

INVESTIGATING THE ATTITUDE TOWARDS THE USE OF MOBILE LEARNING IN OPEN AND DISTANCE LEARNING: A CASE STUDY OF UTTARAKHAND OPEN UNIVERSITY

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ABSTRACT

The mobile devices are increasingly used by the students for educational activities. This paper is an attempt to assess students' self-efficacy and attitudes towards mobile learning through a baseline survey and fine out the students' attitude towards mobile learning. The baseline study conducted a survey for students of Uttarakhand Open University(UOU) with special reference to their attitude towards Mobile learning. The data was gathered through online and 283 valid responses were accepted for the analysis. The result of this study may provide insights for researchers into research trends in mobile learning.

Keywords: Mobile Learning, M-Learning, Mobile Assisted Language Learning(MALL), E-Learning,

1.0 Introduction

The use of wireless, mobile, portable, and handheld devices are gradually increasing and diversifying across every sector of education, and across both the developed and developing worlds(Traxler, Defining, Discussing, and Evaluating Mobile Learning: The moving finger writes and having writ... , 2007). As mobile devices are becoming increasingly ubiquitous, many researchers and practitioners have incorporated the technology into their teaching and learning environments(Park, 2011).

Mobile learning can be described as "the learning activity on mobile devices or learning anytime and anywhere"(Zhang, 2016). (Traxler, Defining Mobile Learning, 2005) has defined mobile learning as 'any educational provision where the sole or dominant technologies are handheld or palmtop devices'. Mobile learning has been defined by (Schelur, Winters, & West, 2012) as the process of learning mediated by handheld devices such as smart phones and tablet computers.

Researchers have investigated the impact of M-Learning at PK-12(Crompton, Burke, & Gregory, 2017), K-12(Christensen & Knezek, 2017) (Hwang & Chang, 2011), Vocational education(Nordby, Knain, & Jónsdóttir, 2017), higher education(Heflin, Shewmaker, & Nguyen, 2017), (Motiwalla, 2007) and various specialization of higher education like medical education(Briz-Ponce, Pereira, Carvalho, Juanes-Mendez, & García-Penalvo, 2016), teacher education(Gunter & Reeves, 2017), (Seppälä & Alamäki, 2003). (Kukulkska-Hulme & Shield, 2008), (Chinnery, 2006) have also explored the use of m-learning for Mobile Assisted Language Learning(MALL).

The applications of mobile learning range widely, from K-12 to higher education and corporate learning settings, from formal and informal learning to classroom learning, distance learning, and field study(Park, 2011). (Hsieh & Tsai, 2017) has investigates the teachers' conceptions of mobile learning and suggested that teacher educators would like to see mobile devices used to their fullest potential, it is necessary to cultivate more sophisticated conceptions of mobile learning among teachers.

However, there are many inherited challenges in the adoption of M-Learning technology. Lack of self-efficacy to integrate technology, classroom management issues, attitudes toward technology and lack of pedagogical strategies contribute to the barriers and challenges to the successful integration of mobile learning(Christensen & Knezek, 2017).

The purpose of the current study is to assess students' self-efficacy and attitudes towards mobile learning through a baseline survey and fine out the students' attitude towards mobile learning. Section 2 discusses the methodology and tools required for the study. Section 3 discuss the profile of the respondents and students' responses on baseline survey. Section 4 contains the result and the last section contains the conclusion.

2.0 Methodology

The tools and techniques used in the present baseline study included the document analysis, questionnaire for students. The students' views have been undertaken on an online questionnaire developed on Google form for analyzing their status, ICT skills as well as their attitude towards M-learning. The data was gathered with the sample of 283 students who have responded to the questionnaire.

The data have been analyzed quantitatively by implying statistical measures. The frequency measures were used to present the demographic as well as other data along with mean, range and standard deviation wherever needed. The analysis was done in SPSS 22.0. The tables and figures are presented for visual presentation of data wherever appropriate. The Data analysis and interpretation is presented further in details.

3.0 Students' responses on Baseline Survey

The present baseline study conducted a survey for students of Uttarakhand Open University(UOU) with special reference to their attitude towards Mobile learning. The data was gathered through online and 283 valid responses were accepted for the analysis.

The baseline survey data analysis is classified into following sections:

- a) Demographic information of the students
- b) ICT skills of students
- c) System of getting University updates for students
- d) Attitude towards M-learning

Demographic information of the students

The demographic information of the students presents a broad picture of students' profile of UOU. The demographic variables present in study are age, gender, caste categories, course enrolled, ICT devices at home, and internet connection.

The data revealed that most of the students are in the age group under 30 (65.4%), while about one third are between 31-60 age group. However, there were 69% female and 31% male students in the survey.

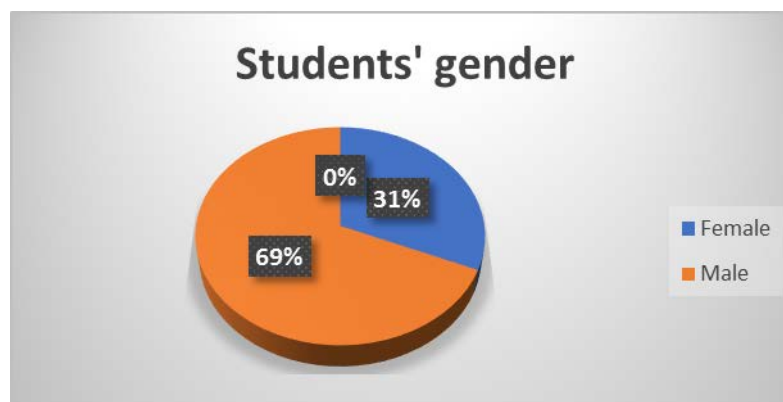
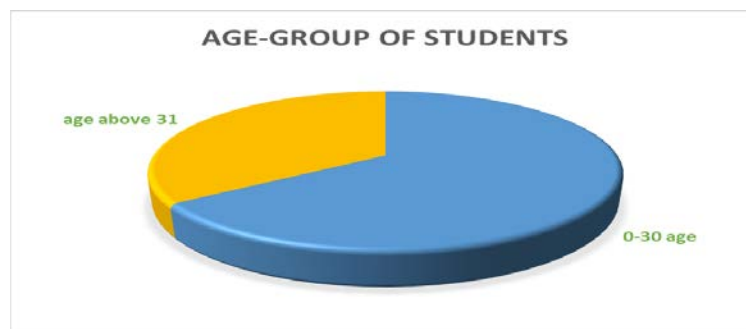
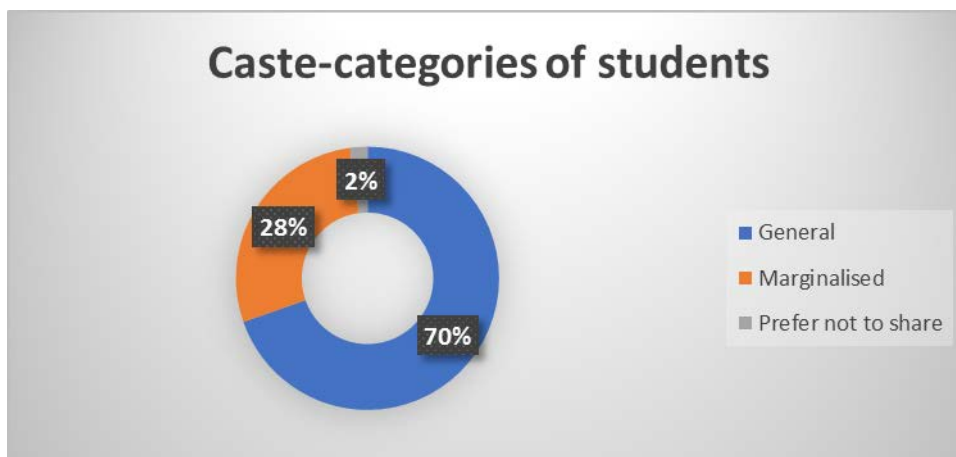
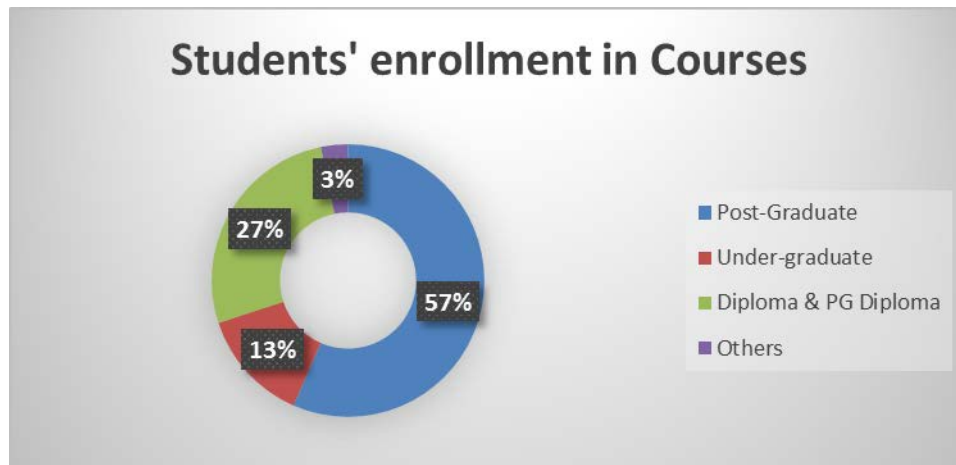
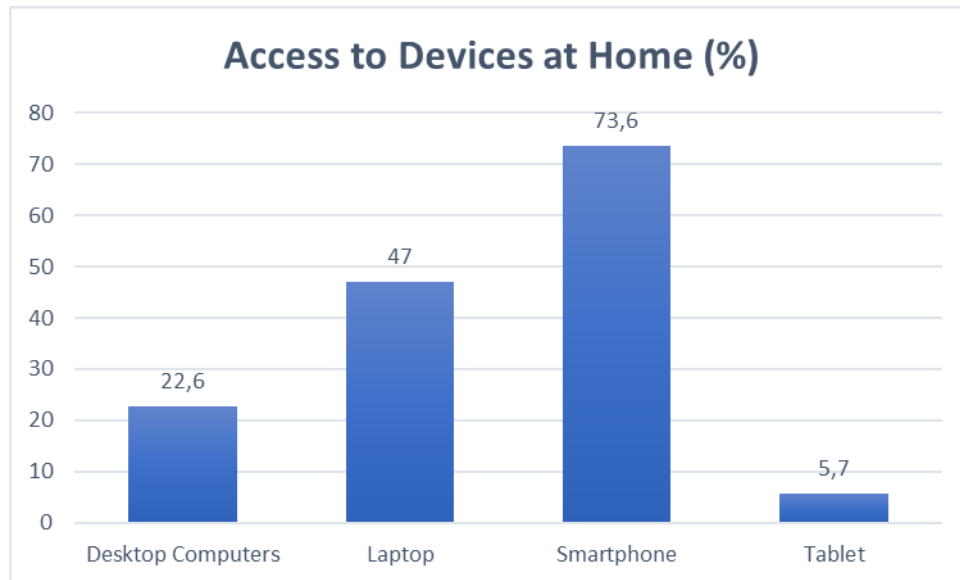


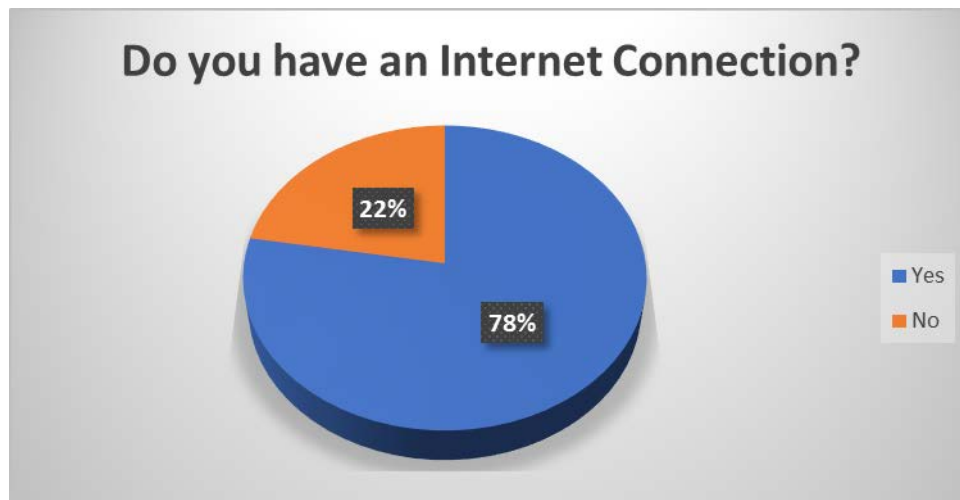
Figure on student enrolment reveals that more than half of the respondents were enrolled in post-graduate courses. On the other hand, 27% were doing diploma and post-graduate diploma courses in various streams provided by the UOU, while only 13% were registered for under-graduate courses. Among these enrolled students, majority of them were from general or unreserved category, while 28% covered under marginalised section of society including schedule caste, schedule tribe, and other backward classes.



In terms of availability of devices at home, majority of students have smartphones (73.6%), while about 50 % of them have their own laptops. Similarly, 22% of students have desktop computer at their homes and only 6 % have access to tablets. Interestingly, it is revealed that students have digital access to support their learning as well as other purposes. However, it is interesting to know about their attitude towards M-learning as most of them have access to smartphones. The study has shown positive attitude of students towards M-learning which is discussed under further section in detail.



Having access to digital devices are not enough, we need to know about internet accessibility also. Most of the students have access to internet (78%), while rest of them (22%) do not have internet connection available.



ICT Skills of the Students

The respondents were asked about their ICT skills and the item were analyzed on 5-point scale from 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree.

Table 1 presents the average of scale related to students' ICT skills. The average of ICT skills ranged from 4.15 to 3.73 is indicating that, overall, student is able to use ICT in various contexts including functioning of devices to its academic uses for self as well as with others. The students agreed that they are able to log in to websites on their mobile phones (M = 4.15, SD = .830) without the help of others (M = 4.14, SD = .888). They responded positively that they can download any figure through internet on their mobile device (M=4.13, SD =.842), check and search hyperlinks to enter another website (M=4.05, SD = 0.799) and surf internet (M = 3.92, SD = 0.344). Apart from mobile devices, students also agreed that they are used to with computers (M = 3.88, SD =.424). The students are somewhere between neutral to agree with statements related to things like doing searches, setting bookmarks, and

downloading files ($M = 3.87$, $SD .482$) along with installing software and changing configuration settings on the computer ($M = 3.73$, $SD = 5.76$).

Overall, the results indicate that students are notably comfortable in using mobile and computer devices for surfing internet and websites, downloading resources including software, using hyperlink, setting bookmarks and configurations of their devices.

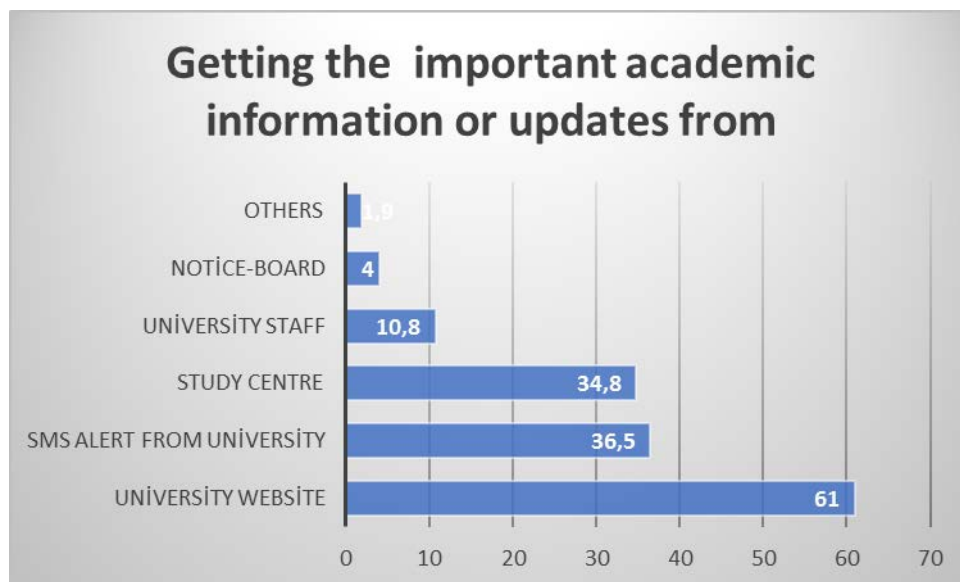
Table 1: ICT skills in students of UOU

	N	Minimum	Maximum	Mean	Std. Deviation
1. I can log on to the website on my mobile device	283	1	5	4.15	.830
2. I can use my mobile device without the help of others	283	1	5	4.14	.888
3. I can download a figure from the internet using a mobile device	283	1	5	4.13	.842
4. I can check a hyperlink to enter another website using my mobile phone	283	1	5	4.05	.799
5. I am comfortable surfing the Internet.	283	2	5	3.92	.344
6. I am pretty good at using the computer.	283	2	5	3.88	.424
7. I am comfortable with things like doing searches, setting bookmarks, and downloading files.	283	2	5	3.87	.482
8. I am comfortable with things like installing software and changing configuration settings on my computer.	283	2	5	3.73	.576

University Information and Updates

It is important to understand from students' perspective about how they get information and updates related to academics. Majority of students with 61% get these information and updates from the university website. On the other hand, about one-third of the students receive the SMS alert from the university and the same number of students get the updates physically through their study centres. Rest of the students (about 15 %) admitted that university staff and the notice board of university are the sources from where they get information and updates about their academics.

Interestingly, majority of the students receive these academic updates and information from ICT platforms which are university website and SMS alert on mobile phones. It indicates that the UOU is using technology for connecting with their students actively.



Students' Attitude towards M-learning

The students' responses on attitude towards M-learning were gathered using a 5-point scale in the questionnaire. There were 13 items considered for this analysis.

The following Table 2 presents the attitude of students towards M-learning. The attitude scores ranged from 4.30 to 3.89, indicating that UOU's students are positive towards M-learning. The item with highest mean score reflected that students agreed on use of video animations for making the audio/video lecture more attractive and understandable ($M = 4.30$, $SD = .647$). Similarly, they accepted that their mobile device can help them to attain more ideas in learning and the digital lectures (audio-video) are more suitable for distance learning ($M = 4.29$). Furthermore, these lectures motivate the learners as well ($M = 4.27$, $SD = .667$). The features such as graphics, pictures, and diagrams enhance the learning, therefore the mobile devices can be helpful for learning ($M = 4.24$). Notably, the audio-video contents and lectures are more useful and relevant for present generation of digital learners ($M = 4.22$, $SD = .655$) as mobiles enhanced their desire to learn ($M = 4.12$, $SD = .747$) without time and space constraints ($M = 4.03$, $SD = .887$). Students can interact with peers through mobile devices for discussion and learning ($M = 4.00$, $SD = .894$). They also felt that mobile use in learning is full of fun ($M = 3.89$, $SD = .935$) as well as ideal ($M = 3.98$, $SD = .877$).

Table 2: Students' attitude towards Mobile-learning

	N	Minimum	Maximum	Mean	Std. Deviation
1. Video animation makes the Audio/ video lecture attractive and understandable	283	1	5	4.30	.647
2. A mobile device can help me to attain more ideas in learning	283	1	5	4.29	.714
3. Audio/ video lecture is a good use of technology for learning at a distance	283	1	5	4.29	.709
4. Audio/ video lectures motivate learners to learn effectively	283	1	5	4.27	.667
5. A mobile phone is helpful for my learning	283	1	5	4.24	.742
6. Pictures, diagrams and graphics in the Audio/ video lectures enhance learning	283	1	5	4.24	.682
7. Use of Audio/ video lecture is more effective as a	283	1	5	4.22	.655

learning tool with today's learners than previous generations of learners					
8. A mobile phone can enhance my desire to learn	283	1	5	4.12	.747
9. It saves time when I use mobile because I can learn without time and space constraints	283	1	5	4.03	.887
10. I love to use mobile device in learning activities	283	1	5	4.01	.879
11. I can use mobile device to discuss with my peers about the learning materials	283	1	5	4.00	.844
12. I think mobiles are very ideal for learning	283	1	5	3.98	.877
13. It is quite fun to use a mobile device for learning	283	1	5	3.89	.935

Result and discussion UOU Students' Attitude towards Mobile-Learning

1. As per the survey of 283 students of UOU, they have expressed positive attitude towards M-learning.
2. The item with highest mean score reflected that students agreed on use of video animations for making the audio/video lecture more attractive and understandable.
3. They accepted that their mobile device can help them to attain more ideas in learning and the digital lectures (audio-video) are more suitable for distance learning.
4. Furthermore, these audio-video lectures motivate the learners as well.
5. They reported positively that the features such as graphics, pictures, and diagrams enhance the learning, therefore the mobile devices can be helpful for learning.
6. For them, the audio-video contents and lectures are more useful and relevant for present generation of digital learners as mobiles enhanced their desire to learn without time and space constraints.
7. Students agreed that they can interact with peers through mobile devices for discussion and learning.

They also felt that mobile use in learning is full of fun and ideal as well.

Conclusion

The university is keen to support ICT at various level. Along with internet infrastructure, it facilitates the learners with e-Learning, OER, MOOCs, and other audio- resources. Interestingly, majority of the students receive these academic updates and information from ICT platforms which are university website and SMS alert on mobile phones. The results indicated that the UOU is using technology for connecting with their students actively. In terms of students' attitude towards M-learning, it was reported that they are comfortable in using mobile and computer devices for surfing internet and websites, downloading resources including software, using hyperlink, setting bookmarks and configurations of their devices As we know that the stakeholders positive attitude directs the success of any policy implementation, the present result indicates a positive efficacious potential of ICT specially M-learning in forthcoming years.

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