

# An Investigation into the Factors Affecting the Adoption Intention of eLearning in India

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**Abstract**—*The aim of this paper is to understand the factors affecting the adoption intention of eLearning as a means of learning amongst individuals (specifically learners and teachers). eLearning is a scalable, efficient, cost effective and fast form of learning but its acceptance levels are still low. The study endeavors to come forward with factors and outcomes, which when analyzed, will help examine the reasons for the low acceptance rate of the eLearning education model in India. The Paper will help all the stakeholders in the field of eLearning to develop a fair understanding of low acceptance of eLearning.*

## 1. INTRODUCTION

With evolution of information technologies like virtual classes and digital libraries, there has been the creation of a new teaching and learning environment which is flexible and independent of time and space. Thousands of online courses are available that not only provide online instructional material but online discussions and collaborative eLearning experience as well. eLearning can be thought of as a learning experience delivered with the help of Information and Communication Technologies (ICTs) that makes information or knowledge available to learners without any limitation of time or space [22, 24].

When researching the adoption intention of new technologies and models based out of them amongst individuals, Technology Acceptance Model is a widely accepted technology model. It is an established fact that factors such as user's perceived ease of use and perceived usefulness are crucial in such researches. [9, 19, 23, 27, 28]. Over the years, the TAM model has found widespread support, appreciation and inclusion in such major studies and researches [7, 14, 15, 19, 20].

In the following sections, existing literature and TAM's factors are discussed. A research design based on TAM has been used to predict user's acceptance behavior. Finally, the outcomes are analyzed and presented.

## 2. REVIEW OF LITERATURE

A proper review of existing literature is essential and of high importance to have a proper bird's eye view of the views and studies of the academics and researchers of the present times.

eLearning or Blended Learning can be perceived as the amalgamation of all the existent modes and means of web-based technology to accomplish an educational objective and consequently attaining enhancement in the knowledge levels. [10, 14, 22, 24]. Learning provides “intellectual growth that leads to scientific reasoning, abstract thought, and formal operations” [16, 33].

Major advantages of eLearning include control over the content offering and pace of learning, ease of distribution, ease in updating material, standardized course material, lifelong learning, interactive session, cost effectiveness and accountability. [3, 22, 29, 32, 33]. eLearning is emerging as the paradigm of modern education by becoming an essential part of teaching and learning process and implementation of systems across borders of time and space [8, 21, 26]. With the shift from product based economy to knowledge based economy, the organizations are looking for knowledge workers who can be trained on an anytime, anywhere basis [3, 17].

Learner Satisfaction (or Acceptance) is a vital factor that has a far and wide mention in all studies based on eLearning. [12, 13, 14, 22, 25, 26, 29, 33]. The benefits of eLearning will not be maximized unless the learners are ready to accept and use the system [21]. Additionally, a peek into what leads to learner dissatisfaction and dropout from online courses and a thereby mild adoption intention rate is also essential. [2, 5, 11, 13, 14, 18, 20, 30].

The quality and reliability of the eLearning system is an important factor for increasing the acceptance of eLearning [31]. It is also essential that the system should be developed in such a way that it has minimal technical problems and is able to support different platforms and application.

This paper aims to look for the possible factors for the low adoption intention of eLearning services in India. Though there is wide literature in general, there is almost no existing literature that focuses on the eLearning adoption intention in India. Using the TAM Model as the research model, this paper will try and identify the major factors and their correlation for the low acceptance rate of eLearning in India.

### 3. RESEARCH METHODOLOGY

The purpose of the study is to understand and investigate into the factors affecting the adoption of eLearning in India.

The impact of various factors was studied using an exploratory-descriptive approach. An Online Questionnaire was designed for the same based on the demographic and TAM model factors.

The objectives for the paper have been defined as follows (1) O1: To determine the effect of Perceived Usefulness on Attitude Towards the eLearning services in India. (2) O2: To determine the effect of Perceived Ease of Use on Attitude Towards the eLearning services in India. (3) O3: To determine the effect of Attitude Towards the eLearning services on Behavioral Intention of users in India.

The study is based upon the analysis of primary data collected through floatation of an Online Questionnaire based on the TAM Model Factors (Perceived Usefulness, Perceived Ease of Use and Attitude Towards eLearning). The questionnaire is a prominent tool for primary data collection which consists of a set of questions used for collecting information and data from individuals. [4]

The Questionnaire made use of the Likert Scale, which is a very common format used for surveys in which the respondents rank the quality of their responses either from high to low or from low to high [1]. A 5-point Likert scale was chosen for better understanding of the responses of individuals by attaching the labels to each point in the scale and the mid-point of the scale was set as the neutral response point. The Likert Scale used was as follows:

(1- Strongly Agree, 2- Agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree )

The research model used for this study is Technology Acceptance Model (TAM) . This model helps in predicting the intention to use and acceptance of Information System and Information Technology by individuals. This Model consists of three important factors for understanding the behavioral intention of users. They are:

(1) Perceived Usefulness, which decides the degree to which an individual believes that his or her job or life performance can be enriched by using a particular Information System or Information Technology;

(2) Perceived Ease of Use, which decides the degree to which an individual believes that by using a particular Information System or Information Technology would be very convenient to use; and

(3) Attitude Towards using, decides the degree to which an individual will adapt the system or not depending on his positive or negative attitude towards Perceived Usefulness and Perceived Ease of Use factors by using a particular Information System or Information Technology. [6]

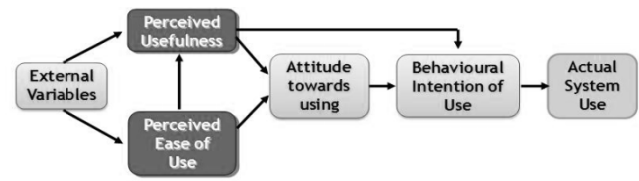


Fig. 1: TAM Model

### 4. DATA REPORTING AND ANALYSIS

In the surveyed 212 respondents, about 56.13% of respondents were male (119 in number) and 43.87% were female (93 in number). Out of the said respondents, 126 were Students (59.43%), 10 were Research Scholars/ Teaching Assistants (4.72%), 29 were Teachers/Professors (13.68%) and 47 were other direct and indirect stakeholders in the eLearning Model (22.17%). Out of the 212 respondents, about 90% (190/212) use Internet services on a daily basis (161 used it every few hours and 29 use it once in a day).

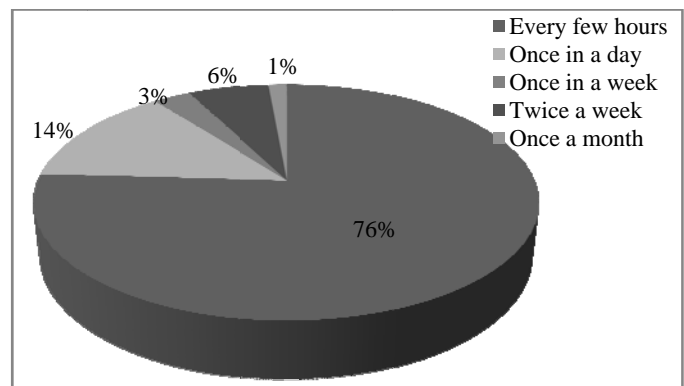


Fig. 2: Internet Usage Statistics

Out of the respondents that use Internet Services daily, along with Social Media and Surfing, there is a wide inclination towards eLearning as well (83% use Internet for eLearning as well)

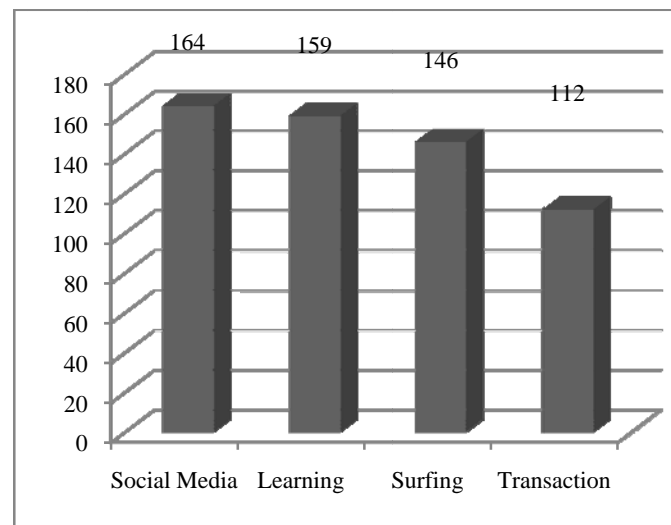


Fig. 3: Purpose of Internet Use Statistics

Out of the total 174 respondents who use the Internet services on a daily basis, a significant three-fourths (76%) agree to the Perceived Usefulness of the e-Learning services in India. A staggering 83% agree to the Perceived Ease of Use of the eLearning services and around 72% agree having a positive attitude towards the eLearning services in India

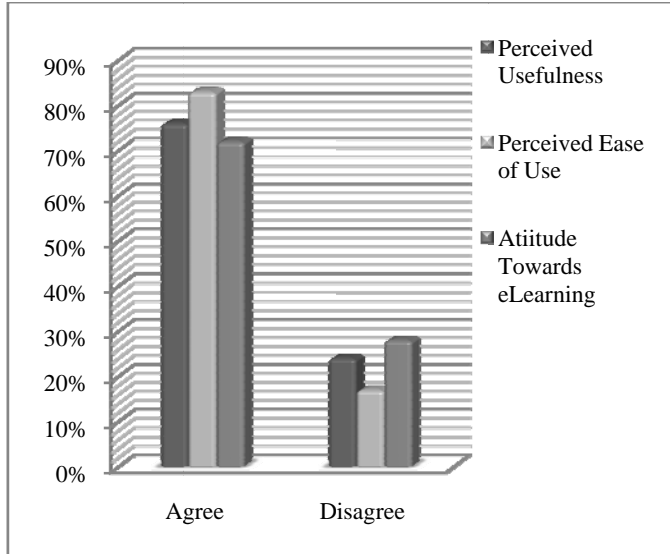


Fig. 4: TAM Factor Statistics

Regression was carried out using the software. The Regression statistics are as follows:

Table 1: Regression Statistics

Multiple R	0.810179437
R Square	0.65639072
Adjusted R Square	0.642849468
Standard Error	0.445171928
Observations	212

Table 2: Table for t-Statistics and P- Value

Factors	t stat	P-value
eLearning provides easy subscription to a Certification Course of a renowned University.	2.1003	0.0369
eLearning is more relevant to a particular specialization course.	0.3696	0.7120
eLearning allows repeated access to video lectures for better understanding of the concept.	8.4138	7.0514
eCertificates from renowned universities can help in career enrichment.	1.8631	0.0638
eLearning saves time.	1.8441	0.0666
eLearning is cost effective.	3.6072	0.0003
eLearning provides easy access to the study material.	1.8119	0.0714
eLearning offers study material that is reliable and more valid in present times.	5.0240	1.1106

Responses were analyzed by applying regression model and calculating the P-value for each factor. In regression models, we adopted the attitude towards eLearning as a dependent variable and tried to find out whether independent variables (Perceived Usefulness and Perceived Ease of Use) are linearly related to it or not. Table 1 and Table 2 provides the details of the test.

This analysis consists of the data of 212 respondents. In a linear regression model, adjusted coefficient of determination is 64.28 %, so the model's fit is good. P-value of each factor gives the insight of relation of factors with the dependent variable. Thus, there is enough evidence to infer that the variables (eLearning provides easy subscription to a Certification Course of a renowned University, eLearning is cost effective) are linearly related to attitude towards eLearning. We have found weak evidences to infer eLearning. There is not enough evidence to conclude that the variables (eLearning is more relevant to a particular specialization course, eLearning allows repeated access to video lectures for better understanding of the concept, eLearning offers study material that is reliable and more valid in present times) are linearly related to attitude towards eLearning. that the variable (eCertificates from renowned universities can help in career enrichment, eLearning saves time, eLearning provides easy access to the study material) are linearly related to attitude towards eLearning.

### 5. FINDINGS

The findings of the study can be summarized as follows:

There is sufficient evidence at the 5% significance level to infer that each of the following variables is linearly related to attitude towards eLearning:

1. eLearning provides easy subscription to a Certification Course of a renowned University.
2. eLearning is cost effective.

There is weak evidence to infer that following variables is linearly related to attitude towards eLearning

1. eCertificates from renowned universities can help in career enrichment.
2. eLearning saves time.
3. eLearning provides easy access to the study material.

There is not enough evidence to conclude that each of the following variables is linearly related to attitude towards eLearning

1. eLearning is more relevant to a particular specialization course.
2. eLearning allows repeated access to video lectures for better understanding of the concept.
3. eLearning offers study material that is reliable and more valid in present times.

The findings, with respect to the objectives of the paper are as follows:

- (1) There is a positive relationship between the Perceived Usefulness and Attitude Towards the eLearning services in India. With a significant three-fourths (76%) agreeing to the Perceived Usefulness of the eLearning services in India, the factor becomes an important consideration to analyze the adoption intention.
- (2) There is a positive relationship between the Perceived Ease of Use and Attitude Towards the eLearning services in India. With a staggering greater than four-fifths (83%), agreeing to the Perceived Ease of Use of the eLearning services in India, the factor becomes a vital component.
- (3) There is a positive relationship between the Attitude Towards the eLearning services in India and Behavioral Intention of users in India. Around 72% agree to this factor being prominent and important.

## 6. CONCLUSION

Internet has become one of the most important means to provide educational and learning resources for teachers and learners alike for the purpose of sharing and obtaining information. The findings of our study reveal that factors like Subscription to Certification Course of a renowned university and cost of effectiveness of eLearning courses are prominent factors in the adoption intention of eLearning services in India. Factors like easy access to the study material, time saving and eCertificates from the renowned universities can help in career enrichment and this consequentially affects the adoption intention of eLearning Services. Factors like reliable study material, repeated access to video lectures and relevance to a particular specialization course does not affect the adoption intention of eLearning.

## 7. FUTURE SCOPE

The study conducted to investigate the factors affecting the adoption intention of the eLearning services in India was based on the widely accepted TAM Model. Further studies can base their research on factors other than those that form a part of the TAM Model. Additionally, the average age group of the survey respondents was 20-25 Years. Future studies can focus on different age groups.

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