

# A Study of Use of Mobile Phones for Teaching & Learning Purpose

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**Abstract:** *The study assessed how mobile phones facilitated the teaching and learning process, identified the mobile phone applications used for teaching and learning, determined the types of learning activities facilitated through mobile phones and assessed the common limitations of m-learning in MRIU, Faridabad (Haryana). A total of 25 teaching staff and 100 students were randomly selected and included in the study. A detailed questionnaire framed by the investigator was used for data collection. It was found that most respondents reported to use traditional mobile learning applications including text messages and calls. It was found that among teaching staff many were not aware of the capacity of their mobile phones such that they underutilized them.*

**Keywords:** E-learning, mobile phones, m-learning, Information and Communication technologies, Internet

## 1. Introduction

The emergence and advancements of Information and Communication Technologies (ICTs) have changed the way of teaching and learning processes are being conducted. ICTs facilitate immediate access to information resources needed for teaching and learning. Information and Communication Technology (ICT) applications enhance an exchange of information between student-teacher and learner-learner. This takes place through the use of different ICT tools including computers, radio, television, mobile phones and some other devices. Current developments in ICTs have increased the level of interactivity and collaborations among learners and teachers. Web based learning occurs through electronic mails, chats, web-based conferencing, message boards and web pages for sharing information resources. It provides a suitable instructional media, facilitates interactive and collaborative learning, and enhances assessment during the teaching-learning process. Mobile phones have a potential of improving the teaching and learning processes as the tools are cheap compared to other ICTs which can be used for teaching and learning. The current study therefore, assesses how mobile phones facilitate the teaching-learning process; identifies the commonly used mobile phone applications and the types of learning activities facilitated by mobile phones; and determines the factors limiting the usage of mobile phones in teaching and learning.

### 1.1 Usage of Mobile Phones for teaching & learning purposes

**a) The role of Mobile Phones in supporting teaching and learning:** The rapid growth of access to mobile phones around the world and in Africa and Middle East regions in particular have a potential of improving teaching, learning and institutional efficiencies to enable national education system transformation (UNESCO, 2012). Hence, the development of m-learning as a new strategy for education has implications for the way students and teachers in educational institutions interact. Ferry, (2009) describes that modern mobile phones can be used to help students to access web based contents, remix it, share it,

collaborate with others and create media rich deliverable for the classroom teachers as well as global audience.

### b) Mobile learning applications

Mobile devices integrate a series of features used in various learning environments. In some mobile learning applications currently available, mobile features are being utilized for various educational practices include the use of Short Message Services (SMS), GPS, camera, browsing, downloading, Bluetooth, Wi-Fi, voice calls and gaming. Browsing with cell phones is one convenient way for students to surf online. Most of the modern mobile phones are incorporated with browsing applications such as Opera Mini, Internet Explorer, Mozilla fire fox, Opera and Google chrome.

## 2. Research Methodology

- a) **Sample:** The study was conducted at Manav Rachna International University, Faridabad (Haryana). The study involved teaching staff and students. The study involved staff from the Faculty of Engineering, Management, Hospitality, and Mass – Communication & Applied Sciences.
- b) **Data collection:** The study involved a total of 125 respondents including students and teaching staff. Simple random sampling procedure was employed in selecting five teaching staff and 10 students were randomly selected from each faculty. Structured questionnaire were used to collect data from the 125 students.
- c) **Statistical analysis:** Data collected was analyzed through content analysis. Frequency distribution tables were used to present results of quantifiable data.

## 3. Findings and Discussion

### 1 Mobile phones system design features used by teaching staff at MRIU, Faridabad

Teaching staff were asked to mention the types of mobile phones they owned.

**Table 1:** Showing percentage of users of different Mobile operating systems

OS	% of users
RIM's Blackberry	3
Android	58
Apple's iOS	10
Nokia Symbian	3
Samsung's Bada	3
Microsoft windows	14
Do not know	9

**a. Usage of mobile phones among teaching staff at MRIU**  
Teaching staff were further asked on their commonly used mobile applications.

**Table 2:** Services provided by mobile phones

Type of service	% of users
Internet services	73
Multimedia services	61
SMS	89
Calls	100
Web 2.0 services	64
Recording event (photographing)	52
Storing files	67

Moreover, some others use voice applications for calling while others used their mobile phones for recording events and storing files. Others accessed internet services as mobile phones had Web browsers installed in them for viewing web contents.

#### **b. Mobile web browsers used by staff at MRIU**

For effective usage of internet services, mobile phones should be incorporated with a web browser. Good mobile browsers should accommodate contents optimized for mobile devices and for personal computer screens.

**Table 3:** Browser software installed in the mobile phone

Browser software	% of users
Internet explorer	56
Mozilla Firefox	53
Opera	20
Opera Mini	72
Google chrome	69

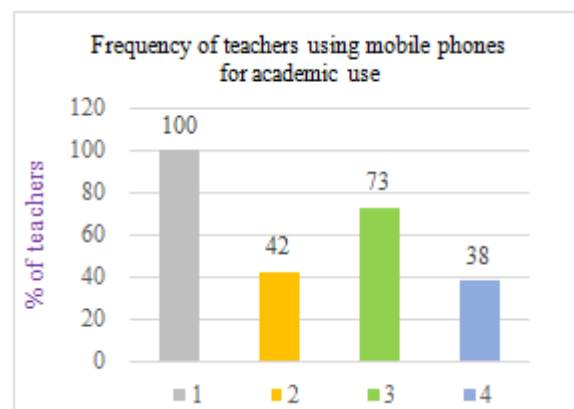
Since most staff involved in the study owned mobile phones which could support internet services, it was possible for most of them to use internet services. Those with smart phones were privileged to have access to more mobile web based services. Moreover, most staff mentioned the ease of use of web services through their mobile phones. They also mentioned that it was easy to afford the mobile internet bundle subscriptions from the mobile phone operators.

#### **Using mobile phones for teaching and learning among teaching staff at MRIU**

Teaching staff were asked whether they used their mobile phones for facilitating teaching and learning. It was found that 100% of the teaching staff made some calls and sent text messages for alerting students and communicating with colleagues on academic issues.

**Table 4:** Usage of mobile phones in teaching and learning

S.No.	Type of usage	% of users
1	SMS for alerting students	100
2	Calls for alerting students	42
3	Surfing (downloading scholarly materials)	73
4	Smart phone learning applications	38

**Chart 1:** Major academic uses of mobile phones by Teachers

In chart 1, series 1, 2, 3, 4 refer to the serial number 1,2,3 and 4 of table number 4.

**Table 5:** Mobile Web based learning services accessed by teaching staff

Type of usage	% of users
Reading scholarly articles	28
Collecting data	17
Reading text books	83
Using online dictionaries	67
Searching library catalogues	9
Sharing information resources	22

**Table 6:** Sharing information resources through mobile web based services

Type of application	% of users
E-mails	74
Social networks	36
Google drive	23

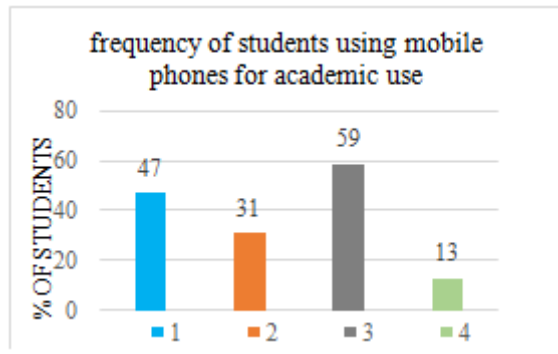
Those with smart phones were also at a position to access dictionaries, encyclopedia and use word processor applications for viewing and editing lecture notes before uploading them to students.

#### **4. Use of Mobile Phones by Students**

**a. Common Mobile phone uses by students at MRIU**  
Students were asked on their common usage of their mobile phones. It was found that all students used their phones for making calls and chatting. The detail is given below in table:

**Table 7:** Common uses of Mobile phone

Common uses of mobile phone	% of users
Selling airtime	19
Download study materials	33
Making phone calls and Chatting	91



**Chart 2:** Major common and academic uses of mobile phones by students

1 Use of SMS for academics (47%)
2 Downloading text (31%)
3 Taking pictures (59%)
4 Audio video Recording (13%)

### b. Factors restricting the of usage of mobile phones in Teaching and learning

It was found that some teaching staff and students were unaware of the capacity of their mobile phones. Some of those who owned smart phones just used them for calls and text messages as they did not know other applications supported by their smart phones. Others did not know the type of phones they owned thus underutilizing them. Smart phones were sold with some applications already installed in them; however a number of important applications needed to be downloaded from the mobile application stores both freely and commercially. It was identified that some of the teaching staff used their mobile phones for storing files, however; mobile phones owned had limited storage space. This limited many from installing e-learning software which could occupy more space as it decreased the storage space for lecture notes and text books. Others mentioned that they were not able to share stored files. This limited them from using their mobile phones for sharing lecture notes. There were a number of complaints made by respondents about the size of the text being uncomfortably small and difficult to read for prolonged periods. It was also identified that some were unable to use some mobile applications useful for teaching and learning. Apart from that, many respondents mentioned that the use of multimedia applications such as sound, more graphics and Movie clips, to enhance learning were very expensive and that only few could afford to pay for them.

### 5.Future Scope and Recommendations

Present study is significant making the educationists aware of the potential uses of mobile phones in teaching and learning. Teaching and learning materials for mobile phones should be developed to make its use effective with ICT. Workshops and seminars should be conducted to make teachers and students aware, where and how mobile phones can be better utilized for teaching and learning.

### 6. Conclusions

The study found that the usage of mobile phone applications for teaching and learning differed among respondents. All teaching staff and students mentioned to use text messages and calls while few mentioned to have used some advanced learning applications. Few did not use such applications as they were not supported by their phones, others did not know how to go about using them. Moreover, limited mobile storage space restricts some from storing large multimedia contents suitable for teaching and learning. Furthermore, limited Web 2.0 skills excluded the majority from using social media which are believed to enhance interactions and collaborations thus being suitable for teaching and learning.

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