

USE OF SMART PHONE FOR E-LEARNING BY THE P.G. STUDENTS OF RANI CHANNAMMA UNIVERSITY BELAGAVI

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Abstract *The study investigates how smart phones have been used by Post Graduate students for learning purposes in Rani Channamma University, Belagavi. The study also focused on the helpfulness of Smartphone's for e-learning, communicating, use of educational apps, storing and accessing, and assessed problems related activities. There are 110 questionnaires were distributed among the respondents, out of which 97 were returned. The Results shows that 94.1% of respondents were used smart phones with variety of Mobil-applications.*

Keyword: *Smartphone, Mobile Apps, Mobile learning, P.G. Students, RCU University*

INTRODUCTION

In the emergence and advancement of information and communication technology (ICT) has changed the way of teaching and learning process. The recent mobile technology made a new identity in the modern age of ICT because it made students move busy in the campuses as they have done for decades, some quickly hurrying from one class to another, others on benches gaining extra study time moments before an exam, and some grabbing a coffee for that extra boost of energy. A mobile technology is one, which has becoming most important tool for communication and educational purpose. The students of RCU in different PG departments are using electronic device called Smartphone for e-accessing, downloading, storage, communicating and reading purposes. There are some particular Smartphone apps they are helping the students to gather information with the help of network based services.

REVIEW OF LITERATURE

Benson and Morgan (2013) noted potential benefits to students with the large number of educational apps that exist creating potential opportunities for more impendent learning, helping to develop a more engaged student. Ria Nicoletti, Morphitou and Morphitis Avros (2014) found many positive aspects of the students' experiences using smartphones, but they also found some negative experiences. The negative

experiences were predominantly frustrations associated with the use of the devices, usually linked to the inability to access data and the limitation of the hardware, software or systems they were utilizing. Gikas and Grant, (2013) supported the value of smartphones for interactions, specifically finding increased value of peer group collaborations at both a formal level with peer group projects and on an informal level through social networking mediums, which increased student communication. Shim, Dekleva, Guo, and Mittleman (2011) also found benefits were gained with interaction between students and teachers in a virtual learning environment, which was also often linked to the design of the courses. Akers et.al (2010) reports the short-term results from a randomized evaluation of a mobile phone literacy and numeracy program (Project ABC) in Niger, in which adult literacy students learned how to use mobile phones as part of a literacy and numeracy class. According to Kam et. al. Researcher Motiwalla (2009) claims that learning on mobile smart phones can never replace classroom or conventional e-learning methods, (2008) cell phones are increasingly adopted in the developing world, and an increasing fraction of these phones feature multimedia capabilities for gaming and photos. According to the review of mobile learning by Goh and Kinshuk (2006) generally research in mobile learning can be grouped into these categories – games and competition in learning, classroom learning, laboratories learning, field trip learning, distance learning, informal learning, pedagogical and learning theory, learning and teaching support, mobile learning architecture, and mobile

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evaluation, requirements, and human interface and learning with mobile could only be complementary to traditional learning and e-learning.

PURPOSE OF THE STUDY

The purpose of this study is to understand how postgraduate students are currently using smart phone device for educational purposes. It will also investigate the compare, the perceptions of students with regard to mobile learning and use inside and outside of the classroom. Mobile learning is considered as the next generation of e-learning. Awareness of modern technology among the students is becoming one of the most focuses of success adoption. Mobile technology offers a new generation of learning for people of all ages anywhere and anytime as flexibility of education. While the rapid advancement in the capabilities of mobile technology has enabled users to perform a wide variety of tasks on one device, the decrease in cost has had both positive and negative effects, especially with relationship to education⁸.

OBJECTIVES OF THE STUDY

The main objectives of the study are:

- To find out the standard smart phones used by PG Students.
- To know the purpose for using the various applications of smart phones.
- To know the areas of learning by the smart phones.
- To know the web sources and services access by smart phones.
- To know the impact of Smartphone's used by the PG students for education.

METHODOLOGY

The study is confined to Rani Channamma University Belagavi. A standard research tool questionnaire method was adopted focusing on the objectives of the study. The data was collected from 97 PG Students in 15 different departments. The related data collected and analyzed through the Statistical Packages and interpreted in the form of table and graphs.

FINDINGS AND DISCUSSION

The structured questionnaire has been designed and was distributed with personal visit amongst 110 (respondents belonging to 15 different departments). Out of which, 97 filled in questionnaire were received with the response rate of 94%. The results of the findings are presented in tables using percentage.

Table 1: Respondents Department and Gender Wise

Sl. No	Departments*	Male (%)	Female (%)	Total (%)
1	MSW	13.4	2.1	15.5
2	Sociology	5.2	8.2	13.4
3	MSc Com Sci	5.2	8.2	13.4
4	M.COM	4.1	7.2	11.3
5	English	5.2	4.1	9.3
6	MLISc	6.2	0.0	6.2
7	Mathematics	4.1	2.1	6.2
8	MBA	2.1	2.1	4.1
9	Political Sci	5.2	0.0	5.2
10	Geography	4.1	0.0	4.1
11	Criminology	3.1	0.0	3.1
12	Economics	3.1	0.0	3.1
13	Physics	2.1	0.0	2.1
14	MCA	2.1	0.0	2.1
15	Chemistry	1.0	0.0	1.0
Total		68.0	32.0	100.0

* MSW-Master of Social Work; MSc Com Sci-Master of Computer Science; M.Com-Master of Commerce; MLISc- Master of Library and Information Science; MBA-Master of Business Administration; MCA-Master of Computer Application.

Table 1 depicts department and gender wise respondents to the survey. Among the total of 97 respondents majority 15.5% (13.4% male and 2.1% female) of respondents belongs to MSW subject followed by 13.4% (5.2% male and 8.2% female) each from MA Sociology and M.Sc. Computer Science, 11.3% (4.1% male and 7.2% female) M.Com, 9.3% (5.2% male and 4.1% female) English, whereas least 1% of respondents belongs Chemistry subject. The study covers both male and female. The respondents sample includes 68% of male and 32% of female participants.

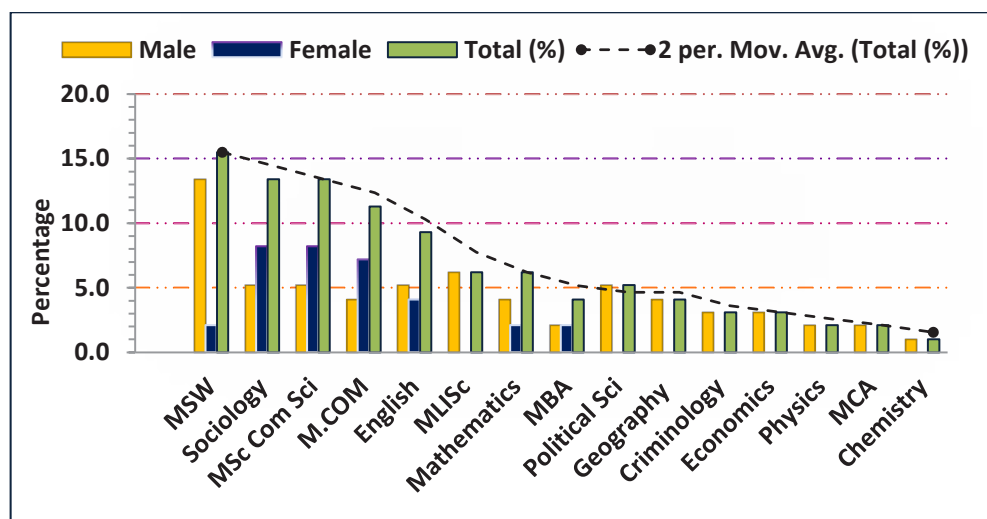


Fig. 1: Respondents Department and Gender wise

Table 2: Name of Smartphone Owned by the Respondents

SL No	Smart phones	%age of respondent
1	Samsung	50.4
2	Lenovo	14.5
3	Carbon	8.7
4	Nokia	10.7
5	Micromax	8.7
5	Others	1.19

The respondents were asked to mention the name of smartphones they owned; it was found that 50% of use Samsung smartphones. Followed by 14.5% Lenevo, 10.7%

Nokia, 8.7% Carbon and Micromax each, and 9.7% of respondents use other named mobiles such as MI4 and Geonee etc.

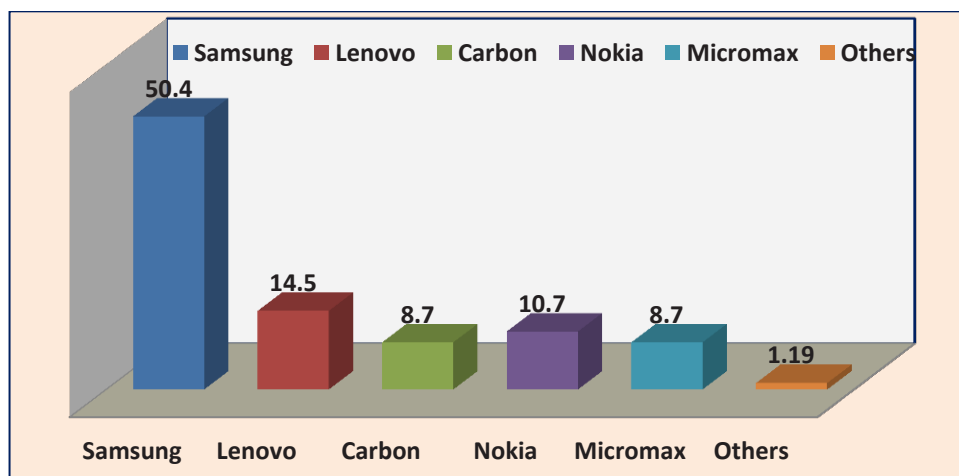
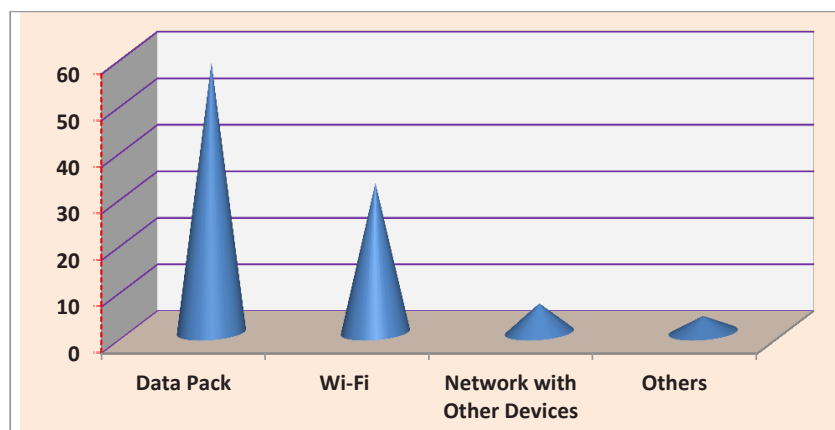


Fig. 2: Name of Smartphone Owned by the Respondents

Table 3: Internet Access Mode

SL No	Modes	%age of respondent
1	Data Pack	58.0
2	Wi-Fi	32.1
3	Network Sharing From Other Devices	6.2
4	Others	3.5

The respondents were asked to internet access mode from the smart phone. The table-3 depicts, that majority 58.4% of respondent's access internet by data pack mode followed by 32.1% Wi-Fi., 6.2% network sharing from other devices and 3.5% by other mode such as D-Link and Net Gear etc.

**Fig. 3: Internet Access Mode****Table 4: Purpose of using Smart Phone**

SL NO	Purposes	%age of respondent
1	Access Scholarly Information	54.3
2	Make calls	94.1
3	Recording and Photographing	45.6
4	Storing Files	35.9
5	Internet Services	64.0
6	Send SMS	48.5
7	Download Apps	30.1
8	Play Games	23.3

Table-4 depicts the purpose of using Smartphone. It is found from the study, 94.1% of respondents use Smartphone to make calls. Followed by 64.0% for Internet services, 54.3% to access scholarly information, 48.5% for sending SMS, 45.6% to recording and photographing, 35.9% storing files, 31.1% to download apps, and least 23.3% of respondents use Smartphone to play games.

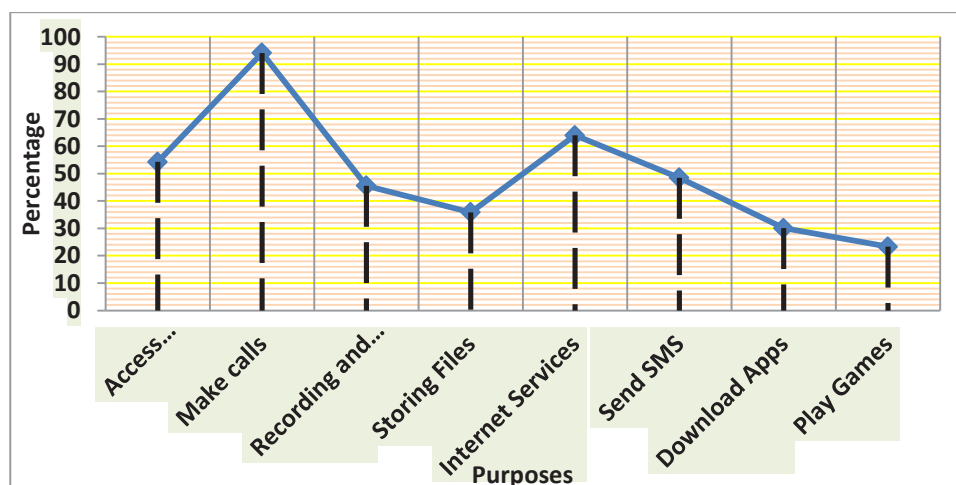
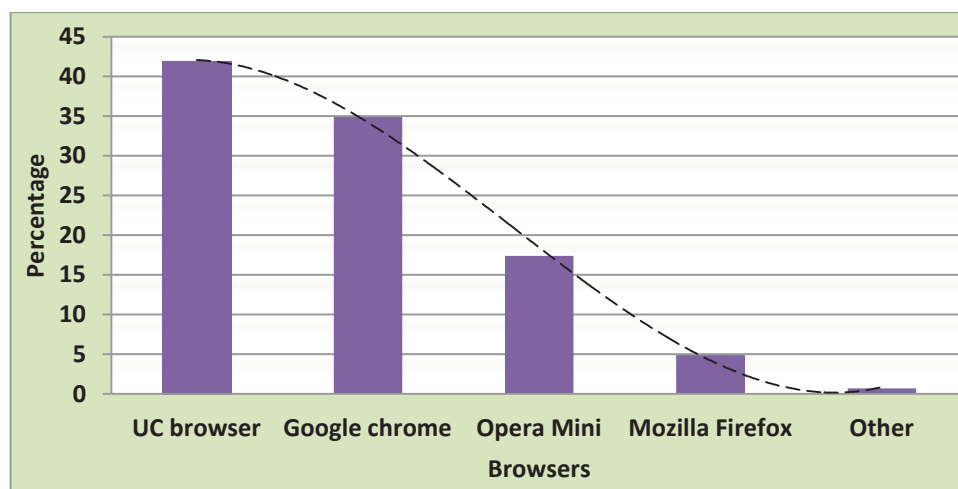
**Fig. 4: Purposes of using Smart Phone**

Table 5: Mobile Web Browsers Used by the Respondent

Sl.No	Browsers	%age of respondents
1	UC browser	41.9
2	Google chrome	34.9
3	Opera Mini	17.4
4	Mozilla Firefox	4.9
5	Other	0.7

For effective usage of internet services, mobile phones should be incorporated with a web browser. The respondents asked to use of different web browsers to access scholarly information resources and other purposes. Installed browsers in their devices and use highest in percentage are UC browser 41.9%, Google chrome 34.9%, Opera Mini 17.4%, Mozilla Firefox 4.9 and others 0.7%.

**Fig. 5: Browsers Used by the Respondent****Table 6: Amount of Time Spend for the Mobile Apps in a Day**

SL No	Applications	0-1Hour/day (%)	1-2 Hour/day (%)	2-3 Hour/day (%)	3-4 Hour/day (%)
1	Educational Apps	58.2	26.19	4.85	4.85
2	Audio/Video Apps	52.38	20.37	14.55	6.79
3	Social Network Apps	18.43	15.52	24.25	35.89
4	Chat Apps	25.22	19.4	20.37	29.1
5	Shopping Apps	77.6	12.61	2.91	0.97
6	Games	22.31	18.43	33.95	19.4
7	Others	48.5	38.8	3.88	2.91

Nowadays majority of students spend their time in making use of various mobile applications. It is found from the study 58% respondents spend less amount (0-1 hour/day) of time for Educational, Audio/Visual and for shopping apps. And also found surprised 35% of respondents spend 3 to 4 hours/day for social networking application followed by 29% respondents for chatting applications. Its shows that social and chatting applications are the most preferred apps among the respondents.

Now a days, Smartphone's are becoming good source of information, Among the total of surveyed respondents, 19% of respondents mentioned to Web pages, 18% for Videos and Audios, 17% each for e-journal/article and newspapers & magazines, 16% for dictionaries, 11% for e-books 6.5% thesis and dissertations and 0.3% for other kind of information sources.

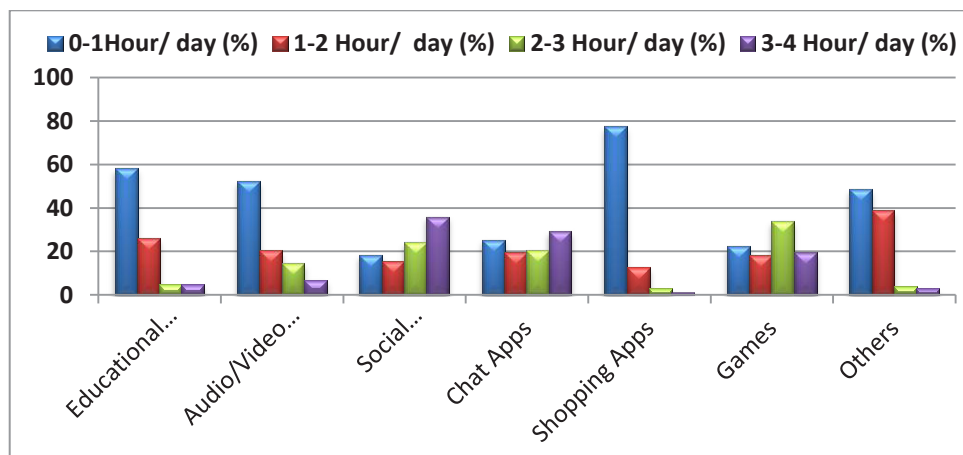


Fig. 6: Amount of Time Spend For the Mobile Apps in a Day

Table 7: Use of Smart Phone for Web based Information Resources

Sl. No	Source of information	%age Percentage
1	Web pages	19.3
2	Videos/Audios	18.9
3	e-journal/article	17.8
4	News paper/magazines	17.8
5	Dictionaries	16.6
6	e-books	11.2
7	Thesis/dissertations	6.5
8	Others	0.3

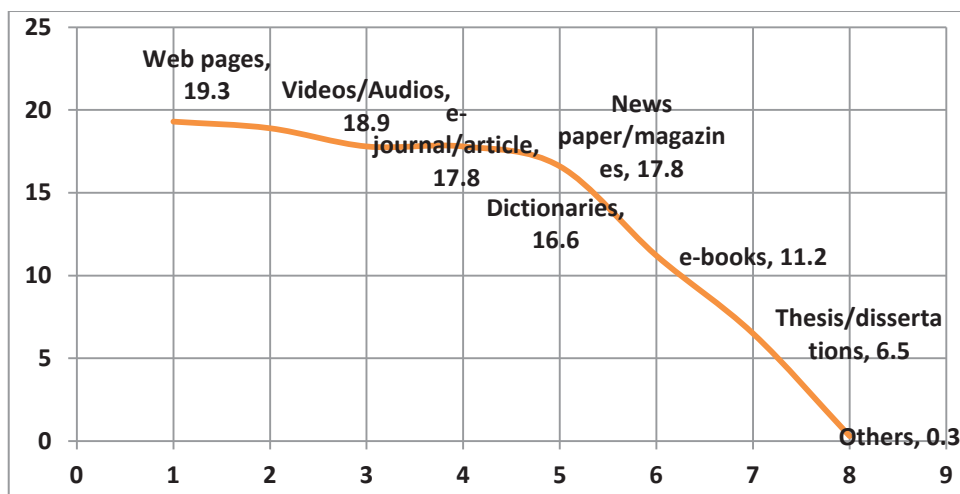


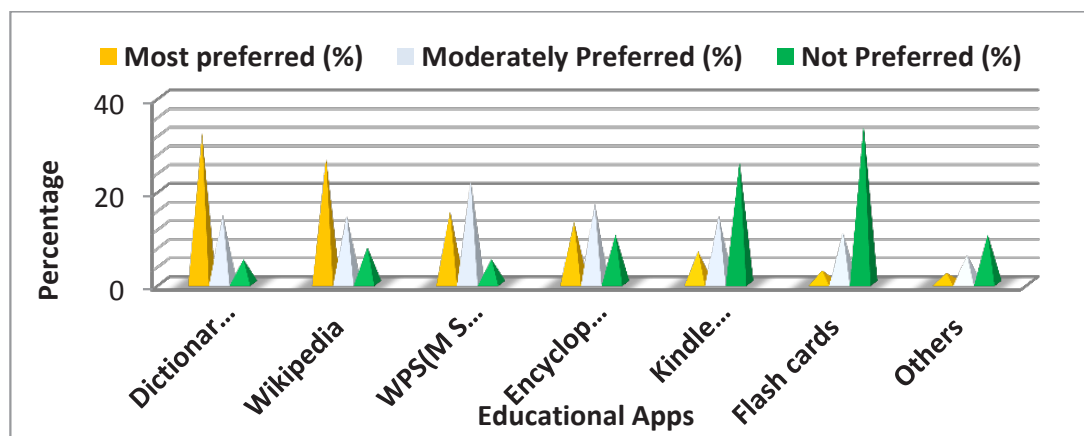
Fig. 7: Use of Smart Phone for Web Based Information Resources

Table 8: Preferences towards use of Educational Apps

Sl. No	Educational app	Most preferred (%)	Moderately Preferred (%)	Not Preferred (%)
1	Dictionaries	32.1	14.6	5.2
2	Wikipedia	27.0	14.6	7.8
3	WPS(M S Office)	15.5	21.9	5.2
4	Encyclopedia	13.2	17.0	10.5
5	Kindle Reader	6.9	14.6	26.3
6	Flash cards	2.8	10.9	34.2
7	Others	2.3	6.1	10.5

Table 8 depicts the preference towards the use of educational apps installed in respondent's smartphones. It is found from the study, more than 27% of respondents expressed Dictionaries and Wikipedia are the most preferred

applications followed by preferred application WPS M.S Office 21%. whereas more than 26% of respondents are expressed Kindle Reader and Flash cards are the not preferred applications.

**Fig. 8: Preferences towards use of Educational Apps****Table 9: Purpose of using Educational Apps**

SL No	Purposes	%age of Repondents
1	For study	21.2
2	update with the subject information	18.3
3	prepare an assignments and seminar presentations	14.7
4	To do Project	14.4
5	Pepare articles/Books	10.2
6	To know more about subjects	12.5
7	Find relevant Information in the area of specialization	8.3

Using educational apps in the smartphone is very important to know and understand the concept very instantly; the respondents were asked the purpose of using educational apps through their mobile. It is found from the table-11 that the 21% of respondent use educational apps for the purpose of study followed by 18.3% to update with the subject information, 14% each to prepare an assignments/seminars presentations and to do project, 10% to prepare articles/books, 12% to know more about subjects, and less 8.3% of respondents use to find relevant information in the area of specialization.

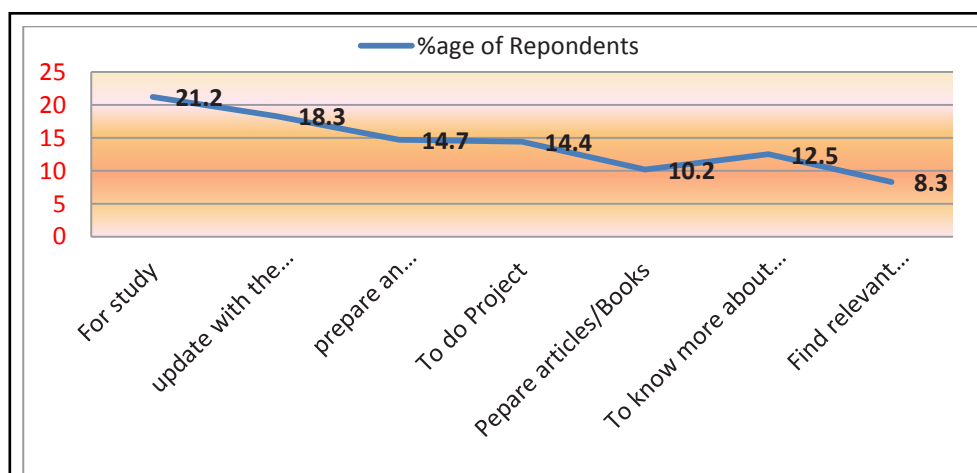


Fig. 9: Purpose of using Educational Apps

Table 10: Level extent of Smartphone for E-resources

SL NO	Adequacy	%age of Respondent
1	Strongly Agree	22.6
2	Agree	64.9
3	Uncertain	8.2
4	Disagree	4.1
	Total	100

E-Resources plays very important role in research and development activities. Through the access of journals and

other materials through library consortium, Digital library, open access directory and subject gateways have made lot of contributions specifically in research contributions. The question has risen to the respondents to know the level of extent of Smartphone for making use of e-resources. The table-10 reveals that majority 64% respondents expressed the level Agree followed by 22% strongly agree, 8% uncertain and least 4% of respondents expressed disagree that smartphones will not much useful in making use of e-resources.

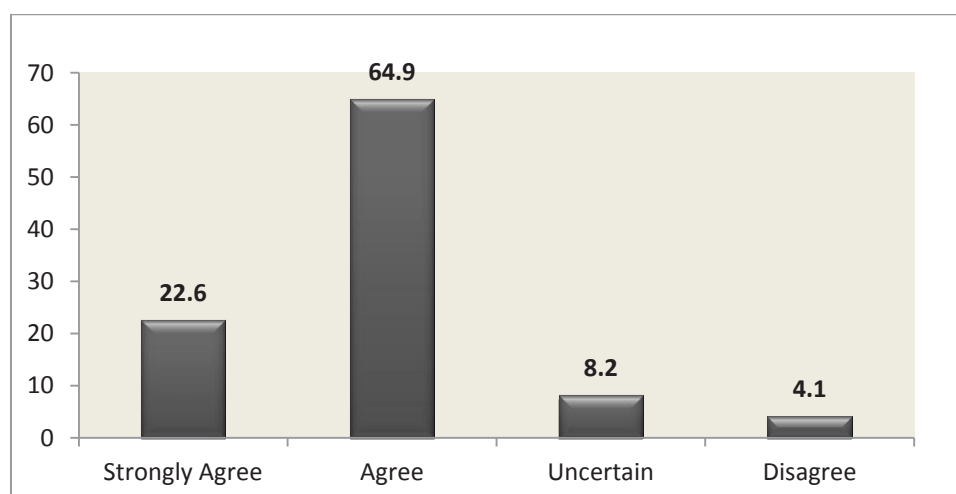
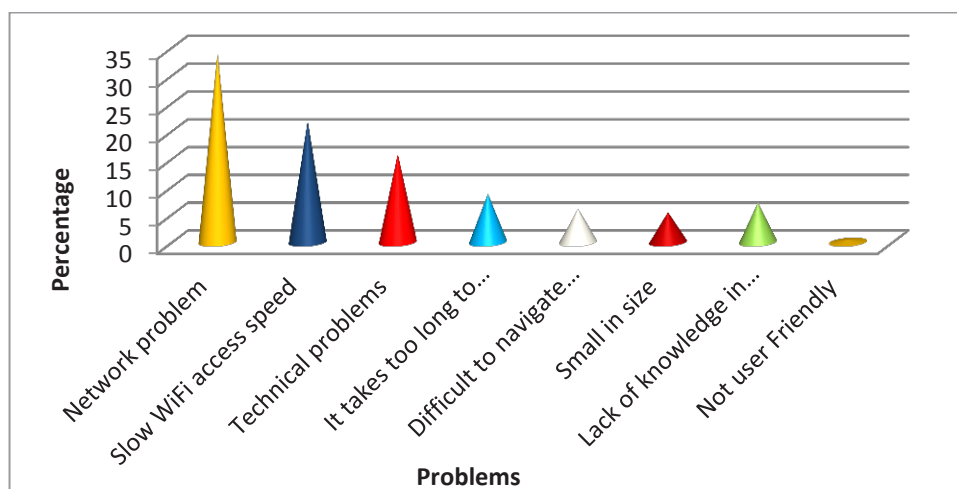


Fig. 10: Level extent of Smartphone for e-resources

Table 11: Problems in Accessing web Information through Smart Phone

SL NO	Problems	%age of Respondents
1	Network problem	34.0
2	Slow WiFi access speed	21.9
3	Technical problems	15.9
4	It takes too long to view/download pages	8.7
5	Difficult to navigate web links through smart phones	6.0
6	Small in size	5.4
7	Lack of knowledge in accessing web resources	7.1
8	Not user Friendly	0.5

In order to know the obstacles faced by the respondents, a question was posed and the results are given in the table-11. Majority 34% of respondents faced network problem followed by 21% slow Wi-Fi access speed, 15.9% Technical problems, 8.7% too long to view and download pages, 6% difficult to navigate web links through Smartphone, 5.4% small in size, 7.1% lack of knowledge and 0.5% of respondents said Smartphone's are not user-friendly as like computer.

**Fig. 11: Problems in Accessing Web Information through Smart Phone****Table 12: Student's Opinion Towards use of Smart Phone for e-learning**

SL NO	Opinion	%age of Respondents
1	Excellent	31.9
2	Good	62.8
3	Poor	1.0
4	No opinion	4.1
	Total no of respondents	100%

Table 12 depicts the student's opinion towards use of Smartphone for e-learning. The study found 62.8% of respondents expressed Good opinion towards the use of smartphones for e-learning. Followed by this 31.9% respondents expressed Excellent, 1.0% Poor and 4% of respondents did not expressed any opinion towards the usefulness of Smartphone for e-learning.

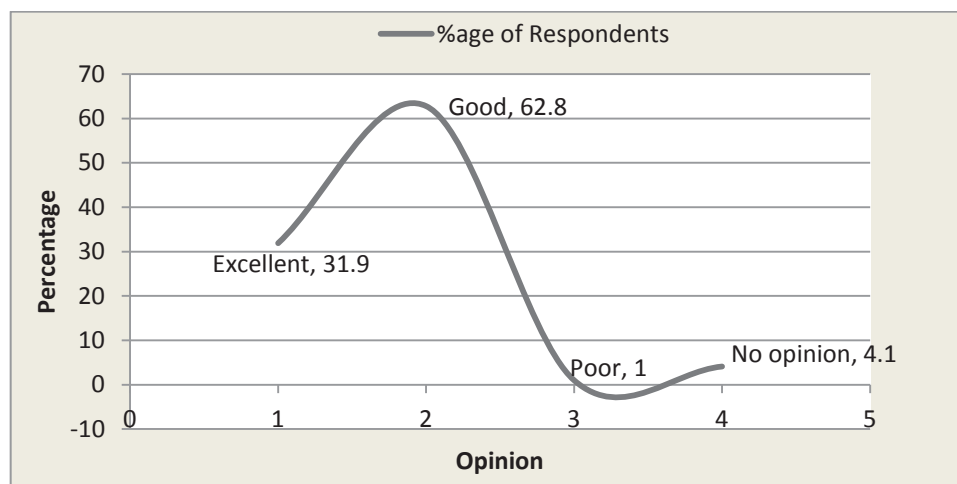


Fig. 12: Opinion towards Use of Smartphones for e-Learning

CONCLUSION

The study found that smartphones were used for learning and other purposes. Despite this generalization, the usage of smart phone applications for learning differed among respondents. All students mentioned to use text messages and calls while few mentioned to have used some advanced learning applications. The majority of PG students use smartphone for making use social media applications and they believed to enhance interactions, collaborations and learning. Few did not use some applications as they were not awareness and did not know how to go about using them. Furthermore, the campus Wi-Fi is the best mode of accessing internet through the student's access web enabled information resources such as web pages, e-journals and e-books. It is also found that the dictionaries, wikipedias and encyclopedias are the most preferred applications. It is recommended that before buying mobile phones people should try to study their specifications. Moreover, web content generators should consider mobile phones versions of their web contents as many people use their phones for accessing such contents. Mobile phone operators should reduce internet service tariffs so that more can afford and use mobile internet services. Furthermore, Web 2.0 awareness among students should be raised as these tools are believed to be efficient in learning.

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