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## Utilization pattern of social media on student engagement and learning: Case study University of UBKV

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### Abstract

The study was conducted at Uttar Banga Krishi Viswavidyalaya. This public university is situated at Pundibari in the Cooch Behar district. The study was conducted during 2021-22. Applying a suitable research design is crucial for moving a research study forward, after considering the objectives, factors are considered and phenomena to be examined, the exploratory research design was selected for the current inquiry. Various processes like frequency, percentage, mean, standard deviation, and correlation coefficient were used to process the data for the interpretations. The study found that YouTube, WhatsApp, and Wikipedia were the most popular and utilized apps among all other social media sites and apps like Research gate, SlideShare, Facebook, and Academia. Edu. and Twitter. YouTube has ranked 1<sup>st</sup> followed by WhatsApp and Wikipedia, average respondents spend 6 hours and 30 minutes on social sites and applications like YouTube, Wikipedia, Facebook, Research Gate, Academia.edu, Twitter, WhatsApp, and Slideshow daily. The purpose of entertainment has ranked 1<sup>st</sup> and news with communication has ranked 2<sup>nd</sup> among all other purposes of using social media. Study materials are available in various formats like videos, multimedia, text, audio, and PowerPoint over the internet. However, Pdf files are the most preferred format followed by PowerPoint and video, these are ranked as 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> respectively. Pdf files were preferred by 97.50 percent of respondents, power points by 88.30 percent, and videos by 75.00 percent of respondents. Social media contents are not always, but only relevant updated, easily understandable, interactive, authentic, interesting, complete, useful and helpful. It helps the students in decision making and opinion building regarding studies and careers.

**Keywords:** Social media, utilization pattern, education, digital literacy, sites and application etc.

### Introduction

"Social media" is popular among young as well as old people and in use for various purposes. It thus needs no explanation. It consists of two words, "social," which means to communicate and exchange or receive information from others, whereas "media" refers to mass media like TV, radio, newspapers, etc. taken collectively. As per Fuchs, 2017, social media are internet-based applications that are developed on the technological capabilities of generation for sharing of user-created content, going beyond interpersonal communication with the help of universally accessible and scalable techniques. However, in general "social media," indicates "web-based" communication devices that enable individuals to interact with one another or exchange information. As per Walter and Riviera, 2004, social media can be defined as "the interactions between networks of individuals" and characterized as "kinds of digital communications (as websites for social networking and microblogging) through which users create online communities to share ideas, personal messages, information, videos, etc.". Ford and Ravansari, 2017<sup>[1]</sup>, stated it as web-based programs that allow people to exchange words with one another by sharing information, facts, views, expertise, and interests online. Broadly "social media" means a wide range of websites or platforms and applications utilized by various media devices such as computers, laptops, smartphones, tablets and other such devices.

End users use internet facilities differently as per their requirements as a result there is a rise in social media use and users over the past few decades.

Daily, more than 90 percent of college-goers use social networking sites. If we see the data, monthly active users of the top social media applications are as follows; According to Stastica (2021) Facebook used by 2.9 billion people, YouTube by 2.2 billion people, WhatsApp by 2 billion people, Instagram by 2 billion people, Tik-Tok by 1 billion people, Snapchat by 538 million people, Pinterest by 444 million, Reddit by 430 million, LinkedIn by 250 million, and Twitter by 217 million people.

### Social Media and Education

According to Greenhow *et al.*, 2019, social media is a bridge between formal and informal learning. It provides vital opportunities for active learning, involvement, collaboration, and community connection enhancement. In the modern paradigm, social media has created a digital space that can develop and envelop the complexities of multimodal or digital learning. However, as to Greenhow & Lewin, 2015, scholars suggested that students inherently adopted the role of consumers rather than full participants.

No doubt social media has helped to serve as a means of connecting people and as a medium of interaction in the social world and educational arena. Consequently, higher education has been exploring the exciting opportunities that technologies have brought to institutions, educators, and students. Today students are exposed to social media platforms on a daily basis; they use desktops, laptops, tablets, and mobile phones to actively engage in social media platforms for chatting, blogging, content sharing, and online learning purpose.

Social media use in education has a controversial nature. However, with widespread adoption, it has preserved positive responses due to the involvement of students with the technology systems and various other interactive features like customization and sharing of content. It also has the added benefit of teaching students proper and responsible use of information technology. Networking has become an essential foundation of professional lives also and many believe its positive reinforcements and use in education can be effective in the 21st-century education paradigm. It has become a major part of our daily activities.

### Research Methodology

The study was conducted at Uttar Banga Krishi Viswavidyalaya. This public university is situated at Pundibari in the Cooch Behar district. The establishment of Uttar Banga Krishi Viswavidyalaya was formerly the North Bengal campus of BCKV College of Agriculture. Applying a suitable research design is crucial for moving a research study forward, after considering the objectives, factors are considered and phenomena to be examined, the exploratory research design was selected for the current inquiry. For the selection of the respondents, stratified simple random sampling method was used. After obtaining the information on the total number of students of the main campus of Uttar Banga Krishi Viswavidyalaya, Pundibari, Coochbehar, which offers B.Sc., M.Sc., and Ph.D. programs 120 students were selected randomly from all three faculties and from all the degree programme. This study was a part of the M.Sc. degree programme, only 120 respondents were thought to be taken

also because of the time factor. Moreover, the students were also not present in campus due to the pandemic thus, the researcher could not maintain the proportion while selecting randomly among the students from different faculties as well as courses. The students use different social media platforms for their educational advancement, amusement, news updates, etc., however several of the platforms were specifically used for research purposes, including Facebook, WhatsApp, SlideShare, YouTube, ResearchGate, Academia.edu, Twitter, and Wikipedia. The researcher is also a scholar in the selected institution. Awareness about the use of various social media platforms for education or otherwise was there with the researcher. For the present study social media utilization pattern for education purposes, has been studied. Frequency of using social media sites, time spent on social media in hours, purposes of Social Networks other than education, different modes of accessing social media, preferred time of using social media, material preferred for education, and frequency of downloading and uploading were recorded. The data collection was initiated after preparing the structured schedule and making necessary. Data collection was started on 10 February 2022 and continued till 30 April 2022. The interview was conducted by personal interview method with the help of a structured schedule. All the questions were explained to them in English as well as in a regional language. A total of 120 respondents were interviewed. Statistical package for social sciences (SPSS) version 26.0.0.0 edition 64-bit was used for the analysis of the collected data. Various processes like frequency, percentage, mean, standard deviation, and correlation coefficient were used to process the data for the interpretations.

### Results and Discussions

**Table 1:** Distribution of students based on the Sites and apps referred for educational purposes n=120

S. No.	Sites and application	Frequency	Percent (%)	Rank
1.	YouTube	114	95.00	1
2.	Wikipedia	103	85.80	3
3.	Facebook	59	49.20	6
4.	ResearchGate	93	77.50	4
5.	Academia.edu	50	41.70	7
6.	Twitter	33	27.50	8
7.	WhatsApp	106	88.30	2
8.	SlideShare	87	72.50	5

\*Multiple responses were collected

It has been found from the table that YouTube, WhatsApp, and Wikipedia were the most popular and utilized apps among all other social media sites and apps like Research gate, SlideShare, Facebook, and Academia. Edu. and Twitter. YouTube has ranked 1<sup>st</sup> followed by WhatsApp and Wikipedia.

YouTube provides the students with a number of lectures in different languages thus helping them a better understanding of the subject. WhatsApp is the most preferred chatting app among others. It offers the users various facilities like voice calls, video calls, video conferencing, media sharing, document sharing, etc.

**Table 2:** Frequency of using various sites and apps of social media for education. n=120

S. No.	Sites and apps	More than once in a day	Once a day	Once in two days	Once in three days	Once in four days	Once in five days	Once in six days	weekly	Fortnightly	Rarely	Weighted mean Score	Rank
1.	YouTube	96(80.00)	16(13.30)	1(0.80)	1(0.80)	1(0.80)	1(0.80)	2(1.70)	2(1.70)	0(0.00)	0(0.00)	9.53	2
2.	Wikipedia	45 (37.50)	22 (18.30)	18 (15.00)	7 (5.80)	3 (2.50)	2 (1.70)	0 (0.00)	12 (10.00)	1 (0.80)	10 (8.30)	7.64	3
3.	Facebook	37 (30.80)	16 (13.30)	6 (5.00)	4 (3.30)	2 (1.70)	5(4.20)	0(0.00)	6(5.00)	2(1.70)	42(35.00)	5.75	6
4.	ResearchGate	28(23.30)	15(12.50)	22(18.30)	6(5.00)	8(6.70)	2(1.70)	5(4.20)	11(9.20)	4(3.30)	19(15.80)	6.42	4
5.	Academia.edu	16 (13.30)	8 (6.70)	4 (3.30)	1 (0.80)	3 (2.50)	2 (1.70)	5 (4.20)	11 (9.20)	6 (5.00)	64 (53.30)	3.56	7
6.	Twitter	12 (10.00)	7 (5.80)	1 (0.80)	2 (1.70)	1 (0.80)	1 (0.80)	1 (0.80)	5 (4.20)	5 (4.20)	85 (70.80)	2.75	8
7.	WhatsApp	107 (89.20)	7 (5.80)	3 (2.50)	1 (0.80)	1 (0.80)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.80)	9.75	1
8.	SlideShare	20 (16.60)	23 (19.17)	5 (4.20)	9 (7.50)	7 (5.80)	2 (1.70)	9 (7.50)	12 (10.00)	31 (25.80)	2 (1.70)	5.81	5

The table shows the frequency of using different sites and apps on social media for educational purposes. It has been seen that the frequency of using WhatsApp is high followed by Youtube and Wikipedia.

It may be explained by the fact that WhatsApp is not only a medium for sharing content in the form of text, images, videos, etc. but it is also a very popular platform for real-time chatting with video and audio calls. It also allows for the creation of different groups. On the other hand, YouTube provides educational content as well as content for entertainment. Wikipedia also provides instant information on any topic of various interests.

**Table 3:** Time spent by students on social media per day. n=120

S. No.	Sites and apps	Average time/Day
1.	YouTube	1hr 43 Minutes
2.	Wikipedia	48 Minutes
3.	Facebook	37 Minutes
4.	ResearchGate	36 Minutes
5.	Academia.edu	19 Minutes
6.	Twitter	8 Minutes
7.	WhatsApp	1 hrs 45 Minutes
8.	SlideShare	33 Minutes
Total		6 hr 30 Minutes

It has been found that on average respondents spend 6 hours and 30 minutes on social sites and applications like YouTube, Wikipedia, Facebook, Research Gate, Academia.edu, Twitter, WhatsApp, and Slideshow daily. It has been told that they spend on an average 1 hour 45 minutes on WhatsApp followed by 1 hour 43 minutes on YouTube and 48mins on Wikipedia every day.

Though YouTube was found to be the most preferred App the time spent on WhatsApp was found to be more or almost the same. It may be due to the fact that WhatsApp is also a medium for chatting as well as sharing documents, pic, and, VDO etc., It keeps people connected unlike YouTube, which is mainly in use for entertainment and educational purposes.

**Table 4:** Purpose of using social media other than education n=120

S. No.	Purpose	Frequency	Percent (%)	Rank
1.	Entertainment	117	97.50	1
2.	News	105	87.50	2
3.	Sports	54	45.00	3
4.	Game	31	25.80	4
5.	Promotion	19	15.80	5
6.	Communication	105	87.50	2

\*Multiple responses were collected

Social media sites and applications are being used for various purposes other than education like entertainment, news,

sports, games, promotion and communication. It has been found that the purpose of entertainment has ranked 1<sup>st</sup> and news with communication has ranked 2<sup>nd</sup> among all other purposes of using social media.

It may be concluded that students, now a days are more involved in social media even for entertainment instead of playing in playgrounds and spending time physically with friends.

**Table 5:** Mode of access to social media by the students n=120

S. No.	Mode of Access	Frequency	Percent (%)
1.	Wi-Fi	18	15.00
2.	Both Wi-Fi and Data pack	85	70.84
3.	Mobile Data pack	10	8.33
4.	LAN	7	5.83
Total		120	100

Regarding the mode of accessing social media, it has been found that the combination of Wi-Fi and mobile data pack was most preferred among all other modes of access like only Wi-Fi, only mobile data pack and LAN.

It may be explained by the fact that University has provided the students with free Wi- Fi in the hostel as well as in the faculty building however, the student also uses their personal data pack whenever they are outside the university premises or when the Wi- Fi doesn't work.

**Table 6:** Preferred timing of using social media by the students n=120

S. No.	Preferred timing	Frequency	Percent (%)	Remarks
1.	6:00 am-9:00 am	9	7.50	
2.	9:00 am-12:00 pm	22	18.30	
3.	12:00 pm-3:00 pm	10	8.30	
4.	3:00 pm-6:00 pm	12	10.00	
5.	6:00 pm-9:00 pm	33	27.50	Most preferred
6.	9:00 pm-12:00 am	31	25.80	2 <sup>nd</sup> most preferred
7.	After 12 at night	3	2.50	Least preferred
Total		120	100	

The above table shows the most preferred timing for using social sites and applications. It has been found that the most preferred timing mentioned by the students was 6 pm to 9 pm followed by 9 pm to 12 midnights. The least preferred timing was after 12 nights.

It may be concluded with the fact that all the classes get over by 5.30 pm and thus 6 pm onwards is the most preferred timing. Due to scheduled classes in the morning, after 12 nights was found to be the least preferred time.

**Table 7:** Preferred format for accessing educational content n=120

S. No.	Materials	Frequency	Percent (%)	Ranking
1.	Pdf file	117	97.50	1
2.	Video	90	75.00	3
3.	Multimedia	29	24.20	5
4.	Text	56	46.70	4
5.	Audio	23	19.20	6
6.	PowerPoint	106	88.30	2

\*Multiple responses were recorded.

Study materials are available in various formats like videos, multimedia, text, audio, and PowerPoint over the internet. However, Pdf files are the most preferred format followed by PowerPoint and video, these are ranked as 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> respectively. Pdf files were preferred by 97.50 percent of respondents, power points by 88.30 percent, and videos by 75.00 percent of respondents.

The probable reason may be the fact that Pdf files are more reliable as no amendment can be done. PowerPoint makes the topic easy to understand and video makes them interesting to learn.

**Table 8:** Frequency of downloading educational materials n=120

S. No.	Downloading	Regularly	Sometimes	Never	Score	Weighted Mean score
1.	Audio lecture	11 (9.20)	61 (50.80)	48 (40.00)	83	0.69
2.	Video lecture	47 (39.20)	67 (55.80)	6 (5.00)	161	1.34
3.	PowerPoint	67 (55.80)	50 (41.70)	3 (2.50)	184	1.53
4.	Pdf	107 (89.20)	13 (10.80)	0 (0.00)	227	1.89
5.	Text	56 (46.70)	48 (40.00)	16 (13.30)	160	1.33

\*Multiple responses collected

The table shows the frequency of materials, the respondents are downloading and found that Pdf files were downloaded the most with weighted mean score of 1.89 followed by PowerPoints with weighted mean score of 1.53. Video lectures and texts were the next to be preferred with weighted

mean scores of 1.34 and 1.33 respectively. The Frequency of downloading Audio lectures was the least.

The frequency of downloading depends on the preference they give to different formats hence the variation in the frequency of downloading may be explained with their preference as mentioned in earlier table.

**Table 9:** Frequency of uploading educational materials n=120

S. No.	Uploading	Regularly	Sometimes	Never	Score	Weighted Mean Score
1.	Audio lecture	2 (1.70)	26 (21.70)	92 (76.70)	30	0.25
2.	Video lecture	7 (5.80)	34 (28.30)	79 (65.80)	48	0.40
3.	PowerPoint	27 (22.50)	50 (41.70)	43 (35.80)	104	0.86
4.	Pdf	40 (33.30)	50 (41.70)	30 (25.00)	130	1.08
5.	Text	28 (23.30)	48 (40.00)	44 (36.70)	104	0.86

\*Multiple responses collected

The table shows the frequency of materials the respondents are uploading and found that Pdf files were uploaded the most with a weighted mean score of 1.08 followed by power points and texts with a similar weighted mean score of 0.86. Video and audio lectures were the next to be preferred with a weighted mean score of 0.40 and 0.25 respectively. The

frequency of uploading the audio lectures was the least. The overall frequency of uploading is comparatively lower than the frequency of downloading. This might be explained by the fact that the respondents are still studying and don't find opportunities of uploading materials. However, they download the materials for study purposes.

**Table 10:** Extent of using social media for various educational purposes n=120

S. No.	Statements	Regularly	Most often	Sometime	Seldom	Never	Weighted mean score
1.	Getting updates in the field of study	70 (58.30)	30 (25.00)	14 (11.70)	4 (3.30)	2 (1.70)	3.35
2.	Getting aware of institutions and their educational activities	34 (28.30)	43 (35.80)	33 (27.50)	7 (5.80)	3 (2.50)	2.81
3.	Retrieving instructional material like PPT, lectures, etc. related to the field of study	66 (55.00)	37 (30.80)	12 (10.00)	1 (0.80)	4 (3.30)	3.33
4.	Sharing of instructional material like PPT, lectures, etc. related to the field of study	48 (40.00)	38 (31.70)	23 (19.20)	10 (8.30)	1 (0.80)	3.02
5.	Sharing of instructional media – photos/ audio/video	36 (30.00)	33 (27.50)	34 (28.30)	12 (10.00)	5 (4.20)	2.69
6.	Retrieving of instructional media – photos/ video/audio	30 (25.00)	24 (20.00)	40 (33.30)	20 (16.70)	6 (5.00)	2.43
7.	Academic interaction with teachers	51 (42.50)	30 (25.00)	27 (22.50)	7 (5.80)	5 (4.20)	2.96
8.	Academic interaction with peer group	53 (44.20)	21 (17.50)	25 (20.80)	13 (10.80)	8 (6.70)	2.82
9.	Sharing of scientific information	23 (19.20)	40 (33.30)	36 (30.00)	15 (12.50)	6 (5.00)	2.49
10.	Retrieving of scientific information	22 (18.30)	35 (29.20)	48 (40.00)	7 (5.80)	8 (6.70)	2.46
11.	Sharing information about professional events	20 (16.70)	35 (29.20)	42 (35.00)	16 (13.30)	7 (5.80)	2.37
12.	Procuring information about professional events	22 (18.30)	33 (27.50)	45 (37.50)	13 (10.80)	7 (5.80)	2.42
13.	Development of technical skills	31 (25.80)	36 (30.00)	40 (33.30)	9 (7.50)	4 (3.30)	2.67
14.	Getting aware about technologies developed in the field of study	40 (33.30)	49 (40.80)	20 (16.70)	8 (6.70)	3 (2.50)	2.79
15.	Getting aware about research activities and events	44 (36.70)	36 (30.00)	29 (24.20)	8 (6.70)	3 (2.50)	2.92
16.	Retrieving instructional material for personality development	25 (20.80)	37 (30.80)	38 (31.70)	17 (14.20)	3(2.50)	2.53



17.	Playing interactive educational games	10 (8.30)	18 (15.00)	38 (31.70)	32 (26.70)	22(18.30)	1.68
18.	Participating in online quizzes and tests	13 (10.80)	28 (23.30)	43 (35.80)	27(22.50)	9 (7.50)	2.07

Social media is being in use for various educational purposes by students across the world. The present study has tried to analyze the extent to which social media is being used for various educational purposes by the respondents. Respondents were asked to inform the extent, ranging from regularly to never to 18 above-mentioned educational purposes the social media can be used. It has been found that the extent of using social media for 'getting updates in the field of study has scored the highest mean score of

3.35 and got 1<sup>st</sup> rank followed by 'retrieving of instructional material like PPT, lectures, etc. related to the field of study with a weighted mean score of 3.33 and 'sharing of instructional material like PPT, lectures, etc. related to the field of study with a weighted mean score of 3.02.

It may be concluded that the extent of use of social media is high among the respondents for getting updates in their respective field of study along with retrieving and sharing of study material.

### Conclusion

Social media has become very popular among the young student community due to the high involvement of students with the technology systems and various other interactive features like customization and sharing of content. It's mostly being used to get updates in the field of study. Students use smartphones and laptops like gadgets more to access social media. On an average, they spend more than six hrs. mainly on YouTube, WhatsApp, and Wikipedia. They spend more time for entertainment on social media than for education. Wi-Fi and mobile data pack are mostly used to access the internet. PDF and power points are mainly viewed and downloaded. The extent of using social media for 'getting updates in the field of study has got the highest mean score of 3.35 and got 1<sup>st</sup> rank followed by 'retrieving of instructional material like PPT, lectures, etc. related to the field of study with a weighted mean score of 3.33 and 'sharing of instructional material like PPT, lectures, etc. related to the field of study with a weighted mean score of 3.02. Social media for education is perceived as cost-effective and it improves the knowledge and interest of the students. However, social media contents are not always, but only relevant updated, easily understandable, interactive, authentic, interesting, complete, useful and helpful. It helps the students in decision making and opining building regarding studies and careers.

### References

1. Ford R, Ravansar H. CPD 12 Impact Skills 3 – Social Media for Academics: Research Dissemination; c2017.
2. Greenhow C, Lewin C. Recrafting formal education: Shifting the boundaries of formal and informal learning. *Learning, Media & Technology*. 2015;40(3):128-148.
3. Greenhow C, Galvin SM, Staudt Willet KB. What should be the role of social media in education? *Policy Insights from the Behavioural and Brain Sciences*. 2019;6(2):178-185.
4. Irwin C, Ball L, Desbrow B, Leveritt M. Students' perceptions of using Facebook as an interactive learning resource at university. *Australasian Journal of Educational Technology*, 2012, 28(7).

5. Manca S, Ranieri M. Facebook and the others. Potentials and obstacles of social media for teaching in higher education. *Computers & Education*. 2016;95:216-230.
6. Mohanty B, Satapathy S. Socio-economic profile of technical graduates in Orissa University of Agriculture and Technology. *Journal of Higher Education*. 1982;7(3):363-373.
7. Ndaku AJ. Impact of social media on students' academic performance. A study of students of University of Abuja. Unpublished B. Sc. Dissertation. Department of Mass Communication Management and Social Sciences. Caritas University, Enugu, Nigeria; c2013.