

THE IMPACT OF SOCIAL MEDIA ON SOCIAL ENGAGEMENT AND COLLABORATIVE LEARNING AMONG UNIVERSITY STUDENTS

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Abstract

This quantitative study investigates the impact of social media on collaborative learning and social engagement among undergraduate students in Lahore, Pakistan. A sample of 600 students from both public and private universities was selected to explore the usage patterns of popular platforms like YouTube, Instagram, and X, and how these affect students' academic collaboration and interpersonal engagement. The research aims to identify which platforms are most used, the intensity of their use, and how they influence skills such as communication, teamwork, active listening, leadership, and peer relationships. Data were collected using a structured questionnaire and analyzed using SPSS, employing descriptive statistics, ANOVA, and regression analysis. Results revealed a significant positive relationship between social media use and both collaborative learning and social engagement. However, certain skills like conflict resolution and student–teacher interaction showed weaker associations. The findings highlight the potential of social media as a supportive tool in enhancing academic interaction, while also emphasizing the need for structured use to prevent distractions and ensure balanced development.

Keywords:

Social Media, Collaborative Learning, Social Engagement, Peer Interaction

Introduction

In the digital age, social media has changed social interactions of people, their means of communication and learning. In the cases of university students, social media has proved to be a very significant component of their learning and social life in that the way they interact with one another, as well as the way they carry on with their academics, has been affected by this social media experience. Social media platforms such as YouTube, Instagram, WhatsApp, and X (formerly Twitter) have increasingly been used by students not just for entertainment, but for exchanging information, forming study groups, and building social networks. This shift in communication patterns has prompted educators and researchers to explore how these platforms impact learning environments and interpersonal relationships within academic settings (Manca & Ranieri, 2016).

Spread of social media among the young people of the world has created a mighty instrument which favors teamwork, knowledge transfer and constant interaction of peers. Social media in university environments presents students with an opportunity of approaching course content, lecturers and other course mates beyond the boundaries of traditional classrooms. This digital interaction can facilitate collaborative learning—an instructional method that emphasizes group-based activities and the development of interpersonal skills, such as communication, active listening, teamwork, and problem-solving (Laal & Ghodsi, 2012).

The collaborative learning has also been identified as one of the core elements of contemporary education, as it shifts the students to act as knowledge developers. In addition to that, social media improves the social engagement of the students, which is the extent of the involvement of the students in their academic community by interacting with peers and networking with peers and members of the faculty. According to Junco (2012), students who use social media frequently tend to demonstrate higher levels of engagement and connection with their peers. Social media is an informal place that provides a space to discuss, question

and seek emotional help all these aid in satisfaction of students, which leads to perseverance of the students in school. Nonetheless, although there are numerous studies according to which positive correlations between social media use and student learning outcomes can be observed, certain doubts started circulating. Some scholars argue that excessive or unregulated use of social media can lead to distraction, reduced attention spans, and lower academic performance (Kirschner & Karpinski, 2010).

Also, not every communication on the social sites promotes profound studying or acquirement of such vital social skills as leadership or conflict solving. That is why more information about the role of social media in influencing various elements of collaborative learning and social engagement needs to be gained. The situation of the current study is the priority in Pakistan where the institutions of higher learning are rolling up digital tools into the process of teaching and learning. In last ten years the spread of the use of social media among Pakistani university students has increased massively due to the wide availability of smartphones, cheap internet and great digital literacy. Despite this growth, limited research exists on how social media affects student learning behaviors and engagement in the Pakistani higher education context (Ali, Haolader, & Muhammad, 2013).

The current research is either theoretical or conducted in the western population, and it is most likely to not represent the social and academic situation in South Asian students. Such study will help to fill this gap as the researcher will be able to analyze the impact of social media on collaborative learning and social engagement of the undergraduate students of Lahore, Pakistan. There are two most significant theories that guide the study; Constructivist Learning Theory and Social Learning Theory. Constructivist Learning Theory, proposed by Vygotsky (1978), emphasizes that learning occurs through social interaction and active participation. Such interaction can occur on the social media platforms, which, in turn, allow students to participate in the co-construction of knowledge.

Similarly, Bandura's (1977) Social Learning Theory highlights the role of observational learning and social modeling. Students learn how to behave in a certain manner because of their peers as they watch their behavior over the social media, acquire learning strategies as well as internalize communication that helps in not only academic but also in the social growth of an individual. With the given theoretical lenses in mind, the research addresses the following issues in the ways social media can facilitate the collaborative learning aspects related to communication, active listening, leadership, teamwork, problem-solving, and conflict resolution. It also analyses how the social media influences the social interaction such as peer relations, student-teacher relations, networking, getting motivated and involvement. The components are significant towards the overall student growth in the university level of education and contribute to academic achievement and personal development. These are some of the inquiries that will aim at revealing the multidimensional impact of social media in universities.

However, the study is accurate in informing the digital learning and youth conduct studies that have been shaping up in the South Asian setting. It provides useful guidelines to teachers, politicians, and higher education officials on the best way of tapping on the teaching value of social media. When properly employed, the social media can emerge as a great instrument of collaborating and empowering peer relations and participation of students in the scholarly world. To sum up, due to the ongoing change towards digital transformation of the learning sphere, the role of social media and its impact on the learning behaviors of students is becoming important to understand. The study is appropriate and up to date as it was established with the use of evidence to provide an insight on the positive and negative impacts of social media on Pakistani university students. It will facilitate the process of meeting the divide between the current trends in the digital world and the process of

education to make sure that technology is used as a force that promotes success and not an obstacle.

Research Objectives

1. Identify the social media platforms used by the undergraduate students.
2. Investigate the intensity of social media platforms use by undergraduate students.
3. To measure the effect of social media on collaborative learning and social engagement of undergraduate students.
4. To identify the differences between social media, collaborative learning and social engagement on the bases of demographics (gender, universities, faculty, departments, CGPA etc.).
5. To investigate the effect of social media on students' s collaborative learning (active listening , communication, problem solving, teamwork, leadership, conflict resolution) and social engagement (peer relationship, networking, student-teacher relationship , students interest and encouragement)

Research Questions

1. To what extent social media platforms such as youtube, X, and Instagram are used by university students?
2. What impact these platforms create on collaborative learning of students?
3. How the factors of leaders skills cooperate and social engagement are created by social media platforms?

Literature review

1. Social Media and Collaborative Learning

Over the past decade, social media has emerged as a central factor reshaping collaborative learning in higher education. Platforms like YouTube, Instagram, X, WhatsApp, and Facebook are increasingly used by university students not only for social connection but also for academic collaboration and content sharing (Blaschke, Porto, & Kurtz, 2010; Junco, Heiberger, & Loken, 2011). Collaborative learning, which emphasizes structured group-based tasks and shared responsibility (Johnson & Johnson, 2009), aligns well with the interactive features of social media. These platforms facilitate peer feedback, resource-sharing, and collective problem-solving—activities that reflect the constructivist principle of co-constructed knowledge (Vygotsky, 1978).

Empirical research has demonstrated how social media supports collaborative learning. In Malaysia, Al-Rahmi, Othman, and Yusuf (2015) found that interactivity and peer support through social media positively predicted academic performance. Liu et al. (2022) similarly reported that perceived usefulness and active learning via social media are strongly linked to collaborative educational outcomes, although perceived ease of use alone may not predict academic success. A more recent systematic review by Luo et al. (2025) observed gains in motivation, team collaboration, and performance in project-based learning contexts facilitated by social media, though cautioning that excessive usage could hinder focus and time management.

In Pakistan, studies confirm local relevance: the introduction of tools like Padlet among English learners enhanced communication and collaborative learning (Mahmud et al., 2023; Soomro et al., 2022). A Lahore-based study by Khan et al. (2025) found notable improvements in creativity, collaboration, and communication attributable to social media use, with observable differences linked to gender and institutional setting. However, while communication, teamwork, and active listening show significant gains, complex skills like leadership and conflict resolution are less consistently supported (Hrastinski, 2009). This indicates that collaborative tasks mediated through social media tend to focus more on execution than on managing group dynamics.

2. Social Media and Social Engagement

Social engagement in university contexts refers to active peer relationships, networking, teacher-student interactions, and motivation to participate. Research indicates that social media increases levels of engagement and belonging among students (Junco, 2012). Chen et al. (2021) found that social media enhances academic engagement and creative thinking, especially when intrinsic motivation is present, though the presence of cyberbullying can negate these benefits. During the shift to e-learning in Malaysia due to COVID-19, Chein, Jie, and Choo (2021) reported that students frequently turned to social media for peer and instructor collaboration, with ease of platform use playing a significant role in maintaining engagement.

In Pakistan, increased mobile access and government-led digital initiatives have expanded social media penetration in higher education (Abbasi, 2020). While platforms offer informal spaces for discussion and emotional support, infrastructural limitations and insufficient technical support continue to restrict their full integration into formal academic systems (Soomro et al., 2022). Moreover, findings by Junco (2012) suggest that social media use positively correlates with student participation in campus life, but these effects are mediated by the quality and balance of usage.

3. Theoretical Perspectives: Constructivism, Social Learning, and Limitations

The use of social media in education is grounded in Constructivist Theory, particularly through Vygotsky's concept of the Zone of Proximal Development. This suggests that learning is socially mediated, as peers help co-construct knowledge through interaction (Vygotsky, 1978). Social media provides these interactive spaces, enabling co-creation of ideas, peer feedback, and scaffolding.

Social Learning Theory (Bandura, 1977) underscores that students learn through observing and modeling behaviors within their social environment. On social media, students learn by viewing peer strategies, leadership behaviors, conflict handling, and group dynamics. When leveraged responsibly, social media can enhance communication, leadership development, and conflict resolution by enabling informal modeling.

Nevertheless, unstructured social media use brings cognitive and social limitations. Kirschner and Karpinski (2010) found that unregulated social media usage can detract from academic performance. Zivcakova and Wood (2012) similarly highlighted decreased classroom focus due to media multitasking. Luo et al. (2025) emphasized that without proper oversight, excessive usage can overwhelm students, suggesting the need for guided integration.

Additionally, Hrastinski (2009) and Deng and Tavares (2013) noted that while social media supports task-oriented collaboration, it lacks the structure required for developing higher-level skills like leadership and conflict resolution. The limited interactions between faculty and students on these platforms can further impede academic support and supervision (Deng & Tavares, 2013).

These findings highlight a paradigm of dual potential: when harnessed purposefully, social media can transform collaborative learning and engagement; when left unstructured, it can hinder academic development.

Theoretical Framework

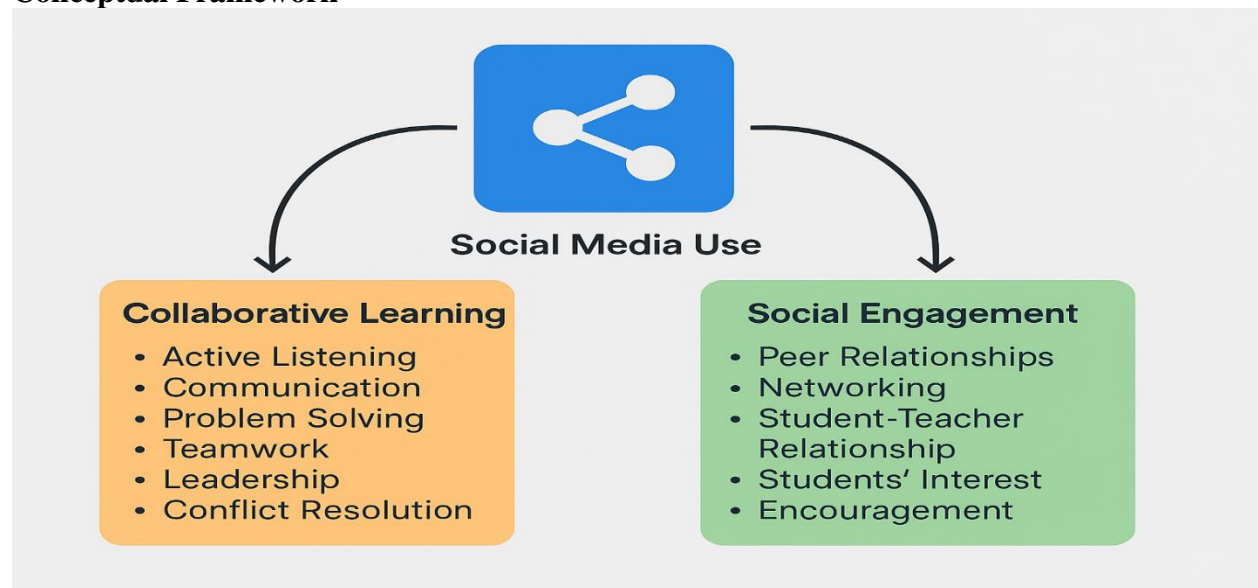
The theoretical framework for this study is grounded in Constructivist Learning Theory and Social Learning Theory, which collectively explain how social media influences collaborative learning and social engagement among university students.

Constructivist Learning Theory posits that learners actively construct knowledge through interaction and collaboration with others. Social media platforms such as YouTube, Instagram, and X (formerly Twitter) provide spaces for interactive learning where students

can engage in dialogue, exchange feedback, and co-construct knowledge. Collaborative learning skills—like active listening, communication, problem-solving, teamwork, leadership, and conflict resolution—are supported through these online interactions, which simulate real-life learning environments in virtual formats (Vygotsky, 1978).

In addition, Social Learning Theory by Bandura (1977) emphasizes that learning occurs in a social context through observation, imitation, and modeling. Through social media, students observe behaviors and learning strategies from peers, influencers, and educators. This contributes to the development of peer relationships, networking abilities, student-teacher interactions, student interest, and motivation—core components of social engagement. Students model communication behaviors and leadership strategies viewed online, integrating them into their academic and interpersonal interactions.

Conceptual Framework



Research Methodology

This study investigates the impact of social media on collaborative learning and social engagement among undergraduate students, using a quantitative, descriptive design. A positivist paradigm guides the research due to its focus on measurable and observable data. The study targets students from both public and private universities in Punjab, with a sample of 600 BS students selected from two Lahore-based universities—one public and one private. Both male and female students from shared faculties (science, social sciences, and arts) and departments were included to ensure representation.

A multi-stage sampling technique was used, starting with purposive sampling to classify universities, followed by stratified sampling to select one from each category, and finally convenience sampling for data collection. A structured questionnaire developed by the researcher, with expert guidance and literature support, served as the primary instrument. It used a five-point Likert scale to assess aspects of collaborative learning (e.g., communication, teamwork) and social engagement (e.g., peer relations, teacher-student interaction).

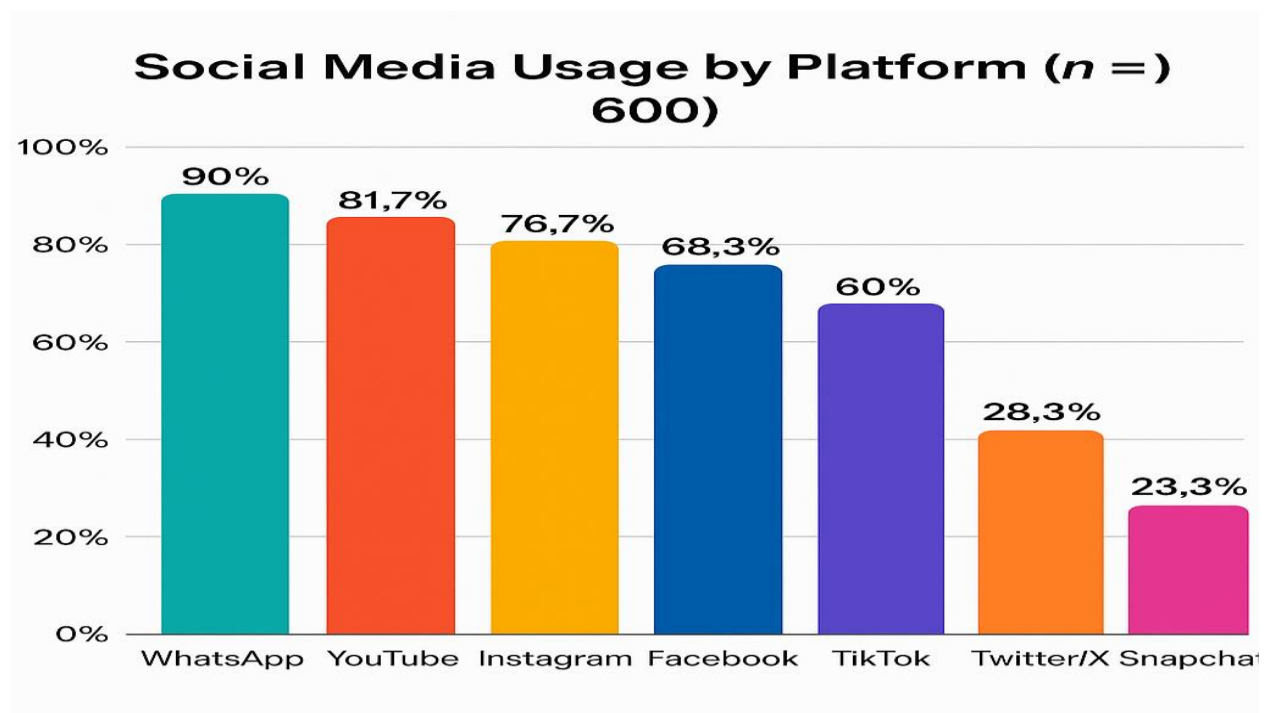
Pilot testing helped refine the questionnaire. Data was collected over three weeks, cleaned, and analyzed using SPSS. Descriptive statistics summarized the sample characteristics, while inferential tests (t-tests, ANOVA, regression) explored differences and predictive relationships. Regression assumptions were met, and graphs supported interpretation.

Ethically, participants responded voluntarily without pressure. Anonymity and honesty were encouraged, ensuring respect for their views and privacy throughout the process.

Table 1

Frequency of Social Media Platform Usage among University Students (n = 600)

Social Media Platform	Frequency	Percentage (%)
WhatsApp	540	90.0
Facebook	410	68.3
Instagram	460	76.7
YouTube	490	81.7
Twitter/X	170	28.3
TikTok	360	60.0
Snapchat	140	23.3



The results indicate the prevalence of use of WhatsApp (90 %), YouTube (81.7%) and Instagram (76.7 %). The least used are Snapchat (23.3 %) and Twitter/X (28.3). This shows that students will use rapid communication and content-sharing platforms to interact both academically and socially.

Table 2

Intensity of Social Media Usage (Hours per Day)

Duration of Use per Day	Frequency	Percentage (%)
Less than 1 hour	50	8.3

Duration of Use per Day	Frequency	Percentage (%)
1–2 hours	110	18.3
2–4 hours	190	31.7
4–6 hours	150	25.0
More than 6 hours	100	16.7

Most of the students spend (31.7) 2-4 hours on social media daily with 25 % taking 4-6 hours daily. 8.3 per cent will restrict it to less than an hour. This proves that there is a prevalence of moderate to high use of social media by university students.

Table 3

Effect of Social Media on Collaborative Learning (Descriptive Statistics)

Collaborative Learning Skills	Mean	Std. Deviation
Active Listening	3.80	0.89
Communication	4.10	0.75
Problem Solving	3.65	0.92
Teamwork	3.90	0.81
Leadership	3.45	0.95
Conflict Resolution	3.55	0.88

(Scale: 1 = Strongly Disagree to 5 = Strongly Agree)

Academic members expressed high levels of agreement regarding the lack of assistance of social media in communication (M = 4.10) and teamwork (M = 3.90) and then listening actively (M = 3.80). Nevertheless, the means are lower in such areas as leadership (M = 3.45) and conflict resolution (M = 3.55), which indicates that social media does not affect these domains significantly or may not support them. All in all, social media has a positive effect on collaborative learning, but not in all domains of skills.

Table 4

Effect of Social Media on Social Engagement

Social Engagement Indicators	Mean	Std. Deviation
Peer Relationships	4.00	0.80
Networking	3.75	0.85
Student-Teacher Relationships	3.50	0.90

Social Engagement Indicators	Mean	Std. Deviation
Student Interest in Participation	3.95	0.78
Encouragement from Peers	3.85	0.83

As far as social engagement is concerned, peer relationships ($M = 4.00$) and a student interest in participation ($M = 3.95$) received the highest scores. This shows that social media is effective in establishing peer contacts and incentivizing students. The student-teacher relationships ($M = 3.50$) were least affected, pointing to the lack of the support of social media in the context of formal academic interaction.

Table 5

Differences in Social Media Impact based on Demographics

Variable	F-value	p-value
Gender	4.21	0.041*
University Type	6.35	0.012*
Faculty	2.75	0.067
Department	5.90	0.003*
CGPA	7.10	0.001*

(*Significant at $p < 0.05$)

ANOVA analysis revealed significant differences with gender ($p = 0.041$), university type ($p = 0.012$), department ($p = 0.003$), and CGPA ($p = 0.001$). Such results indicate that the use and performance of social media can be diverse across various demographics and probably based on the availability, study pressure, and digital conduct.

Table 6

Correlation between Social Media Use and Collaborative Learning & Social Engagement

Variables	r-value	p-value
Social Media Use & Collaborative Learning	0.62	0.000*
Social Media Use & Social Engagement	0.58	0.000*

(*Significant correlation at $p < 0.01$)

Strong positive correlations are found between the use of social media and collaboration in learning ($r = 0.62$) as well as the use of social media and social engagement ($r = 0.58$). This proves the hypothesis that social media have the ability to improve interpersonal, academic and teamwork skills when applied in a positive manner.

Table 7

Gender-wise Comparison of Collaborative Learning Scores

Gender	N	Mean	Std. Deviation	t-value	p-value
Male	300	3.70	0.75	2.45	0.015*
Female	300	3.89	0.72		

The female students ($M = 3.89$) had higher results compared to male students ($M = 3.70$) in collaborative learning although the difference between the two was significant ($p = 0.015$). This is an indication that female students can be more active by working in groups, communication, and group-related assignments facilitated by the social media.

Table 8

Regression Analysis – Predicting Social Engagement from Social Media Usage

Predictor Variable	B	Std. Error	Beta (β)	t	p-value
Constant	1.35	0.21	–	6.43	0.000
Social Media Usage	0.52	0.05	0.58	10.40	0.000**

$R^2 = 0.336$ | $F(1, 598) = 108.16$, $p < 0.001$

The regression model shows that social media use is a significant predictor of social engagement among university students (0.58 , $p < 0.001$). Social media use explains approximately 33.6 percent of the variation in social engagement ($R^2 = 0.336$), which is a strong predictive relationship.

Discussion

The results of the research will be of great use in knowing the importance of social media in promoting collaborative learning and social interaction among the students of the universities of Punjab in Pakistan. The information reveals that the social media use is very frequent among students given that the most commonly used applications are WhatsApp, YouTube, and Instagram. It correlates with the results of the study conducted by Al-Rahmi et al. (2018), who reported that the use of WhatsApp and similar apps is a vital element of communication and collaboration in terms of academics within a university. The research presents the facts that the students are also using social media as the source of entertainment and meaningful academic and social communication. Most of the students showed moderate use of social media as they spent 2-4 hours per day. Such usage pattern is positively linked with the reported experiences of students on collaborative learning and interaction.

These findings are corroborated with the findings of a research by Manca and Ranieri (2016) that stated that social media has developed digital places through which learners can engage, communicate and solve issues that are not traditionally possible in a learning classroom. The students appreciated the aspects of collaborative learning (including communication, teamwork, and active listening), having the overall scores higher than 3.8. This indicates towards the argument that social sites create a favorable setting to acquire social and academic skills (Tess, 2013).

In fact, the communication rating is comparatively high, which is why the social media has filled the gap between students, so that they are always able to talk to each other and collaborate on academic projects. Conversely, some dimensions of collaborative learning had

relatively low scores in the mean, like the conflict resolution and leadership, which can indicate the inefficiency of some of the dimensions to develop in a virtual setting. These results are supported by findings of Hrastinski (2009) who found out that online-based platforms are effective when it comes to facilitating task-based communication but fail to perform well in more complicated leadership or conflict management communicative activities. In the case of social engagement, the statistics indicate that the relationships among peers and the interest to participate in the process were quite impressive.

The aspect implies that social media increases the feelings of belonging and inclination to be involved in academic life and social life among students. Such finding corresponds with that of Junco (2012) that observed the more frequently a social media is used, the closer a person has social connections with peers, and the more the student participation. Nevertheless, there is a relatively lower average of mean scores in student-teacher relationships, which reveals that, whereas peer-to-peer interaction gains socially by the use of the social media, the same does not apply to the formal academic relationships.

The gap can be attributed to the boundary of the social media as a tool in professional communication or the absence of institutional support of faculty-student engagement in the digital environment. The demographic analysis showed the significant difference in the factors gender type of university, CGPA and the department of students using the social media and regarding the effects of the social media on the learning and engagement. The students of the female gender performed better in collaborative learning implying that they could be more oriented towards group interaction and scholarly debate on social sites. This confirms the results of Madge et al. (2009) who discovered that female students tend to use social media in manner that stimulates academic collaboration. The same can be said about the students of private universities, who were more engaged than the students of the public universities which could indicate the difference in access to technology, digital literacy, or the university culture.

The analysis of regression demonstrated that the use of social media has the strong positive relationship with collaborative learning ($r = 0.62$) and social engagement ($r = 0.58$). It means that the level of the student interaction and collaboration in learning will go up as the level of social media is used. Such findings are supportive to constructivist learning theory according to which the students should be given opportunities to learn in an active and social manner and by implementing collaborative tools (Vygotsky, 1978).

media sites such as WhatsApp and Instagram enable students to give feedback, share ideas, as well as ask questions that are the principal aspects of collaborative learning. Also, the fact that the usage of social media predictions of social engagements, presented in terms of regression ($R^2 = 0.336$) proves the inability to reduce the usage of online communication tools to an adjunct and should be considered to be in the center of the experiences of students in high education. It confirms the discovery that Rambe (2012) made, according to which social media may play the role of a socio-academic transition, between the formal learning context and informal peer groups and, therefore, facilitate not only the educational process, but also the social experience. There are also some issues apparent in the findings but not too prominent. Leadership and conflict resolution are also not its highest-rated matters, which means that students are actively present in social media but do not form the higher order social or management skills. It is a gap that implies that there should be more systematic incorporation of collaborative work in the digital settings.

Researchers have cautioned against the excessive and unfocused use of social media that may bring about distractions and lack of depth in the social and academic lives and results, which is similar as to what Kirschner and Karpinski (2010) wrote about. The restrictions of the student-teacher interaction should also be settled. Having obtained moderate scores in the

area, one can see that there is a possibility that teachers have not fully used social media in terms of mentoring or academic assistance. The fact is repeated by Deng and Tavares (2013) who noticed that teachers tend to perceive social media as being rather casual and do not use the latter to communicate with students. The only solution can help to bridge this gap and improve communications in the academic area and the general student satisfaction.

Speaking of its practical implications, the work recommends that schools and other learning institutions understating the relevance of social media in learning and interaction. Educators and administrators are supposed to develop social media in the curriculum design, group work and academic counselling systems. Policies are to be established so that the proper and efficient application of these platforms in education could be conducted. They can have training programs that will enable the faculty and the student to have digital collaboration skills which involve leadership, management of conflicts, and academic professionalism. To sum up, the present research reveals that social media is a potent tool that promotes collaborative learning and social interaction among the students of universities.

The findings confirm that it has positive effects in encouraging communication, peer bonding, teamwork and academic involvement. Nevertheless, the need to overcome certain issues like less involvement of teachers and improper development of a leadership on a digital platform should be resolved. Remaining research areas are the methods of improving the penetrability of social media in formal academia, focusing on ways of fully capturing the educational potential of this platform, and minimizing the dangers in the distraction and pmanagement of superficial academic contact. The role of social media in learning and engagement in students will always be a burning question to a higher education industry that continues to go digital.

Conclusion

In conclusion, this study highlights that social media plays a significant role in enhancing collaborative learning and social engagement among university students. Students actively use platforms like WhatsApp and Instagram to communicate, share academic content, and build peer relationships. While social media positively influences teamwork, communication, and student participation, areas like leadership and student-teacher interaction remain underdeveloped. Universities should promote guided and purposeful use of social media to maximize its educational benefits and address its limitations.

Recommendations

- Encourage teachers to integrate social media tools into academic activities for better student-teacher interaction.
- Conduct training sessions for students on effective and responsible use of social media for learning.
- Promote group assignments using social platforms to strengthen collaborative skills like teamwork and communication.
- Develop institutional policies that support the academic use of social media while minimizing distractions.
- Include leadership and conflict resolution tasks in online group activities to enhance higher-order social skills.

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