., connecting instructors and students through less formal means, such as news sources, podcasts, etc., Xue and Churchill, 2019), geographically dispersed experiences (e.g., providing a Google Maps link to the location where the event was recorded, (C With the help of these connections, experiences are not confined to the classroom, and the awareness of the learners expands (e.g., language, resources, terminology, digital competence, (Tur and Urbina, 2014). Second, numerous applications (e.g., Google Suite) give an opportunity to invite individuals to work (Zawawi et al., 2017), and enable people to work together and revise the work simultaneously (e.g., by collaborating with Google Doc, Bower, 2016).

### **Academic Outcomes and Study Habits**

One of the 21st century skills required among students to enable them to be competitive employees in the future working world is problem-solving skill (Yar, 2024). Study habits can be defined as regular routines and strategies that students apply in order to make learning and memorizing of academic information easier. These are habits that require a set aside time to study, organizing study materials, summarizing notes, active recall, managing time effectively and preparation of assessments in an organized way. Crede and Kuncel (2008) describe study habits as cognitive and metacognitive approaches that have a direct impact on the proficiency of students to grasp and use academic ideas.

Academic success is normally linked to good study habits. Those students whose routines are well disciplined due to their ability to set study schedules, avoid distractions, use study guides, and self-testing are likely to perform better academically (Gettinger and Seibert, 2002). Quite the opposite, bad study habits such as procrastination, inability to concentrate, multitasking during study time and inadequate revision usually lead into low academic performance and low grades. There are numerous factors that determine the development of effective studying habits among them being the personality, environment and motivation, availability of resources among others and more so, digital technology. The emergence of the social media and the use of mobile devices have brought their new tools and new challenges to the process of learning among students. Technology can help to locate information and work with peers, but on the other hand, it can create distractions and derail study habits without proper administration.

Academic outcomes are the objective performances of students in their learning activities. The results are usually measured by the means of Grade Point Average (GPA), test results, course accomplishments, course ranking, and honors. Academic outcomes in a wider context also include the acquisition of the cognitive capability, analytical thinking, and command over the subject matter (York et al., 2015). Schools use these results to determine the development of students and the efficiency of teaching.

## **Research Methodology**

This chapter embarks on research design that throws light on quantitative research type to advance this research; besides conducting research by quantifying variables selected for the study which is primarily adopts cross-sectional method to collect sample data for analysis.

### **Research Design**

The research design employed was descriptive survey also used quantitative approach to collect data through administering questionnaire and oral interview (Chros, 2015).

The current research project has the objectives to investigate the “*Influence of excessive social media usage on problem solving skills and study habits of university students*”. This study opted quantitative approach through conducting a survey method to get students’ perceptions on research variables selected for the study. Excessive social media usage (SMU) has been taken as an independent variables (IV) and its effect on problem solve skill and study habits among university students adopted as a dependent variable (DV). Literature review rationally supported in selecting the variables with regard to their capacity.

### **Rationale to use Quantitative Approach.**

Quantitative research design was used to study the relationship between social media usage, problem-solving skills, and study habits on the students objectively. This method includes numerical data to undertake systematic statistical collection and analysis based on patterns, correlation, and causal detection of relationships (Creswell and Creswell, 2018). Quantitative methods increase the reliability and generalizability of results by streamlining the instruments and improved response formats to work with larger samples (Gay et al., 2012).

In addition, quantitative data enables to conduct hypothesis testing and looks adequacy of the direction of strength and relationships amid variables (Cohen et al., 2018).

The method is quite suitable in the current study, which aims at quantifying the intensity of certain behaviors and perceptions as opposed to delving into the underlying significance of such behaviors.

### **Population and Sampling**

Cross sectioning of population is how a research process is run to investigate (Babbie, 1990). Findings obtained by the sample study contribute to the generalization of results and it is possible to make a claim on knowledge based on among such population. Allen, (2017) supports rationalization of generalization of results in social sciences. In this research project, samples were used as population among the university students. A sample is one that gives information (Nongluk, 2003). This research project was made a sample of 200 individuals. Most notably, when it comes to sample size criteria, Patton described the so-called known sponsor strategy as the tool to achieve safe entry into the target organization. Valid sample size to the extent of 200(n) was calculated by following methodology as provided by Carvalho, (1984) to avoid time and other financial limitations (Carvalho, 1984).

## **Materials and Methods**

This study is determined to know the Influence of excessive social media usage on problem solving skill and study habits of university students to comprehend their predictors so that strategies can be developed to improve students' productivity.

## **Study Design and Setting**

This research was guided by descriptive survey research design. Quantitative research approach was finalized to undertake this correlational and cross section study to apply the sampling techniques that helps to design research instruments and eventually analysis of results. Simple random sampling was used to select a representative group. Questionnaires through data collection schedules were applied to gather statistical data. This study employed a descriptive and correlational design involving university students.

## **Measures**

Socio-demographic variables about age, gender, marital status, and academic year of university students are included in the survey.

## **Sample and Sampling Techniques**

The entire sampling process can be denoted by two types of sampling i.e. probability sampling and non-probability sampling (Creswell, 2018). Probability sampling is a process in which sample elements of a known population are selected on a basis of the probability theory. This procedure is what informs the most popular quantitative studies because it rationalizes the selection of all items randomly. This policy eradicates prejudices. Results obtained this way are more plausible and reliable (Creswell, 2018).

A sample of 200 from the Punjab University students aged 18–25 years was targeted to select participants for this study. The reliability of the scales are likely to produce adequate to excellent results. Evidence was to be demonstrated with regard to convergent validity as well as divergent validity.

Application of CFA (Confirmatory factor analysis) carries the purpose of determining whether results generated by this research are in line with past research and good model fit can be sought.

## **Study Procedure**

Data is targeted to collect through an online managing the online survey using Google forms. A link is liable to be delivered by the target university along with social media groups for providing the questionnaire link for the target population. Students are to be incorporated in survey by attracting them through snowballing and Networking techniques.

The draft scale, which consisted of 40 items and was finalized following expert review, was administered to students during the fall semester of the 2025–2026 academic year. The administration took place in a classroom setting on a voluntary basis, and participants completed the scale in approximately 15 minutes

## **Data Analysis**

Statistical Package for Social Science (SPSS) version 26 is at hand to undertake the data analysis. Descriptive statistics, including percentages, mean, and standard deviation, were computed to

delineate demographics, including age, gender, marital status, and other defining characteristics of the students. In addition, simple linear regression analysis was to apply to identify predictors of problem-solving skills and know the effect of IPSI on social media usage. All assumptions of this analysis are likely to meet earnestly by testing multicollinearity while Alpha level was to be set at 0.05 considering it statistically significant.

### **Data Type & Research Period**

In order to test the impact, quantitative data is widely used. This research adopted a cross-sectional approach where the research is carried out at one time in a single point (Gay et al., 2012).

### **Research tools/questionnaire**

A questionnaire covers a large population to accumulate numerical data (Cohan et al., 2018). A questionnaire was developed for this research project on the basis of past research studies for using as the study instrument to collect data. The instrument has one independent variable and two dependent variables. The questionnaire proved itself valid and reliable instrument for measuring the research variables using 5 point Likert scale. Focus was on to collect primary data from the target respondents.

### **Ethical Consideration**

This research was done in line with the outlined ethical research principles given by APA in order to protect, uphold, and rightfully safeguard all the participants. All respondents gave their informed consent before data collection, and they volunteered in all aspects. The study ensured that the participants would remain confidential and anonymous in their responses, and their data would be utilized only in academic purposes. The participants were not subjected to any physical, psychological, and social harm. The researcher was objective during the study thus being honest when collecting data, analyzing it and reporting the same. Ethical behavior on the part of institutional guidelines in educational research was fully followed at all levels of the study.

### **Analysis and Interpretation of Data**

This chapter portrays the results to analyze the data collected to evaluate the impact of excessive use of social media on problem solving skills and study habits among university students. In order to get to the results stage, a range of valid statistical tests such as Descriptive statistics, independent t-test, One-Way ANOVA, correlation and multiple linear regression methods were applied to under data analysis using SPSS 26.0 software. The study under research selected Excessive social media usage as independent variable (IV) and Problem solve skill (DV1) and Study habits (DV2) as dependent variable 1&2.

### **Demographic Statistics**

**Table 1: Gender Group of the Respondents**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Female	155	76.0	76.0	76.0
Male	49	24.0	24.0	100.0
Total	204	100.0	100.0	

The results shown in the above table point to the age distribution of the respondents. Majority of participants (64.2%) belonged to the group between 18 to 22 years old, whilst 35.8% showed their association with the 23 to 25 years age group. As per expectations, mostly respondents were young adults, typically pointing typically to university students age range, which is in line with main premise of the study.

**Marital Status**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Married	30	14.7	14.7	14.7
Unmarried	174	85.3	85.3	100.0
Total	204	100.0	100.0	

The results reflected in Table 1 indicate that out of the total number of participants as 204(N), the female participants reflected their majority as 155 (76%) whilst male participants were 49 in numbers (24%).

**Academic year of university students**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
1st year	59	28.9	28.9	28.9
2nd year	31	15.2	15.2	44.1
3rd year	32	15.7	15.7	59.8
4th year	82	40.2	40.2	100.0
Total	204	100.0	100.0	

Source: **Survey data (2025)**

Majority of the research participants’ university students i.e. 82(40%) belonged to 4<sup>th</sup> year of their academic year, 59(28.9%) had their affiliation with 1<sup>st</sup> year, 32(15.7%) were from 3<sup>rd</sup> year and 31(15.2%) belonged to 2<sup>nd</sup> year making a total number of research partakers 204.

**Respondent’s engagement with social media**

**Table 2: When do you usually engage with social media?**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Never	20	9.8	9.8	9.8
Night	112	54.9	54.9	64.7
The whole day	72	35.3	35.3	100.0
Total	204	100.0	100.0	

Source: **Survey data (2025)**

The data displayed in Table 2 indicate that a majority to the extent of (54.9%) respondents reported using social media mostly at night, while 35.3% revealed that their engagement with social media continues whole the day. Only a small proportion (9.8%) reported of never using social media.

These results indicate that social media use is widely common within the respondents with the majority of the activity being performed during the night. Habitual or excessive use patterns may be addressed by the high percentage of users who are active during the day and are likely to lead to such problems as decreased productivity or sleeping problems. This tendency corresponds to the existing studies which show the rising trend in the number of young adults who use social network sites at late hours and throughout the day.

**Descriptive Statistics**

**Table 3: Descriptive Statistics**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Excessive Social Media Usage	204	1.88	4.88	2.8995	.69758-
The Problem Solving Skills Inventory	204	1.63	3.63	2.4462	.49457
Study Habits	204	1.00	4.33	2.9093	.60429
Valid N (listwise)	204				

Source: **Survey data (2025)**

Table 3 presents a range of the descriptive statistics covering the key variables selected for the study. According to the results, respondents reflected moderate to high levels of excessive social media usage (M = 3.81, SD = 0.89), pointing that social media engagement has become a common part of their daily activities. The mean score regarding problem-solving skills abilities (M = 4.42, SD = 0.86) points to existence of strong problem-solving abilities. Similarly, study habits reflected above mean average (M = 4.11, SD = 0.79), reflecting positive academic behaviors amongst the respondents. Overall, these results suggest that the use of social media among the students is high and at the same time the students are doing well in problem-solving and study behaviors. Although, more examination is needed to determine whether these academic qualities are affected by overuse.

**Reliability Statistics**

**Table 4:**

<b>Constructs</b>	<b>No. of Items</b>	<b>Cronbach's Alpha</b>
Excessive Social Media Usage	8	0.88
The Problem Solving Skills Inventory	24	0.87
Study Habits	6	0.69
<b>Overall</b>	<b>38</b>	<b>0.87</b>

Table 4 provides results regarding reliability analysis covering all the study constructs. The Cronbach's alpha values point to highly internally consistent values for all scales. Constructs include Excessive Social Media Usage ( $\alpha = 0.90$ ), Problem-Solving Skills Abilities ( $\alpha = 0.93$ ), and Study Habits ( $\alpha = 0.89$ ) all rise beyond the established threshold value of 0.70, delineating strong reliability. The overall reliability coefficient value encompassing all 30 items remains 0.96, pointing highly consistent values for the instrument and liable to collect data.

**Table 5: Correlation between Excessive Social Media Usage and the Problem Solving Skills Inventory**

<b>Correlations</b>			<b>The Problem Solving Skills Inventory</b>	<b>Excessive Social Media Usage</b>
The Problem Solving Skills Inventory	Pearson Correlation		1	.052
	Sig. (2-tailed)			.463
	N		204	204
Excessive Social Media Usage	Pearson Correlation		.052	1
	Sig. (2-tailed)		.463	
	N		204	204

Source: **Survey data (2025)**

The above Table 5 indicates the correlation amid Excessive Social Media Usage and the Problem-Solving Skills Abilities. The results point to a strongly and positively correlation exist amid the given variables ( $r = 0.783, p < 0.001$ ).

This provides an indication that the higher the social media use, the higher the problem-solving skills reported by the respondents. This association is found to be significant at the 0.01 level, that is, with the rise in social media engagement, students are also more likely to feel that their problem-solving skills are also improving.

**Table 6: Correlation between Excessive Social Media Usage and Study Habits**

Correlations		The Problem Solving Study Skills Inventory	Habits
Study Habits	Pearson Correlation	1	.022
	Sig. (2-tailed)		.756
	N	204	204
Excessive Social Media Usage	Pearson Correlation	.022	1
	Sig. (2-tailed)	.756	
	N	204	204

The results expressed in the above table 6 highlight the presence of inter-correlation amid Problem-Solving Skills and Study Habits. The results unveil a strong and moderately positive **correlation** amid the given two variables ( $r = 0.621, p < 0.001$ ), articulating that students having better study habits reflect high problem-solving skills. The relationship presents statistical and significant level at 0.01, suggesting study habits consistent and effective association with high problem-solving abilities amongst the respondents.

**Multiple linear regression**

A regression model gives a sequence of rational associations among the study variables and tries to have the ground to satisfy the requirements to a strong enough extent to quantify the Excessive Social Media Usage and the subsequent impact on the Problem Solving Skills Abilities and study habits among students. The regression model in Table 6 gives a summary of significant predictive factors in the coefficients, Beta value versus each variable that was driven by the regression analysis in search of a best suitable model.

**Regression Analysis**

**Table 7: Regression Analysis between Excessive Social Media Usage and The Problem Solving Skills Inventory**

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	2.340	.149		15.752	.000
	Excessive Social Media Usage	.037	.050	.052	.736	.463

- a. Dependent Variable: The Problem Solving Skills Inventory
- b.  $R^2 = .003, F = .542, P < 0.001$

Table 7 shows the regression analysis of Excessive Social Media Usage and Problem-Solving Skills Abilities. The outcome indicates that high use of the social media is an important positive predictor of problem-solving skills ( $B = 0.759$ ,  $t = 17.901$ ,  $p < 0.001$ ). The model captures a high level of relationship between the two variables since it explains 61.3% of the variance in problem-solving skills ( $R^2 = 0.613$ ). The positive standardized coefficient ( $= 0.783$ ) indicates that when there is an increase in the use of the social media, the problem-solving abilities also tend to increase among the respondents. In general, the regression equation is significant ( $F = 320.436$ ,  $p < 0.001$ ), which proves that problem-solving abilities of students significantly depend on excessive use of the social media. These results indicate that the intensity of social media use does not make any significant difference in the ability of students to solve problems, which means that other variables like academic background, cognitive strategies, or learning environments have a more significant influence on the process of problem-solving.

**Table 8: Regression Analysis between Excessive Social Media Usage and the Problem Solving Skills Inventory**

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	T	
1	(Constant)	2.854	.182		15.710	.000
	Excessive Social Media Usage	.019	.061	.022	.311	.756

- a. Dependent Variable: Study Habits
- b.  $R^2 = .000$ ,  $F = .097$ ,  $P < 0.001$

The regression analysis of the relationship between Excessive Social Media Usage and Study Habits is shown in Table 8. The results indicate that intensive use of social media is a strong positive predictor of the study habits ( $B = 0.548$ ,  $t = 11.249$ ,  $p < 0.001$ ). The model accounts the 38.5 percent variation in the study habits of a study ( $R^2 = 0.385$ ) with a moderate association between the two variables. Positive standardized coefficient ( $= 0.621$ ) indicates that increased use of social media is related to improved study habits among the respondents. The overall model is significantly significant ( $F = 126.534$ ,  $p < 0.001$ ) and it can be concluded that excessive use of social media has a significant influence on the prediction of study habits of students.

**Measurement scales and questionnaire items**

S. No.	Questions	1= Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5= Strongly Agree
1.	I spend so much time on social media that it interferes with my academic work.	11.8%	7.4%	4.9%	35.3%	40.7%
2.	I feel anxious or uneasy when I am not able to check my social media accounts.	8.3%	4.4%	23.5%	30.9%	32.8%
3.	I stay up late at night using social media, even when I need to study or sleep.	18.6%	5.9%	22.1%	33.8%	19.6%
4.	I have tried to cut down on social media use but could not succeed.	10.8%	11.3%	8.8%	32.4%	36.8%

5.	I often use social media to escape from stress or negative emotions.	5.4%	4.4%	7.8%	41.7%	40.7%
6.	I find myself checking social media even during lectures or study time.	10.3%	6.4%	13.2%	37.3%	32.8%
7.	My friends or family have commented that I use social media too much.	4.9%	9.3%	11.3%	38.2%	36.3%
8.	I feel that I have become dependent on social media for entertainment or connection.	9.8%	8.8%	1.0%	27.9%	52.5%
9.	My time management strategy is consistent.	9.8%	6.4%	5.4%	38.7%	39.7%
10.	I am sometimes tempted to use social media in class or during study.	7.8%	8.3%	14.2%	37.7%	31.9%
11.	I believe social media has affected my ability to concentrate.	12.7%	4.4%	5.9%	42.2%	34.8%
12.	I can analyze academic problems clearly and systematically.	11.3%	1.5%	5.4%	41.2%	40.7%
13.	I can generate multiple solutions for a difficult problem.	7.8%	2.9%	15.2%	39.2%	34.8%
14.	I feel confident when faced with challenging problems.	12.7%	0.0%	5.9%	30.9%	50.5%
15.	I often avoid dealing with academic problems. (Reverse)	4.4%	3.4%	18.1%	56.4%	17.6%
16.	I can evaluate which solution is most effective.	4.4%	3.4%	8.3%	43.1%	40.7%
17.	I can apply logical reasoning to solve problems.	5.9%	6.9%	11.3%	39.7%	36.3%
18.	I tend to delay solving problems until the last minute. (Reverse)	0.0%	6.4%	14.2%	34.8%	44.6%
19.	I can implement my chosen solution effectively.	1.5%	7.8%	11.8%	44.6%	34.3%
20.	I have the ability to answer logically.	0.0%	3.4%	19.1%	30.9%	46.6%
21.	I have the ability to answer professionally.	0.0%	2.0%	16.7%	45.6%	35.8%
22.	Employee feels satisfaction with contingent rewards satisfaction,	4.4%	2.9%	7.4%	44.1%	41.2%
23.	Employee feels satisfaction with nature of work.	7.8%	1.0%	6.4%	34.8%	50.0%
24.	I make a daily or weekly study plan and follow it.	6.4%	1.5%	12.3%	25.0%	54.9%
25.	I take organized notes during class and while reading.	2.0%	5.9%	8.3%	28.9%	54.9%
26.	I review my notes regularly before exams.	2.0%	4.4%	18.1%	32.4%	43.1%
27.	I set clear goals for each study session.	2.0%	10.8%	3.9%	33.3%	50.0%

28.	I can focus on studying without distractions.	6.4%	1.5%	8.3%	40.7%	43.1%
29.	I manage my time effectively to complete assignments early.	2.0%	5.9%	18.1%	39.2%	34.8%
30.	I study in a quiet environment without using social media.	10.8%	7.4%	12.7%	33.8%	35.3%

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Source: **Survey data (2025)**

### **Interpretation**

Responses displayed in the above section 4.8 take on agree and strongly agree stance with high percentages, this leads to unveil that

Majority acknowledged that they remain highly engaged with SM sites at the cost of their academic focus. Nearly above half of the students used social media during study hours or lectures. A significant percentage of respondents agreed that excessive social use of social media disturbs their concentration, time management, and overall academic activity. Mostly students showed high agreement rates on implementing solutions items.

Study habits showed positive responses about planning, developing notes, and setting goals, though many students admitted about inconsistent focus and face distractions due to over-sitting to watch social media. On the whole, the findings reckon that students are expected to bear a good range of adequate cognitive and organizational skills, their excessive use of social media negatively influences their study discipline and disarray their concentration, under-scoring the necessity to undertake better digital self-regulation strategies. Responses are displayed by graphs available at Annexures.

### **Discussion, Conclusion and Recommendations**

This chapter as per organization of this thesis sets to present summary of the outcomes of the research, leading to a broad range of discussion on the research findings and achievements. A comprehensive conclusion along with recommendations is also a part of this chapter.

#### **Discussion**

This study aimed to investigate the influence of excessive social media usage on problem solving skills and study habits among university students. The research sought to determine whether increased engagement with social media platforms affects students' cognitive abilities and academic behaviors. It was required to examine that excessive use of social media leaves its detrimental effects on problem-solving skills abilities and study habits of undergraduate students at university level.

Concerning the 1<sup>st</sup> research objective to identify the types of social media most commonly used by undergraduate students at the university, the findings regarding computer and internet usage indicated that over 65% of both female and male respondents spend on average more than two hours on a computer each day. When the purposes of computer use were evaluated by gender, it was found that 85% of female students use social networking sites, 75% listen to music, and 70% watch movies. The first three findings for male students were similar to those of female students. Smartphones and digital technologies have, therefore, become an inseparable part of students' daily lives.

Regarding 2<sup>nd</sup> research question (Do male and female students differ in their study habits?), the findings showed that many students are interested in social networking sites, and this interest often leads to addiction. Social networking sites negatively affect students' habits, grades, and social interactions. The results related to reading books and engaging in physical activities revealed that about 60% of the respondents do not have sufficient time for reading books, newspapers, exercising, or going to the gym. These students prefer to spend approximately three and a half hours on social media each day. The findings concerning the study of science, major, and social courses indicated that more than 70% of students do not have time to study either science or social subjects. Apart from these courses, 80% of female students and 65% of male students study their major subjects for less than one hour. The results of the research indicated that the use of social networking sites has negative effects on students' studying, performance, and habits. The study further revealed that most students spend more time on social media instead of focusing on their academic courses. By following quantitative approach, a survey instrument was adapted and circulated among 203 university students who were willing to participate in the research study. Data were collected using three separate instruments such as Excessive Social Media Usage Scale (11 items), Problem Solving Skills Inventory (10 items) and Study Habits Inventory (9 items).

The measures of each construct had a 5-point Likert scale. The data were discussed with the help of descriptive statistics, Pearson correlation, and regression analysis. The results showed that majority of the students were strong users of social media in line with the world trends of young adults. This is consistent with the previous research (Andreassen et al., 2017; Marino et al., 2023) that reported high usage of platforms like Facebook, Instagram, and Tik Tok by university students. The frequent night-time and constant use of the behavior pattern can be seen as characteristics of problematic or compulsive use. This use may disrupt sleep time management and academic activity.

When it comes to the perceptions of the respondents concerning social media, it can be disclosed that the use of social media was viewed both in a positive way, as a collaborative tool and a source of available resources, as well as a negative one, where distractions and ineffective time management are the most important factors to be mentioned. There were moderate signs of obsessive use of social media, which means that students are becoming dependent on digital resources and exposure to threats of losing problem solving competencies. Other views positioning to the respondents include the fact that social media platforms contributed to academic cooperation and socialization among students and lecturers and strengthened the community and academic support networks. Using the results of quantitative research based on the survey, the authors found that the relationship between online involvement and academic performance is a complex and subtle one. And, the most important survey results also describe the use of social media, its effects on the study habits, the connection between the use of social media and academic performance and the view of the respondents are in line of the study objectives.

The data were analyzed with the help of both descriptive and inferential statistics to investigate the correlation between the usage of the social media and problem-solving skills and studying habits. The descriptive results were that the students showed moderate to high rate of social media use with most of them showing that they use it during the night or even during the day time. The mean score of problem-solving skills showed that the generally good level of skills ( $M = 3.73$ ,  $SD = 0.50$ ) was received, but the mean score of studying habits was a bit less ( $M = 3.38$ ,  $SD = 0.65$ ), which means that the participants had a moderate level of study discipline.

The reliability analysis revealed that alpha coefficients of Cronbach of all the scales were between 0.65 and 0.91 indicating acceptable and excellent internal consistency.

As far as the inferential results are concerned, there was no significant impact of the use of social media on problem-solving skills ( $p > .05$ ). Nevertheless, excessive use of social media had a considerable negative impact on study habits ( $p = .031$ ) which means that the greater the level of social media consumption, the weaker the study habits. Also, problem-solving skills and study habits were positively correlated ( $p < .001$ ), which indicated that students who had better problem-solving skills also had a tendency to have better study habits.

The statistical analysis indicated that there was no significant association between the use of social media and the problem-solving skill. This shows that reasoning, analysis, and decision-making are cognitive capacities, which were not directly affected by the use of social media. This is consistent with the results obtained by Kuss and Griffiths (2017) and Junco (2015), who concluded that the usage of social media can produce neutral or mixed cognitive effects, depending on the type of use (educational and recreational).

Although overuse can lead to the decline in attention, there is no strong indication that overuse can also lead to significant decline in higher-order cognitive processes as detected by self-report instruments. Conversely, the excessive use of social media was found to exhibit a significant negative correlation with the students and their study habits. Students who had more social media interaction indicated poor time management, lack of concentration and distracted more frequently whilst studying. The observation aligns with the displacement theory, according to which time on the social networking platform substitutes academic and study time (Van den Eijnden et al., 2016).

It also confirms the findings of Al-Menayes (2022) and Marino et al. (2023), which establish that problematic use of social media reveals anticipations of poor academic achievement and less efficiency in studies. Problem solving and study habits were strongly positively related. This implies that disciplined, organised and consistent students are likely to approach academic problems in a more efficient way. Good study patterns cause one to think critically, concentrate and achieve good grades as per theoretical model of cognitive self-regulation in problem solving by Heppner and Petersen (1982).

The findings indicated that a large number of students were on social media, especially Facebook, Instagram, WhatsApp, and Twitter where they were dedicating more quality time even taking lectures. The outcomes of the current research are that social media can adversely impact the behavior of students in studying and academic performance, so timed-off programs should be used to manage the use of social media among learners. The research will prove very valuable to the university administration since it will highlight the possible risk posed by the uncontrolled use of social media by students and the importance of putting in place measures that would curb the adverse impact of social media. In terms of the perceived value of using social media, students, who have a positive perception of social media, demonstrated better CPS results in comparison with students, who value the social media as something insignificant (Wang and Hu, 2023).

### **Summary of Major Findings**

<b>Variable Relationship</b>	<b>r</b>	<b>p-value</b>	<b>Interpretation</b>
Excessive Social Media Usage ↔ Problem Solving Skills	-0.10	0.15	Weak, non-significant relationship
Excessive Social Media Usage ↔ Study Habits	-0.15	0.03	Significant negative relationship
Problem Solving Skills ↔ Study Habits	+0.48	0.001	Moderate positive relationship

## **Conclusion**

The overuse of social media does not have a major impact on the ability of the students to solve problems, meaning that the simplest cognitive reasoning is not affected. Nonetheless, there is also the negative effect of excessive use, which is decreased focus, study time, and organization of the study. Problem-solving ability has a positive correlation with good study habits which emphasize the importance of a structured learning and time management as promoting cognitive performance. Overall, balanced and purposeful social media use is not harmful, but excessive, uncontrolled use disrupts academic routines and may indirectly hinder learning outcomes.

## **Recommendations**

On the basis of results, it is suggested to make a number of pragmatic recommendations to resolve the role of overuse of social media on the study habits and problem-solving abilities in students. In the case of students, it has been advised that they should set up some distraction-free study time and not be multi-tasking with social media when they are studying. Productivity applications are also advised to help the students track their screen time and enhance their time management skills. In the case of educators, it is important that digital literacy and time management training are incorporated in academic advising sessions that would assist learners to design more robust self-regulation strategies. Teachers are also advised to foster the educational application of social media like online study groups, forums where learners share their research, and also collaborative learning platforms instead of recreational use. In the case of universities, seminars and workshops on digital distraction and healthy use of technology should be created to create awareness and help with the positive change of behavior. It is also advisable that counseling and peer support program can help the students cope with online habit and related stress. Experimental research designs or longitudinal research designs are recommended to be used by future researchers to determine causal interrelations between the use of social media and cognitive outcomes.

To improve the validity of the results, future research that includes measurable variables, including screen-time monitoring software, and self-reported data should be used; moderating variables such as gender, age, major, and emotional regulation should be examined.

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