



Impact of the Evaluation of Smart Phones in Education Technology and its Application in Students of Vidyasagar University

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ABSTRACT

This paper is an attempt to find out the usage of mobile devices by students for academic purpose in Vidyasagar University in WestBengal state in India. The findings of the study reveal that male students out number female students in mobile device use. Not significant numbers of students are using mobile devices for accessing academic information. Mobile devices are less used for accessing subscribed library resources. Poor network coverage and high charging data plans are the two most common problems faced by students. The findings of the study will guide students and research scholars in effective use of mobile devices for academic purpose and help mobile manufactures, university authorities, librarians in exploring mobile devices adoption and usage at the university.

Keywords: Mobile Devices, Mobile Learning, Students, Vidyasagar Universities, Academic

1. Introduction

The Indian heritage and culture has always been one of leaning and enlightenment. As is popularly said “Sa Vidya Ya Vimuktaye” (which liberates us is education). The idea of education has been very grand, noble and high since ancient times. Early evidences such as the Vedas and the Upanishads, suggest that education had an esoteric existence. The word Upanishad itself translates into learning acquired by sitting at the feet of the master or the guru. In those times, education was imparted orally to the scholars. Later the Gurukul system of education came into existence. This is the oldest and rightfully the most effective education system mankind has ever known. Gurukuls were the temples of learning that served as the repositories of its philosophical literary, artistic, scientific & spiritual achievements. They were also a medium of transmission of our heritage to the future generations. In time, several educational institutions took shape all across India. These centers were specialized in imparting higher education. The Nalanda University was the first university-system of education in the world. The universities of Taxila, Ujjain, Benares, Vallabi, Ajanta, Madura and Vikramsila were also very famous in ancient India. These were the fountains of knowledge where students from all across Asia came to quench their thirst for knowledge, truth and enlightenment. With time, India lost its native educational system, rather slowly but surely. This can be attributed to the long history of invasions and attacks by warriors and kings all across the world. The culture shock diluted the importance and relevance of the traditional Indian educational system and ingrained the western educational system into the Indian education fabric. The colonial rule was a key contributor to this cause. The present system of

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education was founded and introduced by the British in the 20th century. By the time India got its freedom from colonial rule in 1947, its education system had undergone a metamorphosis. During the last 60 years post independence, we have witnessed a number of changes in our education system. Both the regular and distance modes are popular in India today. The exponential growth of the internet is ready to transform the delivery of our education system. India comes only next to China in terms of the number of mobile subscribers globally. Smart phones sales are also at its boom in India. In this paper we have studied the changing scenario in Higher Education and impact of the arrival of smart phones on Indian education system.

2. Review of Literature

The articles published in 2016 show that students and educators mostly use smartphones and different mobile apps for learning activities. Al-Emran *et al.* (2016) found that 'students are using smartphones and other mobile devices for browsing the web, accessing their emails as well as in their education'. Hossain and Ahmed (2016) indicated that 'majority of university students have a positive attitude towards the academic use of smartphones'. Studies of 2015 depict that students and educators have positive attitude towards the use of mobile technology and they are willing to use different features to m-learning. As, Al-Emran and Shaalan (2015) indicated that 'both genders are willing to use mobile technology advantages in education but yes, female students are more positive towards the use of mobile technology than male students'. Madhusudhan (2015) found that most of the respondents use mobile devices for m-learning to improve their social interactions, mostly through Academic SNSs to search other research scholars. Sending emails, accessing e-newspapers and searching Web OPAC is the most frequent activity through mobile devices. Bakhsh *et al.* (2015) shows that 'student has high level of willingness to use mobile devices in educational activities. The students feel that m-learning can save learner's time and feel comfortable in m-learning activities'. Chan *et al.* (2015) stated that 'students perceived that mobile devices are useful and convenient for instant access to various sources of information, for note taking and for visually sharing their research and ideas'. Dukic *et al.* (2015), studied that 'students, found that students use smartphones for learning activities like discussing assignments, accessing resources and news from the course learning platform, checking course emails, etc.'. Khan *et al.* (2015) reveals that educationally advanced countries that promote the mobile device use in the educational sectors as well as mobile learning. They had drawn five important lessons from these countries, national level initiatives, public and private partnership, characteristics of learners and cultural norms, M-Learning infrastructure, and awareness. Ko *et al.* (2015) indicated that students are less frequent to use their smart phone for academic reading. They also report that the lack of the mobile version website constitutes a significant barrier in m-learning.

3. Objectives

There are four objects in this research article such as

- (i) To analysis female students are more using smartphones than male students at the studied universities;
- (ii) To study the Mobile devices play vital role in accessing academic information;
- (iii) To explain the Mobile devices are less used for accessing library resources and services
- (iv) To discuss the Poor network coverage is the most common problem associated with the effective use of Mobile devices for learning purposes.

4. Statement of Problem

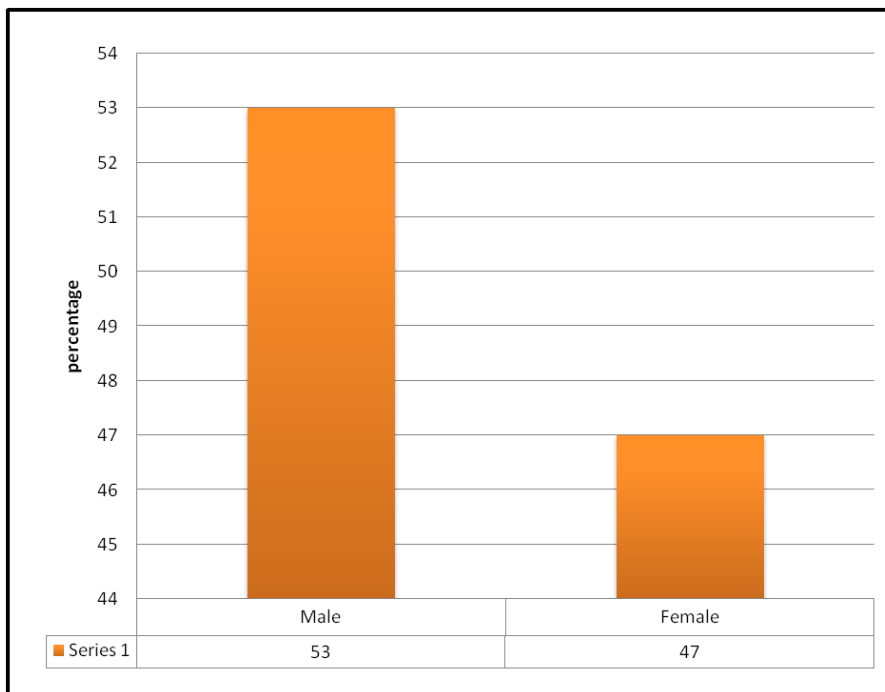
Mobile technology is widely used in education sector. Nowadays, Indian students are no exception. Indian students do use mobile devices to support their study and learning activities. Many studies have been conducted on university, college and school students in abroad and a few in India on learning. This study is specifically related to mobile device use for academic purpose by LIS students. This is an attempt to find out the usage of mobile devices by students in academics, the level to which they access library resources through mobiles and major limitations faced while using mobile devices for learning.

5. Methodology

The selection of the universities was done on the basis of existing courses offering in regular mode in universities. The study deals particularly with the academic use of mobile devices by the students. To solicit information about the academic use of mobile devices, a structured questionnaire was designed, comprising of different type of questions, such as dichotomous (yes/no), multiple choice, and opinion questions and personally distributed to 250 students studying in the studied Vidyasagaruniversities of West Bengal during July–September 2019. Out of which, 153 filled-in questionnaires were received, with a response rate of 61.2%. The responses to six questions in the questionnaire were analysed and presented in the form of tables and figures and analysed by using a simple method of calculation.

6. Results and Discussion

Gender is a matter of consideration when we talk about use of mobile devices. Usage of mobile devices is significantly influenced by gender. Data relating to gender were sought from the respondents as a dichotomous question and responses received from them are tabulates in figure 1. Figure 1 shows that male representatives are higher in number than female representatives. About 53.59% are male respondents; where female respondents correspond to only 46.41%. Thus, the share of males is more than females.



Source: field survey

Figure 1: Gender-Wise Distribution of Respondents (N=153)

5.1 Type of Mobile Device Used

Mobile devices serve students in their daily lives as well as academic learning. There are many mobile devices in use. A multiple choice question was asked from the respondents about the types of mobile devices they use, such as smartphone, laptop, tablet, e-book reader and others.

Table 1: Type of Mobile Devices Used (N=153)

Sr. No.	Mobile Devices	Total responses
1.	Smartphone	141 (92.15)
2.	Laptop	94 (61.44)
3	Tablet	25 (16.34)
4	E-Book reader	05 (3.27)

Source: Field Survey

Table 1 categories the most prominent and frequently used mobile devices and shows the percentage count of the various types of the mobile devices in use by the students and research scholars for academic purpose. Table 1 represents that the smartphone is the most used mobile device with 92.15%, followed by laptop with 61.44%, tablet (16.34%) and e-book reader (3.27%). Another thing that is very clear from the figure is that e-book reader is the most-less used mobile device. The reason can be few students own e-book reader and very few libraries provide e-book readers to their users.

5.2 Academic Use of Mobile Devices

Mobile learning is a new concept and this concept has evolved because of the advancements in indulge in mobile learning across the world. They have become an indispensable part of imparting education nowadays.

Table 2: Gender-Wise Distribution of Usage of Smartphone's

Sr. No.	Smartphone usage	Total responses
1.	Male	79 (56.03)
2.	Female	62 (43.97)

Source: Author calculation

Students use mobile devices in their everyday lives from listening to music or to capturing special moments. The study tried to shed some light on the purpose of using the mobile devices. The users generally use mobile devices for daily information needs and entertainment, academic information and research work. A multiple choice question was asked to the respondents and figure2 enumerated the responses of the respondents on the purposes of using the mobile devices. Figure2 reveals that 50% use mobile devices for daily information needs and entertainment.

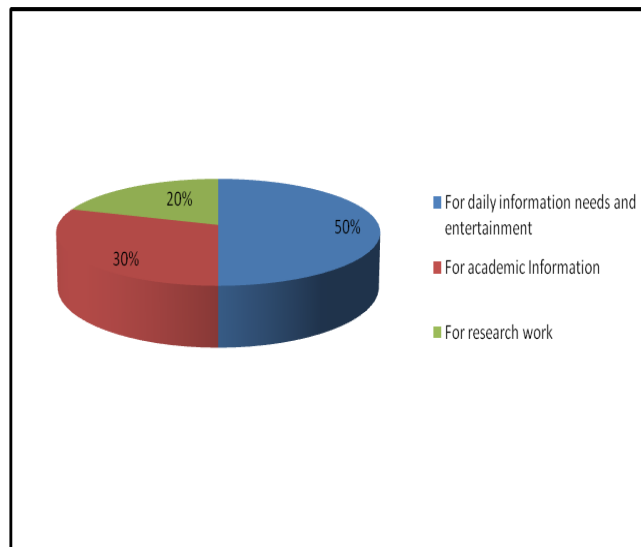


Figure 2: Purpose of Using Mobile Device

followed by 30% that use it for academic information and 20% use the mobile devices for research work. The findings of the study was supported by Balakrishnan and Raj (2012) has supported the finding as they mentioned that mobile phones are known to be very popular among the university students, increasing their social inclusion and connectedness as well as providing a sense of security as they can contact others in times of distress or emergency.

In this section, an attempt has been made to see how mobile devices are serving the libraries. A multiple choice question was asked to the respondents with eight options. Table 3 presents the use of mobile device for library services.

Table 3: Use of Mobile Devices for Library Services

Sr.No.	Use of mobile devices for library services.	Total responses
1.	Accessing Library website	128 (83.66)
2.	Check library hours, library map)	70 (45.75)
3	Accessing Institutional Repository	64 (41.83)
4	Contact librarian	61 (39.87)
5	For Web OPAC	25 (16.34)
6	Accessing subscribed e-journals	19 (12.42)
7	Accessing subscribed e-books	03 (1.96)

Note: Percentage exceeds 100% because respondents were allowed multiple answers

Table3 reveals that maximum respondents used mobile devices to access the Library website with 83.66% followed by check library hours, library map 45.75%, access institutional repository 41.83% and to contact a librarian 39.87%. Very few respondents use mobile devices to access Web OPAC that corresponds to 16.34%, accessing e-journals with 12.42% and e-books with only 1.96%. 'Many studies on mobile learning also reported that a very low percentage of students search library resources with smartphones' (Dresselhaus and Shrode, 2012; Bomhold, 2013).

Mobile devices offer innovative ways to students for study and learning but like any other technology, mobile technology and mobile devices are also prone to certain risks. Misa *et al.* (2016) addressed certain risks associated with mobile devices as slow processing of data, short battery life, small screen, limited storage capacities and safety/security and consequences associated with a stolen or lost mobile device. An attempt has been made to list out the various risks and problems faced by respondents while using mobile devices. A multiple choice question was asked to the respondents and 13 options were provided (figure 3).

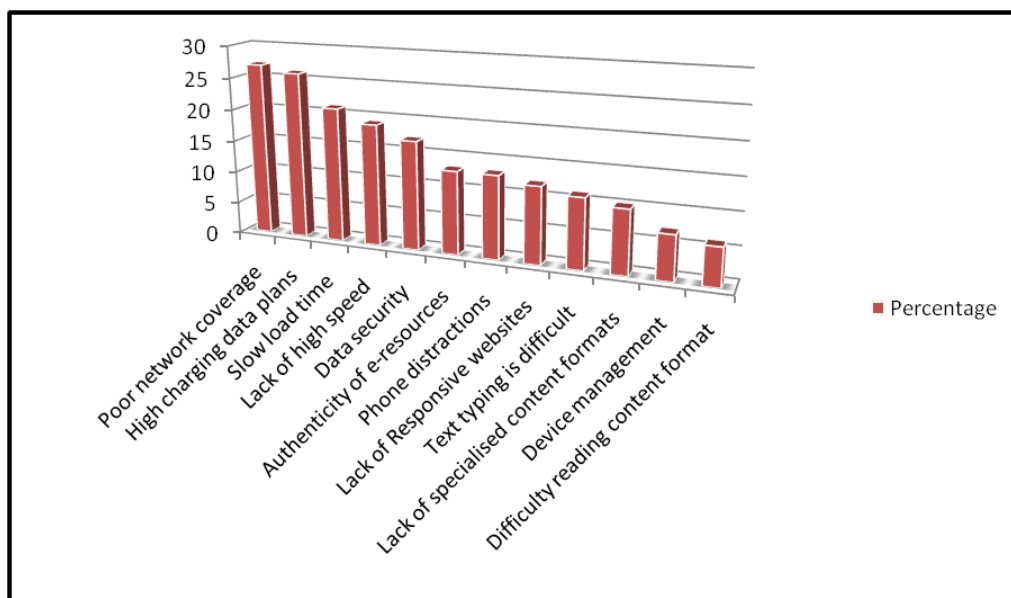


Figure 3: Problems Associated with Mobile Devices

7. Conclusion

Mobile technologies are playing a vital role in the lives of students nowadays because of the benefits it offers. It enables students to access relevant information without any time and location restrictions and facilitates easy communication with others. The results of the study highlighted that male students outnumber female students in Smartphone use. Significant proportion of students are using mobile devices for study and learning; however, it is gloomy to report that they seldom use the devices for accessing academic information and subscribed library resources such as academic journals and e-books. Major barriers to use of mobile devices for academic purposes as reported by study respondents are poor network coverage and high charging data plans. If these mobile technologies are to be effectively used in imparting education, then, the first step is to the University authorities should lay down certain policy towards the use of mobile

devices and to develop new tools/mobile apps for delivering library services through mobile devices; second step is the Research supervisors should also encourage their scholars to make use of mobile devices in their work, and third step is the University librarian may develop an Information Literacy Programme and impart on effective use of mobile devices for library resources and services. We hope that the present study has succeeded in providing a starting point in studying mobile devices in educational use.

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