

Identifying Factors Enabling Willingness to Adopt Mobile Learning

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Abstract

In today's global and shirking world mobile learning provides a new learning platform in which learners can access the content and just in time information as required irrespective of the time and place. Mobile learning is evolving at a very high rate all across the globe and one of the major reasons behind is that it uses mobile platform. The accessibility of mobile devices like smart phones, tablets, I-pads, personal digital assistants, E-readers etc. has increased drastically over the period of time. In this paper, the authors have analysed external factors like affordability, enjoyment, interaction and convenience to see their influence on willingness to adopt mobile learning.

Keywords: E-commerce, Mobile Learning, Internet, Technology.

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1. INTRODUCTION

Learning is a broad term that happens both lifelong and life-wide. Education is considered a subset of learning that can drive growth, economic prosperity and advancement of an individual, a community and a country. Learning doesn't need an institution and can happen informally. Education often happens in an institutionalised manner in a more formalized way. Yet, in the kind of education system that children are going through, they are educated inside the four walls of a classroom and learning often happens outside it. This kind of a boundary is not preparing students effectively to become the global citizens of 21st century. Imagine a world where the boundary between formal and informal ways of learning are blurred, learning and education become synonymous and ubiquitous, independent of time, available materials, resources, previous qualification, pace and style. Technology, especially Mobile technology in e-commerce has the potential to achieve such a transformation.

1.1 E-learning

E-learning is a learning system which is based on formal teaching with the help of the electronic resources. While teaching can be based mostly in or out of the lecture rooms, the utilization of computers and also the net forms the main part of E-learning. E-learning may also be termed as a network enabled transfer of skills and information, and also the delivery of education to a vast variety of recipients at similar or completely different times. Earlier, it had not been accepted wholeheartedly because it was assumed that this method lacked the human part needed in learning.

E-learning has proved to be the most effective mean in the corporate sector, particularly for the training programs. These training programs are conducted by companies for employees across the world making employees obtain important skills while sitting in a board room, or by having seminars, which are conducted for members of the same or the different companies under similar roof. The schools which use E-learning technologies are leading ahead to those which still use the traditional and standard approach for learning.

1.2 M-learning

M-learning or mobile learning can be explained as "learning across multiple contexts, through Interaction and content interactions, using personal electronic devices." It is one form of distance education where mobile-learners use this technology at their time and as per their convenience.

M-learning technologies include notebooks, mobile phones, tablets and I-Pads. M-learning has major focus on the mobility of the student and allow interaction with portable technologies. Using mobile tools for creation of learning aids and materials has become a very important part of informal learning.

2. OBJECTIVES

2.1 Primary Objective

- The primary objective of this research is to study the factors enabling the consumer willingness to adopt mobile learning in e-commerce.

2.2 Secondary Objective

- To study the relationship between enjoyment, affordability and usefulness of mobile learning

- To study the relationship between convenience, interaction and ease of use of mobile learning in e-commerce.
- To study the relationship between usefulness and ease of use on willingness to adopt mobile learning
- To analyse gender difference with respect to adoption of mobile learning
- To analyse difference between students and working professionals for adoption of mobile learning

3. CONCEPT OF M-LEARNING

The concept of M-learning (mobile learning) is presumed to have emerged from distance learning (d- learning) to electronic learning (e-learning) (Sharma & Kitchens 2004). The popularity of mobile learning can be credited to the development of iPads and smartphones that work through wireless technology (Park et al. 2012). M-learning can be summarized as the acquisition of any information & skills by using of mobile technologies at anyplace and any-time (Liu et al. 2010). To understand better it can be said that mobile learning is learning through mobile-devices like smartphones, tablets, computers, personal digital assistants (PDAs), MP3s and MP4 devices as well as other portable device (Milošević et al. 2015). Devices like these are handy (convenient for holding in hand and do not require to be installed on a computer), compact (can be taken or carried anywhere easily in a handbag or pockets and have easy battery charging options) and also lightweight (device do not weigh a lot) (Nor din et al. 2010). The advancement of Social media and its free applications and software allow easy communication and boost m-learning (Rodriguez 2011).

4. THE CURRENT STATE OF MOBILE LEARNING

Currently, cell phones which were at first advertised firmly as communication and entertaining gadgets are now becoming an imperative part in economies and society at large. Cell phones have affected almost each and every task, from managing an account to governmental issues, and are presently being utilized to build profitability in various fields. As these gadgets turn out to be progressively noticeable around the world, mobile learning is also getting lot of attraction. Students and faculties are utilizing this technology for various educational purposes while the government is also being supportive in making policies to promote this innovative method of mobile learning in both formal and informal education setting. Many local educational institutes are also adopting this technology due to its advantages. The specialists in education sector believe that m-learning has now reached to level where its systematic integration with learning both inside and outside of institute's premises is necessary. Choices made today will definitely impact the significance of m-learning in years to come. Some of the latest trends in m-learning are as follows. It includes the innovations in formal and informal education.

Out of the 150 responses the minimum age person from which data was obtained was 16 years. The maximum age person from whom data was obtained was of 31 years. While the mean age of the sample was 25 years with a count of 35 responses.

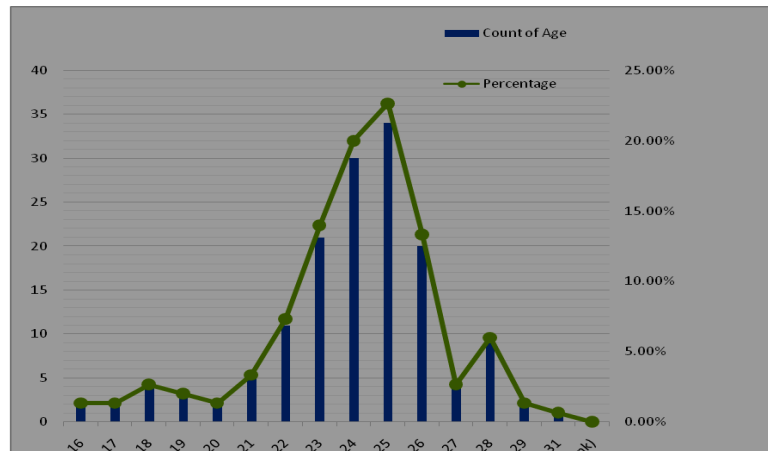


Figure 1: Age group graph

The occupation of the sample was also noted. Out of 150 responses obtained there were 126 students, 23 working professionals and 1 self-employed respondent. Since self-employed respondents were negligible, therefore, for analysis self-employed and working were clubbed together.

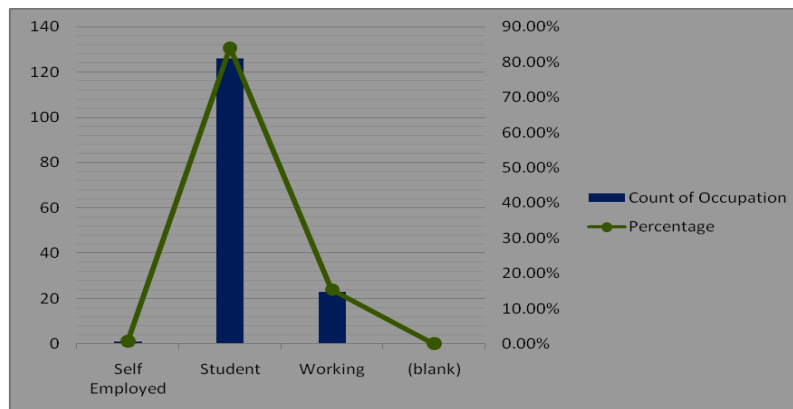


Figure 2: Occupation of respondents

5. DESCRIPTIVE ANALYSIS : The analysis of this study can be as follows:

	N	Mean	Std. Deviation
Willingness	150	4.2267	0.69656
Convenience	150	3.61	0.54456
Interaction	150	3.63	0.52673
Enjoyment	150	3.8767	0.60183
Affordability	150	3.825	0.59904
Ease	150	4.216	0.60624
Usefulness	150	4	0.66778
Valid N (listwise)	150		

(Source: Primary data Table 1: Descriptive Analysis Analysed)

All the 26 items were computed under 6 different variables which are convenience, Interaction, enjoyment, affordability, ease of use and usability. Descriptive analysis was done on these variables and their mean and standard deviation were calculated. The table of the analysis is as follows.

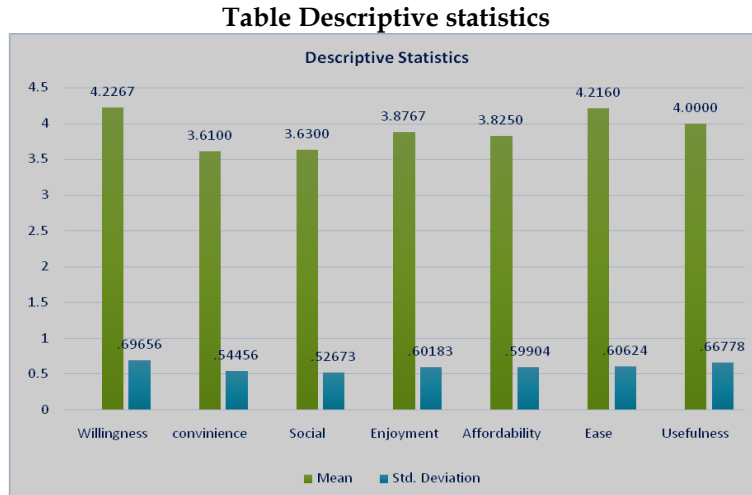


Figure 3: Descriptive statistics

6. INFERENCE ANALYSIS

Regression analysis has been done on the variables. Regression analysis has been done 3 times. In first step enjoyment and affordability are kept as independent variable, while Usefulness is kept as dependent variable. In second step Convenience and Interaction are kept as independent variable, while Ease of use is kept as dependent variable. In last step Usefulness and Ease of use are kept as independent variable, while Willingness to adopt is kept as dependent variable.

6.1 Regression Analysis

Null Hypothesis (H_0): There is no significant relationship between Enjoyment and Affordability with respect to Usefulness.

Alternate Hypothesis (H_1): There is significant relationship between Enjoyment and Affordability with respect to Usefulness.

Table: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig F change
1	.437a	.191	.180	.60477	.191	17.333	2	147	.000

a. Predictors: (Constant), Affordability, Enjoyment

b. Dependent Variable: Usefulness

Table: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	12.679	2	6.340	17.333	.000b
Residual	53.765	147	.366		
Total	66.444	149			

a. *Dependent Variable: Usefulness*

b. *Predictors: (Constant), Affordability, Enjoyment*

Table: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.702	.393		4.328	.000
Enjoyment	.301	.087	.271	3.455	.001
Affordability	.296	.087	.265	3.381	.001

a. *Dependent Variable: Usefulness*

7. FINDINGS

- It was observed in the sample that almost everyone has once used mobile devices for learning purposes.
- It was observed that both students and working professionals are using mobile devices for learning purposes.
- It was observed that mostly respondents fall in medium usage category, which is 0 to 2 hours per day usage of mobile devices for learning purposes.
- It was found in regression 1 that there is significant relationship between Enjoyment and Affordability with respect to Usefulness
- It was found in regression 2 that there is significant relationship between Convenience and Interaction with respect to Ease of use.
- It was found in regression 3 that there is significant relationship between Ease of use and Usefulness with respect to Willingness to adopt.
- It was found that as compare to Usefulness, Ease of use is a better enabler of willingness to adopt mobile devices for learning.
- In T-Test it was found that there is no significant gender difference with respect to willingness to adopting.
- In T-Test it was also found that there is no significant difference between students and working professionals with respect to willingness to adopting.

8. CONCLUSION

Mobile learning is one of the latest advancements in technology which is gaining popularity day by day. It is gaining so much popularity because of the fact that it uses mobile platform. The accessibility of mobile devices like smart phones, tablets, i-pads, personal digital assistants, e-readers etc. has increased drastically which is the main reason for mobile learning's popularity.

Apart from having access to smart gadgets, there are various other factors which affect the willingness of any individual to adopt m-learning.

Perceived ease of use and perceived usefulness are the two important factors which are found in literature that affect the new technology acceptance. The technology acceptance model was developed by Davis in 1989. These two factors have been analysed in this research to understand the willingness to adopt. Other external variables which have been considered are enjoyment, affordability, convenience and Interaction. A questionnaire was prepared on the basis of these variables and data was collected. A total data of 150 respondents was taken into consideration for the analysis. In the analysis it was found that ease of use and usefulness are the factors which enables the willingness of an individual to adopt the mobile learning but the strength of both the factors varies. Ease of use is more significant to enable the willingness to adopt as compared to usefulness. Hence, ease of use is must for a user to make him adopt the mobile learning system.

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