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A STUDY OF THE SOCIO-ECONOMIC PERSPECTIVE OF THE DIGITAL DIVIDE AMONG UNIVERSITY STUDENTS

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ABSTRACT

Indians living in the 21st century are known as one of the world's most dynamic, developing, and digitally loving people. With the rapid growth of Digital Technology, the Internet emerged as an important medium for exchanging ideas, opinions and knowledge. The ICT (Information and Communication Technology) facilities are the basic right of every individual for the economic and social exchange of knowledge.

The term 'Digital divide' denotes the gap between people who have access to modern information and communications technology (ICT), and those who lack it. Various studies and reports suggest that the digital divide is still very much a reality today. The India Inequality Report 2022: Digital Divide by Oxfam underscored that only 38 per cent of households in the country are digitally literate. This report also highlights the rural-urban digital divide in the country. Factors such as educational and income levels, geographical restrictions, lack of motivation, digital illiteracy, discrimination, etc. contribute to the digital divide. This research paper aims to study the socio-economic reasons for digital divide among students of Higher Education. The purpose is to provide a comprehensive analysis of digital technology usage patterns among the students of Higher Education. It also tries to highlight the basic reasons for the digital divide among students. The study exposes the different factors including socio-economic status, geographical status and educational background of the population. The researcher conducted survey among the students of Higher Education and found that the use and access of digital technologies are quite dismal in various caste, class and peri-urban students. The researcher also focused on the ease of access to technology and education. It was quite interesting to see that the students who were from convent education had more knowledge about digital technology than those who came from Hindi medium schools. The Caste, Class, and Place of living also affect the access to digital technology. The difference between have and have not is affecting educational achievements.

If we want to make India a digitally literate society then we have to take measures to fill this gap as soon as possible. The government can take various steps like increasing affordability, strengthening internet infrastructure, addressing gender gaps, etc. to tackle the challenge of the digital divide among university students. The findings of the research can be utilized by policymakers to invest in digital education for holistically tackling the digital divide. For example, the research highlights the importance of mobile as a personal device among university students and hence, policies emphasizing boosting the affordability and accessibility of mobile can help boost digital literacy.

Keywords: Digital Divide, Higher Education, ICT, Digital Access, Digital Equality

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1. INTRODUCTION

The origin of the term digital divide goes back to an unknown American source in the 1990s and was first used in an official publication by the US Department of Commerce's National Telecommunications and Information Administration (NTIA, 1999). According to Cambridge Dictionary, the meaning of the digital divide is "the problem of some members of society not having the opportunity or knowledge to use computers and the internet that others have (Cambridge Dictionary)."

The Digital Divide commonly refers to the gap between those who do and those who do not have access to new forms of information technology. It is the inequality among people in terms of access to digital tools and techniques and information technology. The various socio-economic factors influence the digital divide in this era of Internet and communication technology. Also, the pandemic has further filled this divide. It creates differences in opportunities for access to digital education, jobs, information, etc.

The Digital Divide in higher education prevents students from taking advantage of technology in learning practices. This digital divide further affects the future of students in the knowledge and economy of the nation in general. Rogers has referred to this issue as an important issue for social justice in the twenty-first century.

According, the problem of the digital divide needs to be understood in multi-dimensional ways to counter this challenge. Overcoming the digital divide would help SDG 4 which aims to ensure inclusive and quality education.

Also, the National Education Policy, 2020 aims for the Gross Enrolment Ratio (GER) in higher education to reach 50 per cent by 2035 and digital inclusion will play an important role in achieving it. In this paper, we have attempted to highlight the scenario of the digital divide among University Students. At the same time, we have tried to give some suggestions, which could play an effective role in minimizing this inequality or the digital divide.

2. LITERATURE REVIEW

Soomro et al. (2020) in the paper, Digital divide among higher education faculty, The Researcher investigated digital inequalities at the physical, motivational, skills, and usage levels among Pakistani faculty concerning their personal and positional categories. They concluded that there are statistically significant differences in faculty's access to ICT for their personal and positional categories like age, gender and university type. They also found that the ICT access of the public faculty was lower than that of the faculty of private universities. They also concluded that faculty feel more confident while using digital technologies for their general tasks as well they get more ideas on how they should use technology for their teaching.

Sun et al. (2011) in the paper, The Digital Divide and Its Impact on Academic Performances, tries to find out the relationship between the two factors, socio-economic status as well as technology usage and the student's school performance. In this article, the researcher found that the proper use of technology by students increases their academic performance outcomes. They also concluded that the use of technology by students is linked to socioeconomic status and academic performance. They also found that educators should try to identify whether the achievement of students is directly connected with the use of technology.

Pandey (2014) in the paper Impact of New Media Technology on Information and Entertainment Behavior of Youth, explains that the Youth in India is spending a lot of time on the Internet and other alternative means of communication. Mobile phones are the most preferred medium among youth for content generation, uploading of data and dissemination of information. The mainstream media will have a tough competition in the form of alternative media. The global civil societies have found a new and alternative platform for raising their concerns.

The researcher here concludes that the various social issues raised with the help of social networking sites are getting good responses from the netizens which shapes global public opinion. Now the local governments are finding it difficult to regulate the flow of information. The world is now fast becoming multi-polar and multiple sources of communication in the form of small and alternative media have given a strong platform to the marginalized communities and socially deprived class.

Kim et al. (2005) in the paper The Digital Divide in Students' Usage of Technology Tools: A Multilevel Analysis of the Role of Teacher Practices and Classroom Characteristics, revealed that students in suburban schools had significantly greater access to computers at home and spent more time on computers both at home and school. Data analysis in this study showed that, in general, students tended to use technology tools for individual/personal practices rather than for instructional activities. These findings suggest that access to computers at home is an important factor in students' utilization of computer resources. Even when schools provide equal access to computers for all students, the digital divide in students' usage of technology tools remains, due to differing students' home environments. Although the study found no statistically significant evidence of a gender gap among students in fourth- and fifth-grade levels in the usage of computer tools in the classroom, boys on average spend more hours on computers at home than girls. This difference in home usage of computers by gender, if unchecked, may lead to a gender digital divide later on in their school life. Educators should make an effort to identify more institutional and societal factors that may lead to the widening of this gender digital divide, as well as we should make this a part of gender equity strategies in the curriculum of teacher training programs. Therefore, the higher education community, including teacher education programs, should establish a partnership with school districts that show limited practice with technology tools to ensure equal opportunities for all students. Other findings in the study revealed the importance of teachers' beliefs and practices in technology in relation to the digital divide in students' usage of specific computer tools. Also, teaching experience was positively related to students' usage of productivity tools that are often integrated into the curriculum. This finding may imply that when teachers are more proficient in technology and have more experience, they integrate technology tools into their teaching. As a result, their students are given the opportunities to use technology, regardless of their technological environment at home.

3. OBJECTIVE

1) To know the digital inequalities among university students at motivational and skill levels.
2) To assess the media usage pattern by the students.

4. RESEARCH QUESTION

The present study was based on the following questions:

1) How does student's ICT access differ with respect to their age, gender, caste and class?
2) How do students use ICT to support their educational practices related to their physical access, skill access, and general usage access?
3) Is there any relationship between ICT and quality of education?

Methodology

Research Design

To gain insight into the digital divide among university students, the researcher employed a mixed-method research approach (Descriptive and Analytical). Data was collected through a self-administered questionnaire.

Population of the study

Since the Universe of the study consists of the students enrolled in the various Higher Education Institutions, an online survey of those students has been conducted.

Sample and Sampling Technique of the Study

One hundred students enrolled in various courses in Higher Educational Institutions have been selected with the help of purposive sampling.

Tools for Data Collection

For collecting desired information from the population, a questionnaire has been prepared having two sections.

1) Personal Details
2) Socio-Economic behaviour

The questionnaire was sent to the respondents through email and the response was also collected through email.

5. RESULT AND FINDINGS

RQ1. What device do you prefer for learning? (Answer in order of your preference).

1) Mobile
2) Tab
3) Laptop
4) Desktop
5) Any other

Figure 1

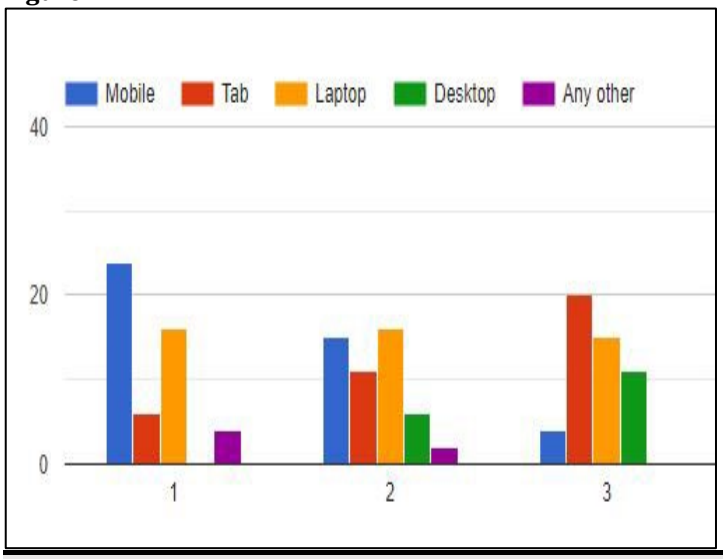

Figure 1 RQ1.

Fig. RQ1. Explains that out of the people surveyed, mobile is the most preferred digital device for learning due to its handy and affordable nature. Therefore, increasing smartphone density can be an effective tool to boost digital literacy. Also ecosystem of mobile learning should be strengthened more through various tele-education services like ePathshala After mobile, the Tab is the second most convenient device among students for learning. The respective order of preference of digital devices used by the students are as follows: 1. Mobile 2. Tab 3. Laptop 4. Desktop 5. Any other devices.

RQ.2. Do you have a personal device? (If yes, then mention)

a) None
b) One
c) Two
d) More than three

Figure 2

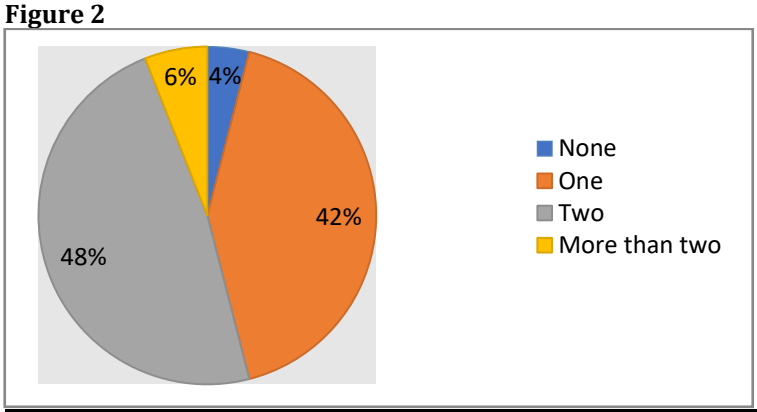

Figure 2 RQ2.

According to Fig. RQ2. 42% of the students surveyed have one personal device and 48% of them have two personal devices. This suggests that in recent years, the

number of personal devices used for digital learning has increased signaling expenditure on digital literacy.

RQ.3. Do you have pre-paid or post-paid connections?

Figure 3

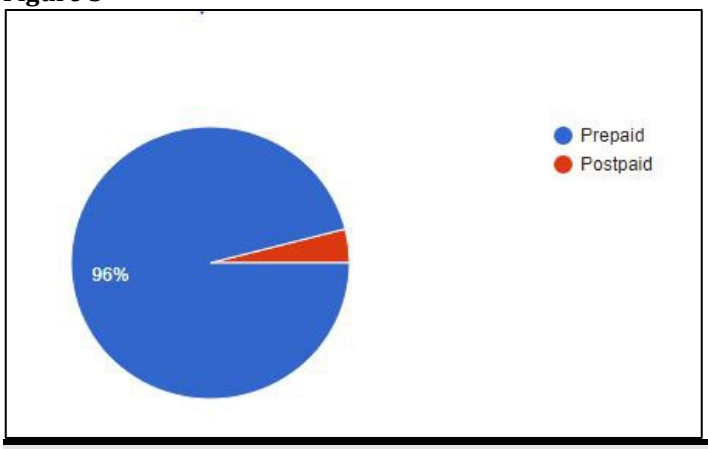

Figure 3 RQ3

Fig.RQ3. concludes that 96% of students, out of the total population have prepaid connections when it comes to internet access. Normally, students still believe in 'First pay, then use' rather than paying later after use of service.

RQ.4. At university/department, do you use personal data or university data?

Figure 4

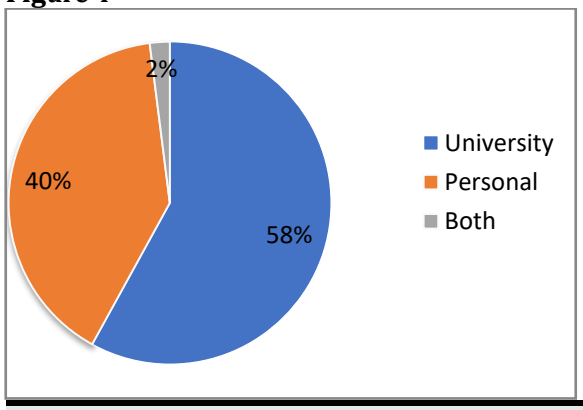

Figure 4 RQ4

Fig.RQ4. explains that at university, around 58% of students use university data while 40% of them use personal data. Due to poor ICT-friendly campuses, people have to rely on personal data usage even at University premises. This calls for investment in ICT Infrastructure in Universities to reduce the out-of-pocket expenditure of students on the internet which can give a fillip to the scenario of the digital divide.

RQ. 5. Do you feel that ICT makes learning effective and interesting?

- Yes
- No

Figure 5

Figure 5 RQ5

In Fig.RQ5. The given data shows that 98% of students in higher education believe that ICT is helpful in education. ICT makes learning more interesting and Effective. Therefore, digital education is the need of the hour. Also, the Right to Education should imbibe digital education.

RQ.6. What range of activities do you prefer for learning?

a) Streaming Videos
b) Assignment
c) Research Work
d) Online classes
e) E-newspaper
f) E-book
g) Attend Conferences

Figure 6

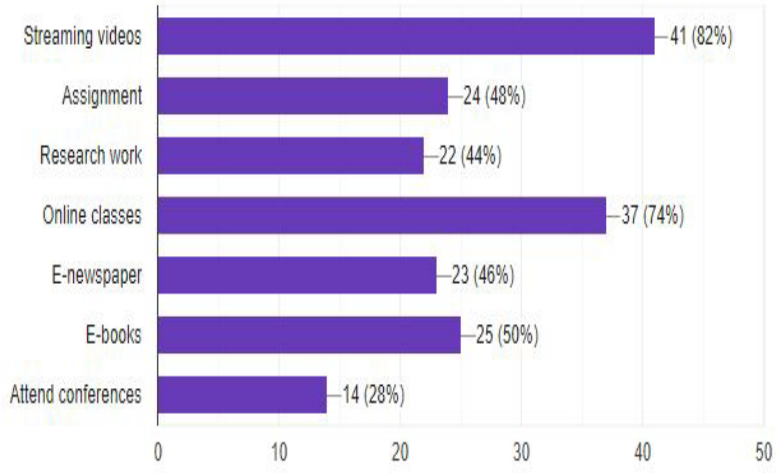

Figure 6 RQ6

According to Fig.RQ6, Students of higher education in University deploy multiple ranges of activities for learning through digital mode. The graph shows that, out of the Students surveyed by the researcher, learning through Online videos

occupies the primary place. Therefore, content related to digital education should be comprehensive for effective digital learning.

RQ.7. What is the primary barrier to having sufficient and reliable internet access?

a) Economic
b) Infrastructure
c) Knowledge
d) Lack of Interest
e) Electricity

Figure 7

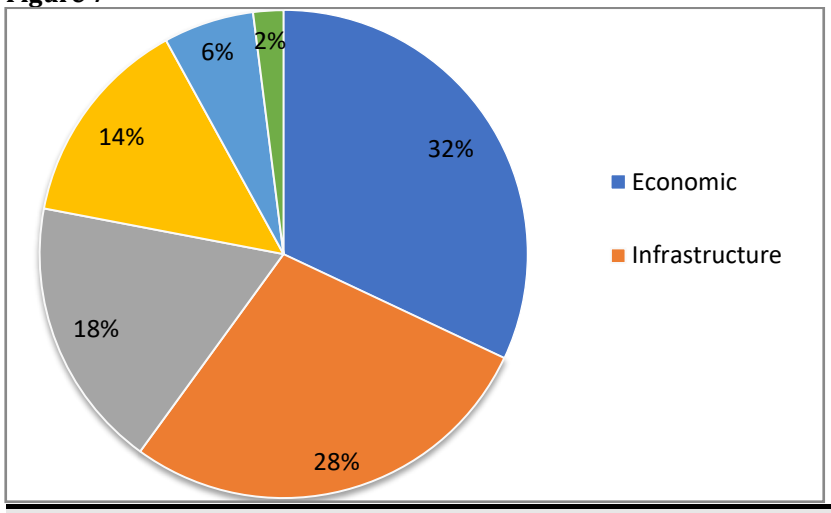

Figure 7 RQ7

Fig.RQ7. concludes that there are multiple barriers when it comes to ICT Learning like Infrastructure, Knowledge, Economic barriers,etc. 32% of the students feel that financial status is the primary reason which leads to hindrance in comprehensive access to the internet. Students from poor backgrounds have higher chances of digital illiteracy in comparison to students from rich families. These disabilities caused by poverty can be checked by emphasizing on concept of equity while formulating policies like subsidies for digital education, distributing smartphones, etc.

RQ.8. How difficult it is to understand ICT?

a) Very difficult
b) Difficult
c) Normal
d) Easy
e) Very easy

Figure 8

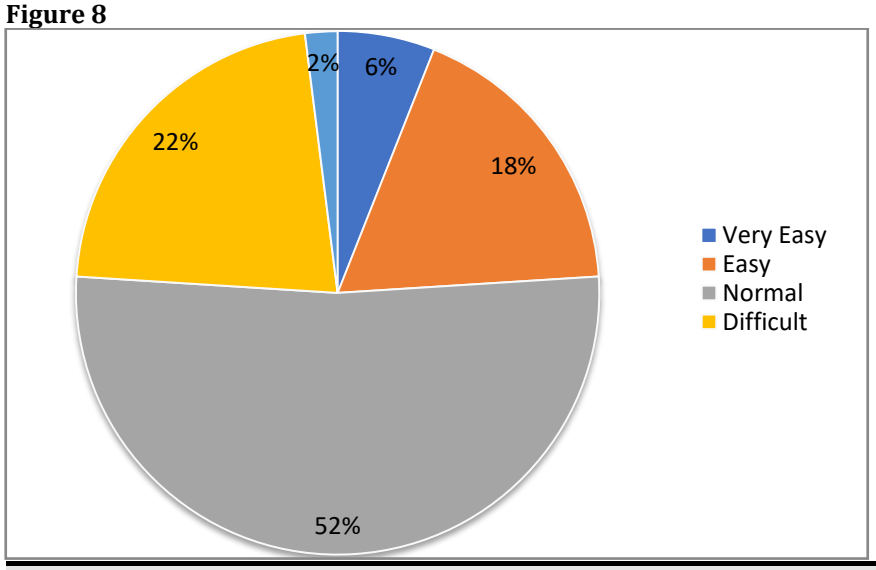

Figure 8 RQ8

According to Fig.RQ.8, around half of the individuals surveyed find, ICT learning to be normal while 22% of students think that learning through ICT is a difficult task. Therefore, the focus should also be on quality aspects along with quantity and students' capabilities should be enhanced so that it would be very easy for students to learn in digital mode

RQ.9. Do you know there are different ICT tools (Spreadsheet, Google Classroom, Interactive Whiteboard, PowerPoint, Projector) available to use for learning?

a) One or Two
b) More than three
c) Almost every tool

Figure 9

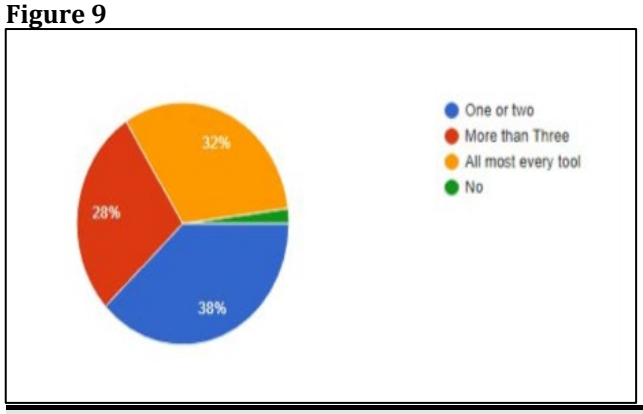

Figure 9 RQ9.

Fig.RQ9. The given data shows that, out of five ICT tools, 38% of the population knows about one or two tools only. On the other hand, 32% of the population knows about almost every ICT tool. ICT tools should be inculcated in the students through workshops.

RQ.10. How do you see yourself regarding knowledge of the Computer?

a) Basic Knowledge
b) Working Knowledge
c) Technical Knowledge

Figure 10

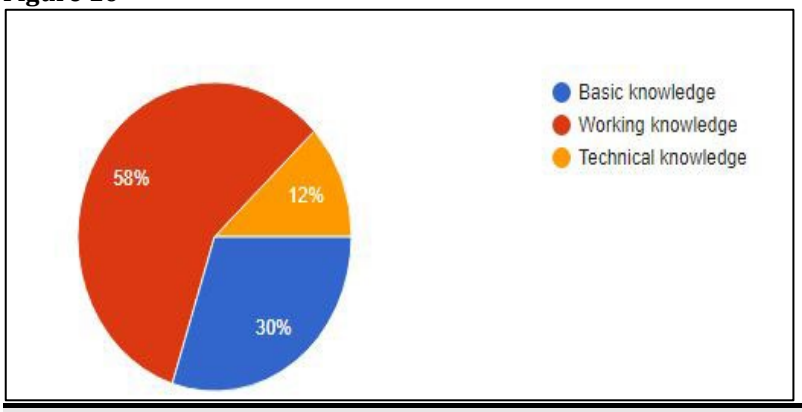

Figure 10 RQ10.

Fig.RQ10. Around 58% of the surveyed Individuals feel that they have working knowledge while 30% of them feel that they have basic knowledge. Emphasis should also be there on the digital skills of students so that more students come into the field of technical knowledge.

6. DISCUSSION AND CONCLUSIONS

Education is not just important for breaking the vicious cycle of poverty but also for the prosperity of the nation and world. Education is the light that drives away the darkness of ignorance and illuminates the mind.

Since the advent of digital technology, the process of learning shifted from traditional methods to digital devices. The lack of access to the internet and infrastructure is the reason behind the digital divide among students.

The use of ICT-enabled devices has been increasing continuously in the Higher Education Institutions but the distribution of the devices is not equal among different strata of the society. The rural-urban divide, the caste-wise division and class are very important and play crucial roles in deciding about haves and have-nots of digital techniques. This digital divide leads to inequality in access to the Internet which affects the learning process. The economic condition of the students is the most common reason behind the internet access. The digital divide is also influenced by the infrastructure of the University premise as some Universities have better access to high-speed internet and some don't. In the ICT learning process, the most preferred device is mobile. Due to the development of technology and decreasing prices of mobile phones, it is now affordable to the poor and deprived class students as well.

The digital divide has to be addressed in a multi-dimensional way so that the motto of 'Education for all' would no longer be a dream. In order to fill the gap the Indian government has taken measures like e-pathshala, Swayam and upgrading the Infrastructure of Educational Institutions so that India's vision of 'VishwaGuru' can be achieved. If India has to grow as digitally literate then we should make sure that

not only our universities but also the schools from private to government develop good infrastructure facilities to divide the digital gap.

CONFLICT OF INTERESTS

None.

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None.

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