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SIGNIFICANCE OF INFORMATIONAL AND EDUCATIONAL GRATIFICATIONS FROM MOBILE DEVICES ON UNDERGRADUATE COMMUNITY OF LAHORE, PAKISTAN

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Abstract

The mobile devices with smart technology have different influences on different users. These devices provide a number of options to share in different ways to the users even masses. This study is linked with the uses and gratifications theory because it states that people use medium either digital or traditional according to their needs for their gratifications. The study main question is to investigate what are the descriptive patterns of undergraduate students in using mobile devices and gender differences in patterns of the undergraduate students who use mobile devices for informational and educational purposes.? The method is quantitative in this research. The data collection tool is adapted from need for touch scale and the responses our based-on paper and pencil questionnaire, survey. The data analysis is based on statistical and inferential analysis. The area of study is Lahore, Pakistan. The target population for this research is the undergraduate university students. The results have shown that the student community mostly uses smartphones for sharing information and education in personal, professional, or academic context with each other and there is no difference based on the gender among the patterns of using the mobile devices.

Keywords: Mobile devices, student's community, information sharing, education seeking, smart technology, android, need for touch scale

1. Introduction

Smart technology is a worldwide technology used throughout the world. The details regarding this technology globally and in Pakistan are shown in the chapter of introduction. However mobile devices usage patterns are defined as the preferences and choices of the

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CJSSR
CONTEMPORAY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.02 No.04 (2024)

undergraduate students who use these mobile devices for different information and educational purposes.

1.1. Problem statement

The main purpose of this study is to see is there any significance of mobile devices in informational and educational context for university students specifically the undergraduate ones in Lahore, Pakistan. As the trends of using smart mobile devices is extensively increasing.

1.2. Study Rational

This research will enable us to know what gratifications are being utilized by the students on the mobile devices that are affecting the quality of education and information among the undergraduate students. As after reading previous literature of the research scholars Chester, Hirose, Holak, Huang, Kearney, Muhammad, Nilsson and Oloo's research it is found that previous research is based on general public and social notions. For this research and phenomena of interest the significance of these devices in the use for quality of education is the rational behind the use of this research. Based on specific applications on mobile devices that the students use the responses are quantitatively taken. This research has not been conducted in the setting of Lahore, Pakistan and a very strong rationale is that this research is aligned with the sustainable development goals mentioned in the significance portion.

1.3. Significance

The significance of this research is based on the notion that this research will be helpful in providing awareness to the students by digital technology campaigns carried by different organizations on the useful and correct use of smart technology.

1.3.1 UNSDG 4

This research is aligned with the 4th United Nation sustainable development goal to Pakistan. It is a necessity and becomes a strong rationale to align the research with the UN-SDG because Pakistan has to provide progress to the United Nations regarding these goals so any students who attempt to progress with such a topic or such a domain enables the country towards a better future.

1.4. Research Objectives

To check the descriptive patterns and gender differences of the undergraduate students who use mobile devices for information and education purposes.

1.5. Research Question

The below research question indicates the interrogation of the objective of this research.

RQ1. What are the descriptive patterns of undergraduate students in using mobile devices for information and education and the difference in the patterns between the genders?

1.6. Hypotheses

Below are the hypotheses both alternative and null that are assumed for the research based on uses and gratification theory.

H_0 Mobile devices have no significance in the information and education patterns of undergraduate students in Lahore, Pakistan.

$H_{(Alt)}$ Mobile devices have significance in the information and education patterns of undergraduate students in Lahore, Pakistan.

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CJSSR
CONTEMPORAY JOURNAL OF SOCIAL SCIENCE REVIEW
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1.7. Limitation

The city of Lahore is the only location for obtaining the responses. There are time constraints to conduct this research and the list of students is not provided.

1.8. Delimitation

The researcher is deliberately using purposive non-probability sampling. Because probability sampling is not always practical, non-probability sampling is frequently utilized in quantitative research and here the list of undergraduates for randomization is not provided by the university.

1.9. Brief Introduction and History of Mobile Devices and Smart Technology:

A mobile is a device that does different functions of a computer, specifically having a screen with touch ability. The internet can be accessed on it having an operating system that is also having the ability to download apps and use them (English Oxford Living Dictionaries, 2017). First time the word "smart technology" was introduced by American Telephone and Telegraph Company (Savage, 1995). In 1992 the first smart Technology mobile device was introduced by International Business Machines Corporation named personal digital assistant and then it was followed by iPhone after 15 years (Tweedie, 2015). The first touch Technology was introduced by the Simon Company that had the ability to share emails. (QR Code Scanning, 2017).

The History of GSM Technology in Pakistan started by a company M/s Pakistan mobile Telecommunication ltd. Global System for Mobile communication introduces advanced digital networking systems. This happened by the brand name of Mobilink in 1994. This company started providing mobile connected telecommunication services by partnership with a safe group who brought Motorola Inc in Pakistan. The first commercial General Packet Radio Services were introduced in 2000 that had the ability to connect with the internet on the mobile set ("Instaphone" n.d.; "Mobilink" n.d.).

The History of 3rd and 4th generation Internet in Pakistan states that on the 23rd of April 2014 both the technologies comprising 3rd generation and 4th generation were introduced in Pakistan because of the simultaneous Multi Around Ascending Auction SMRA. However, 3G was less used in its initial presence in Pakistan because of slow services and 4G took place over 3G ("3G adoption" n.d.).

There were collective five telecommunication companies that were providing services of telecommunication in Pakistan out of them three took the license of 3G Technology those were Telenor Mobilink and Ufone similarly Zong got the license for 4G and 3G both had where as Warid had its own 2G technology that they converted to 4G LTE without taking participating in the auction of the prevailing practices and in this way these technology were implemented in Pakistan.(Khan & Baloch, 2014).

Higher Education Commission of Pakistan Facts: There are many public and private Sector universities in Pakistan that are having access to internet technology in Pakistan. According to Higher Education Commission of Pakistan the public sector universities/degree awarding institutions that are recognized are approximately 23 universities that are chartered by the Government of Pakistan. There are approximately 24 universities that are chartered by the Government of Punjab. There are approximately 20 universities chartered by the Government of Sindh. There are approximately 18 universities that are chartered by the Government of NWFP. There are seven universities chartered by the Government of Baluchistan. There are three

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CJSSR
CONTEMPORAY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.02 No.04 (2024)

universities chartered by Government of Azad Jammu & Kashmir (Higher Education Commission Pakistan, 2017).

According to the Higher Education Commission of Pakistan the private sector universities/degree awarding institutions are approximately seven that are chartered by the Government of Pakistan. There are approximately 20 that are chartered by the Government of Punjab. There are approximately 30 universities chartered by the Government of Sindh. There are approximately 10 universities that are chartered by the Government of NWFP. There are no such registered private sector universities in Baluchistan and Azad Jammu & Kashmir who have authority of degree awarding institutions (Higher Education Commission Pakistan, 2017). Approximately most of these universities have facilities for internet and Wi-Fi in their Computer Labs, libraries, classes, cafeterias and open areas.

2. Literature Review

According to a United Nations Educational Scientific and Cultural Organization report approximately 800 million people including more than 123 million youth cannot read and write but just because of this mobile Technology it is motivating and enabling the potential for reading and improving literacy and developing countries by developing skills for reading by via mobile devices (Smith, 2014).

This mobile device Technology is an appearance that represents the digital age for poor people in the world (Ilahiane & Sherry, 2009). According to Daniel Lerner traditional societies get less bound by traditions and are making them aspire to a new way towards modernization of life (Thussu, 2000).

2.1. Technological Advancements:

The mobile devices specifically Android and similar have the ability to provide assistance to the users related to e-learning, information, education, entrepreneurship, banking, health delivery services, and much more et cetera (Donner, 2008; Goggin, 2006).

Differences indicate that because of the word spread of mobile technology the research on Investigation of e-learning has been conducted on a large scale (Yu-Lin et al., 2010).

The present smart technology linked mobile devices have the ability to provide location provide reader system information and environmental awareness sensors that enable the users to experience learning content for academic purposes and also it enables to equip learning strategies that can help educators and facilitate them for the mobile learning process for their academic goals (Yu-Lin et al., 2010).

The research on significance of mobile devices in learning of students has been explored in many ways by the researchers and now the instructor side of learning is also being included in the research (Evrim, 2014).

The learning method on mobile devices has a very influential role in developing new Knowledge and Skills among the students (Valk, Rashid, & Elder, 2010).

It is feasible if the academic institutions include mobile learning in the informal environment so that the quality of Education can be increased for the approach towards students learning (Ferial et al., 2016).

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CONTEMPORAY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.02 No.04 (2024)

2.2. Literature Gaps

The major gap that lies within the domain of testing the theory of uses and gratifications in the concept and the construct of mobile devices usage because there is a lot of research in past based on different websites comprising of social media social networking sites Etc. but specifically on mobile devices there is still a gap that needs to be discovered accordingly.

3. Theoretical Framework

The mobile devices are used in sharing and seeking information in education accordingly for the needs and gratifications (Papacharissi, 2011). The uses and gratifications theory states that the audience needs a medium for gratification (Katz, Blumler, & Gurevitch, 1973).

Variable and Types

The independent variables in this research are the undergraduate students. The mediating variable are the mobile devices, and the dependent variables are information and education seeking and sharing

4. Methodology

This research is based on primary type of data. The Research Design is deductive, the method of research is quantitative, and the study area is Lahore, Pakistan. In the context of sharing information and education as an indicator in students, the community is supported in Lahore, Pakistan setting towards undergraduate freshman students or not. On the basis of the hypotheses responses are taken from the freshman students in Lahore Pakistan via open-ended questionnaire and their mobile devices application's relevance with their responses are recorded too so that results are carried out.

The Need for Touch Scale is used because it has gone through the procedures of testing and in quantitative research it is visible to adapt an already developed scale to avoid errors as this scale and instrument that has already been maintained; the instrument has gone through the process of statistical tests for validity (Has et al., 2020).

The number of respondents in a minimum perspective should be no less than 30 as per the condition and circumstances if sample size is not in a bigger category so the software states that the recommendation in the research and software package for Social Sciences 30 is an initial sample size (Serdar et al., 2021).

Quantitative research method is used to interpret the findings from an open-ended questionnaire after the collection of responses based on identified recurring patterns or themes.

To draw the results arithmetic mean is used for analyzing the descriptive patterns and to investigate if there is any gender difference among the patterns of mobile devices usage for the information and education independent sample t-test is used that comes from the inferential statistics in this research.

5. Participants and Data Collection

An indicating sample of 32 Freshman Students of the Institute of Communication Studies of a public sector university named University of the Punjab were taken. The sample size was taken from https://www.surveysystem.com. The students were selected on the basis of a

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CJSSR
CONTEMPORAY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.02 No.04 (2024)

sampling technique known as purposive sampling technique because to fill the purpose of the research and to have pure experiences of only those representatives of the population who use these mobile devices are only asked to share their responses in the open-ended questionnaires.

6. Results and Findings

The findings are in descriptive and show the below results that are based on statistical Findings on Students using descriptive method by synchronizing identified recurring themes or patterns. All the details regarding the descriptive analysis are mentioned within the tables and also their explanation in the north section of each table is mentioned for the readers by the researcher.

Table 1 Type of information Educational, Professional etc. you share on mobile devices.

Percent %	Personal	Informational	Professional	Project Oriented	Educational	All	Total
	3.1	25.0	18.8	3.1	40.6	9.4	100.0

Note: The above table shows descriptive detail of the use of mobile devices by undergraduates

Table 2 Contents you share on your mobile devices.

Content	Percent
Academic	21.9
English Poetry	6.3
Biology	3.1
Mathematics	3.1
Social Sciences	3.1
Politics	3.1
Health	3.1
Financial Reports	3.1
Office Related	6.3
Computer Science/Information Technology	3.1
Chemical Engineering	3.1
ISO Standards/QMS TOOLS/Quality Assurance	6.3
Mechanical Engineering	3.1
Construction	3.1
Research	6.3
Mass Communication	21.9
Total	100.0

Note: As per the patterns provided by the undergraduate it is clearly mentioned that these students avail a wide variety of applications in their mobile devices related to Information and education. The application such as games videos entertainment and other time-wasting applications were not found in the devices of the undergraduate students that shows a milestone of availing mobile devices for such academic and information or educational uses.

Table 3 Common Apps in Mobile Devices?

Primary Apps	Percent
Facebook	6.3

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CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORAY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.02 No.04 (2024)

WhatsApp	9.4
Other	31.3
Facebook/WhatsApp/Skype	3.1
Facebook/WhatsApp	9.4
All including (Facebook/WhatsApp/Skype/Instagram)	15.6
YouTube	6.3
Google	15.6
No	3.1
Total	100.0

Note: The findings show that not specifically social media apps are common in the mobile devices of the university students but other specific apps that are needed by the students in their studies are more common.

Table 4 Do you share articles, blogs, and E-Books through your mobile devices?

Sharing Types	Percent
Articles	18.8
E-Books	9.4
Blogs	3.1
News	12.5
Others	3.1
Articles, E-Books, Blogs, news	46.9
No	6.3
Total	100.0

Note: The maximum percentage of the students show that they do share articles, blogs, and E-Books on the mobile devices.

Table 5 Similarity Between Claimed Apps and mobile devices Screenshots.

Similarity	Percent
Yes	68.8
No	31.3
Total	100.0

Note: During the process of obtaining quantitative responses that were taken from the respondents their mobile device screen was also asked to show to compare their answers with their mobile device screen as a validity concern during the research and found that maximum students answered their questions correctly aligned with their mobile device screens.

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CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORAY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.02 No.04 (2024)

Table 6 Would you please tell me how many information and Education based apps you have?

Number	Percentage
2	31.2
3	12.5
4	12.5
More than 4	31.4
No	12.5
Total	100.0

Note: The results showed that maximum students have more than four educational and informational apps in their mobile devices.

Table 7 Types of Topics shared on mobile devices.

Topics	Percent
Communication	9.4
History	6.3
News	15.6
Mathematics	3.1
Academic	28.1
Political	6.3
Poverty	3.1
Law	3.1
Engineering	3.1
Offense	3.1
OHSAS, Lean Manufacturing, Benchmarking Database	6.3
Pathology, Physiology	3.1
No	3.1
Financial Reports	3.1
Algorithm Database	3.1
Total	100.0

Note: There are lots of topics that are search and viewed on the mobile devices by the undergraduate students as per their taste need and academic requirements. The topic search specific in their domain and they enable the undergraduate students to develop reading skills for their education and information.

Table 8 Other Specific Apps in the mobile devices.

Secondary Apps	Percent
Dictionary	37.5
English Poetry	3.1
The Guardian	3.1
Calculator	3.1
No	28.1
I-book	3.1
YouTube	3.1
WhatsApp	3.1
IMO/Line	6.3
Share it	9.4

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CJSSR
CONTEMPORAY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.02 No.04 (2024)

Total	100.0

Note: The students use different specific applications to gratify their needs as per their requirements of studies and dictionary is a common app the students use for their studies to understand the meanings of the words.

Table 9 How mobile devices help in sharing knowledge?

Advantages	Percent
Instant	34.4
Fast	15.6
Multiple Sharing Options	21.9
Spreadable	18.8
Positive	6.3
Advanced	3.1
Total	100.0

Note: The students have responded that the mobile devices usually help them in sharing knowledge instantly as per their need.

Table 10 Show difference between the mobile devices sharing patterns Variables by Gender

Dependent Variable	Gender of the Respondent	N	Mean	Std. Deviation	t	df	Sig.
mobile devices sharing patterns	Female	12	10.90	2.57	-.30	246.99	.767
	Male	20	10.99	2.98			

Table 10 states that independent samples t-test was conducted to compare the Academic Motivation scores for males and females. There was no significant difference in scores for males (M=10.99, SD=2.98) and females M=10.90, SD=2.57; t (32) =-.30, .767 (two tailed).

7. Discussion

The results show that the Freshman Students of the Institute of Communication Studies of University of the Punjab are sophisticated in context of reading and gaining knowledge and information for their education on their mobile and smart devices that is also influencing the quality of education for students understanding towards diversity of topic that day or reading. However, the fact is that this is a very small-scale research and it cannot be generalized to the masses of the population of Lahore Pakistan of undergraduate students, and there are other limitations regarding the analysis of the results because of the small sample size drawn on purposing basis for the collection of data need to be further analyzed on a larger scale.

8. Conclusion

According to this study the results have indicated that only 6.3% of the undergraduate freshman students do not use their mobile devices for sharing articles, blogs and E-Books. The evidence has shown that 68.8% of the student mobile devices have the apps they mentioned while responding to the questionnaire. Combining the crux of the results, not a single student refused to share any kind of content on their mobile devices. This shows the acceptance of uses and gratifications phenomena on the undergraduate students. This concludes to the point that the Halt "Mobile devices have significance in the information and education patterns of undergraduate students in Lahore, Pakistan." is proven in this small-scale research. Secondly, to double check whether both the genders have the same patterns of mobiles apps usage were checked by independent sample t-test and it was found that there were no

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CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORAY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.02 No.04 (2024)

statistically significant differences in those patterns. Hence the transnational corporations of the first world and second world developed countries will keep on implementing changes to the third world developing countries and this chain of modernization will keep on spreading and changing the developing societies. The technological knowledge sharing of communication shows the circle of disseminating and decoding the content on mobile devices in the undergraduate community of Lahore, Pakistan.

9. Future Recommendations

Smart technology is a very widespread technology that requires study on a large scale so that new findings regarding its best use can be carried out and this technology can be viewed in different ways. So that different techniques can be invented to use this technology in a beneficial way.

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