

WhatsApp Usage among the Selected Schools Students in Kalmunai, Sri Lanka

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Abstract

In this descriptive cross-sectional research study, a sample of 233 school students data were collected from different two schools in Kalmunai Zone using a stratified random sampling technique. This study aimed to analyse the student's usage of the internet and WhatsApp, to compare the WhatsApp usage among stream wise, and to check the relationship between WhatsApp usage and school educational performances. More students preferred chatting and information sharing in WhatsApp. And they said that WhatsApp is a time waste and they do not have enough time to use. 60.5% of the students spent less than 1 hour on WhatsApp. 20% of the pupils kept their internet for 24 hours. The findings prove that valuable study time of a day is engaged with WhatsApp usage, thus it affects the time allocation for the studies. Further, the field of study is significantly related to all variables except WhatsApp usage during studies, face to face communication reduction and only some reasons for using WhatsApp. But the class stand is interconnected with information sharing, wish to others WhatsApp installation, WhatsApp quality, and affecting rest time. WhatsApp is considered one of the best messengers in the student's view. This study recommends that the positive usage of WhatsApp needs collaborative study and research should be encouraged while extreme usage for entertaining purposes must be reduced to the least possible.

Keywords: Internet, School, Social media, Students, WhatsApp

1. Introduction

The internet is generally used by students in several countries in their day to day life. Nowadays, it can be used despite of time and the geographical location with the help of smart devices. Therefore, usage of internet has become a part of life for the undergraduates for their academic purpose [1]. At present, a new wave of mobile communication facilities called as Mobile Instant Messaging (MIM) applications has extended to a significant momentum. Applications like WhatsApp, Viber and Line let mobile users send real-time text messages to individuals or groups of friends at any time and at not any cost.

Nowadays, one of the supreme interesting MIM Applications on the market is WhatsApp. WhatsApp is a platform for prompt messaging applications all over the world for smartphone [2]. More than 1.5 billion people in over 180 countries use WhatsApp Messenger [3], [4]. It is free and offers simple, secure, reliable messaging and calling, available on phones across the world [5]. WhatsApp started as an alternative to SMS. It now supports sending and receiving a variety of media: text messages, images, audios, videos, documents, information and user location as well as voice calls and video calls.

And also, the messages and calls are secured with end-to-end encryption [6]. WhatsApp was founded in 2009 by Jan Koum and Brian Acton, both former employees of Yahoo [7]. This kind of platform was designed as a way of communication for family, friends and strangers to have conversations and dealings. Later, WhatsApp is combined to the Facebook in 2014 but continues to operate as a separate app with a laser focus on building a messaging service that works fast and reliably anywhere in the world.

2. Literature review

Usage of WhatsApp as a study implement is beneficial to both learners as well as teachers. A study recommends that electronic protocol should be functional in the instructor-learner teaching procedure through WhatsApp [8]. WhatsApp messenger is used by a bulk amount of post-graduate students rather on a regular basis for academic intentions. A study reveals the title role of the library in mobile schooling. It suggests that universities need to join in the mobile skill into schooling progression so that a policy can be formed to share the digital materials [9].

Another study describes, WhatsApp instead of constructing communication at ease also quicker thereby enhancing real movement of data and opinion sharing amid scholars, slightly has crushed adversely on the implementation of tertiary level students in Ghana such as: WhatsApp affects students study time, results in procrastination relevant issues, impairs students' spelling grammar punctuation of sentences, leads to deficiency of absorption for the duration of lectures, results in discomposing WhatsApp online activities plus academic preparation as well as diverts students from assignment works, etc. [10].

3. Materials and methods

The study was undertaken using a stratified random sampling technique by chosen up samples from the respective stratum of the corresponding high schools KM/Zahira College Kalmunai (National School) and KM/Mahmud Ladies College Kalmunai. A total of 300 questionnaires were distributed amongst the schoolchildren and in these, the usable questionnaires were 233. So the sample size was 233. This study has been carried out to analyse the student's usage of the internet and WhatsApp, to compare the WhatsApp usage among stream wise, and to check the relationship between WhatsApp usage and school educational

performances. Descriptive test statistics and chi-squared tests were performed to check the relationship using SPSS software. Further, 5% of the significant level was used in this study. Further, 5% of the significant level was used in this study. This research study tests the following hypotheses:

- H₁: There is a relationship between demographic variables and device they use for the Internet.
- H₂: There is a relationship between demographic variables and mobile messengers they use.
- H₃: There is a relationship between demographic variables and How Long Use (years).
- H₄: There is a relationship between demographic variables and Reasons for WhatsApp using (Chatting, Sending Images, Video, and Audio, Group Chatting, Sharing Document, Update Yourself, Sharing Information, Entertainment)
- H₅: There is a relationship between demographic variables and sharing education-related topics.
- H₆: There is a relationship between demographic variables and Hour/ Day.
- H₇: There is a relationship between demographic variables and feeling anxious when do not use WhatsApp.
- H₈: There is a relationship between demographic variables and wish to others install WhatsApp
- H₉: There is a relationship between demographic variables and Affect rest time.
- H₁₀: There is a relationship between demographic variables and Affect study time.
- H₁₁: There is a relationship between demographic variables and Quality of WhatsApp.
- H₁₂: There is a relationship between demographic variables and Face to Face Communication reduce.

*Demographic variables: Gender, Year of study, Field of Study and Class stand.

4. Results, analysis, findings and discussion:

The personal background information of the students is shown in Table 1. Out of the 233 students, the majority of the students were males (61.8%) and the remaining (38.2%) were females. 64.8% of them were between the 16-17-year-old age categories. These students learning was in various streams such as Maths, Bio, Commerce, Arts, and Technology. This study reveals that the majority of the students participated from Bio (21.9%), Arts (21.5%), and Technology (21.5%) streams. Only 18.9% and 16.3% of students were in Maths and Commerce stream respectively. Additionally, the respondents were asked about their education level, 64.8% of the students were in the first-year while 35.2% of them were second-year students.

Table 1. Demographic variable

Variables	Frequency	%
Gender		
Male	144	61.8
Female	89	38.2
Age		
16 – 17 years	151	64.8
18 – 20 years	82	35.2
Stream		
Maths	44	18.9

Bio	51	21.9
Commerce	38	16.3
Arts	50	21.5
Technology	50	21.5
Year		
1	151	64.8
2	82	35.2

Table 2 shows the usage of the Internet among students. The majority of students have access to the internet in their day to day life [11]. 20.6% of the students keep hook to internet for 24 hours. Thus, a fair amount of time of a day is engaged with WhatsApp usage, time for further study work is reduced. The highest percentage for the sources of access is parents Phone (49.8%). As well as 25.8% of students have own smartphone. And around half of them (51.1%) say they spend money on internet usage from their parents' money.

Table 2. Usage of the Internet

Variables	Frequency	%
Internet Access		
Yes	167	71.7
No	66	28.3
Anytime Internet connection		
Yes	48	20.6
No	185	79.4
Devices**		
Own Smart Phone	60	25.8
Parents Phone	116	49.8
Sibling Phone	19	8.2
Friends Phone	9	3.2
Relative Phone	6	2.6
Computer/ Laptop	4	1.7
Internet usage way**		
Pocket money	42	18.0
Parents money	119	51.1

Home connection	47	20.2
Friends money	15	6.4
Friends home connection	4	1.7

Note: **N=233 due to unmarked fields by respondents

According to the survey made, WhatsApp is the most popular mobile messenger rendered by the students (72.1%), but they rarely use both IMO (5.2%) and Facebook (4.7%). It concludes that, the youngsters are more likely to be addicted to WhatsApp messenger. The least percentage of people use WhatsApp to send audio (6%) and event updates (9.9%). Among the several services on WhatsApp, most of students' preferences are chatting (44.6%), sharing the information (30.0%) and group chat (28.3%). 18% of students use for sharing documents. Some of them are using WhatsApp for uploading images (16.7%) or videos (16.3%) and entertainment purposes (13.3%). It shows that more social media and new technologies have provided space and application platforms of amusement to society as well as disguised kind of things for desirability to the society for using the internet and spent a lot of time. The majority state that, the time runs off as waste when they hook in WhatsApp (20.6%), meanwhile few of them declare, that they don't have adequate time to spend (13.7%) and a smartphone (11.2%) for using WhatsApp. It indicates that people use WhatsApp mostly to contact Friends (66.5%) and Family (51.1%). It confirms that only 18% of students have been using WhatsApp for more than two years, it seems that they have started to use WhatsApp very recently. 60.5% of the students use WhatsApp less than one hour daily, but there are some students who use more than 5 hours per day (1.7%). Mostly, pupils share text messages (62.7%).

Table 3. Pattern of WhatsApp usage

Variables	Frequency	%
Mobile messenger**		
WhatsApp	168	72.1
Facebook	11	4.7
Google	8	3.4
Skype	4	1.7
IMO	12	5.2
Yahoo	3	1.3
Reasons for using WhatsApp*		
Chat	104	44.6
Send Image	39	16.7
Send Video	38	16.3
Send Audio	14	6.0
Group Chat	66	28.3
Document Share	42	18.0
Event update	23	9.9
Information Share	70	30.0
Entertainment	31	13.3
Reasons for not using WhatsApp**		
Lack of Time	32	13.7

Financial Problem	20	8.6
Wasting of Time	40	20.6
Not having Smart Phone	26	11.2
Chat with*		
Family	119	51.1
Friends	155	66.5
Teacher	65	27.9
Stranger	11	4.7
Other	19	8.2
How Long Use (years)		
0	47	20.2
< 1	91	39.1
1 and 2	53	22.7
> 2	42	18.0
Hour/ Day*		
0	52	22.3
< 1	141	60.5
1 – 3	25	10.7
3 – 5	11	4.7
> 5	4	1.7
Media type**		
Text	146	62.7
Audio	18	7.7
Video	16	6.9
Image	20	8.6

Note: *Multiple choice questions

**N≠233 due to unmarked fields by respondents

In Figure 1, about 40.2% of the students use the Internet via their parents' phone for less than 1 hour per day and about 6.1% used own phone for 1-3 hours per day.

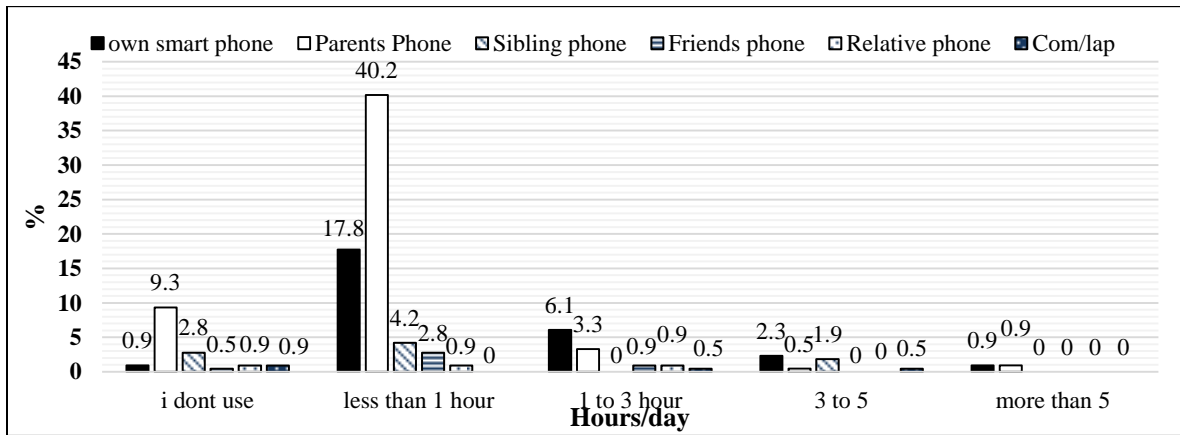


Figure 1. Devices vs. Spending hours on WhatsApp/day

The majority of the people say that the group message is useful and it helps them to be in touch with their friends and families (47.2%). 13.3% of students do not like to use WhatsApp group conversation. But the majority of them are in 1 – 3 WhatsApp groups (40.8%) and 20.2% of them had 4 – 6 WhatsApp groups which clearly state that people like to keep in touch with group chats. During the past year, most of them have been connected to groups from 1 to 3 (39.9%), also only 3.9% of students have joined more than 10 groups. But 18.5% of people didn't show any interest to join with any WhatsApp group. 67.5% of pupils have left groups during the last 1 year, but 27.9% of them did not leave from any group. It proves that they comfortable with group conversations. 17.2% of students have left because of no useful data and waste of internet data usage. But 20.6% of them have left due to feeling too much disturbance or distraction by WhatsApp and 25.8% say they have lost their valuable time by using the group chat. 39.1% of them share anonymous messages from their friends or group messages and the majority of them (61.4%) do not enquire anonymous messages before sharing.

Table 4. Usefulness of group messaging

Variables	Frequency	%
Purpose of group chat**		
Connecting Family & Friends	110	47.2
Business	15	6.4
News Update	63	27.0
Other	17	7.3
Number of groups**		
0	31	13.3
1 – 3	95	40.8
4 – 6	47	20.2
7 – 10	15	6.4
10 +	18	7.7
Number of Joined Groups in past 1 year**		
0	43	18.5
1 – 3	93	39.9
4 – 6	42	18.0

7 – 10	19	8.2
10 +	9	3.9
Number of Groups left in past 1 year**		
0	65	27.9
1 – 3	95	47.8
4 – 6	33	14.2
7 – 10	8	3.4
10 +	5	2.1
Reason for Leaving Group**		
Disturbance	48	20.6
Irrelevant	19	8.2
Loss of Interest	15	6.4
No useful data	33	14.2
Time waste	60	25.8
Data Waste	7	3.0
Other	7	3.0
Share anonymous messages		
Yes	91	39.1
No	142	60.2
Enquire before sharing anonymous messages		
Yes	90	30.8
No	143	61.4

**N≠233 due to unmarked fields by respondents

In Table 5, the majority of the students use WhatsApp sometimes for educational related topics sharing. And 21.5% of them say they do not use WhatsApp for their educational purposes. Furthermore, 43.2% of the students said that their class rank was at 1 to 9th level but 45.9% of them said that their class rank has been gone to 10–19th level because of WhatsApp usage.

Table 5. Influence of WhatsApp in Education

Variables	Frequency	%
Education related topics sharing		
Frequently	68	29.2
Sometimes	115	49.4
Never	50	21.5
Class stand		
1 – 9	102	43.2
10 – 19	107	45.9
20 – 29	21	9.0
> 30	3	1.3

Note: *N≠247 due to unmarked fields by respondents

***Multiple choice questions

The majority of the pupils disagree that they feel anxious when they can't use WhatsApp (46.8%) meanwhile 27% of the students strongly disagree about that and 16.3% of them agree with that. 21.9% of students say that people around them should install WhatsApp because they use, but 42.5% of them reject that in the meantime 30.5% of them strongly reject it. The majority of the pupils agree with WhatsApp affecting their rest time (47.7%) and 25.3% of pupils say their rest time is not affected by WhatsApp. The bulk number of students say that they do not use WhatsApp during their study time (45.5%). Students who are using mobile phones even when they are at the schools and private classes, it is not advisable to use WhatsApp during their study time, but 21.5% are using WhatsApp at their study time. Thus, fair amount of valuable study time of a day is engaged with WhatsApp usage, the study hours of that day will be affected. 31.3% of them say WhatsApp has high quality and 49.8% say it reduces the face-to-face communication.

Table 6. Impact of WhatsApp usage

Variables	Strongly Disagree		Disagree		Agree		Strongly Agree	
	Freq	%	Freq	%	Freq	%	Freq	%
Feel anxious when I can't use WhatsApp	63	27	109	46.8	38	16.3	22	9.4
People around me should install WhatsApp because I use	71	30.5	99	42.5	51	21.9	12	5.2
Affect rest time	19	8.2	59	25.3	111	47.7	44	18.9
Use WhatsApp during study time	58	24.9	106	45.5	50	21.5	19	8.2
High quality in WhatsApp	29	12.4	110	47.2	73	31.3	21	9
Reduces face-to-face communication	13	5.6	52	22.3	116	49.8	52	22.3

Figures 2 and 3 explicit the comparison between the stream of the students for the frequent internet usage device and how they take money for internet usage. Mostly arts students get the internet by using their own phones (36%) and parents' phones (64%). And most of all students use the internet by getting their parents money.

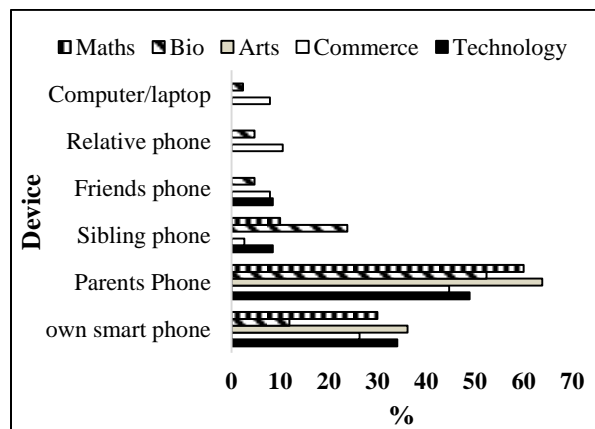


Figure 2. Stream vs. Type of Device

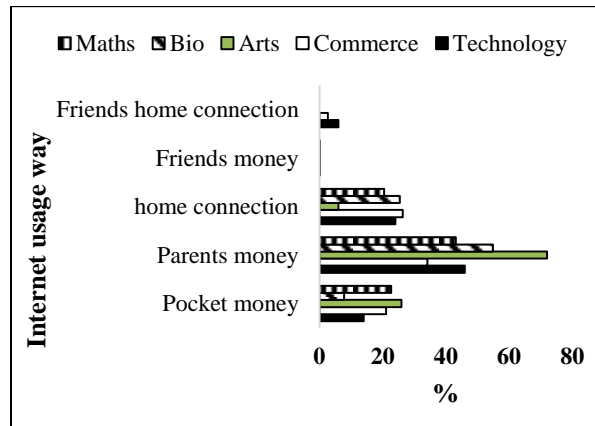


Figure 3. Stream vs. Internet usage

Figure 4 shows the comparison of stream with enquire before sharing. Mostly commerce stream students enquire before sharing anonymous messages.

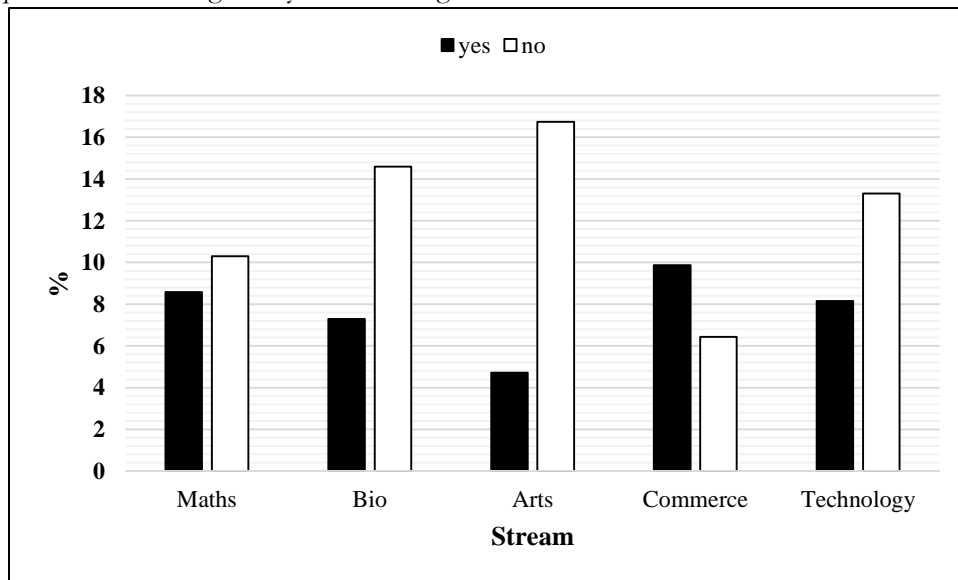


Figure 4. Stream vs. Enquire before share

In Figure 5, 80% of arts students use WhatsApp sometimes to share educational related messages. Most only bio students use WhatsApp frequently for their educational purposes.

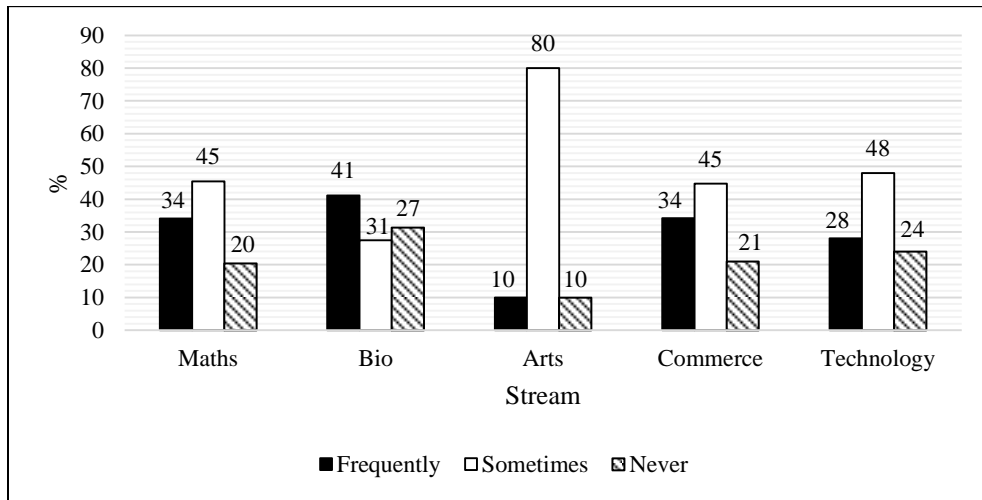


Figure 5. Stream vs. Sharing educated related topics

All streams students agree with the rest time is affected by the WhatsApp usage. The stream comparison with rest time affected results are shown in Figure 6.

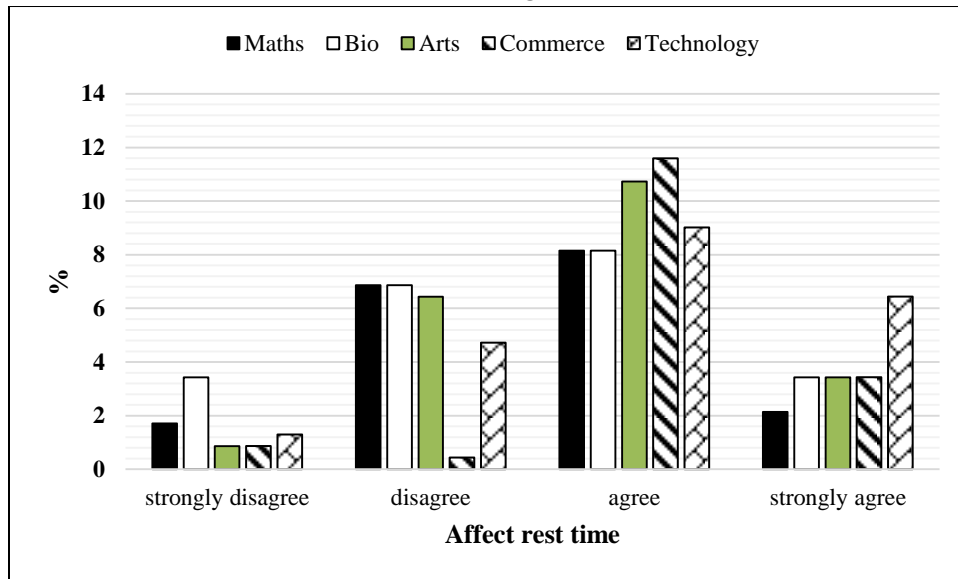


Figure 6. Stream vs. Rest time affected

Table 7 shows the relationship with demographic variables. There is no significant relationship between gender wise and how long use WhatsApp use (years), reasons for using WhatsApp (except chatting and information sharing), hours/day, feeling anxious and rest time effected. As well as, the year of study also considerably interrelated with the device, messenger type, how long use WhatsApp (years), reasons for using WhatsApp (only chatting and sending audio), hours/day, rest time effected and quality. But the field of study is significantly related to all variables except using WhatsApp during studies, face to face communication reduce and some of the reasons for using WhatsApp. And the class stand is interconnected with information sharing, wish to others install WhatsApp, rest time effected and quality.

Table 7. Relationship with demographic variables

Variables	Gender	Year of Study	Field of Study	Class Stand
	χ^2 (P-value)	χ^2 (P-value)	χ^2 (P-value)	χ^2 (P-value)
Device	77.900 (0.000*)	13.232 (0.021*)	53.456 (0.000*)	9.808 (0.832)
Messenger Type	15.528 (0.008*)	12.793 (0.025*)	49.397 (0.000*)	13.462 (0.567)
How long use WhatsApp (years)	4.498 (0.212)	9.662 (0.022*)	27.003 (0.008*)	10.528 (0.309)
Reasons for using WhatsApp				
Chat	3.893 (0.048*)	4.399 (0.036*)	19.380 (0.001*)	5.090 (0.165)
Send Image	0.159 (0.690)	1.448 (0.229)	11.942 (0.018*)	7.574 (0.056)
Send Video	2.812 (0.094)	0.026 (0.873)	6.050 (0.195)	3.815 (0.282)
Send Audio	0.585 (0.444)	5.527 (0.019*)	13.858 (0.008*)	0.926 (0.819)
Group Chat	0.437 (0.508)	2.111 (0.146)	7.712 (0.103)	3.356 (0.340)
Document Share	2.011 (0.156)	0.404 (0.525)	13.634 (0.009*)	1.459 (0.692)
Event update	0.126 (0.723)	0.928 (0.335)	0.965 (0.915)	5.449 (0.142)
Information Share	16.326 (0.000*)	0.622 (0.430)	8.983 (0.062)	14.216 (0.003*)
Entertainment	1.272 (0.259)	1.558 (0.212)	4.1154 (0.391)	2.890 (0.409)
Share Education Topic	6.826 (0.033*)	1.305 (0.521)	29.893 (0.000*)	5.881 (0.437)
Hours/day	8.967 (0.062)	11.232 (0.024*)	48.036 (0.000*)	14.570 (0.266)
Feel anxious when I can't use WhatsApp	-0.010 (0.156)	2.036 (0.565)	38.286 (0.000*)	13.085 (0.159)
I wish to Others Install WhatsApp	15.695 (0.001*)	7.217 (0.065)	29.518 (0.003*)	34.438 (0.000*)
Rest Time Effectd	3.651	13.162	27.843	38.992

	(0.302)	(0.004*)	(0.006*)	(0.000*)
Using WhatsApp during Studies	16.864	3.822	18.584	5.513
	(0.001*)	(0.281)	(0.099)	(0.787)
Quality	14.581	17.353	28.746	20.813
	(0.002*)	(0.001*)	(0.004*)	(0.014*)
Face to Face Communication reduce	16.864	3.822	18.584	5.513
	(0.001*)	(0.281)	(0.099)	(0.787)

Note: * fail to accept null hypothesis of there is no relationship at 5% level

5. Conclusions and recommendations

Using the descriptive study, the students' internet, WhatsApp usage and the comparison of the usage between streams of the students were analysed. Arts students use the internet more using their own phones and parents' phones. Students use the mobile phone in despite of various places. This condition leads to drain the pocket of the parents on their internet purpose. This study reveals that most of them have adopted with WhatsApp messenger because of easy chatting, information sharing and staying connected with friends or families via groups. The majority of them say that WhatsApp is a time waste and they do not have enough time, meanwhile few of them say that they don't have a smartphone. More pupils spend less than one hour on WhatsApp per day but there are some students who use more than 5 hours per day. 20% of the pupils engage themselves on internet for 24 hours, results as much of the valuable study time of a day is being engaged with WhatsApp usage, thus study hours of that day will be affected. Further, they say that they also prefer to use WhatsApp in the meantime they want the people around them to start to the usage of the WhatsApp. At the same time, they say the group chat is very useful. Recently during the last one year, most of them have been connected to groups from 1 to 3, but some people remain ever in their groups. It proves that students are comfortable with group conversations. Meanwhile, they agree on the WhatsApp reduces the face to face communication and they disagree with using WhatsApp during their study time. And the field of study is significantly related to all variables except using WhatsApp during studies, face to face communication reduce and some of the reasons for using WhatsApp. The productive output of the class is interconnected with information sharing, wish to others install WhatsApp, rest time effected and quality. WhatsApp is considered to be the best messenger among the school students and they feel that in future also it remains. This study recommends that the positive usage of WhatsApp needs collaborative study and research should be encouraged while extreme usage for entertaining purposes is reduced to the least possible.

References

- Bashir, S., Mahmood, K., & Shafique, F. (2008). Internet use among university students: a survey in University of the Punjab, Lahore. *Pakistan Journal of Library and Information Science*, 9, 49-65.
- Joicy, A. J., & Sornam, S. A. (2018). Perception of WhatsApp Usage among Students of College of Excellence: A Case Study. *Indian Journal of Information Sources and Services*, 8(1), 73-78.

WhatsApp: number of users 2013-2017. (2019). Retrieved from <https://www.statista.com/statistics/260819/number-of-monthly-active-whatsapp-users/>

WhatsApp 2019: Stats and Facts. (2019, February 1). Retrieved from <https://99firms.com/blog/whatsapp-statistics/>

WhatsApp: Everything you need to know! (2018, June 13). Retrieved from <https://www.imore.com/whatsapp>

About WhatsApp. (2017). Retrieved from <https://www.whatsapp.com/about/>

Jain, R., & Jain, S. (2016). Impact of WhatsApp on academic activities of Basic and Applied Science students in College of Applied and Basic Science, Madhav University, Pindwada. *International Journal of Current Science and Technology*, 4(4), 188-190.

Malecela, I. O. (2016). Usage of Whatsapp among Postgraduate Students of Kulliyah of Education, International Islamic University Malaysia. *International Journal of Advanced Engineering Research and Science*, 3(10), 126-137.

Patil, S., Deepthi, & Tadasad, P. G. (2015). Usage of WhatsApp Messenger amongst post-graduate students in a University environment: A Study of Karnataka State Women's University, Vijayapura. *International Journal of Multidisciplinary Research and Development*, 2(11), 591-594.

Yeboah, J., & Ewur, G. D. (2014). The Impact of Whatsapp Messenger Usage on Students Performance in Tertiary Institutions in Ghana. *Journal of Education and Practice*, 5(6), 157-164.

Jagboro, K. (2003). A study of Internet usage in Nigerian universities: A case study of Obafemi Awolowo University, Ile-Ife, Nigeria. *First Monday*, 8(2).