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## Use of WhatsApp Technology in Library Services: Case study of National Defence University Library, Islamabad, Pakistan

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# **Use of WhatsApp Technology in Library Services: Case study of National Defence University Library, Islamabad, Pakistan**

**Abid Hussain**

## **Abstract**

### **Purpose**

This study aimed to investigate the interest and use of WhatsApp technology among the library users of National Defence University Pakistan.

### **Design/methodology/approach**

A questionnaire in google forms was created shared with the students of five departments of National Defence University Pakistan via email. The data were tabulated and analyzed using SPSS 22 for this paper.

### **Findings**

This study revealed that WhatsApp is a robust and state of the art technology that could be embedded with digital library services to approach the library's patrons. This technology will help the library users getting quality services. Some technical and human resource factors could affect the delivery of services and hence need to be addressed. Therefore, it is recommended that library management should take necessary action to Embedded WhatsApp with Digital library services to ensure efficient and effective service delivery.

### **Practical implications**

The WhatsApp is one of the most prominent technologies in social media applications that is deployed by many organizations including libraries. This technologies help the patrons at campus and remote places around the clock. Consequently, it will increase the quality of library services with greater satisfaction among users.

### **Originality/value**

This study focuses on WhatsApp technology in the academic environment of National Defence University, Pakistan. This study is the first attempt of the researcher to highlight the critical issue. This study will be helpful for the library users of National Defence University and the entire academic setup in Islamabad.

**Keywords:** WhatsApp Technology, User's perception, Mobile Technology; NDU Library.

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## **Introduction:**

The present National Defence University was established in May 1970 named National Defence College Rawalpindi. Later on, it was upgraded to the university by the former president of the Islamic Republic of Pakistan (Pervez Musharraf) in 2007. The university offers a degree programme in social and military sciences. Faculty of Contemporary studies is one of the academic wings of National Defence University offers BS, MS and PhD Programmes in five disciplines those are Leadership Management Science (LMS), Peace and Conflict Studies (PCS), International Relations (IR), Government and Public Policy (GPP), strategic Studies (SS).

National Defence University presents a well-versed library in terms of Collections named Sahibzada Yaqub Khan Library (SYK), the library established in 1970 and renamed as SYK Library in 2010. It offers a blend of printed and electronic material. Currently, the library has occupied more than 100,000 printed volumes. The library plays a pivotal role in the student's, staff, and faculty members' research support. The library has offered electronic services since 2010 via library software named Libmax: Hussain, A (2018).

Mobile phone technologies have brought tremendous changes to our daily lives Abid & Masrek (2021). It is believed that approximately 3.9 billion worldwide are using cell phones, and it is increasing day by day. It is argued that 57 percent of Pakistanis aged 15-65 have a cellular device of some type. Only two percent (of the population) owns computers; smartphone ownership is low at 22 percent, while 53 percent still use non-Internet-enabled basic phones. Approximately 37.97 million people in Pakistan use a smartphone, which will increase in the next year as forecasted. Among Mobile technologies, WhatsApp is one of the most extensive usable applications, which was brought into use initially in 2009, developed by former yahoo managers. Brain Acton and Jan Koum" under the tagline — Simple, this Application facilitates communication among individuals for free without any cost and makes it easier to create groups. One can also send unlimited messages, sharing images, audio notes and videos, sharing ideas with other users Veena, Loksha(2016). WhatsApp was also available for PCs through a web client under WhatsApp Web in January 2015. In 2021, WhatsApp's user base in the world amounted to approximately 1,607.6 million users. The number of WhatsApp users worldwide will reach 1,902.4 million users by 2025.

In a recent survey carried out by Gallup & Gilani Pakistan, it came to light that only 39% of Pakistanis use WhatsApp. In comparison, the remaining 61% either don't know what the platform is for or are not interested in using it. The traditional face-to-face system where a library user must be physically present to consult or access library services is no longer a prerequisite in the contemporary library environment. Library services have witnessed tremendous improvement around the globe. Information that once took several processes and procedures is now readily available on mobile phone apps. However, even when apps are commonly used, the desired impacts on library operations like current awareness services, reference services, circulation services, serial control and lending services are being well utilized. Odu& Omini (2017).

## **Literature Review:**

As mobile phones are growing day by day, in technological advancement, 2G was introduced in Pakistan in 1992. After the rise, 3G and 4G simultaneously was introduced in Pakistan on April 23, 2014. This internet technology was the advancement, and it is evolving day by now. The world is moving toward the 5G technology as successful experimentation is done. On April 3, 2019, 5G mobile service technology was initiated in parts of Chicago and Minneapolis, and soon, it will be available in other regions. These mobile applications are playing a vital role in the evolving day activities of humans. There are multiple applications that everyone uses daily. Abid, H. (2021). For communication, WhatsApp, WeChat, Messenger, Instagram, IMO etc., are operated by every smartphone user worldwide. These activities also include the practical training of using the library and its services by the students and others. So providing the library services, these digital platforms are beneficial in delivering a satisfactory service. WhatsApp greatly influences university students, shown in Mohammad Irfan Sonali Dhimmarr (2019); in this study, a survey among 105 students revealed that WhatsApp is one of the fastest and most accessible sources of communication, idea sharing and connecting people. The WhatsApp augmenting learning among the professional of MBBS students was conducted by Manpreet Singh Nanda (2019); the results revealed that it could improve learning chances among slow learners and develop interest among students. Purkatastha and Chanda (2018) researched WhatsApp to share information among LIS professionals in northeast India. They investigated the features of WhatsApp and its use among LIS professional groups.

Bajpai (2016) investigated the impact of WhatsApp on LIS professionals. He found that WhatsApp is a well-known social media among students and LIS professionals. They used a survey method to understand the use and importance of WhatsApp among LIS professionals. This survey draws results that library professionals use WhatsApp to make their appearance on the social media surface. Adomi and Soloman-uwakwe(2019) researched work-related WhatsApp groups as knowledge-sharing platforms among librarians in selected federal universities in Nigeria. They use the survey method and Questionnaire to collect data from the Library professionals. This study revealed that WhatsApp mainly uses a virtual platform where librarians can share and trace the WhatsApp group's knowledge. Bisto (2016) investigated using WhatsApp to sustain functional school libraries. They found a positive contribution in using WhatsApp to interact with library users. Stephen (2019) said that WhatsApp is an effective social media among the LIS community. He recognized the massive outcomes of using WhatsApp in academic libraries. Using WhatsApp, it looks easy to share photos, videos, audio and other information.

Mansour (2016) use of WhatsApp among LIS students in Egypt. Saha, Naskar and Padhan(2019) found WhatsApp among chattergarh libraries. Caplan and Lam (2014) studied WhatsApp at the HKUST library's new channels. As research conducted by udem, Aghoghovwia and Boro(2020) on WhatsApp and its sharing information among LIS professionals. Oyovve and Akpojotor(2020) surveyed Librarians' perception and use of WhatsApp to enhance library services. WhatsApp's popularity, especially amongst the younger generation (Nyasulu and Chawinga, 2019), makes it an ideal platform for library services. Ansari and Tripathi (2017) discovered that users' attitudes towards WhatsApp in delivering library services are favourable as they view it as a vehicle to provide better services. The Polytechnic and Mzuzu University (MZUNI) libraries planned to offer their services through WhatsApp (Chaputula and Mutula, 2018).

## **Research Question:**

1. What is students' perception about WhatsApp and its usefulness in the library services at National Defence University Islamabad?
2. How do they perceive WhatsApp for their educational activities?
3. How does NDU Library Embedded WhatsApp to their services?
4. What are the various challenges for Librarians at National Defence University to launch the Whatsapp services at this Library?

### Research Methodology:

A quantitative research method was used for this study using online Questionnaire. The Questioner was developed and pre-tested with the help of expert researchers and was divided into seven parts: Demographics, usage of WhatsApp, Advantages and Disadvantages of WhatsApp, and problems faced while using this application. It was then designed through google forms and distributed among targeted audience using registered email, whatsapp and messenger for maximum response. 300 students of five departments at National Defence University was targeted in return (N=251) have responded. The result shows that majority of the students are taking keen interest to launch and implement WhatsApp Technology at National Defence University Library, Islamabad.

### Analysis of Data

Table 1 shows that 251 out of 300 students responded, of which male respondents were 107(42.62%), whereas Female respondents were 144 (57.37%). Among age factors, respondents of students between the age of 18-28 were higher than 182 (72.51%). As far as the department wise is concerned, the respondent ratio of International Relations was higher among all with 84(33.47%)

**Table: 1 Demographics information of library users**

Demographics	Category	Frequency	Percentage
<b>Gender</b>	Male	107	42.62
	Female	144	57.37
<b>Age</b>	18-28	182	72.51
	29-38	42	16.73
	38+	27	10.76
<b>Department</b>	IR	84	33.47
	LMS	59	23.50
	GPP	41	16.33
	SS	47	18.72
	PCS	20	7.97

Table 2 represent the usage and frequency of WhatsApp technology. Among 251 students, all used WhatsApp through various devices helpful for WhatsApp applications. The result shows that mainly students use Android application for WhatsApp 189(75.30%) followed by IOS 57(22.71%). The result also shows that 233(92.83%) uses WhatsApp daily, whereas 18(7.75%) students use WhatsApp twice a week.

**Table: 2 Usage and Frequency of WhatsApp Technology**

Usage of WhatsApp						
<b>Which Smartphone do you use?</b>	<b>Scale</b>	<b>IOS</b>	<b>Android</b>	<b>JAVA</b>	<b>Window / Web</b>	
	<b>Frequency</b>	57 22.71%	189 75.30%	-	52%	
<b>Do you use the WhatsApp application?</b>	<b>Scale</b>	<b>Yes</b>			<b>No</b>	
	<b>Frequency</b>	251 100%			-	
<b>If Yes, to what extent do you use WhatsApp?</b>	<b>Scale</b>	<b>Daily</b>	<b>Weekly</b>	<b>Bi-weekly</b>	<b>Bi-monthly</b>	<b>Monthly</b>
	<b>Frequency</b>	233 92.83%	-	18 7.17%	-	-

Table 3 shows the purposes and time of WhatsApp technology consuming by students, 176 students use it for educational purposes with a frequency rate of 176(70.12%) for 1-3 hours, 45 students respond that they are using WhatsApp for 4-6 hours only 30(11.95%) have stated that they are using WhatsApp for educational purposes from more than 6 hours. The ratio was 164(65.34%) for sharing information between 1-3 hours. However, from 4-6 hours, only 56(22.31%) used WhatsApp technology. The respondents' ratio was 172 from 1-3 hours for voice messages and calls, and 68(27.09%) used WhatsApp for 4-6 hours. The percentage of students using WhatsApp Technology in Social Networking was 167(66.53%), and 41(16.33%) used WhatsApp for 3-4 hours. For chatting, 140(55.78%) use WhatsApp from 1-3 hours. However, 33(13.15%) use it for chatting for more than 6 hours.

**Table: 3 Daily Usage of WhatsApp**

<b>if daily, then to what extent do you use the WhatsApp application and for what purpose</b>	<b>1-3 Hours</b>	<b>4-6 hours</b>	<b>More Than 6 Hours</b>
Educational purposes	176 70.12%	45 17.93%	30 11.95%
Sharing information	164 65.34%	56 22.31%	31 12.35%
Sharing pictures/videos	172 68.52%	50 19.92%	29 11.55%
Voice messages/calling	153 60.96%	68 27.09%	30 11.95%
Social networking	167 66.53%	41 16.33%	43 17.13%
Chatting	140 55.78%	78 31.08%	33 13.15%

Table 4 reveals the advantages of WhatsApp technology. Among students, 141(56.18%) strongly agreed that much could not be spent chatting and sharing information, only 9 (3.58%) strongly disagreed with this statement. The documents or files up to 100 MB can be shared of them 123(49%) were agree with this statement, while 13(5.18%) strongly disagree. Another statement that you can share live location up to 15 minutes, 208 (82.87%) strongly agreed with this statement. For instantly sending messages, 172(68.52%) strongly agreed with this statement, only 9(3.58%) strongly disagreed with this statement. The end-to-end encryption feature makes WhatsApp more secure, said 118(47.01%), while 4(1.59%) strongly disagreed with this statement. Sharing 30 pictures in one go, 106(42.2%) strongly agreed, while 17(6.77%) strongly disagreed with this statement. Within one hour, you can delete messages by 105(41.83%) and strongly agree with this statement, while 26(10.36%) strongly disagreed with this statement. 137(54.58%) were strongly agreed with this statement that one could identify that message has been sent or not or read by the receiver or not only 4(1.59%) showsdisagreement with this statement. Overall the student ratio for WhatsApp's advantages is highly commendable and will add positive gestures for launching this application in educational needs.

**Table: 4 Advantages of WhatsApp**

Advantages of WhatsApp	1 strongly agree	2 agree	3 neutral	4 disagree	5 strongly disagree
You need not spend any money chatting and sharing with your friends (except the internet charges).	141 56.18%	66 26.29%	28 11.16%	7 2.79%	9 3.58%
You can send a document or files up to 100Mb.	123 49%	70 27.89%	41 16.33%	4 1.59%	13 5.18%
You can also share live locations for 15 minutes, 1 hour and 8 hours.	208 82.87%	32 12.75%	11 4.38%	-	-

Instantly send a message to anywhere in the world.	172 68.52%	53 21.12%	11 4.38%	6 2.39%	9 3.58%
You can change your number to another number without losing your existing WhatsApp account.	122 48.60%	63 25.10%	42 16.73%	5 2%	19 7.57%
WhatsApp started providing an end-to-end encryption feature, making your WhatsApp communication highly secure.	118 47.01%	72 28.68%	46 18.33%	11 4.38%	4 1.59%
You can send 30 pictures in one go	106 42.23%	56 22.31%	49 19.52%	23 9.16%	17 6.77%
You can delete read messages within one hour.	105 41.83%	50 19.92%	43 17.13%	27 10.76%	26 10.36%
It shows that your message was sent or not and the receiver has received or read the message.	137 54.58%	56 22.31%	47 18.72%	7 2.79%	4 1.59%

Table 5 reveals the disadvantages of WhatsApp technology. Though it has many benefits, several people consider this application dull and useless. About constant messages, 84(33.47%) said that they do not like this application for constant messages; however, 17(6.77%) people strongly disagreed with this statement. Internet for this application, 105 (41.83%) perceived that the Internet is required to send and receive messages, while 13(5.18%) strongly disagree with this statement. About addiction to this application, 68(27.09%) students strongly agreed to this statement; however, 33(13.15%) strongly disagree. About communication with someone, you need to exchange numbers first stated by 78(31.08%) while 13(5.18%) strongly disagreed with this statement. For lacking concentration on other aspects of life, 66(26.29%) strongly agreed with this statement, while 22(8.76%) strongly disagreed with this statement. 58(23.11%) believes that it creates health-related problems like sleep deprivation due to continuous chatting, while 32(12.75%) strongly disagreed with this statement. About contributes to social isolation, 62(24.70%) said that this application suffers social contribution, but 33(13.15%) strongly disagreed with this statement.

**Table: 5 Disadvantages of WhatsApp**

<b>Disadvantages of WhatsApp</b>	<b>1 strongly agree</b>	<b>2 agree</b>	<b>3 neutral</b>	<b>4 disagree</b>	<b>5 strongly disagree</b>
It can be annoying sometimes due to constant messages.	84 33.47%	75 29.88%	49 19.52%	26 10.36%	17 6.77%
You must have access to the Internet to send and receive messages for free.	105 41.83%	88 35.06%	30 11.95%	15 5.98%	13 5.18%
WhatsApp is addictive. Once you get addicted to it, it's complicated to get over WhatsApp addiction.	68 27.09%	57 22.71%	45 17.92%	48 19.12%	33 13.15%
You need to share your number to add someone and communicate.	78 31.08%	92 36.65%	40 15.94%	28 11.15%	13 5.18%
It also causes a lack of concentration in other aspects of life.	66 26.29%	70 27.89%	59 23.50%	34 13.54%	22 8.76%

It contributes to health-related problems from sleep deprivation (continuous chatting) to straining eyes.	58 23.11%	86 34.26%	49 19.52%	26 10.36%	32 12.75%
It also contributes to social isolation.	62 24.70%	71 28.29%	63 25.10%	22 8.76%	33 13.15%

Table 5 perceived the user's perspective of WhatsApp application in library services. They strongly agreed to library news and event 107(42.63%), while 8(3.19%) strongly disagreed with this statement. For a list of e-journals and e-books, 127(50.60%) students were strongly agreed, while 9(3.58%) strongly disagreed with this statement. 158 (62.95%) perceived that this application is best for the workshop and exhibition announcement, while 11 (4.38%) strongly disagreed about this statement. For sharing the list of new books, 137(54.58%) strongly agreed, while 9(3.58%) strongly disagreed with this statement. In searching the online catalogue, 115(45.82%) views that this application was a good one; however, 16(6.37%) strongly disagreed about this statement. 111(44.22%) strongly agreed with library instruction and information literacy, while 7(2.72%) strongly disagreed with this statement. 120 (47.81%) strongly agreed to contact the librarian via this application, while 16(6.37%) students strongly disagreed with this statement. About user discussion forums, 103(41.04%) strongly agreed. However, 23(9.16%) strongly disagreed. 112 (44.62%) believes that WhatsApp is the best for document reservations, while 12(4.78%) strongly disagreed with this statement. For the statement about acquisition feedback, 103(41.04%) students strongly agreed, while 13(5.18%) strongly disagreed with these statements.

**Table: 6 User Perspective about WhatsApp Technology**

<b>If yes, then to what extent do you agree or disagree with the following statement?</b>	<b>1 strongly agree</b>	<b>2 agree</b>	<b>3 neutral</b>	<b>4 disagree</b>	<b>5 strongly disagree</b>
Library News and events	107 42.63%	88 35.06%	27 10.76%	21 8.37%	8 3.19%
List of e-journals and e-books	127 50.60%	84 33.47%	15 5.98%	16 6.37%	9 3.58%
Announcements about workshops and exhibitions	158 62.95%	44 17.53%	19 7.57%	19 7.57%	11 4.38%
List of new books	137 54.58%	65 25.90%	24 9.56%	16 6.37%	9 3.58%
Help for a catalogue search	115 45.82%	72 28.68%	33 13.15%	15 5.98%	16 6.37%
Information literacy and library instructions	111 44.22%	70 27.89%	37 14.74%	26 10.36%	7 2.79%
Contact with librarian	120 47.81%	76 30.28%	26 10.36%	13 5.18%	16 6.37%
User discussion forum	103 41.04%	68 27.10%	41 16.33%	16 6.37%	23 9.16%
Document reservation	112 44.62%	70 27.89%	39 15.54%	18 7.17%	12 4.78%
Acquisition feedback	103 41.04%	77 30.68%	37 14.74%	21 8.37%	13 5.18%

The following short table shows students' perception of WhatsApp technology and its provision in library services. 201(80.08%) agreed to launch the WhatsApp technology in the National Defence University library. Only 50(19.92%) were not adequately prepared to launch this technology in National Defence University's library services for a few reasons. As aforementioned in WhatsApp Technology's disadvantages, they were either unaware of this technology or did not like to be a part of this technology. Figure 201 is a remarkable picture of WhatsApp technology that needs to be embedded with library services.

**Table 7: Use of WhatsApp Technology in Library Services**

**WhatsApp Services In Library**

	Yes	No
Do you suggest WhatsApp Services should be provided in the library?	201 80.08%	50 19.92%

**Conclusion and recommendations**

National Defence University is a public sector university based in Islamabad. The University was established in 2007 and since that time, it has widened the scope of social sciences in various subjects. Faculty of Contemporary studies is one of the academic wings of National Defence University that offers BS, MS, and Ph.D. Programs in five disciplines such as Leadership Management Science (LMS), Peace and Conflict Studies (PCS), International Relations (IR), Government and Public Policy (GPP), strategic Studies (SS). National Defence University presents a well-versed library in terms of Collections named Sahibzada Yaqub Khan Library (SYK); it offers a blend of printed and electronic material. Currently, the library has housed more than 100,000 printed volumes. The library plays a pivotal role in the research support of students, staff, and faculty members. The library has offered electronic services since 2010 via library software named Libmax: Hussain, A (2018). Mobile Technology has brought tremendous challenges in the educational and health sectors. Libraries are active parts of any educational institution. NDU Library offered a robust digital library to reach the patrons. In today's busy environment, people often do not regularly visit the library. Keeping the information demands of its users, the libraries are experiencing the latest technologies to fulfill the needs of our valued users. National Defence University Library diversifies its services using state-of-the-art technology. The present study undertook to know the perception of users towards WhatsApp Technology. The study reveals that most of them are taking a keen interest in launching and implementing WhatsApp Technology at NDU Library. The study also highlighted some critical issues like the privacy of genders, budgeting problem, security issues, and the latest technology. The present study has highlighted both positive and negative aspects of this technology and will help the stakeholders and staff working at National Defence University. Keeping in view the

The study covers the gap between students and library services using WhatsApp Technology at National Defence University Islamabad. The study reveals that most of them are taking a keen interest in launching and implementing this technology at NDU Library. Some significant recommendations made by the researchers are given below:

1. Heavy budgets are required to launch this technology.
2. Knowledge about adequate technology and internet facilities.
3. Information and communication technologies policies should be formulated
4. Privacy of people
5. Orientation services and its positive use
6. Staff and users training
7. Avoid of Copyright content
8. Monitoring and surveillance of all members
9. Dedicated staff members

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