

Usage of Smartphones by Prospective Teacher-Educators in Central University of Jammu

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Abstract- *The Information and Communication Technology (ICT) tools are very powerful and playing a vital role in higher education, particularly to gain information, to have deep understanding about the concepts, and useful for self-improvement in academics. The smartphone is one of the powerful platforms to learn at any time, at any place and easy to carry anywhere. Different applications installed in Smartphones have provided facility to access various e-learning material in the form of audio, videos, and read material, etc. The present study aimed to ascertain the use of Smartphone with respect to learning academic courses, extent of its usage and impact on learning while pursuing their Master of Education Programme. The present study adopted descriptive survey method and purposive sampling technique. A total of fifty-two prospective teacher-educators of Master of Education (M.Ed.) programme of Central University of Jammu constituted as sample and a self-constructed semi-structured questionnaire was administered The target-group. The study findings revealed that all the prospective Teacher-Educators were using smartphones to improve their understanding of academic courses. Majority of the prospective teacher-educators were found to have lack of awareness about smartphone precautions and also seeking training/orientation to use it effectively. 92% of prospective teacher-educators responded that using smartphone in the class will engender distractions to lecturers/mentors and firmly dissented to using smartphones during lecturing in the class. Majority of the prospective teacher-educators opined that using smartphone categorically wasting their valuable time (61.53%), smartphones have some drawbacks (92.30%) and also believed to be addicted to use of smartphones (76.92%) in their day-to-day life.*

Keywords: Information Communication Technology, Smartphones, Prospective Teacher-Educators.

Introduction

In the 21st century, classroom has become a vibrant learning zone which is vastly reinvigorated with technology and also observed as a techno-zone for learners where pupils are engaged with greatly use of technology for acquiring skills and information particularly in the field of education. Technologies have been shaped and manufactured into various tiny-devices and also being available to use for different purposes. Dietz and Henrich (as cited in Pulliam, 2017, p.1) observed that in high schools and colleges, devices being used most commonly for educational

purposes are tablets (iOS/Android), smartphones (iOS/Android), and laptops (Windows/Macintosh). ICT tools are prominently used in today's classrooms, the reason behind it is that these devices enable the users to have a rich personal experience pertaining to learning context. But, the paramount goal of using any device is to enhance over-all educational performance, and learners are categorically using these devices in the classrooms for different purposes such as communicating with others, finding the answers to questions, sharing information, examining their self-understanding, downloading audio-video lectures, shopping, making bills payment, note-making and researching, etc. In the current higher education system of India, it is noteworthy to mention here that teaching-learning process has been highly enabled with ICT and also integration of ICT invariably influencing the lecturers/mentors as well as learners. In the due course of coping up with various devices, the learners/users completely undergo with a kind of experience which may turn into either favourable or unfavourable on using it. Basically, the ICT devices are just tools which are helpful to pupils to learn and every device is made and aimed to perform certain functions, and the efficiency of each device totally relies on its own features. ICT devices are tiny and extremely used as hand-held computers which comprise the entire operating system, features, abilities, efficiencies, etc. The reason to use ICT could be more than one and some of the foreseen retorts may be ICT devices act as an effective medium, high influence of visual, auditory, oral features, etc. The purpose of the present research is an attempt to explore the usage of smartphones by Post-Graduation students while pursuing their academic programme. In order to dig up answer in scientific way, the investigator reviewed the accessible literature allied with ICT and its usage. Some of the related review has been consolidated and supplied in the ensuing segment.

Review of related Literature

Eysenback (2014) measured that most of the respondents had intermediate smartphone skills and used smartphones for several learning activities. Sixty-four percentage of the students used smartphones to access to social media and found it valuable for their education.

Johnson and Radhakrishnan (2016) revealed that students were found to have positive perspectives towards academic use of smartphones.

Pulliam (2017) found that using cell-phone during the class may affect more than just their individual academic performance. The study also further point out that use of cell-phone by students may have a negative impact on the entire class and the quality of teaching.

Steven et al. (2017) measured the effect of student classroom cell-phone usage on teachers. The results of the study showed that teachers believe significantly more than students that cell- phones should not be used during the class. It also showed that students using cell- phones during the class may affect more than just their individual academic performance; student cell- phone use may have a negative impact on the entire class and the quality of teaching.

After reviewing the accessible studies, the investigator come up with certain observations that students' outlook on the way of using of smartphones in and outside the class-room, their perception to use in class-room, their ability in use of smartphone, students' habits in listening and reading through smartphones have been unexplored by researchers.

Need and Significance of the Study

Smartphones act like mobile entertainer for watching videos, listening music, video calling, and taking pics, reading and browsing material, etc. ICT devices play a pivotal role not only in common man's life, but also vastly on academic life of the learners. Smartphones become mostly viable devices particularly in teaching-learning context of present education system. Smartphones are behaving like intervening variables which always facilitate the users with or connect with related/closely relevant learning zones. Johnson and Radhakrishnan (2016) revealed that students were found to have positive perspectives towards academic use of smartphones. It is also understood that due to the handiness, accessibility and affordable cost of smartphones, it has highly been used by the students for academic and also for non-academic purpose in their daily life. Hossain and Ahmed (2016) found that majority of the students utilized their smartphones to access the academic information and record class notes. In the 21st century, human life is awfully relied on use of technology, but if it is categorically used in an appropriate way for what purpose it is developed, no doubt users would have sophisticated life and simultaneously growth and development of that nation also could be seen. The use of smartphones demands not only the knowledge of how to use, but also it requires sensitization, when to use, where to use, specifically for him who looks forward to excel in his/her academics.

By profoundly looking into the available literature and its lacunas, the investigator has tried to explore the use of smartphones by prospective Teacher-Educators during pursuing their academics. The following research questions have been emerged after reviewing related literature. They are as follows.

Research Questions

1. How far do the prospective teacher-educators use the smartphones for their academic purposes?
2. What would be the impact of using smartphones on prospective teacher-educators?
3. What kind of obstacles do the prospective teacher-educators confront while using smartphone in their daily-life?

Statement of the Study

The present study is entitled as "Usage of Smartphones by Prospective Teacher Educators in Central University of Jammu".

Objectives of the study

1. To ascertain the use of smartphone applications and their purpose by Prospective Teacher-Educators.

2. To estimate an extent of using smartphones by Prospective Teacher-Educators pertaining to learning of academic courses.
3. To determine the impact of using smartphones by Prospective Teacher-Educators with respect to Safeguard, Duration, Advantages and Challenges.

Explanation of the Terms Used

Smartphone: It is an android mobile with internet facility and having variety of features and capacity to install different applications related to entertainment, to enhancing skills and collecting information and to know about the academic courses.

Prospective Teacher-Educators: They represent degree holders in Master of Arts/Science /Commerce and also pursuing the teacher education programme (i.e. M.Ed. two-year).

Methodology

The present study was descriptive survey-type in nature where the investigator made an attempt to explore the impact of usage of smartphones by prospective teacher-educators on their academics.

Sample of the Study

The present study followed the purposive sampling technique for accumulating the required data from the target population. Fifty-two prospective teacher-educators of the Master of Education (M.Ed. two-year) programme during the academic year 2017 to 2018 at Central University of Jammu were constituted as sample of the study.

Tool employed for Data Collection

For procuring required data from the sample, the investigator constructed and employed a semi-structured questionnaire which comprised five dimensions viz. purpose of using Smartphone (three-items), use of software applications (five-items), habit and frequency of usage (seven-items), safeguards (three-items) and Challenges (three-items). A total of twenty-one items had been used in the questionnaire, out of which two of them were completely open-ended items.

Data analysis

Since the questionnaire included both closed and open ended-items, the congregated data were analysed with the help of qualitative and quantitative data analysis techniques. The numerical data were analysed by using the frequency and percentage count while the descriptive data were analysed through content analysis technique.

The total research participants of this study were 52 prospective teacher-educators out of which forty-four (85%) were female and eight (15%) were male. In this study, majority of the participants (38%) were belonged to the rural area of Jammu province. When the participants educational background was observed, 26 (50%) possessed the Post-Graduation in Master of Arts stream, rest of them procured their degrees in Master of Commerce (16%), and Master of

Science (34%) respectively. The following Table 5.1 shows the responses of prospective teacher-educators regarding the purpose of employing smartphone.

Table 5.1 Purpose of Using Smartphones by Prospective Teacher Educators (N= 52)

S. No.	Items	Yes		No	
		Frequency	Percentage	Frequency	Percentage
1	Use of smartphone	52	100%	-	-
2	Smartphone improves academics	49	94.23%	3	5.76%
3	Spending Time for using smartphone per day: Do not calculate it	25	48%	-	-
	Depending up on work	21	40%	-	-
	2 to 3 hours	6	12%	-	-

From the Table 5.1, it can be seen that all the prospective teacher-educators were using smartphones, but when it comes to the allocation of time for using the smartphones, it revealed that 48% were generally did not figure out the time while they engaged with smartphones whereas 40% responded the amount of time being spent on smartphones was absolutely rely on nature of the work. Only 12% stated that from two to three hours were spent on using smartphones per day. It can also be observed that majority of the participants (94.23%) opined that using smartphones ameliorates their understanding in the academic courses'. The subsequent Table 5.2 displays the responses of prospective teacher-educator on use of variety of application on their smartphones.

Table 5.2. Use of various Applications by Prospective Teacher Educators.

S. No.	Items	Yes		No	
		Frequency	Percentage	Frequency	Percentage
1	Having Dictionary App	46	88.46%	6	11.53%
2	Habit of updating Applications	32	61.53%	20	38.46%
3	Installing new Apps whenever getting to know	40	76.92%	12	23.07%
4	Awareness of Apps related to education	43	82.69%	9	17.30%

From the Table 5.2, it can be seen that majority of the prospective teacher-educators were having English Dictionary Application on their smartphones, and also responded that they had habit of updating Applications as well installing new Apps in smartphones. It also observed that 83% of the participants were aware of the smartphone Applications related to education whereas 17% accepted that they were not aware of these.

From the analysis of the above data, since they were using English dictionary Application and having the habit of updating and installing various Apps, it can be presumed that they might have enriched their vocabulary-log and enhanced their pronunciation in English language. It can also be assumed that majority of the Prospective Teacher Educators were found to be aware of smartphone Applications pertaining to educational field. This also indicates that they might have

the habit of reading concepts/topics related to their academic courses, watching and listening lectures through smartphones. The following Table 5.3 indicates the prospective teacher-educators' responses regarding the habits of using Smartphones'.

S. No.	Items		Yes		No	
			Frequency	Percentage	Frequency	Percentage
1	Listening lectures related to education		43	82.69%	9	17.30%
2	Changing of smartphone frequently		26	50%	26	50%
3	Reading academic articles/research papers/notes on smartphone		42	80.76%	10	19.23%
4	Feeling comfortable while reading on smartphone		32	61.53%	20	38.46%
5	Browsing on smartphone for learning academic courses		45	86.53%	7	13.46%
6	Use of smartphone disturbs lecturers/mentors		48	92.30%	4	7.69%
7	Demanding the use of smartphone while lecture is being delivered		20	38.46%	32	61.53%
8	Status of Smartphone's during delivering lecture in the class	Smartphone is switched off	6	11.53%	-	-
		Smartphone is switched on but kept away	29	55.76%	-	-
		Smartphone is used to send SMS and checking notifications	7	13.46%	-	-
		Smartphone is switched on and frequently checked it	20	19.23%	-	-

Table 5.3 shows the responses of prospective teacher-educators pertaining to their habits and beliefs on use of smartphones. Majority of the Prospective Teacher-Educators expressed that they were having the habit of listening lectures (82.69%), browsing reading material (86.53%), reading articles/research papers/notes (80.76%) related to academic courses on smartphone whereas a few of them disagreed. It also observed that 61.53% of them felt that they were more comfortable while reading on smartphones. Fifty percent of the participants responded that they like to change their smartphones frequently. When the participants were probed further regarding rate of changing their smartphones, out of the total respondents, 50% specified that whenever it was required then only they would change. It is also seen that majority of the participants (92%) strongly believe that using smartphones really disturbs the lecturers/mentors in the class whereas

8% did not perceive like others. Sixty-two percentage of the participants also intensely opposed the use of smartphones while lecture was being delivered in the class-room whereas 38% wished to use it while lecturing in class-room. when participants were investigated further about the status of their smartphones during lecturing, smartphone was switched on mode but it was kept away from them (57%), smartphone was switched on mode and being checked it frequently (19%), smartphone was being used for Short Message Service (SMS) and for checking notifications (13%), and smartphones were kept in switch off mode during delivering lectures in the class.

From the analysis of the above data, the study found that majority of the participants were having the habit of using smartphones for listening lectures related to education, browsing material pertaining to academic courses, and for reading material/notes/research papers. Majority of the respondents were also disagreed to use of smartphone while lecture being delivered in classroom. It concluded that participants were aware of importance of smartphones and also how it distracts lecturers/mentors if it is used in classroom. The subsequent Table 5.4 provides the responses related to awareness about protecting the smartphone and usage.

Table 5.4 Prospective Teacher-Educators Safeguards about the use of Smartphone

S. No.	Items	Yes		No	
		Frequency	Percentage	Frequency	Percentage
1	Awareness about precautions to use smartphones	50	96.15%	2	3.84%
2	Demanding training on use of smartphone	45	86.53%	7	13.47%
3	Protecting smartphone with password	40	76.92%	12	23.07%

It can be observed from the Table 5.4 that 96.15% of the participants had awareness about the precautions in using smartphones whereas 4% were unaware of it. When the participants were examined about taking precautions regularly, it confirmed that 67% of the participants agreed up on it. Majority of the respondents (86.53%) were claiming the need of training on use of smartphones, whereas 13% were not on this view. It is also understood that 76.92% of the participants were invariably protecting their smartphones with password while 13% were not following any kind of precautions to safeguard their smartphones.

From the analysis of the above data, the study found that majority of the participants were maintaining the smartphones with secret password. This indicates that participants may also be aware of the cyber threat, hacking personal data and mails, etc. Although, participants were claimed to possess the knowledge and awareness about the precautions to use the smartphones, the study revealed that majority of the participants were found to be seeking training on use of the smartphones. This unveils their zeal to excel in using the smartphone in smart way. The

subsequent Table 5.5 shows the responses of the participants with respect to challenges confronted while using the smartphones.

Table 5.5 Challenges encountered by the participants in using Smartphone

S. No.	Items	Yes		No	
		Frequency	Percentage	Frequency	Percentage
1	Use of smartphone wasting valuable time	32	61.53%	20	38.46%
2	Use of smartphone wasting valuable time	48	92.30%	4	7.69%
3	Feeling of addicted to use of smartphone	40	76.92%	12	23.07%

Table 5.5 shows that majority of the participants (61.53%) opined that using smartphones categorically was a waste of their precious time whereas 38.46% disagreed with it. Majority of the respondents stated that usage of smartphones comprised with some disadvantages (92.30%) and they also alleged that they were addicted to use of smartphones (76.92%) in their day-to-day life. From the analysis of the above data, it can be observed that majority of the research participants were of the view that use of the smartphones was really wasting their valuable time.

Discussion of the Findings

It is found from the study that majority of the participants devoted a lot of time for using smartphone and they also opined that using it really amplifies their understanding in academic courses. This finding was also corroborate with Eysenback (2014) who found that sixty-four percentage of the students used smartphones to access to social media and realized it as valuable for their education. The study pointed out that use of smartphone seems to be unavoidable due to its easy carrying, facilitating towards required information within few seconds, available at low cost, viability of reading at any time, downloading and sharing information, etc. Further, it also observed that spending much of the time on using smartphones also enable them to acquire some new knowledge regarding updating Apps, installing new Apps, and precautions related to it. In this view, technology is regarded as ‘facilitator to learn’. Though, majority of the participants were acquainted with reading on smartphone, browsing notes/articles, but what they purported that using smartphones should not be allowed in the class-room because it invariably interrupts the teacher/instructor. This finding was confirmed with the study of Steven et al. (2017) found that students using cell-phone during the class may affect more than just their individual academic performance; students’ cell-phone use may have a negative impact on the entire class and quality of teaching. But, the study unveiled that only a few (12%) replied to have the habit of maintaining their smartphones in switch-off mode during lecture being delivered. It indicates that the participants have lack of sensitization where to use, when to use the smartphones for academic and non-academic purposes. When the investigator scrupulously probed them through questionnaire about the status of smartphones in the class-room, 56% asserted that their smartphones were in switched-on mode, but it was kept away. This kind of maintenance may not

interject the mentors, but there may be a possibility of getting disturbed by themselves whenever they receive SMS's, emails, and calls, etc. and also liable to be an inattentive in the class. For avoiding such situations, it is advised that smartphones have preferably been kept in switched-off mode during delivering the lecture in the classroom. The study also revealed that majority of the participants were of opinion that use of the smartphones is wasting their valuable time, it also included with some disadvantages, and they were also believed to be addicted to use of smartphones. It shows that they may not have the single-minded while exploring information and extracting requisite information from the enormous web-world- information. This pointing them that they were using smartphone in ill-suited way which consumes a good amount of time and ultimately made them to feel using it as waste of time. This might be the strong intention for demanding the training on use of smartphones particularly on their academics. The chief aim of any techno-oriented device is to facilitate users towards information, but the fact is that if the users are unaware of using it in proper ways; it turned into detriment, leads to consume their valuable time, and it may also be accountable for establishing negative attitude towards using smartphone. By and large, each device has certain limitations because of its configurations and a variety of features inbuilt in those devices. So, all the users of the ICT devices must be familiar with the operational procedures, how do smartphones function and their limitations rather just testing their luck to operate the way it works. The major findings of the study which have been drawn from the analysis and interpretation of data. They are as follows.

Major finding of the Study

- Majority of the respondents (94.23%) were found to believe in use of smartphones categorically ameliorates their understanding in academic courses.
- The study found that 77% of the participants were having interest in installing new Applications in their smartphones and 83% of the participants were found to be aware of the smartphone Applications pertaining to education field.
- Majority of the participants stated that smartphones were being used for listening lectures related to education (82.69%), surfing material pertaining to academic courses (86.53%), downloading materials, sharing information, and also for reading material/notes/research papers (80.76%).
- Majority of the participants responded that using smartphone in the class could engender distractions to lecturers/mentors; hence they dissented to use smartphones during delivering lecture in the class.
- The study also disclosed that majority of the participants (86.53%) were found to be looking for training on use of smartphones for academic purposes.
- Sixty-two percentage of the participants opined that using smartphone was categorically wasting their valuable time, and 92% were of view that smartphones comprised some downsides.
- Seventy-seven percentage of the participants replied that they were under the impression of addicting to the use of the smartphone in their day-to-day life.

Conclusion

In the 21st century, the ICT tools play a vital role in higher education predominantly to accumulate the information, for improving their understanding regarding various concepts/topics and for self-improvement in academics as well as non-academic. The advancement of hardware and software invariably evolves day-by-day in and around the globe. The smartphone is one of the most powerful platforms to learn at any time, at any place and easily portable to anywhere. The smartphones are immensely used in higher education for sharing information, downloading reading material, video's, and lectures, etc. The study found that most of the participants were addicted to the use of smartphones and using it lead to wasting their time. The key function of ICT is to facilitate the user towards retrieving requisite information and further related to materials/areas. The fact is that users must have the ability to discriminate the authentic information and also able to regulate their behaviour to accomplish pre-set task/work within a stipulated time. The investigator appeals the users that any device related to ICT is just a tool, an inanimate object which meant to be used to serve our purposes; and for that one must be aware of its functions and limitations pertaining to its use to realize the tasks. The study also recommends that the users should be able to tame their behaviour to get work done because the way of using smartphones really influence the user's thinking process and also accountable to establish a kind of attitude towards it. All these ICT devices are just inventions of human beings and man-made tools. Human brain is more powerful intellectual-machine therefore one should not get influenced or addicted to these man-made tools. If users are intended to use of any ICT tool, they must be aware of users' guidelines and sensitized pertaining to specific software's. Otherwise, one may not be able to yield the actual benefits out of it.

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