A Study on Knowledge and Awareness of M-Learning among the Teachers of Higher Education

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Abstract

Higher education is tertiary education leading to award of an academic degree. Higher education, also called post-secondary education, third-level or tertiary education, is an optional final stage of formal learning that occurs after completion of secondary education. It represents levels 6, 7 and 8 of the 2011 version of the International Standard Classification of Education structure. Tertiary education at a non-degree level is sometimes referred to as further education or continuing education as distinct from higher education. Nowadays, m-learning services are interesting and very recent addition as a new vital platform for the higher education environment. This study explored the requirement for utilizing m-learning services in the higher education environment. Moreover, it provided the knowledge base about the current state of students' awareness about m-learning services. Both of the environment and the infrastructure are appropriate to diffuse m-learning in the higher education environment. The results indicate that the higher education environment has the required infrastructure to utilize m-learning services. Furthermore, the results show that the teachers have adequate knowledge and awareness to use such technology in their education environment. However, the barriers and obstacles that could be faced during the actual use of mobile learning should be considered. Literature shows that while the limitations of mobile technology are reducing over time, the capabilities are going on increasingly. This study shows that the limitations of m-learning for education are well concerned by teachers. However, Mobile wirelesses technology use in higher education will keep growing and will become the choice of the learning environment. This study is part of research to investigate adoption and diffusion of m-learning services among teachers in the higher education environment.

Introduction

Education means the modification of behaviour. Education is an activity or a process, which transforms the behaviour of a person from instinctive behaviour" to human behaviour. According to Mahatma Gandhi speaks education as, "By education I mean an all-round drawing out of the best in child and man-body, mind and spirit".

(Nagarajan, 2009). Education is the deliberate and systematic influence, exerted by the mature person upon the immature, through instruction, discipline and harmonious development of physical, intellectual, aesthetic, social and spiritual powers of human being, according to individual and social needs and directed towards the union of the education with his creator as the final end (Redden, 1956). Education may help the individuals in bringing out and realizing all latent potentialities of the child development, of a well balanced personality, cultivation in him, flexibility and adaptability, growth of social virtues, his preparation for a complete living etc.

Educational Technology

Educational technology is concerned with the systematic application of science and technology in the field of education and thus maybe defined as the application of technology to education in order to further the cause of the latter. According to Leith (1967), "Educational technology is the systematic application of scientific knowledge about teaching-learning and conditions of learning to improve the efficiency of teaching and training (Mangal, 2007). According to Tucker (1976), "Educational technology is a systematic approach for designing and evaluating learning and teaching methods and methodologies and to the application and exploitation of media and the current knowledge of communication techniques in education, both formal and informal (Mangal, 2007). Educational technology is not limited to the use of audio-visual aids and does not symbolize merely educational hardware such as the sophisticated gadgets and mechanical devices used in education. For the effective management of the total teaching-learning process it tends to utilize the results of all good, experiments and research in the field of human learning and the art of communication and employs a combination of all possible human and non-human resources to achieve the desired educational objectives.

Need and Significance of the Study

The main focus of this study was to measure students acceptance of new Mobile Learning technology and effectiveness of Mobile Learning mode of delivery in complementing or supplementing classroom Face-to-Face teaching and learning for which design and implementation of Mobile Learning pedagogy and activities were part of the research process. The design of learning activities was based on available Mobile Learning Devices like mobile phone especially smart phones, laptop computers, tablets, phablets, PDAs, portable gaming devices, handhelds and Mp3 players. My prime focus was on Smart Phones. The mobile device applications had been chosen on the basis of its availability in various Mobile devices, students" familiarity and its ease of use. Beside that preparedness of the participants and participants" awareness of new mobile technologies and operations were also explored. Mobile devices in this research were treated as support delivery tools intended to provide students with always on learning services and so as to provide a wider context of learning opportunities. This means that learning of language was not restricted to Face-to-Face classroom teaching session, but it could be reflected and reconstructed anywhere anytime student wishes. This research did not Endeavour to study effectiveness of one particular application of mobile device or any mobile learning activity, but it aimed at registering students perception of new M-Learning mode of learning process and acceptance of new M-Learning technology in and outside of the classroom. Moreover, this study did not concentrate on or take into consideration principles of any one school of educational psychology, pedagogy, sociology and linguistics. However, general categories

of the M Learning activities utilized in this research were designed, developed and empirically validated by Sakina Sofia keeping in mind constructivist principles of learning. The study more emphasized students" point of view of using Mobile Technology for language learning and not teachers or researcher's perception in general. The research could shed some more light on theoretical development of Mobile Learning or Face-to-Face learning as it bridges the gap between theory and practice. Furthermore, the study was specifically administered to the higher education students in Anand, Gujarat, India. So this study could bring out some more facts of Mobile 8 Learning status and activities in this particular region and particular age group of students. This study contributes to the limited body of knowledge concerned with the use of mobile devices by the students in higher education institutes and new method of M Learning and its role in complementing Face-to-Face classroom teaching and learning process. Challenges and issues are also highlighted in order to provide a reality check in the complexity of introducing new M-Learning technology and mode of delivery to learners.

Objectives of the Study

- To find out whether any significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to Gender
- To find out whether any significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to subject
- To find out whether any significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to location of the teachers
- To find out whether any significant difference between Knowledge and

Awareness of M-Learning among higher education teachers with respect to type of the family

Hypotheses of the Study

- There is no significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to Gender.
- There is no significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to subject
- There is no significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to location of the teachers
- There is no significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to type of the family

Method Used for the Study

For the present study, the investigator used the survey method in the view of the objectives of the study and the nature of the problem concerned. Survey method is an important method in the field of research. It is used to describe and explain the attitude behaviours of relatively large number of people by administering questionnaires to relatively small parts of samples of the groups. According to Best (1959) "The survey is an extensive and cross sectional dealing with a relatively large number of cases at a particular time and yielding statistics that are abstracted from particular cases".

Population for the Study

According to Aggarwal (2009), population means the aggregate or totality of objects or individuals regarding which inferences are to be made in a sampling study. A population is any group of individuals that have one or more

characteristics in common that are of interest to the researcher. The population of the present study is the teachers working in arts education and engineering colleges from Karur district in tamilnadu.

Samples for the Study

According to Agarwal (2009), sample is a small proportion of a population selected for observation and analysis. It is a collection consisting of a part or subset of the objects or individuals of population which is selected for the express purpose of representing the population. The investigator used simple random sampling technique. 300 higher education teachers were taken for this investigation. The investigator collected the data from arts, education and engineering colleges in Karur districts in Tamilnadu.

Tools Used in the Present Study

As the study aims to find out the Knowledge and Awareness of M-Learning of higher education teachers, the investigator has used the following standardized tools.

(i) Knowledge and Awareness of M-Learning scale was developed by the investigator (2019)

Tool 1: Knowledge and Awareness of M-Learning Scale

Description Knowledge and awareness of m-learning scale awareness Scale was downloaded from the website and adapted by the investigator. The tool to measure m-learning knowledge and awareness scale consisted of 20 items. Each item had four alternatives. The respondent can choose any one for each item.

Each item measured the Internet awareness of the respondent. Establishing Content Validity The tool has been submitted to a panel of experts in College of Education and the arts and engineering teachers. All the experts' opinions are executed in the content of the statements in he tool. Thus the content validity of the tool has been established.

(ii) Establishing Reliability

Reliability is the degree of accuracy and consistency. The investigator has used test-retest method for establishing reliability of the tool. The investigator randomly selected 30 professor from groups of institution in Karur. The same tool was administered to the same sample of 30 professors after an interval of 20 days. The responses were scored. The correlation co – efficient was found to be 0.79. Thus the reliability of the tool is 0.79. Thus the reliability of the tool was established.

Statistical Techniques Used

Statistical techniques are very essential for any research. It will help the investigator to analyze and interpret the data. The investigator has used the following statics for analysis of data.

- Standard Deviation (SD)
- 't'-TEST

Analysis And Interpretation of Data
Null Hypothesis 1

There is no significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to Gender.

Table 4.3: Significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to Gender

Variable	Male (N=123)		Female (N=171)		Calculated value of 't'	Remarks at 5% level
	Mean	S.D	Mean	S.D		
M-Learning	49.70	12.45	51.29	14.31	2.26	S

(At 5% level of significance the table value of 't' is 1.96)

It is inferred from the above table that the calculated value of 't'(2.26) is greater than the table value of 't' (1.96) at 5% level of significance for df 299. Hence the null hypothesis is rejected. Thus, there is significant difference between male and female of higher education teachers in their Knowledge and Awareness of M-Learning.

Null Hypothesis 2

There is no significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to subject

Table 4.4: Significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to subject

Variable	Arts (N=162)		Science (N=132)		Calculated value of 't'	Remarks at 5% level
	Mean	S.D	Mean	S.D		
M-Learning	48.89	9.93	52.75	10.33	3.25	S

(At 5% level of significance the table value of 't' is 1.96)
NS- Not significant, S- Significant

It is inferred from the above table that there is significant difference between arts and science subject teachers in their Knowledge and Awareness of M-Learning. While comparing the mean scores of arts and science subject of higher education teachers, the science subject of higher education teachers have more than the arts and science subject of higher education teachers in their Knowledge and Awareness of M-Learning

Null Hypothesis 3

There is no significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to location of the teachers

Table 4.5: Significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to location of the teachers

Variable	Rural (N=145)		Urban (N=155)		Calculated value of 't'	Remarks at 5% level
	Mean	S.D	Mean	S.D		
M-Learning	47.22	10.37	52.15	9.89	3.83	S

(At 5% level of significance the table value of 't' is 1.96)
NS- Not significant, S- Significant

It is inferred from the above table that there is significant difference between rural and urban area higher education teachers in their Knowledge and Awareness of M-Learning. While comparing the mean scores of the urban area higher education teachers have better than rural area of higher education teachers in their Knowledge and Awareness of M-Learning

Null Hypothesis 4

There is no significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to type of the family

Table 4.6: Significant difference between Knowledge and Awareness of M-Learning among higher education teachers with respect to type of the family

Variable	Nuclear (N=203)		Joint (N=91)		Calculated value of 't'	Remarks at 5% level
	Mean	S.D	Mean	S.D		
M-Learning	50.99	9.83	49.82	11.22	0.86	NS

(At 5% level of significance the table value of 't' is 1.96)

It is inferred from the above table that there is no significant difference between nuclear and joint family of higher education teachers in their Knowledge and Awareness of M-Learning.

Conclusion

Nowadays, m-learning services are interesting and very recent addition as a new vital platform for the higher education environment. This study explored the requirement for utilizing m-learning services in the higher education environment. Moreover, it provided the knowledge base about the current state of students' awareness about m-learning services. Both of the environment and the infrastructure are appropriate to diffuse m-learning in the higher education environment. The results indicate that the higher education environment has the required infrastructure to utilize m-learning services. Furthermore, the results show that the teachers have adequate knowledge and awareness to use such technology in their education environment. However, the barriers and obstacles that could be faced during the actual use of mobile learning should be considered. Literature shows that while the limitations of mobile technology are reducing over time, the capabilities are going on increasingly. This study shows that the limitations of m-learning for education are well concerned by teachers. However, Mobile wirelesses technology use in higher education will keep growing and will become the choice of the learning environment. This study is part of research to investigate adoption and diffusion of m-learning services among teachers in the higher education environment.

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