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A Study of Attitude and Psychological Readiness of Students While Using Mobile Technology in Teaching-Learning Process

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Abstract

The main aim of this research study is to better understand and measure Pupil –Teachers attitudes and Psychological Readiness regarding the use of mobile learning in Teaching-Learning process due to the increasing global demands towards the integration of mobile technology in teaching-learning process. This paper reports on the results of a study of two hundred students of G.G.S.I.P. University about their attitude and psychological readiness regarding the use of mobile technology in education. An analysis of the quantitative study findings is presented focusing on the ramification for mobile-technology (m-learning) practices in university learning and teaching environments. Results of this study clearly indicate that offering mobile learning could be our method for improving retention of pupil-teachers by enhancing their teaching/learning. The biggest advantage of this technology is that it can be used anywhere, anytime and adopt their mobile learning systems with the aim of improving communication and enriching students' learning experiences. Mobile learning is becoming a part of our daily life. Adaptive mobile learning helps learners to study learning materials anytime anywhere using mobile devices. Therefore, it is the time to build guidelines for designing and implementing highly efficient usable contents and courses from mobile devices also. The widespread use of mobile technologies has led to an increasing interest in mobile learning. In the mobile environment, teachers and learners must move away from knowledge production and into a knowledge navigation paradigm in which teachers become more like tutors who help learners to select and manipulate pre-existing information. This moves education towards a truly learner centered model in which the learner defines how to proceed, based on individual needs, and that learning is highly tuned to the situation in which it takes place. Mobile learning is not intended to replace the classroom learning, just like the relationship between e-Learning and classroom instruction. In fact, mobile learning offers another way to deliver content and to embed learning into daily life. The main aim of this research study is to better understand and measure Pupil-teachers attitudes and Psychological Readiness regarding the use of mobile learning in Teaching-Learning process.

Keywords: M-learning, Psychological readiness, mobile technology, mobile learning.

Introduction

Recent development in interactive multimedia technologies which promise to facilitate "individualized" and "collaborative" learning, are blurring the distinctions between distance and traditional education. These technologies also have the capability of creating new environment for learning such as "virtual communities". Students in traditional settings are being given entire courses on CD-rum multimedia disks through which they progress at their own pace, interacting with the instructor and other students on electronic mail or face to face according to their needs (Technology Based Learning, 1994). Through international collaboration, students around the world participate in cooperative learning activities sharing information using computer networks (Riel, 1993). In such cases, global classrooms may have participants from various countries interacting with each other at a distance. As mobile devices are becoming ubiquitous, there is an increasing interest in the educational applications of mobile technologies, a research area referred to as mobile learning. Mobile learning refers to the use of mobile or wireless devices for the purpose of learning while on the move (Park, 2011). In general, mobile learning has often been viewed as learning mediated through mobile devices (Brown, 2005; Peters, 2007). Typical examples of mobile devices include smart phones, tablets, notebooks, laptops, and personal media players. Mobile devices enable learning to take place at any time, in any location, and at a learner's pace. Klopfer and Squire (2008) describe five properties of mobile handheld devices that produce unique educational affordances: **portability, social interactivity, context sensitivity, connectivity, and individuality.** Furthermore, it has been widely recognized that context is the most distinctive feature in mobile learning (Specht, 2009; Wang, 2004, Yau et al., 2010). Context-aware mobile learning applications leverage the context information of the learner to provide personalized and motivating learning experiences. Several researchers have proposed theoretical work around mobile learning and proposed models on how to leverage emerging mobile technologies in teaching and learning (Koole, 2009; Park, 2011; Sharples et al., 2007; Uden, 2007).

Technology in Education

The emergence of evolving technologies leaves a significant impact on educational development. Many researchers reported their studies on the integration of technology in the process of teaching and learning as efforts to amplify students' performance, teaching effectiveness, as well as teachers' productivity (Wang et al., 2008; Jamil and Shah, 2011). In fact, Malik and Shabbir (2008) and Saba (2009) also emphasized on the effective usage of technology to produce new opportunities for self-directed learning as one of efforts to increase students'

achievement. The use of technology, namely ICT is viewed as a potentially powerful enabling tool, specifically for educational change and reform (Tinio, 2003). Plomp et.al (1996) identify three objectives of using ICT in education which includes the use of ICT as object of study, the use of ICT as aspect of a discipline or profession, and the use of ICT as medium for teaching and learning. In an earlier study by Sheingold and Hadley (1990), it was also agreed that integrating technology is more than just helping people to use computers, but it is also for helping teachers to utilize it for learning. In fact, technology should make teaching and learning process easier and get along with it. Thus, technology integration in classrooms takes more than just having the facilities installed in schools; much consideration is needed to find the right way of how it can be utilized for education.

Technology Acceptance in Education

Achieving a significant usage of computer technology in the field of education can be influenced by many factors. According to Ertmer (1999), teachers would not automatically integrate technology into teaching and learning even if barriers such as access, time, and technical support were removed. Bingimlas (2009) identified several major barriers to successful ICT integration in teaching and learning environment, which include lack of confidence, lack of competence, and lack of access to resources. From the review of literatures by Mumtaz (2000), it was reported that the three interlocking factors that affect take-up of ICT are institution, resources and teacher. Overall, the literatures suggest that, teachers and institutions uptake on the technology in education plays an important role before the technology can successfully be embedded in the education system. Teachers' technology acceptance is one of the issues being addressed by several scholars. Teo(2011) defined technology acceptance as a user's willingness to employ technology for the tasks it is designed to support. Thus, some of issues that relate to technology acceptance might be teachers' acceptance in terms of their awareness and motivation towards the use of technology in teaching and learning process. Teachers' awareness on pedagogical usage of technology plays important roles in determining whether they will use it in classrooms or not. In a research by Ngozi et al. (2010), it was reported that, even though the teachers could identify the specific technological tools which are useful for education, they however were not aware of in what way the tools can be used. Level of motivation among teachers was also seen to be related to a successful implementation of technology .Studies that examined attitudes and achievement associated with mobile learning in a variety of contexts were selected for this review. In Malaysia, a study conducted by Jacob and Isaac (2008) carried out a study on the perception towards mobile learning revealed the mobile device usage among university students as a means to make the subject interesting and an effective learning supplement. Zoraini Wati Abas et al. (2009) concluded that through the formative evaluation of the Open University Malaysia (OUM) mobile learning www.ccsenet.org/ass Asian Social Science Vol. 8, No. 12; 2012 278 initiative, the use of SMSs was generally accepted by its students. It is also reported that mobile learning has great potential to be integrated in the existing blend of pedagogies at OUM. Mobile learning definitely contributes to the flexibility of learning in open and distance learning institutions. Norazah Nordin et al. (2010:1) reported that 120 post-graduate students at Universiti Kebangsaan Malaysia, who participated in a survey, agreed that "mobile phones had successfully enhanced the teaching and learning process. The findings also revealed that mobile-learning activities are effective ways to motivate students and to foster interaction."

Justification of the problem:

Over the past decade there has been an increasing global demand towards the integration of mobile technologies for teaching and learning. There has emerged a need or a survey instrument that can form a solid foundation for objective judgement of learner perspectives as they begin using mobile applications for learning. The justification of the study lies in the contribution to society for its welfare because national unity is the basic need of India. It is time to lively approval of educational development in India. When many changes are being witnessed in organization, curricula and teaching techniques, it is important to seek systematic and up to date information on the significance. Through this study the investigator wants to know about the attitude and psychological readiness among the future teachers for improving the education system in India.

Statement of the Problem:

"A study of attitude and psychological readiness of students regarding the use of mobile technology in teaching-learning process."

Objectivies:-

1 To study the attitude of students regarding the use of mobile technology in teaching-learning process.
2 To study the psychological readiness of students regarding the use of mobile technology in teaching-learning process.
3 To compare the attitude of students regarding the use of mobile technology in teaching learning process.
4 To compare the Psychological readiness of students regarding the use of mobile technology in teaching-learning process.

Hypothesis:-

H1: There is no significant difference between the attitudes of male and female students regarding the use of mobile technology in teaching-learning process.

H2: There is no significant difference between the psychological readiness of male and female students regarding the use of mobile technology in teaching-learning process.

METHODOLOGY

In order to study, the student's attitude and psychological readiness regarding the use of mobile technology in teaching-learning process a five point Linkert Scale with **strongly agree; agree; undecided; disagree; and strongly disagree,** was used from main items.

Data Collecting Tool :-

Data of this study will be collected by using a quantitative questionnaire. All scales and items used in the tool will be

developed by the researcher after the review of related literature. The face and content validity of the questionnaire will be evaluated by the experts in faculty and related field.

The questionnaire consists of three sections:

i) **Part A:** The Demographic section (age, gender, maritial status, ethnicity, academic qualification level).

ii) **Part B :** Consists of 7 questions which will be used to evaluate the attitude of pupil-teachers regarding the use of mobile technology in teaching-learning process

iii) Part C: Consists of 21 questions to study the psychological readiness of pupil-teachers regarding the use of mobile technology in teaching-learning process.

Type of sampling:

The random sample of 200 students from educational institutes affiliated to G.G.S.I.P. University in Delhi will be used to collect the data for the study. The respondents were choosen because of their knowledge about educational technologies. The participants were deemed to be well familier with at least basic technological tools in their teaching –learning process.

Delimitation of the study:-

- This study is limited to the Delhi city only.
- This study will only analyze the attitude, and psychological readiness of pupil-teachers regarding the use of mobile technology in teaching learning process.
- This study is limited to the education field only.

Data Analysis:

All data will be ported in Microsoft Excel for statistical analysis. **The data was analyzed in terms of percentage and mean scores.** For comparing the mobile learning attitude and psychological readiness levels of pupil-teachers difference according to their gender the **t-test** will be used.

The first two objectives namely the pupil-teachers attitudes and psychological readiness regarding the use of mobile technology in teaching –learning process were measured by using 7 and 21 closed questions. Table (1) and Table (2) shows the percentage of descriptive statistics for the use of mobile learning. Responses to the each of the indicators on attitude and psychological readiness regarding the mobile learning were measured on a Likert Scale of 1 to 5 ranging from strongly disagree to strongly agree.

Table (3) shows the comparison of significant difference between the attitude of male and female pupil teachers regarding the use of mobile technology in teaching learning process.

Table (4) shows the comparison of significant difference between the psychological readiness of male and female pupil teachers regarding the use of mobile technology in teaching learning process.

Table 1: Descriptive statistics for the attitude of Pupil-Teachers regarding the use of Mobile-Technology in teaching –learning process.

S.NO	Questionnarie Indicator	SD	%	D	%	UD	%	A	%	SA	%	Total
1	The rapid development of Mobile Learning devices and tools (Apps) has empowered informal learning.	0	0%	16	8%	0	0%	118	59%	66	33%	200
2	Mobile Apps could be integrated seamlessly to support informal learning.	0	0%	12	6%	26	13%	120	60%	42	21%	200
3	Mobile Apps could bring enormous opportunities into universities to further empower informal learning	4	0%	18	9%	18	9%	114	57%	50	25%	200
4	Student acceptance of Mobile Learning in higher education would be high.	4	2%	10	5%	24	12%	102	51%	60	30%	200
5	Recent developments in Mobile Learning are leading to the exploration of new methods/models at universities	0	0%	6	3%	26	13%	98	49%	70	35%	200
6	Theoretical models and methods can assist in informing the design for mobile learning Apps	0	0%	18	9%	28	14%	88	44%	66	33%	200
7	The integration of mobile applications, mobile social networking platforms and other mobile technologies has become pervasive in teaching and learning.	0	0%	8	4%	22	11%	98	49%	72	36%	200

Table 1

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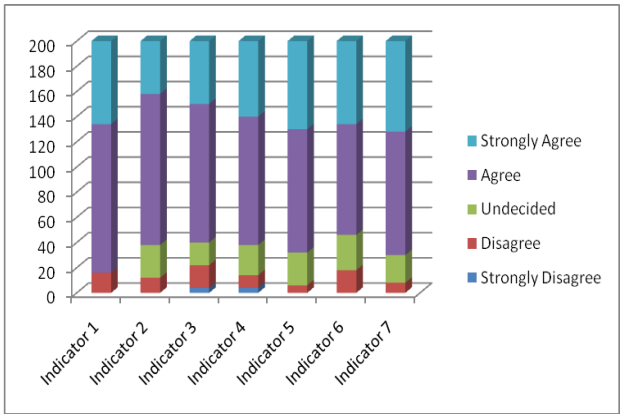

Chart 1

This data in Table (1) and Chart (1) indicates that some how, mobile technologies are more flexible and effective method of learning and enable students greater freedom of learning at any place , any time. Response to the question on knowledge about the mobile learning show that 60% respondents are agreed with the question that Mobile Apps could be integrated seamlessly to support informal learning and improved the informal learning. There are 49% respondents are agreed with the questions that the integration of mobile applications, mobile social networking platforms and other mobile technologies has become pervasive in teaching and learning.

Table 2:

Descriptive statistics for the Psychological Readiness of Pupil-Teachers regarding the use of Mobile-Technology in teaching –learning process.

S.No.	Statement	SD	%	D	%	UD	%	A	%	SA	%	Total
1	I know what mobile learning is all about.	0	0%	14	7%	12	6%	104	52%	70	35%	200
2	I want to know more about mobile learning.	4	2%	4	2%	10	5%	94	47%	88	44%	200
3	I prefer conventional learning than mobile learning.	14	7%	52	26%	78	39%	28	14%	28	14%	200
4	I think mobile learning is good for working adults who are pursuing their higher education.	8	4%	32	16%	12	6%	82	41%	66	33%	200
5	I don't mind paying extra money for mobile learning.	10	5%	42	21%	38	19%	76	38%	34	17%	200
6	Mobile learning will make my life difficult.	16	8%	18	9%	12	6%	92	46%	62	31%	200
7	I would like to integrate mobile learning in my class room teaching in addition to face-to-face meetings in the class.	16	8%	26	13%	20	10%	92	46%	46	23%	200
8	I am afraid I will spend more money on my handphone bill because of mobile learning.	18	9%	56	28%	32	16%	64	32%	30	15%	200
9	I will be ready for mobile learning after 2 years.	30	15%	64	32%	34	17%	46	23%	26	13%	200
10	I don't know how to use 3G facility in my handphone.	56	28%	70	35%	16	8%	58	29%	0	0%	200
11	I would like to integrate mobile learning in my class room teaching-learning process besides online forum.	0	0%	20	10%	46	23%	92	46%	42	21%	200
12	Mobile learning is an alternative to web based learning.	8	4%	20	10%	18	9%	108	54%	46	23%	200
13	I need to learn how to use my handphone for mobile learning.	20	10%	44	22%	14	7%	88	44%	34	17%	200
14	I am looking forward to engage in mobile learning.	8	4%	16	8%	32	16%	106	53%	38	19	200
15	I will upgrade my handphone if mobile learning is going to be implemented in my course.	6	3%	6	3%	18	9%	100	50%	70	35%	200
16	Mobile learning is an alternative to conventional learning.	6	3%	22	11%	52	26%	86	43%	34	17%	200
17	Mobile phone helps to assist teaching in school.	8	4%	40	20%	30	15%	80	40%	42	21%	200
18	The use of mobile phone for teaching and learning is encouraging. Mobile phone helps to interaction easy	6	3%	10	5%	12	6%	114	57%	58	29%	200
19	M-learning will help to learn ubiquitously.	4	2%	12	6%	56	28%	96	48%	32	16%	200
20	I will use SMS to communicate with my students.	4	2%	24	12%	22	11%	78	39%	72	36%	200
21	Believe the benefits of m-learning to future generation.	0	0%	0	0%	12	6%	72	36%	##	58%	200

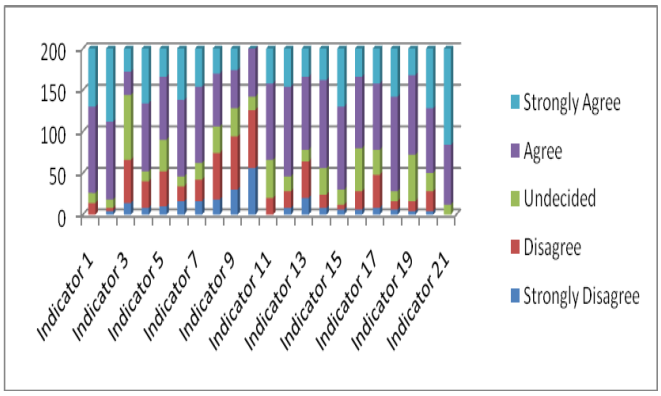

Chart 2

This data in Table (2) and Chart (2) indicates that somehow, mobile technologies are more flexible and effective method of learning and enable students' greater freedom of learning at any place, any time. Response to the question on knowledge about the mobile learning shows that 52 % respondents are agreed with the question that they know about the mobile learning. There are 46% respondents are agreed with the questions that they would like to integrate mobile learning in my class room teaching in addition to face-to-face meetings in the class.

Table 3:

Descriptive statistics to study the significant difference between the attitudes of male and female pupil-teachers regarding the use of mobile-Technology in teaching – learning process.

Attitude regarding use of mobile learning	N	Mean	S.D	SEd	C.R	Level of Significance
Male	100	28.01	3.1	0.37	0.4	Not Significant
Female	100	28.14	2.1			

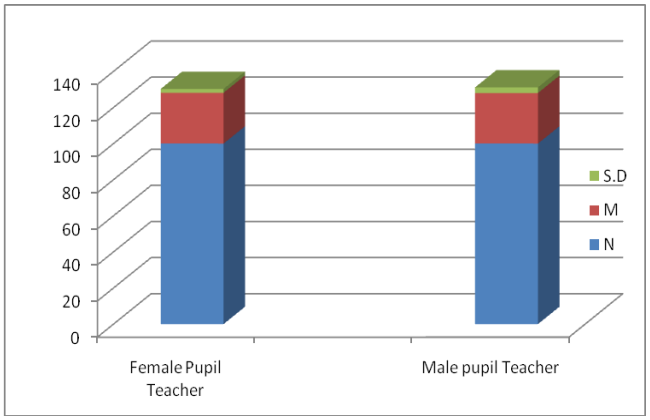

Chart 3

The calculated value 0.35 in table (3) is less than the table value 1.98 so the null hypothesis is accepted and we can say that there is no significant difference between the mean scores of male and female pupil teacher's attitude regarding the use of mobile technology in teaching-learning process.

Conclusion:

It is determined that the attitude and psychological readiness of pupil –teachers regarding the use of mobile technology in teaching -learning process were measured and response scores about each of indicator in the part B and C of questionnaire was observed. The score for each of the indicators greater than 3 shows the relative importance and the scores below the 2 indicate relative unimportance; a score of 2 to 3 shows that it is neither important nor unimportant. Table 1 and 2 provides an overview of the relative importance of these indicators . this data indicates that some how , mobile technologies are more flexible and enable students greater freedom of learning any place, any time.

The descriptive analysis to find the significant difference between the attitude and psychological readiness of male and female pupil-teachers regarding the use of mobile technology in teaching –learning process in Table 3 and 4 shows no significant difference after comparison which indicates that both male and female pupil-teachers shows positive attitude and psychological readiness regarding mobile technology .

At last we can conclude that mobile technologies such as mobile phones can be used to enrich student's learning environment by providing timely information and can also provide good support to micro-learning, a new and effective way of learning and teaching.

References:

Asian Social Science; Vol. 8, No. 12; 2012 ISSN 1911-2017 E-ISSN 1911-2025 Published by Canadian Center of Science and Education.

British Journal of Social Sciences,
URL: http://www.bjss.baar.org.ukcurrentissue.html, Vol. 1, No. 2, pp 101-116, **November 2012.**

Mahamad, S., Ibrahim, M.N., & Taib, S.M. (2010).M-learning: A new paradigm of learning mathematics in Malaysia. *International Journal of Computer Science & Information Technology*, *2*(4), 76-86.

Rashid, A. M., & Gloeckner, G. N. (2008). Information and learning technology (ILT) among career and technical teachers in Malaysia. *Electronic Journal on Information System in Developing Countries*, *33*(4), 1-20. Retrieved, August 13, 2012 from http://www.ejisdc.org

Ritchie, D. and Rodriquez, S. (1996). School administrators and educational technologies: Narrowing the divide. *Journal of Information Technology for Teacher Education*, *5*(1/2), 107-114.

Ramajanaki Doraiswamy Iyer (2013). Servant Leadership: The Leadership Style for Teachers", International Journal of Computational Engineering and Management IJCEM, Vol. 16, issue 02, March 2013, pp. 39-42.