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INTERACTION OF TEACHER EDUCATORS WITH INNOVATIVE DEVICES (MOBILE-LEARNING): EXPLORING IMPLICATIONS

Abstract

Mobile learning is relatively new concept attaining the interest of researchers and educators. Especially its use in Education is yielding very positive result in developing countries. By the successful use of these devices, quality of education has improved and use of these contemporary technologies in Education is helping in satisfying the needs and demands of this Net-Generation. Therefore the aim of the study was to explore the perceptions of Prospective Teachers regarding M-Learning. The sample of the study was randomly selected from (B.Ed.) program batch 2015-2016 students of Faculty of Education, University of Sindh, Pakistan. A survey questionnaire consisted of 27 statements based on the questionnaire used by the Khwaileh &AlJarrah (2010) in their study on M-learning was developed to collect data from the sampled B.Ed. students. Collected data was quantitatively analyzed by using mean score and percentage, the findings of the study showed that majority of the students had very positive perceptions about M-learning, and they agreed that M-learning had many advantages and dis-advantage as well. In the end of the study, It was suggested that universities should offer M-learning courses and proper training should be

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provided to students and Teacher Educators, so that they can reap the true fruit of technology integration.

Key terms: *M-learning, effectiveness, Perceptions, quality education, teacher Educators.*

Introduction

Background of the Problem

Recent advancements in science and technology have revolutionized the world and now the world has turned into global village due to new emerging communication technologies. Mobile devices nowadays are most utilized and fast expanding devices and these have occupied a great part of our lives. In the learning field, mobile learning has become very common and popular trend in developed countries. With the use of mobile devices, educational process has become more versatile and Mobile learning is absolutely gaining momentum. According to Pollara et al. (2011), "The implications of mobile learning are far-reaching, and its potential influence on education are profound".

Mobile Learning is playing very important role in the field of education especially in the developed and advanced countries. M-learning includes tablet PCs, i-phone and smart phone. These mobile devices have an undeniable potential to expand the accessibility of learning opportunities. It is fair to assume that the opportunity of using mobile device as a learning approach will increase in the future. "There are enormous benefits of use of mobile in education, M-learning providing education anywhere anytime, enhancing collaborative learning, providing social interaction, offering personalized instruction. Through M-learning students take interest in study, get motivated for education. Assessment has become very easy, short test or quizzes can be

arranged easily and provide immediate feedback". (Osang, et al., 2013) "Because of the potential usage of 3G and wireless network, mobile learning is becoming integral part of learning environment. Some developed countries, such as US, Australia and Japan, have already provided mobile learning environments in education" (Wu, et.al 2008), (Lin, 2007), and (Litchfield, 2007).

Statement of the Problem

In Pakistan, mobile phones are now widely used by people belonging to different sectors of Pakistan. According to a statistical report (2013) published by Pakistan Telecommunication Authority, "the number of mobile users in Pakistan reached 129.6 million at the end of September 2013". Although mobile technology is widely being used in Pakistan, but its use in education is very limited. Currently in Pakistan, mobile learning mode is being used in distance education programs only so there is the need to explore the challenges and issues hindering the use of M-learning in the field of education generally and in the field of teacher education particularly. Thus the topic "Interaction of Teacher Educators with innovative Devices (Mobile-Learning): Exploring Implications" was selected to seek the B.Ed students' perceptions about the use and implication of M-learning in the field of Teacher Education.

Objectives of the Study

The objectives of the study were:

   i. To seek the perceptions of Prospective Teachers about the use of M-learning in teacher training institutions.
   ii. To investigates the implications of M-learning in teacher training institutions.
   iii. To recommend effective strategies for positive use of M-

learning in teacher Training Institutions.

Delimitation of the Study

This research study was carried out at Faculty of Education, University of Sindh, Hyderabad ,Sindh Province, Pakistan. The research was focused on Prospective Teachers of B.Ed morning program Spring semester of the academic year 2015-2016.

Method

The study was a descriptive in nature. A survey approach was adopted for research. For sampling purpose, 40% prospective teachers among total 250 enrolled prospective teachers in the batch 2015-16 of B.Ed morning program at Faculty of Education, University of Sindh, Pakistan, were randomly selected. A survey questionnaire comprised of 27 items was developed to seek the perception of Prospective Teachers about M-learning and its implications. Questionnaire was based on the pattern adopted by Khwaileh and AlJarrah (2010), from University of Jordan for their study on M-learning. Reliability (0.928) of the questionnaire was determined through Alpha Cronbach method, and the validity was determined through the feedback provided by expert panel. The questionnaire was personally administered to the sample prospective teachers.

Data Analysis

Prospective Teachers Responses

While analyzing the data, prospective teachers' positive responses: strongly agree and agree were combined and negative responses: strongly disagree and disagree responses

were also combined then percentage, mean and standard deviation was calculated.

Objective 1:   To seek the perceptions of Prospective Teachers about the use of M-learning in teacher training institutions.

Objective 1 covers statements from 1-7
Table.1

S. No	Statements	Level of Agreement			Mean	SD
		A	U	DA		
1	The M-learning makes the learning effective	75%	8%	17%	4.07	1.249283
2	The use of mobile phone in the classroom enhances students' interest and motivation.	76%	5%	19%	4.0	1.340888
3	Students desirably use mobile devices as a way for learning	72%	6%	22%	3.8	1.392621
4	M-learning courses are uncomfortable for me.	20%	5%	75%	4.01	1.388954
5	M-Learning implementation should be gradual,(start from I subject)	63%	8%	29%	3.41	1.371389
6	I would be entertained in my study by using mobile devices	75%	7%	18%	4.02	1.317941
7	I believe that my learning will improve through M-learning rather than through lectures.	66%	8%	26%	3.61	1.49

Discussion

Table,No.1 shows that mean score of responses against four statements is (4) which indicates that all prospective teachers viewed positively about the use of M-learning makes the learning effective, increase students motivation and interest. The overall

mean score of responses given against statements 1 to 7 remain (3.8).

The above statistics shows that majority (75%) of the respondents feel comfortable in using M-learning devices, and they feel pleasure while using them. According to Economic survey of Pakistan (2013) "mobile subscribers have reached to 121.13 million in Pakistan". Chen (2013) also found that "teenagers have a positive attitude towards the usability, effectiveness and satisfaction of mobile devices because they are the generation that has grown up using these technologies". Grimus (2014), Al-Fahad,(2009),Cavus (2009), and Novak (2009) in their studies on M-learning "endorsed that students have positive perception about M-learning".

Objective 2: To investigates the implications of M-learning in teacher training institutions.

i. Statements from 8-15 covering advantages of use of mobile phones in teacher training institutions.

Table.2

S. No	Statements	Level of Agreement			Mean	SD
		A	U	DA		
8	M-learning helps me to complete assignments quickly during and outside the class.	60%	10%	30%	3.51	1.459867
9	M-learning saves my time in learning.	62%	7%	31%	3.53	1.473366
10	M-learning saves my efforts in learning.	66%	8%	26%	3.69	1.412033
11	M-learning enables me to get education any where any time	75%	7%	18%	4.0	1.340888

12	M-learning increases collaboration with teachers and students.	76%	5%	19%	4.0	1.340888
13	M-learning provides me sufficient resources for learning.	66%	6%	28%	3.62	1.440959
14	M-learning provides massive education for learners.	63%	8%	29%	3.41	1.371389
15	The use of M-learning in teaching and learning will reduce the cost.	75%	6%	19%	4.03	1.38137

Discussion

According to data in the table.2 overall mean score of responses of prospective teachers is (3.69) which indicates that all respondents viewed that use of M-learning in the classrooms have many advantages. This result shows that majority of the respondents agreed that due to M-learning they can get education anywhere and anytime ,and use of these devices in education is reducing the cost of learning. Now they don't need to get books photo stated but they just use camera to take photos of script of books. Moreover, due to reduce in the cost of these devices, affordability is increasing day by day, Prospective teachers further viewed that by the use of mobile devices they collaborate with each other easily for effective learning through easy and cheap SMS packages, free phone calls, internet browsing and downloading with very low prices. According to Huang et al. (2007) "due to mobility, these devices (Mobile) provide better opportunity that one can get education any where any time". "M-learning provide potential benefit to student in their studies, such as create classroom environment interested, motivate learner, learner will entertain ,positive impact on students achievements and students want to use these devices in future classrooms (Shih et al, 2010; Wyatt et al, 2010).

ii. Statements from 16-27 investigate the disadvantages of use of mobile phones in teacher training institutions.

Table.3

S. No	Statements	Level of Agreement			Mean	SD
		A	U	DA		
16	M-learning needs well prepared mobile materials.	68%	7%	25%	3.77	1.427401
17	M-learning requires adequate training courses for implementation.	67%	6%	27%	3.65	1.459037
18	M-learning will not offer any advantages to me.	18%	5%	77%	4.04	1.355274
19	M-learning needs variant teaching strategies.	64%	7%	29%	3.59	1.511538
20	M-learning poses difficulty in monitoring the evaluation process.	70%	8%	22%	3.7	1.35214
21	M-learning causes decline in learners' achievement results.	18%	7%	75%	4.02	1.363151
22	Majority of material is in English and it is difficult to understand it.	60%	5%	35%	3.31	1.419169
23	Due to small screens it is difficult for me to use it for long time.	75%	6%	19%	4.02	1.377892
24	Mobile phones have limited storage capacity.	53%	6%	41%	3.14	1.484057
25	Excessive use of mobile phone causes health problems.	76%	5%	19%	4.06	1.339531
26	Excessive use of mobile phone causes social isolation	71%	6%	23%	3.81	1.353596
27	Due to M-learning my time is wasted in irrelevant activities, rather than learning	71%	5%	24%	3.79	1.444565

For the statements no.18 and 21, Likert's Scale was reversed as Strongly Agree 1,Agree 2,Un-decided 3,Disagree 4,Strongly Disagree 5 respectively.

Discussion

Data in table.no.3 shows that overall mean score of responses of Prospective Teachers is (3.74) which indicates that although use of mobile in education provide enormous advantages but its improper use may yield many dis-advantages. The excessive use of mobile devices is very harmful, and instead of blessing, it can be disaster. Majority of respondent (76%) opined that many health problems can be caused by the excessive use of mobile technology, such as backbone problem, weak eye-sides, shoulders pain, and headache. In response to the statements no:16 and 22, majority of the prospective teachers (75% and 77% respectively) disagreed that M-learning did not offer any advantage and causes decline in learner achievement" and mean score remained (4)."the advantages of M-learning are countless, but unfortunately, there are some challenges and barriers appear in implementation of mobile learning, such as low battery, small screen size, problem in input with small keys, low storage capacity, implementation problems, lack of technical support, lack of teacher training to use these devices confidently, unavailability of software etc". (Pisey, et al., 2012,; Addison, 2011,;Saleem, 2011,; Jarc, 2010 ; Chanchary 2009,;Paliwal,2009,; Vavoula, 2009).

Recommendation

- Latest software should be developed to incorporate the M-learning in the field of Teacher Education according to the need and demand of the students and the teachers.

- Software should be developed in national language so that all students may get benefit equally from the facility of M-learning.

- Norms should be set for the use of mobile devices in the

classrooms so that teachers and students may know the ethics of use of mobile phones in the educational institutions for teaching-learning purpose.

• Guidance should be provided to parents so that they may be aware of negative effects of use of mobiles phones by their children.

• Teachers should be trained so that they may be able to guide the students about the proper use of mobile phones for effective learning and teachers themselves be able to use these devices in their classroom teaching.
.
• Teachers should prepare electronic lesson plans and try to create such environment in the classrooms which ultimately motivate students to use electronic devices for learning purpose.

• Government should initiate immediate efforts to boost software development industry in the Pakistan and facilities of E-Lab and E-library should be provided to the teacher education institutions.

Conclusion

Due to increasing affordability and portability M-learning is widely being used for learning purpose. Today in many developed countries students and teachers know the potentials of M-learning in the field of education. Teacher education is also no exception where M-learning is becoming popular and cheap source prospective teachers to learn effectively with fast pace. In Pakistan, distance learning educational institutions like Allama Iqbal Open University and Virtual University are the pioneers in applying modern electronic devices in their system for learning

purpose. Due to popularity of mobile phones, ipads and laptops among students community in Pakistan, learning through electronic devices has become very common trend. Despite different problems and some disadvantages, M-learning is being widely applied source for learning in all levels of educational institutions including teacher education and training. So it is concluded that prospective teachers and teacher educators are fully motivated to use M-learning for teaching-learning and now it is the responsibility of administration and government to provide opportunities and facilities to them. For proper implementation of M-learning in teacher education institutions in Pakistan, policies and planning framework is necessary. Special software, mobile material also needed. Trainings are also necessary for teachers and students for proper use of these devices. Besides pedagogical, technological knowledge and knowhow is also required, we need updated curriculum that can be taught through M-learning and need training to both students as well as teachers, Student should be trained so that they are aware about the hazard of technology. And they must know how to use these devices.

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