Repercussions of Social Networking Websites Usage Concerning Academic Performance of Engineering Students

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ABSTRACT

Social media can be defined as a form of electronic communication through which many people make on-line communication to share information, ideas, personal messages etc. Social media has gained much popularity among people of all arena. Because of its diversified features like audio/video calling, blogging, communication, entertainment, texting and sharing contents all across the globe it is developed as a protruding practice of life especially the young generation. Social media usage is increasing swiftly over the worldly map. Pakistan is also among the list of countries who have growing number of social media usage and academic performance of the students. A questionnaire was formulated and distributed in this regard. Completely filled total 532 responses were received. Results revealed that gender and year of degree has significant relationship with avg time spent. Whereas, type of residence has non-significant relationship with avg time spent on social media usage time spent on social media. However, academic outcome has positive relationship with average time spent on social media. Moreover, multiple correspondence analysis is done to understand the correspondence of purpose of social media usage with that of avg CGPA. Additionally, at the end two-way clustering is used to made the clusters of the data sets showing similar characteristics.

Keywords: Avg CGPA, avg time spent, social media, social media usage, social media websites, social networking sites, two-way ANOVA.

I. INTRODUCTION

Since the past few times technical advancements have grownup massively and have brought huge global changes. A handy platform is provided by internet to billions of computers at several locations in several countries, of professions, establishing billions government organizations, research institutes, educational institutes and other administrative firms to connect with each other. Communication gaps have been abridged via technological progress and novel modes are being formulated to deliver information dissemination, exchange and communal interaction among folks and electronic devices ultimately, linking a large figure of global spectators without taking in account the geographical restriction of space [1-3].social media is commenced when individuals started to interact. Social means anthropoid society, as meddling of folks & the groups whereas word media is the mean of expressions. So Social Media can be well-defined as "technologies that made public communication relaxed and enable deliberations among its applicants" [4]. Since its inception, social media has engrossed thousands of operators, among them many have assimilated these sites into their personal proceedings. Moreover, hundreds of communal networking sites, with several technical gears, backing up an extensive range of interests and proceedings. These interacting sites are receiving fame among pupils and experts and supporting them in linking with one other, their local and international communal at large [5]

Therefore, the word social media merely defined as a webbased mobile application that permits folks or firms to build, interrelate with, and share innovative userformulated or recent material, in digital atmosphere[4].Social networking has turned into a global trend and is rapidly spreading its range to nearly every

angle of the globe. The speedy development of media expertise has had a countless influence on the mode folks communicates every day. The rising frame of the usage of social media amongst the currently adolescence should not be over underlined. Over the period, social media has gained much popularity in pupils. It is a mode to form link ups, not only in institute but with folks outside the space of institute. Social interacting sites are a mode that is helping individuals to make them feel that are belonging to a community [6]. Because of these improvements a major discussion emerges, that in this era of massive scientific expansion social networking sites are gaining popularity among students of Pakistan [7].

According to global digital report 2018 and global digital report 2019, the number of users who remain active on social media are increased from 35 million to 37 million, which shows that 18 percent Pakistani population is using social media. By considering 2018 report it is cleared that among these 35 million people 32 million active users are using social media via their smart phones whereas 2019 report showed the increased in figure that is 36 million [8, 9]. In Pakistan the most six social media websites commonly used by the people on the Internet are Facebook, YouTube, Twitter, Pinterest, Instagram and Google+. The social media website mostly used by people in Pakistan is Facebook as 92.06 percent of residents who have access to internet actively use Facebook.

Additionally, 0.4 and 0.1 percent natives of Pakistan are using YouTube and Twitter respectively [10]. Whereas, [11] shows some different facts that are 91.6% people are Facebook users. While 3.9%, 1.84%, 1.35% and 1.17% are twitter, Pin interest, Instagram and You tube users respectively. Although, all aforementioned stats show a bit of variation but still it is very much clear that population of Pakistan are just familiar with Facebook and among them mostly are only using it with the prime drive of connectivity with peers and family however overlooking the other dynamic usages of social media.

With these advancements in technology social networking sites have gained much popularity amongst students and a key discussion have ascended that in what ways the usage of social media websites amongst undergraduate students affect their educational front [12].The core emphasis of student should be education but sadly now a days student are focusing on these websites which can be a whole time wastage [13] and sadly, non-availability of Internet is assumed to be a nightmare in this scientific-fluxed world [14].

Despite the unhealthy repercussions many students are occupied by social media, spending their maximum time on social media websites including the highly famous Facebook, Twitter and Instagram. Social media has entrenched an adverse impact on many brains. On the other hand, it is appraise as a gateway to evolve diversified understanding and dynamic expertise amongst students outside their institution boundaries [7]. Because of the increasing popularity of it, economists and professors are inquisitive about the fact that whether grades of students are affected or not. Furthermore, the authors [15-18] believe that the usage of internet and technical expertise are the key elements that usually impact educational outcomes of students in both ways i.e positive or negative.

Internet is significant component of life which cannot be overlooked. Boyd and Ellison [19] defines social networking facilities as "web-based services which allow individuals to Construct a public or semipublic profile within a bounded system, Communicate with other users; and View the pages and details provided by other users within the system" . The first social network site, SixDegrees.com, was launched in 1997 [20] . Social networking sites evolved from Web 2.0 and social media phenomena, materializing both new technologies and ancient computer-mediated communication expertise pervaded by tech industry ideals [19]. Since their inception, social network sites (SNSs) such as MySpace, Facebook, Cyworld, and Bebo have fascinated billions of individuals. most of them have infused these websites into their regular daily life [21].In recent hi-tech world, social media has almost become an indispensable segment of everyday life, predominantly in university students, who are usually immense social media users [22]

With the speedy progress of mobile communications technologies, social apps have arisen as significant communication tools. Unfortunately, addiction of using of social media is enormously increasing in current scenario. The threating impact of it on the academic performance of the over involved students are alarming. A large community is using internet for academic purposes but sadly, we are having a huge community consisting of majority of youngsters and teens who are accessing Internet only for social networking sites [23]. It is a usually observed that youngsters use smart phone in sacred and extremely disciplined places like church, mosque and lecture halls. A few of them are so over-occupied that they never stop chatting, even as they are walking along the high way [24]. No doubt, social apps has provided people sufficient convenience, but excessive use of these apps may impact adversely [25]. The progression of the Internet and its versatile features has led to a prominent rise in threats regarding social networking sites (SNSs). Social platforms have had comprehensive and massive demand and their frequently usage – mostly by youth – has stimulated many reservations, debates and researches over the subject of technical and social networking addictions[26].

II. RELATED WORK

A. SNS and Academic performance

The relations among social networking practices and academic performance has been the focus of fair amount of research attention in the past decade [27]. Numerous empirical researches have been done to observe and explain the relation between SNS practice and academic outcome [28, 29]. Some researches show that there exists no significant correlation among social media usage and GPA score [25, 30-32]. Some studies [33, 34] found out that social media use is not the sole reason of low grades, many other issues like time management, family or financial problems are the factors which impacts students 'GPA negatively. However, many studies discovered that using social media websites has adverse influence over academic performance of the students. Therefore, they conclude that the using social media and academic performance are inversely related to each other. These authors [35-40] explored that internet addiction is the reason of less attention paid to studies, major decrease in GPA scores, loss of interest in scholastic and non-scholastic activities. The authors [22, 41-43] concluded that if the amount of time spent on these platforms increases then the chances for the impact will also increase. Whereas, some studies also show there exists positive correlation in students' Academic Performance and Facebook usage i.e. the more the respondent use the better they perceived they perform[27, 44-46]. Moreover, researchers [12, 47] revealed that students engaged in information technology and mobile applications showed positive attitude towards studies.

B. Social media Usage Habit vs Gender

Another question which got the major consideration that, whether there exists any relationship between SNS usage habit and gender? In this regard different researches show different result. In this regard, some studies revealed that, gender remained non-significant variable in smart phone using habit [12, 25, 30, 40, 48-50]. Whereas, some studies explored that, males remain more hooked to social media as compared to females. Contrary to this, the academic performance of women gets more disturbed by social media. That is why, many female students avowed drop in GPA scores after social network participation as compared to their male counterparts [5, 51-53]. Additionally, it is also

an accepted fact that although males spent more time on internet browsing in comparison with females but females spent more time on the Facebook.[54]

C. Impact of SNS on Youth of Pakistan

The advancement of technology, introduction of smartphones and access to Social Networking Sites to the youth in Pakistan, has triggered many researchers to study, highlight and identify the impact of these SNS on lifestyle of our youth. Some studies have brought our attention to the fact that the core emphasis of students should be academics but sadly, students of the recent period are paying attention to these sites which might be a whole waste of time. Social Networks were just an electronic medium of connectivity between masses but disastrously it is developed as an addiction for students, teenage and even adults and most famous among all is Facebook [13]. Therefore, this addiction is a big obstacle in way of getting good marks[5, 7, 54-56]. These researchers are waged to modify curricula to incorporate social media usage into effective learning strategies However, some studies also showed that social platforms have not any relation with the grades of students. There exit many other issues which keeps students away from getting good marks [49, 57-59]. In contrast aforementioned researches, there are a few researches which find that SNS practices and academic outcomes are positively related [60, 61]. Because these findings claim that these SNS helps students to get online education and other detailed updates about the recent development in their fields. Furthermore, students of Illama Iqbal open university and virtual university admit that with the use of these technologies their academic performance was improved [4, 50]. Moreover, suggesting that social media should use for conferring subjects concerning health, education, social problems and politics. Furthermore, some students recommend that social media can be utilized by libraries to propagate the library mission and amenities with the intention of proving their existence and worth for information users.

III. METHODOLOGY

The apt research design for this research was a descriptive Α well-constructed and self-developed survey. questionnaire titled "Effect of Social Networking Sites on Academic Performances of Engineering Students" was used to get the anticipated information from the students. The populace in this study are all the full-time undergraduate students from the engineering Universities of Pakistan. The engineering students were selected purposely in order to check that how the technology is affecting the performance of students who are dealing with it on regular basis. The questionnaire was distributed randomly using emails, WhatsApp and other social media means. So, the collected data is totally random. On basis of randomly sampling technique total 562 responses were received. A total of 30 questionnaire were half filled leaving the data with sample size of 532 responses. After that, data was analyzed using Microsoft Excel and SPSS 23 software package in order to get the desired results. The online responses are downloaded into Microsoft Excel for analysis. Microsoft Excel is used to draw graphs for the research questions regarding avg time spent on social

media and avg CGPA. Additionally, all the categorical data of demographic characteristics were coded in excel and export to SPSS. For example, a categorical question of gender was coded as, 1 for male and 2 for female. Similar, coding is done for type of residence. Then the formulated hypotheses are tested at 0.05 level of significance. Twoway ANOVA is used to check the relationship between dependent and independent variables. Furthermore, Linear Regression and Multiple Correspondence analysis are used to deal with further data.

A. Hypothesis Formulation

Following hypothesis are formulated by keeping in consideration of the research questions.

H01 Avg time spent has no relation with gender.

H02 Avg time spent has no relation with Type of residence.

H03 Avg time spent has no relation with interaction of gender and type of residence.

H04 Avg time spent has no relation with academic year.

H05 Avg time spent has no relation with interaction of academic year and type of residence.

H06 Avg time spent has no relation with interaction of academic year and gender.

H07Time spent on social media has negative influence on Avg CGPA.

B. Frequency of Participants

The participants in current study were included from engineering institutions and from undergraduate level. The sample consisted 562 participants. Total 532 participants completed their survey, 30 questionnaires were not filled completely and removed from the survey and considered as bogus. The demographic information contains respondents' gender, type of residence and academic year. Gender distribution in this study depicted that female participant accounted for (28.3%) of the whole sample and male participants contributed (71.6%) of the study. The reason behind the low contribution of female participants in this study is the gender proportion in Engineering Institutes of Pakistan.

Whereas, among the 532 respondents 250 were day scholars and 281 were boarders who made 46.9% and 52.8% of the total sample respectively. Moreover, academic year shows most of participants (31.3%) was of 4th year of the degree (8th semester). Second highest (28.5%) was in the 1st year of their degree $(2^{nd}$ semester) followed by the 2nd year (22.1%) and 3rd year (17.8%) of degree residents. Moreover, after the generic classification the collected gender data is further sub-divided regarding their residence type and academic year. After that male who are residing in hostels are separated from males living in their homes and same is the case with females. In addition to this, day scholars and boarders are further classified according to their year of degree. Fig. 1 represents the frequencies of male day scholars of year 1,2,3 and 4 and males of year 1,2,3 and 4 who are using hostels as their residence. Similarly, females are divided in the same way. Moreover, among 532 respondents 163 are male day scholars whereas 217 respondents are males who live in hostels. Furthermore, 87 respondents are female day scholar and 64 are the females who live in hostels.



Fig. 1 Group demographic characteristics

IV. FINDINGS

After getting the complete demographic details of the respondents now we will address the findings and discuss the results of our research questions through the options given in the questionnaire marked by respondents. The data is retrieved from 532 respondents. The students' responses are evaluated against following questions.

i) Avg time spent by you on social media.

The respondents were asked to mention their CGPA. Fig 2 shows the classification of students regarding their CGPA. Graph shows that maximum students have GPA in range 2.5 -3 means 185(35.9%), followed by 152 (28.5%) respondents having 3 - 3.5 and 108 (20.8%) respondents having CGPA in 3.5 - 4 range. Whereas 2- 2.5 and 1.5 - 2 CGPA range got the second last and last place because of 46 (8.64%) and 37 (6.95%) respondents respectively.



ii) Avg time spent per day by you on social media

Fig 3 demonstrates the avg time spent per day on social media by respondents. The graph shows the 40.2% (214) of students spend 2-3 hours on social media. 25% (136) spent 4-5 hours, 14% (79) spent 30 minutes- 1hour and 10% (54) spent 6-7 hours. Whereas 9.2% (49) spent 8- more hours on social media per day on average.



iii) What are your primary reasons of using Social Networking Websites (multiple options can be marked)?

10 options were sought to figure out what are primary reasons of using social media by students. Fig 4 below perfectly describes the purpose of usage social media by respondents. It is found that most of them used it for entertainment, communication, academic work and time killing. On other hand some students also use it for freelancing, job hunting and on-line shopping too. The rare use of social media is to submit articles to websites. Some respondents also mention that they use social media to be social, to play online games and to do some official works etc.



A. POINT BISERIAL CORRELATION As the independent variables in the data sample are

		Avg Time Spent
Gender	Pearson Correlation	.176**
	Sig. (2-tailed)	.000
Type of Residence	Pearson Correlation	.071
	Sig. (2-tailed)	.104
Year of Degree	Pearson Correlation	.057
	Sig. (2-tailed)	.193

categorical variables whereas the dependent variables are continuous so a special case of Pearson's correlation coefficient is used in order to measure the relationship between dependent and independent variables which is known as Point Biserial coefficient correlation. Below given table 1 clearly explains the values and correlation status.

Table 1 Correlations

**. Correlation is significant at the 0.01 level (2-tailed).

Gender, type of residence and year of degree are positively correlated with avg time spent having r=.176, p=.000, r=.071 and p=.104 and r=.057, p=.193 respectively. But in case of gender this positive correlation is very weak whereas for year of degree and type of residence its negligible.

B. Two Way ANOVA

In our sample data the dependent variable is avg time spent whereas gender, type of residence and degree of the year are the independent one. The two- way ANOVA is run in order to check whether the main independent factors and their interactions have significant relationship with the dependent one or not.

a. Gender and Type of Residence

A two-way ANOVA is conducted with gender (male and female) and type of residence (day scholars and boarders) as independent variables and Avg time spent on social media as a dependent variable. All values are explained well in detail in table 2 given below.

H01 Avg Time spent has no relation with gender.

A two-way ANOVA is conducted with gender (male and female) as independent variables and Avg time spent on social media as a dependent variable. The below given table 2 explains the all values in detail. For gender the output values are F= 18.263, p= .000 and $\eta 2 = .033$. As for the value of F (1,528) = 18.263, p= .000 $\leq \alpha = 0.05$. Therefore, we got the enough evidence to reject null hypothesis and conclude that gender has significant relation with avg time spent on social media. So, it is found that male and females are different in consideration of spending time on social media. Moreover, .033 value of the partial Eta square shows the good effect of gender on avg. time spent on social media.

H02 Avg Time spent has no relation with Type of residence.

Similarly, a two-way ANOVA is conducted with type of residence (day scholars and boarders) as independent variables and Avg time spent on social media as a dependent variable. The below given table 2 explains the all values in detail showing that for type of residence the output values are F=1.764, p=.185 and $\eta 2 = .003$. As for the value of F (1,528) = 1.764, $p=.185 \ge \alpha = 0.05$. Therefore, we are unable to get the enough evidence to reject null hypothesis and conclude that type of residence has no significant relation with avg time spent on social media. So, it is found that day scholars and boarders are not significantly different from each other in time spent while using social media. Moreover, .003 value of the partial Eta square shows the almost negligible effect of type of residence on time spent on social media.

Moreover, the two-way ANOVA table (table 2) also shows the interaction effect of gender and type of residence over the dependent variable that is average time spent. On observing the table, we got to know that, the interaction of gender and type of residence has no significant relationship with Avg. time spent because for F (1,528) = 2.500, p = $0.114 \ge \alpha = 0.05$. Therefore, we are unable to get enough evidence to reject null hypothesis. Additionally, value of eta square is .005 which is also very less therefore, showing no relationship.

Table 2 Two-way ANOVA table for type of residence and gender Dependent Variable: Avg Time Spent

				-		Part ial
	Type III					Eta
	Sum of		Mean			Squ
Source	Squares	df	Square	F	Sig.	ared
Corrected Model	461873. 799a	3	153957.9 33	8.181	.000	.044
Intercept	233449 37.537	1	23344937 .537	1240.526	.000	.701
Gender	343689. 784	1	343689.7 84	18.263	.000	.033
TypeofRe sidence	33192.5 21	1	33192.52 1	1.764	.185	.003
Gender * TypeofRe sidence	47042.5 53	1	47042.55 3	2.500	.114	.005
Error	993621 1.680	528	18818.58 3			
Total	372653 75.000	532				
Corrected Total	103980 85.479	531				

a. R Squared = .044 (Adjusted R Squared = .039)

As the above two-way ANOVA table shows that in case of gender both male and female are significantly different in terms of avg time spent on social media. Whereas, in case of residence type day scholars and boarders are not significantly different. Therefore, the given below table 3 is drawn to compare the means. As in case of gender the mean of females (263.485) is more than mean of male (206.463) so we will conclude that females spent more time on social media as compared to men. In contrast to this, type of residence is not significantly related to avg time spent. Therefore, we will not consider the day scholars and boarders means which are 226.114 and 243.834 respectively. In addition to this, as the interaction effect is also non- significant therefore, we will not consider pair wise comparison too.

Table 3 Mean and Std. deviation for Type of Residence and Gender

			95%	
			Confidence	
			Interval	
		Std.	Lower	Upper
Gender	Mean	Error	Bound	Bound
Male	206.463	7.102	192.511	220.416
Female	263.485	11.295	241.295	285.674
Type of Residence				
Day Scholars	226.114	9.107	208.223	244.004
Boarder	243.834	9.751	224.678	262.991

By the visual inspection of graph (fig 5) it is clear that by considering both gender and type of residence simultaneously it is clear that females (day scholars and boarders) on average spent more time on social media than males (day scholars and boarders). Moreover, among all the four categories female day scholars have highest mean value of avg time spent on social media as compared to rest (female boarders, male day scholars as well as male boarders). Furthermore, male boarders spent more time on social media as compared to male day scholars. Contrary to this, on average, female's day scholars spent more time on social media as compared to female boarders.





b. Type of Residence and Year of Degree

A two-way ANOVA test is conducted with year of degree (1,2,3 and 4) and type of residence (day scholars and boarders) as independent variables and Avg time spent on social media as a dependent variable.

H02 Avg Time spent has no relation with Type of residence.

From the table 4, for type of residence the output values F= 3.105, p= .079 and $\eta 2 = .006$ are taken. As for the value of F (1,524) = 3.105, p= $.079 \ge \alpha = 0.05$. Therefore, now we are not convinced enough to reject null hypothesis and conclude that type of residence has no significant relation with avg time spent on social media. So, it is found that day scholars and boarders are not significantly different from each other in consideration of avg time spent. Similarly, .006 value of the partial Eta square shows the negligible effect of type of residence on time spent.

H04 Avg Time spent has no relation with academic year.

Similarly, for academic year the output values F= 3.705, p=.012 and $\eta 2 = .021$ are noted. As for the value of F (3,524) = 3.705, p= .012 $\leq \alpha = 0.05$. Therefore, we got enough proof to not accept null hypothesis and conclude that year of degree has significant relation with avg time spent on social media. So, it is found that academic year 1,2,3 and 4 are all different in consideration of avg time spent on social media. Moreover, .021 value of the partial Eta square shows the very good effect of academic year on avg time spent on social media.

H05 Avg Time spent has no relation with interaction academic year and type of residence.

However, the two-way ANOVA table show that the interaction of year of degree and type of residence has

significant relationship with Avg. time spent because for F (3,524) = 7.219, p = 0.000 $\leq \alpha = 0.05$. Therefore, we got evidences to reject null hypothesis. Hence conclude that day scholars and boarders are different from each other on basis of all academic year regrading avg time spent on social media. Additionally, value of eta square is .040 which shows the good effect of type of residence and academic year interaction on social media usage time.

	Type					Parti
	III Sum					ai Eto
	Squara		Moon			Eta
Course	Square	46	Savara	Б	C: a	Squa
Source	S	dī	Square	Г	51g.	rea
Corrected	699507	7	99929.6	5 300	000	067
Model	.378a	'	25	5.577	.000	.007
Intercept	246159	1	246159	1329.	000	717
	67.374	1	67.374	965	.000	./1/
Year_of_Deg	205711	2	68570.5	2 705	012	021
ree	.771	3	90	5.705	.012	.021
TypeofReside	57474.	1	57474.3	2 105	070	000
nce	335	1	35	3.105	.079	.006
Year of Deg						
ree *	400831	2	133610.	7.010	000	0.40
TypeofReside	.774	3	591	7.219	.000	.040
nce						
Error	969857		18508.7			
	8.101	524	37			
Total	372653		0,			
rotur	75 000	532				
Corrected	103980					
Total	85 / 79	531				
Total	03.479					

Table 4 Two-way ANOVA table for type of residence and academic year

a. R Squared = .067 (Adjusted R Squared = .055)

As the above two-way ANOVA table shows that in case of residence type day scholars and boarders are not significantly different. Whereas, the academic years 1,2,3 and 4 are significantly different from each other. Therefore, in the given below table (table 5) we will only compare the means of academic year or year of degree. As, in case of day scholars and boarders, the day scholars have mean = 211.362 which is less than mean of boarders = 232.825. But they are not significantly different so we will not consider their means. Moreover, the means of 1st year = 230.797 ,2nd year = 213.382 ,3rd year = 194.648 and 4th year = 249.547. Hence show significant difference in means. As the value of means of 4th year is highest among all followed by mean of 1st year of degree. Whereas, 2nd year mean took got the third place and 3rd year mean is lowest among all. So, we conclude that the students of 4th year of degree spent maximum time on avg on social media followed by students of 1st year. In addition to this, 3rd year students spent less time on social media as compared to students of other academic year.

Table 5 Mean a	and std.	deviation	for type	of resident	ce and	academic	year

			95%	
			Confidence	
			Interval	
Year of		Std.	Lower	Upper
Degree	Mean	Error	Bound	Bound
	230.797	11.132	208.929	252.665

1				
2	213.382	12.641	188.549	238.215
3	194.648	14.091	166.967	222.329
4	249.547	10.543	228.835	270.258
Type of Residence				
Day Scholars	211.362	8.734	194.205	228.519
Boarder	232.825	8.490	216.147	249.503

Additionally, the interaction effect is also significant therefore, so we will consider the means of interaction effects. From the given table it is evident that mean of boarder of 4th year students (280.739) is the highest followed by the mean of day scholar of 1st year (258.106), showing that boarders of 4th year spent maximum time on social media. After that, mean of boarder of 3rd year (237.073) takes the third position. Moreover, day scholar of the 4th year (218.354), day scholars of the 2nd year (216.765), boarders of the 2nd year (210.000) boarders of the 1st year (203.488), and day scholars of the 3rd year (152.222) stands on fourth, fifth, sixth, seventh and eighth place respectively on basis of average time spent on social media. Additionally, because of significance of interaction effect we will also consider pair wise comparison.

Table 6 Two-way ANOVA interaction table for type of residence and academic year

			Std	97.5% C Interval	onfidence
Year of Degree	Type of Residence	Mean	Err or	Lower Bound	Upper Bound
1	Day Scholars	258.106	16. 746	220.463	295.749
	Boarder	203.488	14. 670	170.512	236.465
2	Day Scholars	216.765	19. 050	173.942	259.587
	Boarder	210.000	16. 621	172.639	247.361
3	Day Scholars	152.222	18. 514	110.606	193.838
	Boarder	237.073	21. 247	189.313	284.833
4	Day Scholars	218.354	15. 306	183.948	252.761
	Boarder	280.739	14. 503	248.139	313.339

Dependent Variable: Avg Time Spent

Below given table (table 7) shows the pair wise comparison of both independent variables. This pair wise comparison table can be drawn by much sophisticated approach called syntax approach. But SPSS do not give this approach by default. So, by making few changes in syntax of univariate analysis we use this approach. In the given below table first we will consider day scholars section. In day scholars section 1st year has significant value with 3rd year because $p=.000 \le .025$, 2nd year has significant value for 3rd year $p=0.015 \le .025$. Similarly, 4th year has significant value for 3rd year $p = 0.006 \le .025$ and vice versa. Furthermore, by considering the boarders section 1st year has significant value with 4th year because $p = .000 \le .025$, 2nd year has significant value for 4th year because $p=0.01 \le .025$ and vice versa. In contrast to this 3rd year has no significance relation with any other academic year.

Graph (fig 6) is drawn taking the means of Avg time spent, type of residence and academic year. By inspecting the graph (fig 6) for case of day scholars, it is clear that day scholars of 1st year spent maximum time on social media as compared to day scholars of 2nd, 3rd and 4th year day scholars. Whereas, in case of day scholars average time spent decreases for 2nd and 3rd year students and again increases for 4th year day scholars but still lowers than the time spent by students of 1st year. Whereas in case of boarders the graph continuously increases form 1st year to 4th year students showing that with each successive academic year time spent on social media increases. Furthermore, by considering both day scholars and boarders simultaneously, we get to know that day scholars of 1st year and 2nd year spent more time on social media as compared to boarders of 1st and 2nd year. Whereas the day scholars of 3rd and 4th year spent less time on social media as compared to 3rd and 4th year boarders. By collectively concluding the graph we get that boarder of 4th year spent maximum spent on social media as compared to all other students. Whereas the day scholars of 3rd year spent the minimum time on social media.



Fig. 6 Academic year & type of residence vs avg time spent

Table 7 Two-way ANOVA pair wise comparison table for types of residence and academic year

Type of		(J) Year	Mean Difference (I-			97.5% Confide Difference	nce Interval for	
Residence	(I) Year of Degree	Degree	J)	Std. Error	Sig.b	Lower Bound	Upper Bound	120
Day	1	2	41.341	25.364	.104	-15.674	98.357	130
Scholars		3	105.884*	24.964	.000	49.769	161.999	
		4	39.752	22.688	.080	-11.247	90.750	
	2	1	-41.341	25.364	.104	-98.357	15.674	
		3	64.542*	26.564	.015	4.829	124.256	
		4	-1.590	24.438	.948	-56.522	53.343	
	3	1	-105.884*	24.964	.000	-161.999	-49.769	1
		2	-64.542*	26.564	.015	-124.256	-4.829	
		4	-66.132*	24.022	.006	-120.130	-12.135	
	4	1	-39.752	22.688	.080	-90.750	11.247	1
		2	1.590	24.438	.948	-53.343	56.522	
		3	66.132*	24.022	.006	12.135	120.130	
Boarder	1	2	-6.512	22.169	.769	-56.345	43.321	1
		3	-33.585	25.820	.194	-91.624	24.454	
		4	-77.250*	20.629	.000	-123.621	-30.880	
	2	1	6.512	22.169	.769	-43.321	56.345	
		3	-27.073	26.976	.316	-87.711	33.564	
		4	-70.739*	22.058	.001	-120.323	-21.154	
	3	1	33.585	25.820	.194	-24.454	91.624	
		2	27.073	26.976	.316	-33.564	87.711	
		4	-43.665	25.725	.090	-101.491	14.160	
	4	1	77.250*	20.629	.000	30.880	123.621	1
		2	70.739*	22.058	.001	21.154	120.323	
		3	43.665	25.725	.090	-14.160	101.491	

Based on estimated marginal means

*. The mean difference is significant at the .025 level.

C. Gender and Year of Degree

Another two-way ANOVA is conducted with gender (male and female) and year of degree (1st, 2nd, 3rd and 4th) as independent variables and Avg time spent on social media as a dependent variable. The below given table 8.

H01 Avg Time spent has no relation with gender.

From the table 8 output values for gender the F= 4.479, p= .035 and $\eta 2 = .008$ are noted. As for the value of F (1,524) = 4.479, p= .035 $\leq \alpha$ = 0.05. Therefore, we got the enough evidence to reject null hypothesis and conclude that gender has significant relation with avg time spent on social media. So, it is found that male and females are different in consideration of avg time spent on social media. Moreover, .008 value of the partial Eta square shows the less effect of gender on avg time spent.

H04 Avg Time spent has no relation with academic year.

Similarly, for academic year the output values are F= 3.819, p= .010 and $\eta 2 = .021$. As for the value of F (3,524) = 3.819, p= .010 $\leq \alpha = 0.05$. Therefore, we got the enough evidence to reject null hypothesis and conclude that year of degree has significant relation with avg time spent on social media. So, it is found that academic year 1,2,3 and 4 are all different in consideration of avg tome spent.

Moreove

r, .021 value of the partial Eta square shows the small effect of academic year on avg time spent on social media.

H06 Avg Time spent has no relation with interaction academic year and gender.

Furthermore, the two-way ANOVA table (table 8) shows that the interaction of year of degree and gender as no significant relationship with Avg. time spent because for F (3,524) = 1.235, p = $0.296 \ge \alpha = 0.05$. therefore, we are unable to get enough evidence to reject null hypothesis. Additionally, value of eta square is .007 which is almost negligible.

Table 8 Two-way ANOVA table for year of degree and gender

Dependent Variable: Avg Time Spent

						Parti
	Туре					al
	III Sum					Eta
	of		Mean			Squa
Source	Squares	df	Square	F	Sig.	red
Corrected	548770	7	78395.	4 171	000	052
Model	.483a	/	783	4.1/1	.000	.055
Intercept	159481	1	159481	848.4	000	610
-	16.630	1	16.630	66	.000	.018
Year_of_De	215370	2	71790.	2 8 1 0	010	021
gree	.154	5	051	5.019	.010	.021

Gender	84186. 917	1	84186. 917	4.479	.035	.008
Year_of_De gree * Gender	69621. 005	3	23207. 002	1.235	.296	.007
Error	984931 4.996	524	18796. 403			
Total	372653 75.000	532				
Corrected Total	103980 85.479	531				

a. R Squared = .053 (Adjusted R Squared = .040)

As the above two-way ANOVA table shows that in case of gender both male and female are significantly different from each other. Similarly, the academic years 1,2,3 and 4 are also significantly different from each other. Therefore, we will compare means of both gender and academic year and for that table 9 is drawn. As, in case of male and female, the males have mean = 208.329 which is less than mean of female = 240.973. So, it is clear that females have spent more time on social media than males. Moreover, the means of 1st year = 238.161, 2nd year = 220.213, 3rd year = 182.387 and 4th year = 257.843. Hence showing significant difference in means. As the value of means of 4th year is highest among all followed by mean of 1st year of degree. Whereas, 2nd year mean took got the third place and 3rd year mean is lowest among all. So, we conclude that the students of 4th year of degree spent maximum time on avg on social media followed by students of 1st year. In addition to this, 3rd year students spent less time on social media as compared to students of other academic year. Additionally, the interaction effect is non- significant therefore, we will not consider pair wise comparison. Table 9 Mean and Std deviation for year of degree and gender Dependent Variable: Avg Time Spent

			95%		
			Confidence		
			Interval		
Year of		Std.		Upper	
Degree	Mean	Error	Lower Bound	Bound	
1	238.161	11.776	215.028	261.294	
2	220.213	15.678	189.414	251.011	
3	182.387	21.171	140.797	223.977	
4	257.843	10.911	236.409	279.278	
Gender					
Male	208.329	7.049	194.481	222.177	
Female	240.973	13.720	214.020	267.926	

Another graph is drawn for avg time spent on social media but this time the variables are gender and academic year. Below given graph (fig 7) shows that females of all 4 years except 3rd year have spent more time on social media than males of all academic years. Females studying in 4th year spent maximum spent as compared to all other categories (including both males and females of all academic year). Whereas the females of 1st year stand on second position in spending time on social media. In contrast to this, the 3rd year female spent less time as compared to other females and even its value is not only less than males of 3rd year but also from all other categories too. So, we conclude females of 3rd year spent the most minimum time on social media. Moreover, in case of females the sudden drop-in time spent on social media usage is shown for 1st and 2nd year whereas for males no difference is shown for males of 1st and 2nd year. Furthermore, the increase in time spent is shown for 4th year in case of both male and female students.



D. Avg time Spent and Avg CGPA

a. Correlation

In order to check the relationship between dependent and independent variables a correlation table is drawn. The correlation between avg time spent on social media and avg CGPA r=.113 and p=.004 states that avg time spent and avg CGPA are positively correlated. Therefore, we can conclude that the students who spent more time on social media has good CGPA. However, .113 shows a weak yet positive relationship among avg time spent and avg CGPA, so we can say that there are other factors that effect CGPA too. Below given table 10 clearly explains the values and correlation status.

Table 10 Correlation for avg CGPA and avg time spent

		Avg CGPA	Avg Time Spent
Pearson	Avg CGPA	1.000	.113
Correlation	Avg Time Spent	.113	1.000
Sig. (1-tailed)	Avg CGPA		.004
	Avg Time Spent	.004	
Ν	Avg CGPA	532	532
	Avg Time Spent	532	532

b. Regression Analysis

Linear regression analysis is used to test our formulated hypothesis. In this analysis avg time spent is used as independent variable whereas avg CGPA is used as dependent variable. Below given model summary (table 11) is showing the value of R= .113 and R-square = .013. Hence proving a weak but positive relationship between

the dependent and independent variable. Moreover, Durbin-Watson test is also conducted to undergo autocorrelation. Value of Durbin-Watson should not be less than 0 and more than 4. Values from 0 to 2 shows positive whereas 2 to 4 shows negative autocorrelation. As from the table we got the value 1.533. which verifies the positive correlation.

Table 11 Regression analysis model summary

Mo		R	Adjusted	Std. Error of	Durbin-
del	R	Square	R Square	the Estimate	Watson
1	.113 a	.013	.011	.55538	1.533

a. Predictors: (Constant), Avg Time Spent

b. Dependent Variable: Avg CGPA

H07 Time spent on social media has negative influence on Avg CGPA.

By considering the ANOVA table (table 12), for regression we get values like F= 6.877, p= .009. As for the value of F (1,530) = 6.877, p= .009 $\leq \alpha = 0.05$. Therefore, we got the enough evidence to reject null hypothesis and hence we can say that avg CGPA has significant non-negative relation with avg time spent on social media.

TABLE 12 ANOVA Table of Regression Analysis

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.121	1	2.121	6.877	.009 ^b
Residual	163.477	530	.308		
Total	165.598	531			

a. Dependent Variable: Avg CGPA

b. Predictors: (Constant), Avg Time Spent

Hence concluded that avg time spent has significant positive impact on avg CGPA that means the students who spent more time on social media have high GPA.

E. Avg CGPA vs Purpose of using social media

As in sample data set the purpose of usage is multi categorical data. That is why, simple linear regression or two-way ANOVA approaches cannot be use to find the correlation among academic performance and purpose of social media usage. Therefore, a multiple correspondence analysis (MCA) technique is used to find the relationship and get the clear picture that which CGPA category student used social media for what purpose. In this approach crosstabulation of responses to each CGPA is made. The given correspondence table (table 13) is showing the score of each category of purpose of usage in correspondence to avg CGPA marked by the respondents.

Furthermore, the table (table 14) is the summary of the dimensions. The table 14 explains that 1st dimension gives 65% individual and cumulative proportion of inertia and 2nd dimension gives 18% individual and 84 % cumulative proportion of inertia. As the further dimensions are not giving beneficial individual proportions so we will ignore them and consider only the first two dimensions.

Table 13 Correspondence table of purpose of social media usage and avg CGPA

								Sub mitti
								ng
			Aca				On-	Artic
	Ent	Com	demi	Job	Tim		line	les
Avg	erta	muni	c	Hu	e	Freel	Sho	to
CGP	inm	catio	Wor	ntin	Killi	anci	ppi	webs
А	ent	n	k	g	ng	ng	ng	ites
1.5-2	26	29	18	2	3	4	1	1
2-2.5	27	23	13	8	9	7	5	0
2.5-3	165	129	101	82	21	30	13	7
3-3.5	107	93	73	45	15	16	11	4
3.5-4	96	67	59	40	15	13	10	0
Activ								
e	421	341	264	177	63	70	40	12
Marg	121	5.11	201	1,1	00	, 0		
in								

Table 14 Summary of multiple correspondence analysis

			Proportion of		Confidence		
			Inertia		Singular Value		
					Standar d	Correl ation	
Dimensio	Singular	Inert	Accoun	Cumu	Deviati		
n	Value	ia	ted for	lative	on	2	
1	.089	.008	.653	.653	.009	.453	
2	.048	.002	.187	.840	.005		
3	.039	.002	.126	.966			
4	.020	.000	.034	1.000			
Total		.012	1.000	1.000			

By considering the two dimensions row points are for Avg CGPA and column points are for purpose of social media usage. Below given graphs (fig. 8(a)) are for CGPA and purpose of usage respectively. The graph of CGPA shows that 2- 2.5 CGPA gets an extreme low negative value of dimension whereas 2.5-3 got positive value. None of the GPA value got extreme positive value of inertia. Similarly, in case of purpose of usage time killing the extreme negative value whereas submitting articles to websites got the extreme positive value of inertia. Moreover, from latter graph (fig.8 (b)) we can conclude that communication, academic work, entertainment and freelancing has close relationship. Additionally, time killing and on-line shopping also show close relationship.



Fig. 8(a) Scatter plot avg CGPA & purpose of usage



Fig. 8(b) Scatter plot avg CGPA & purpose of usage

Now the combine relationship between purpose of usage to avg CGPA is given in two-dimensional scale. Green color circle shows purpose of usage whereas blue color circles show the CGPA. By the visual inspection of graph (fig 9), it is clear that avg CGPA 2.5-3 has relationship with academic work and entertainment, whereas students having CGPA 3-3.5 show good relationship with purpose of usage like communication, academic work and entertainment. Additionally, CGPA 2-2.5 shows close relationship with on-line shopping and time killing. Similarly, students having CGPA 3.5-4 use social media mostly for freelancing and somehow for job hunting too.



Fig. 9 Correspondence chart of avg CGPA & purpose of usage

F. Two-way Clustering

The Two-step Cluster Analysis which is an exploratory technique intended to reveal natural clusters in a data file that would else not be visible. This technique can be used when data consists of both categorical and continuous variables. This clustering tool helps to cluster the similar subgroups having the same characteristics in a large data size. In this technique the automatic clustering algorithm identifies the no of cluster, with the specification given by the user as Bayesian Information Criteria (BIC) or the Akaike Information Criteria (AIC).

For our data set we use the two-way clustering technique with Akaike Information Criteria which gives the validity to our analysis. SPSS 23 is used to do the analysis. For given 5 inputs (gender, type of residence, year of degree, Avg CGPA, Avg time spent) the system automatically decides and generates 13 clusters with the cluster quality as fair, which is acceptable. Furthermore, the size of smallest and largest cluster which is 65 (12.2%) and 24 (4.5%) respectively.

After getting visual inspection of all cluster, we need to compare the cluster individually. We need to compare the all 13 cluster simultaneously in order to get a better understanding. But unfortunately, due to limitation of statistical package we will only consider 5 cluster at a time. So first we will only check the first five cluster that are 8,6,9,10 and 13 in the fig 10.



Fig. 10 Cluster comparison part 1

The fig 10 clearly explains the clusters characteristics in regard of the 5 inputs. By taking year of degree in consideration we got to know that members of cluster 8 belong to 1st year and cluster 6,10 belong to 2nd and 3rd year respectively. Moreover, both cluster 9 and 13 members belong same to academic year that is 4th year. In addition to this all the members of these clusters have gender male. Whereas cluster 10 and 13 member belong to day scholar category and 8,9 and 6 belong to boarder category. By looking at avg CGPA we got to know that cluster 13 has maximum GPA whereas cluster 6 has minimum GPA among all. Similarly, in avg time spent the members of cluster 10 spent the minimum time and cluster 9 members spent maximum time on social media. After studying the first five clusters now, we will move to next five clusters 7,11,12,1 and 4. The fig 11 clearly explains the clusters characteristics in regard of the 5 inputs which are different from each other. By taking year of degree in consideration we got to know that members of cluster 11 and cluster 4 belong to 1st year and cluster 12, 7 and 4 belong to 2nd and 3rd and 4th year respectively. In addition to this all the members of 7,11,12 clusters have gender male and 1 and 4 cluster members are female. Whereas cluster 11,12 and 1 member belong to day scholar category and 7 and 4 belong to boarder category. By looking at avg CGPA we got to know that cluster 1 has maximum followed by cluster 11 and after that cluster 4 gets the third position depend on avg GPA scale whereas cluster 12 members has minimum GPA among all. Similarly, in avg time spent the members of cluster 1 spent the maximum time and remaining clusters spent almost similar time with small figure changes on social media. As we have 13 clusters. First, we made two sets of 5 clusters covering the 10 clusters in total.



Fig. 11 Cluster Comparison Part 2

Now we are left with only three clusters, so we will compare the remaining three 5,2 and 3 clusters simultaneously. The below fig 12 clearly explains the remaining 3 clusters characteristics in regard of the 5 inputs. By taking year of degree in consideration we got to know that members of cluster 2 belong to 1st year and cluster 3, 5 belong to 2nd and 4th year respectively. Additionally, all members of clusters 2,5,3 belong to female gender category. Whereas on comparison with (clusters given in fig 11) cluster 11,12 and 1 member belong to day scholar category and 7 and 4 belong to boarder category. By looking at avg CGPA we got to know that cluster 2 and cluster 3 have maximum avg GPA whereas cluster 5 members has minimum GPA. Moreover, cluster 2 and cluster 3 has maximum CGPA among all the 13 clusters. Similarly, in avg time spent the members of cluster 2 and 5 spent the maximum time and remaining cluster 3 spent minimum time on social media.

Furthermore, cluster 3 members spent most minimum time among all 13 clusters.



Fig. 12 Cluster Comparison Part 3

The fig 13 is giving the complete information of all the 13 clusters. These clusters are formed with the inputs like gender, type of residence, academic year, avg CGPA and avg time spent on social media. The respondents having the similar responses to these inputs are clustered together. Members of every cluster have similar characteristics whereas, these characteristics differ from other cluster's members.

From fig 13 it is clear that cluster 8 is at place 1 because it is having maximum no of the cases or respondents 65 (12.2%), followed by cluster 6 having 60 cases (11.3%), followed а successive order by cluster 9,10,13,7,11,12,1,4,5,2 and 3 with cases 57 (10.7%), 47 (8.8%), 46(8.6%), 36(6.8%), 36(6.8%), 34 (6.4%),33(6.2%), 33(6.2%), 31(5.8%), 30(5.6%) and 24(4.5%)respectively. Moreover, by considering input CGPA then cluster 3 has maximum avg CGPA whereas cluster 12 has minimum CGPA among all 13 clusters. Similarly, by taking avg time spent in account than we got to know that members of cluster 2 and cluster 3 spent maximum and minimum time on social media among all the 13 clusters respectively.

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Cluster bel	escription	Size	nputs				
•	-	12.2%	Year of Degree 1 (100.0%)	Gender Male (100.0%)	Type of Residence Boarder (100.0%)	Avg CGPA 2.85	Avg Time Spent 199.08
9		6 11.3% (60)	Year of Degree 2 (100.0%)	Gender Male (100.0%)	Type of Residence Boarder (100.0%)	Avg CGPA 2.83	Avg Time Spent 200.50
6		10.7%	Year of Degree 4 (100.0%)	Gender Male (100.0%)	Type of Residence Boarder (100.0%)	Avg CGPA 2.85	Avg Time Spent 270.79
10		8.8%	Year of Degree 3 (100.0%)	Gender Male (100.0%)	Type of Residence Day Scholar (100.0%)	Avg CGPA 2.95	Avg Time Spent 149.36
13		8.6%	Year of Degree 4 (100.0%)	Gender Male (100.0%)	Type of Residence Day Scholar (100.0%)	Avg CGPA 3.02	Avg Time Spent 178.37
1		6.8%	Year of Degree 3 (100.0%)	Gender Male (100.0%)	Type of Residence Boarder (100.0%)	Avg CGPA 2.97	Avg Time Spent 245.42
7		6.8%	Year of Degree 1 (100.0%)	Gender Male (100.0%)	Type of Residence Day Scholar (100.0%)(Avg CGPA 3.00	Avg Time Spent 215.28
12		6.4% (34)	Year of Degree 2 (100.0%)	Gender Male (100.0%)	Type of Residence Day Scholar (100.0%)(Avg CGPA 2.69	Avg Time Spent
-		6.2%	Year of Degree 4 (100.0%)	Gender Female (100.0%)	Type of Residence Day Scholar (100.0%)	Avg CGPA 3.34	Avg Time Spent 274.09
4		6.2%	Year of Degree 1 (63.6%)	Gender Female (100.0%)	Type of Residence Boarder (100.0%)	Avg CGPA 3.16	Avg Time Spent
2		5.8%	Year of Degree 4 (100.0%)	Gender Female (100.0%)	Type of Residence Boarder (100.0%)	Avg CGPA 3.02	Avg Time Spent
2		690 (30	Year of Degree 1 (100.0%)	Gender Female (100.0%)	Type of Residence Day Scholar (100.0%	Avg CGPA 3.18	Avg Time Spent 309.50
		4.5	Year of Degree 2 (70.8%)	Gender Female (100.0%)	Type of Residence Day Scholar (100.0%	Avg CGPA 3.40	Avg Time Spent

Input (Predictor) Importance

Clusters

Fig. 13 Cluster distribution

V. DISCUSSIONS

The data analysis was done by using SPSS software and excel. Graphs of research questions were made through excel. SPSS was used to run Biserial Correlation, two-way ANOVA, linear regression, multiple correspondence analysis and two-way clustering. Moreover, line graphs are also drawn by using SPSS.

Linear regression is used by taking avg time spent as independent variable and avg CGPA as dependent variable. The results indicated that there exists a significant relationship between social media usage and academic performance of the students perusing engineering degree. Results show that both have positive significant relationship, means students who spent more time on social media has better CGPA. Eventually, making it clear that social networking sites usage has positive impact over the academic performance of the students. Two-way ANOVA is used to check relationship of dependent variables avg time spent with the independent variables gender, type of residence academic year and time spent. Analysis shows that gender has significant relationship with avg time spent. Moreover, on further analysis the given research indicated that females spent more time on social media as compared to males giving a hint that female usually stay indoors that is why spent more time on social media. On other hand, year of degree and type of residence have significant and non-significant relationship with avg time spent respectively. Therefore, it is found that day scholars and boarders are not significantly different from each other in time spent while using social media. Additionally, in case of year of degree, it is found that academic year 1,2,3 and 4 are all different in consideration of avg time spent on social media. Clearing the fact that students of 4th year of degree spent more time on social media followed by the students of 1st year of degree, giving an idea that students remain carefree either start or end of degree. In addition to this if interaction effects are considered only interaction of type of residence and academic year has significant relationship.

Furthermore, multiple correspondence analysis was used to understand the relationship between purpose of usage with avg CGPA. Results show that avg CGPA 2.5-3 has relationship with academic work and entertainment, whereas students having CGPA 3-3.5 show good relationship with purpose of usage like communication, academic work and entertainment. Additionally, CGPA 2-2.5 shows close relationship with on-line shopping and time killing. Similarly, students having CGPA 3.5-4 use social media mostly for freelancing and somehow for job hunting too.

Two-way clustering is done to gather the cases having similar characteristics in one group. Total 13 clusters were made by using 5 inputs. Among 5 inputs 3 inputs were in form categorical data whereas 2 inputs were continuous data type. Majorly we were considering the continuous data that is avg CGPA and avg time spent. Moreover, by considering input CGPA then cluster 3 has maximum avg CGPA whereas cluster 12 has minimum CGPA among all 13 clusters. Similarly, by taking avg time spent in account than we got to know that members of cluster 2 and cluster 3 spent maximum and minimum time on social media among all the 13 clusters respectively.

VI. CONCLUSIONS

Social media has gained popularity all across the globe because of great extent of technological developments over a recent period of time. People belong to all arena and professions use social media. Almost everyone has become so addicted social media that they used to spend a good number of hours on these apps predominantly students.

During the research, the participants were asked about the reason of their academic performance. 49.6% respondents stated that excessive use of social media is the key reason of poor academic performance. However, from the analysis of the study held, social media's impact is found out to be mostly positive because students spent time of their daily activities on these social media websites enabled to share and develop novel ideas and notions concerning to their academic fields. They can also utilize these forums for amusement as well as find them helpful in their academic tasks. Therefore, from this conducted research we have concluded that students spent more time on social media has better academic outcomes. These interacting websites usage has turned into the daily routine practice of students. They spent the prime portion of their times on these forums for enjoyment and focus on their academics too. By these social platforms they can perform their academic work along with entertainment. No doubt, we got a positive relation between avg time spent and academic performance but still just getting good grades are not enough. From this research we have also find out that respondents usually spent 4-5 hours daily on average on social networking sites are still not aware about the basic web tools. Many students mentioned that they have not even heard the names. Whereas a few have mentioned that they are expert in the web tools. In addition to this, mostly students use it for entertainment and communication. Whereas, the least it is use for research articles search, read and submission.

Students are a valuable asset of any nation. Therefore, it is suggested that youth have to be more prolific. The students need to curtail the time they spent involving in entertainment and time killing activities. Instead they should focus on recent developments in the field of research and should use social media platforms for good cause.

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