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A Review of Related Literature on Mobile Learning

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ABSTRACT

As we know that present era is the age of science and technology. Those countries are developed that are engrossing science and technology in all its educational institutions. We cannot deny that science and technology are the core need of today's world. We all are very much aware and conscious about science and technology. Majority of students are inclined to embrace technology as their educational means that's why we see the rapid expansion of technology in the field of education. Just few years back, e- learning played a pivotal role and still it is, but at present the concept of mobile learning is dominating. A literature review is an evaluative report of studies found in the literature related to Researchers selected area. It should give a theoretical basis for the research and helps the researcher to determine the nature of your own research.

Keywords:- Mobile, Mobile Learning, E- learning.

I. INTRODUCTION

"Technology can become the "wings" that will allow the educational world to fly farther and faster than ever before—if we will allow it."

India is the largest democratic country in the world. According to the 2011 census report, the population of India crosses 1.25 billion. But the literacy rate is under 80%. Various types of religion, community, caste, sub-caste are living here. But still India not becomes a developed country rather it is developing country. As we know that present era is the age of science and technology. Those countries are developed that are engrossing science and technology in all its educational institutions. We cannot deny that science and technology are the core need of today's world and we all are very aware and conscious about the same but unfortunately in India there are some problems to utilize it, it may be because of some economical, political and social hindrances.

In modern era, the age of technology, e-learning and m-learning play a vital role. In some western countries various researches are being conducted on this topic. They are very well-known that upcoming generation can learn through m-learning very easily. Now-a-days, using of mobile phones especially smart phones is increasing rapidly. So researchers are facing the haunting question-**"can we use mobile devices as a means of learning?"** The salient features of mobile learning that attract the researchers' are- because it is more convenient to the learners, inexpensive, easily portable for its being small size, and containing latest functions etc. We can carry it everywhere any time, and at any place we can learn from it. Every type of data can send and receive from it very easily.

As a developing country in India, we need to educate the next generation of scientists, inventors, engineers, and entrepreneurs with the help of mobile learning. Educating a workforce, that is effective in a global context and adaptive as new jobs and roles evolve, will help to support our economic growth. Mobile learning makes it possible to extend education beyond the physical confinements in the classroom and beyond the fixed time periods of the school day. It allows students to access content from home, communicate with teachers, and work with other people online. The value of mobile devices is that they allow students to connect, communicate, collaborate and create using rich digital resources.

Kukulska-Hulme & Traxler [1] Mobile learning, sometimes called M-learning, is learning accomplished with the use of small, portable computing devices. There is some debate on the inclusion of tablet and laptop computers. Often, wireless two-way internet connection is assumed as an integral component. Mobile learning refers to the use of mobile or wireless devices for the purpose of learning while on the move. Typical examples of the devices used for mobile learning include cell phones, Smartphone, palmtops, and handheld computers; tablet PCs, laptops, and personal media players can also fall within this scope. M-learning or 'mobile learning' is any sort of learning that takes advantages of learning opportunities offered by mobile technologies. According to Quinn (2000) [2] "Mobile learning is learning through mobile computational devices". Shepherd [3] M- learning is not just electronic, it's mobile. Ally (2009) The process of using a mobile device to access and study learning materials and to communicate with fellow students, instructors or institution [4].

II. OBJECTIVE OF THE STUDY

1. To present a brief account of some related research works of mobile learning.

III. DESIGN OF THE STUDY

This study is a review study. The literature was reviewed to find articles that are related to the mobile learning. 26 articles were found related to the mobile learning. The time period of these articles ranged from 2007 to 2017. The findings of this study are built based on the findings of other researchers.

IV. CONCEPT OF REVIEW OF RELATED LITERATURE

A literature review is an evaluative report of studies found in the literature related to Researchers selected area. The review should describe, summarize, evaluate and clarify this literature. It should give a theoretical basis for the research and help Researcher determine the nature of your own research. Select a limited number of works that are central to your area rather than trying to collect a large number of works that are not as closely connected to Researchers topic area.
Different educationists have given various important definitions about review related literature, these are as follows:

- According to **John W Best and James Kahn** (2006) "A summary of the writings of recognized authorities and of previous research provides evidence that the researcher is familiar with what is already known and what is still unknown and untested."[5]

The review related literature is done into three phases, these areas-

    A. **Researches on Mobile Learning done in India.**
    B. **Researches on Mobile learning done in Abroad**.

A. *Researches on Mobile learning done in India:*

Banerjee, J. & Bose, I. (2011) [6] have conducted a study entitled as "Higher Education Through Mobile Learning: An Analysis Of Students From Kolkata"

Objectives of the study:

1. To find the people respondents who are interested in M-learning mode of management education.
2. To find the reasons for preference of mobile based education compared to traditional method.

Findings of the study:

1. It is found that 80% of the respondents are aware of the M-learning platform.
2. Findings revealed that 78% of the respondents are willing to opt for M-learning courses.
3. It is also found that 56% of the respondents are willing to take management courses on M-learning mode , if offered.
4. Findings revealed that awareness level regarding the M-learning is quite high.
5. Finding indicates that number of people willing to take courses through M-learning mode is quite high.
6. There is the tendency of high deviation regarding choice of course through M-learning.

7. It is also found that Mean of preference of management course if offered through M-learning is above average.

Fouzdar, K. & Behera, K.S (2017) [7] have conducted a study entitled as "Attitude of Post Graduate Students towards Mobile Learning".

Objectives of the study:

1. To ascertain the attitude of PG students of Sidho-Kanho-Birsha University in Purulia District of West Bengal, India, towards mobile learning.
2. To compare the attitude of PG male and female students of Sidho- Kanho-Birsha University in Purulia District towards mobile learning.
3. To compare the attitude of PG rural and urban students in Purulia District of West Bengal towards mobile learning.
4. To compare the attitude of PG General and SC/ST students in Purulia District towards mobile learning.
5. To compare the attitude of PG Arts and Science streams students in Purulia District towards mobile learning.
6. To compare the attitude of PG 2nd and 4th Semester students in Purulia District towards mobile learning.

Findings of the study:

1. It is finding that the attitude of PG students of Sidho-Kanho-Birsha University in Purulia District of West Bengal, India is neither more favourable nor unfavourable towards mobile earning, i.e. satisfactory or average in attitude towards mobile learning.
2. It is found that there is no significant difference between the attitude of PG male and female students of Sidho-Kanho-Birsha University in Purulia District towards mobile learning.
3. It is finding that there is no significant difference between the attitude of PG rural and urban students of Sidho-Kanho-Birsha University in Purulia District towards mobile learning.
4. The findings of this study revealed that there is no significant difference between the attitude of PG General Students and PG SC/ST (Scheduled Castes/Scheduled Tribes) students.

5. The study indicates that there is significant difference between the attitude of PG Arts students and Science students of Sidho-Kanho-Birsha University in Purulia District towards mobile learning.
6. It is also found that there is no significant difference between the attitude of PG 2nd and P.G. 4th Semester students of SKB University in Purulia District towards mobile learning.

Paliwal, S. & K.K. Sharma (2009) [8] have conducted a study entitled as "Future Trend of Education – Mobile Learning Problems and Prospects."

Objectives of the study:

1. To find out the problem of the incorporation of mobile learning into mainstream education and training.
2. Find out the answer that how we can implement M-learning in mainstream education.
3. To create flexible teaching solutions which will enable access to information using different devices, and support learning in a variety of situations?

Findings of the study:

1. It finding that mobile learning is not seen as a satisfactory revenue stream by the telecommunications operators.
2. The problem of the incorporation of mobile learning into mainstream education and training has been addressed in this presentation.

Shanmugapriya, M. & Tamilarasi, A. (2013) [9] have conducted a study entitled *as* "Developing a Mobile Courseware for ICT Students using Problem Based Learning Approach".

Objective of the study:

1. To evaluate the feasibility of adopting the problem-based learning pedagogies in a mobile Learning environment for ICT students.

Findings of the study:

1. The mobile courseware designed for ICT students by using problem-based learning approach in the mobile learning environment enhances the overall learning experience through mobile devices.
2. The problem-based learning approach adopted in mobile learning environment helps in achieving integrated approach while designing the course, enhances the problem-solving skills, enhances the object oriented programming principles while writing programs to create objects and functions during coding, it gives unique approach for solving the same program differently by individuals, enhances the communication, group discussion and collaborative learning skills.
3. The objectives for attaining effective learning can be realized only when the learner does the active role which has been envisaged and opined by the constructivist theory.
4. This approach enables the instructor to create an interactive teaching experience for the motivated students and to build peer-to-peer learning models.

Behera, S. K. (2013) [10] has conducted a study entitled as "E- and M-Learning: A Comparative Study."
The Researcher highlights in this area, which are as follows:

1. To shed light on the concept of E-learning and Mobile learning.
2. To focus on the characteristics of E-learning and Mobile learning.
3. To compare the advantages of E-learning and Mobile learning.
4. To compare the disadvantages of E-learning and M-learning.
5. To judge the similarities and differences between E-learning and Mobile learning.

Behera, S. K. (2013) [11] has conducted a Study entitled as "M-Learning: A New Learning Paradigm."
The Researcher highlights in this area, which are as follows:
The concept of M-learning, Characteristics, Types, Significance, M-Learning System, Categories of Mobile learning and their Technologies, Advantages and Disadvantages of M-learning.

Hemabala, J. & Suresh, E.S.M. (2013) [12] have conducted a Study entitled as "Mobile Learning for Undergraduate Engineering Students",
Objectives of the Study:

1. To find out the acceptance level of the learners and teachers on the mobile learning environment.
2. To find out the Understanding level of the students.
3. To find out the Usage of video lesson in learning system

Findings of the Study:

1. The figure 2 shows the 92% of students own a wireless handheld devices and mobile phones and 8% of students don't have the device but no one has not given any comments.
2. The second attribute indicates that the 80% of students have video facility wireless handheld devices.
3. Third attribute indicates that 60% of students may access the internet on their devices and 40% of students may not access the internet for the reason is 'costly' and 'not accessible'.
4. Fourth attribute indicates that the new learning methodology can be appreciated in the next generation of learning because 80% of the students were willing to use their wireless handheld devices for learning.
5. And the last attribute indicates that 84% of students have positive impact on the wireless handheld devices and 16% has not given any comments, but no one has given the negative impact on the system.
6. The survey result shows that the video lesson is more effective in the field of learning using mobile learning.

Bansal, T. & Joshi, D. (2014) [13] have conducted "A Study of Students' Experiences of Mobile Learning",
Objectives of the Study:

1. To study the student's Perception on ubiquitous aspect of WhatsApp m learning.
2. To study Educational benefits of WhatsApp m learning.
3. To explore Collaborative learning in WhatsApp mobile learning atmosphere.

4. To study the Social interactivity in WhatsApp mobile learning atmosphere.
5. To study the Attitude of students' towards WhatsApp mobile learning.

Findings of the Study:

1. Researches show that many educational stakeholders have positive attitude towards the adoption of M-Learning in educational situations.
2. A small number of married students find learning everywhere and anytime disruptive to their family life.
3. When educational benefits were concerned, students' found it beneficial as it provides immediate feedback to the problem; opportunity to learn on move; provide deeper clarity on issues through discussions; revision of previously learned topics; learning from others problems; and availability of learning material all the time.
4. Most of the students agreed that learning through WhatsApp m learning is a collaborative learning experience and it has increased their social interactivity with their peers and teacher.
5. Overall students' shows a favourable attitude towards WhatsApp m learning.
6. They found WhatsApp m learning a valuable teaching method; a valuable learning aid and highly personalized instructional medium.
7. Students' gave preference to WhatsApp m learning over traditional classroom and are willing to continue using WhatsApp in future for teaching learning.
8. This study also support this as students' finds that learning through WhatsApp m learning is making their lives easier since they can learn anytime and anywhere hence contributing to the overall success of teaching and learning.

Saxena, A. & saxena, A. (2015) [14] have conducted a study entitled as "A Viewpoint and Attitudes of Students' towards Future of Mobile Learning in Education Industry of India".

Objectives of the study:

1. To compare the viewpoint of student's towards future of mobile learning in education industry of India with respect to gender.

2. To draw the general attitude of student's towards future of mobile learning in education industry of India.

Findings of the study:

1. Result indicates that there are no significant difference was found as far as the students' viewpoint towards future of mobile learning in education industry of India with respect to gender.
2. It is found that majority of students show a high number of positive attitudes towards M-leaning.
3. Result reveals that there is a general agreement among the students who see the bright side of M-learning and see its positive consideration as a good vehicle for learning.

B. Researches on Mobile Learning done in Abroad.

Mcconatha, D. & Praul, M. (2008) [15] have conducted a study entitled as "Mobile Learning in Higher Education: An Empirical Assessment of a New Educational Tool."

Objective of the Study:

1. To assess some of the possible methods, challenges and future potential of using this approach in a college classroom and describes an empirical evaluation of the effectiveness of M-learning in a college classroom.

Findings of the study:

1. Table 2 outlines the findings from the analysis, a statistically significant difference was found between the control and the experiment groups.
2. The standard deviation for the control group was almost twice as high (11.7 compared to 6.1) as the experimental group.
3. Those students who used the MLA/WAP web-enabled cells phones to retrieve and review the practice material provided for the two mid semester tests in the course had an average for the two tests of 89% and those who used only the printed or discussion sources had an overall average of 84% (t=-2.50, p < .01).
4. Above finding indicate that students in this class using web-enabled cell phones to assist in their review of test materials outscored the students who used more

traditional means (handouts and review lectures) to practice and review materials.

Al-Fahad, N. F. (2009) [16] has conducted a study entitled as "Students' Attitudes and Perceptions towards the Effectiveness of Mobile Learning in King Saud University, Saudi Arabia."

Objectives of the study:
1. To explore the student attitudes and the perceptions on the effectiveness of mobile learning.
2. To draw the student's preferences for mobile learning in distance education.
3. To examine the extent of use mobile learning by distance learners.

Findings of the study:
1. It is found that mobile learning is widely embraced by the student community.
2. It is finding that majority of student supported the notion that the wireless networks increase the flexibility of access to resources in learning and that they could work independently of variable resources like lab or library PCs.

Result of this survey clearly indicate that offering mobile learning could be our method for improving retention of B.A ,and M.D. students, by enhancing their teaching/learning.

Osman, M. El-Hussein, M. & Cronje, C.J. (2010) [17] have conducted a study entitled as "Defining Mobile Learning in the Higher Education Landscape."

Objectives of the study:
1. To clarify the meaning of mobile learning by applying its key concepts to learning experiences in post-school education.
2. To disassemble the basic components and provide an interpretation of the model in the context of higher education.

Findings of the study:
1. It is finding that the authors define mobile learning as "any type of learning that takes place in learning environments and spaces that take account of the mobility of technology, mobility of learners and mobility of learning".
2. The uses and applications of mobile learning have multiplied in different contexts even though the eventual consequences of the proliferation of this medium are not yet entirely clear,

either to designers and practitioners themselves or to researchers.
3. The proper design of the technologies leads to greater effectiveness of mobile learning.
4. It is also necessary to describe in detail the various advantages and disadvantages of mobile instructional devices as tools for the delivery of higher education.

Keskin, O.N. & Metcalf, D. (2011) [18] have conducted a Study Entitled as "The Current Perspectives, Theories and Practices of Mobile Learning."

Objective of the Study:
1. To understanding and discussion of current perspectives and theories in mobile learning.

Findings of the Study:
1. Researchers find that Mobile learning has a promising future as a field of study.
2. Researchers also find that Mobile learning has many different approaches, theories and practices.

Makoe, M. (2012) [19] has conducted a study entitled as "The Pedagogy of Mobile Learning in Supporting Distance Learners."

Objective of the study:
1. To investigate the pedagogic approach that best support effective use of cell phones in the distance education context.

Findings of the study:
1. Cell phones can be used as a tool to facilitate interaction through synchronous and asynchronous learning.
2. It is suggested that different cell phones applications are harnessed for teaching and learning.
3. It is find that students can also be encouraged to use cell phone social networks such as MXit, WhatsUp, BBM to form study groups and work collaboratively on projects.
4. Communities develop their practice through problem solving, requests for information, coordination and discussing developments, mapping knowledge and identifying gaps.
5. It is finding that cell phones can also be used to enhance this interaction through weekly self-assessment quizzes where

students can test themselves on basic factual information.

6. This will also encourage students to pace themselves as they go through their study material.

7. It is finding that cell phone based self-assessment quizzes and audio can guide a student through the maze of learning material while assisting them to pace themselves.

Sarrab, M. Elgamel, L. & Aldabbas, H. (2012) [20] have conducted a study entitled as "Mobile Learning (M-Learning) and Educational Environments."

Objectives of the study:

1. To discusses the background of mobile learning and how it can be used to enhance the whole E- Learning system.

1. To highlights the benefits and future challenges of mobile learning in our educational environments.

Findings of the study:

1. M-Learning makes the merge and connection between technology and education possible

2. The development of a mobile infrastructure for the provision of nomadic learning will meet this need and opening new scenarios for both the developing e-learning and the telecommunication industry.

3. M-learning can be used to solve the traditional learning system problems.

4. It is finding that both teachers and students need a proper and handy system to interact with each other and facilitate the teaching system.

5. It is finding that M-Learning can be used to complement the learning process in our schools and universities.

Wishart, J. & Green, D. (2012) [21] have conducted a study entitled as "Identifying Emerging Issues in Mobile Learning in Higher and Further Education: A report to JISC."

Objective of the study:

1. To identifying emerging issues for the sector arising from the increasingly likely large scale use of Smartphone's, PDAs and camera phones by learners in HE and FE, both on campus and in the workplace.

Findings of the study:

1. It is clear from the trials that different people take to mobile technologies in different ways and with the lack of a mobile tool specifically designed for education the volatility of designs on the market aimed at use for business or entertainment means we have yet to attain a stable platform on which to research this.

2. Other issues that arise from reviewing the scenarios envisaged by the three workshops for this project relate more to learning opportunities.

3. In FE4: Problem Based Learning in Building and WBL1: Projecting Handheld Device the workshop participants also draw attention to the opportunities for communication in different modes between tutor and student.

4. They view the tutor as taking a more collaborative role than is seen currently in most HE and FE institutions and using the mobile device to support a teaching approach that facilitates context specific learning opportunities.

5. Several scenarios pointed to security issues within the online repository described above. In WBL 3: My Life Space this was linked to the combination online of records of informal and formal learning to provide a more "rounded" assessment of an individual's learning progress leading to a loss of privacy.

6. Members of the network pointed out that public confidence in the security of large ICT systems is low.

7. The way social networking sites such as Facebook and Flickr continue to flourish and the variety of information uploaded suggest that such concerns are not held by everyone.

8. It is interesting to note that, in the workshop focusing on developing scenarios for work based learning, though the participating group was multi-disciplinary, use of mobile devices within science, particularly bioscience and medical sciences, underpinned three of the four scenarios envisioned.

9. Another emerging issue noted by the network in a previous workshop6 is that assessment of process rather than product

is a feature of using mobile devices to record learning.

10. Finally it is interesting to note how the different futures prediction tools used were related to the scenarios that were generated.

Taleba, Z. & Sohrabi, A. (2012) [22] have conducted a study entitled as "Learning on the move: the use of mobile technology to support learning for university students".

Objectives of the study:

1. To evaluate the impact of gender and educational course on the rate of the educational use of mobile.
2. To assess the impact of academic major on the rate of educational use of mobile.
3. To assess the effective factors on the rate of the educational use of mobile.

Findings of the study:

1. It is also found that female students, compared with male students, have more educational use of mobile phone.
2. Result reveals that the academic course had no significant impact on the rate educational use of mobile phone among the university students.
3. It is also the academic course has no significant impact on the rate of educational use of mobile phone among the students.
4. The present study indicates that mobile phone usage is common in different academic majors and there is no difference in its application in different academic majors.

Narayanasamy, F.S. & Mohamed, B.K.J. (2013) [23] have conducted a Study entitled as "Adaptation of Mobile Learning in Higher Educational Institutions of Saudi Arabia."

Objectives of the Study:

1. To investigate the students' awareness of m-learning and its aspects.
2. To investigate the adaptation of m-learning in education and the disclosure of m-learning services.

Findings of the Study:

1. The results indicated that students have an adequate knowledge and awareness in m-learning and provided the strong evidence on readiness of students to accept mobile technologies for their learning process.

2. This result also showed an indication of students' expectations towards university services via mobile phones in higher educational institutions.
3. The results indicated that Jazan University had the required infrastructure to utilizing m-learning services.
4. The results showed that the students had ample knowledge and awareness to use such technology in their learning process.
5. The study also found that the most beneficial aspects and advantages of using mobile technologies for learning services were to give students an immediate access to information regardless of place.

Rueckert, D. Kim, J.D. & Seo, D. (2013) [24] have conducted a Study entitled as "Students' Perceptions and Experiences of Mobile Learning."

Objective of the Study:

1. How students perceive the use of mobile devices to create a personalized learning experience outside the classroom.

Findings of the Study:

1. The findings of this study suggest that mobile technologies have the potential to provide new learning experiences.
2. The fact that the students' TACI scores dropped significantly after participating in these activities indicates that the use of mobile technologies in these classes opens up new avenues for interaction and learning.
3. The participants became more willing to adopt new technologies into their own lives, which revolve around teaching English as a profession.
4. The t-test results indicated statistically significant changes in their views towards mobile technology.

Grant, M.M. & Barbour, K.M. (2013) [25] have conducted a Study entitled as "Mobile Teaching and Learning in the Classroom and Online: Case Studies in K-12"

Objectives of the Study:

1. To deploy iPads to classroom teachers.
2. To discuss the growth of K-12 online learning through a mobile learning content management system.

Findings of the Study:

1. It is finding that there is an increase in teacher learning from professional development when teachers take ownership of that professional development.
2. It is finding that there is a higher level of transfer in professional development initiatives when on-going support is provided to the teacher following the initial training.

Liu, Navarrete, M. Maradiegue, C.C. E. & Wivagg, J. (2014) [26] have conducted a Study entitled as "Mobile Learning and English Language Learners: A Case Study of Using iPod Touch as a Teaching and Learning Tool."

Objective of the Study:

1. To examined how ELL teachers and their students at two middle schools used the iPod touch to support their teaching and learning and explored the potential benefits of using such mobile devices as a teaching and learning tool.

Findings of the Study:

1. The findings of this case study suggest that incorporating the iPod touch in ELL instruction provided significant support for improved learning capacity along with distinct challenges.
2. The results indicated that in spite of the challenges teachers faced when integrating the iPod touch in their teaching, the wide-ranging, diverse set of resources and capabilities to support English language education made available by mobile devices such as iPod touch, has led to an overall positive outlook towards the use of mobile devices in a traditional school environment.
3. The convenience, individual guidance, and educational play made available through the device encouraged ELL students and teachers to access information for educational purposes.

Foti, K.M. & Mendez, J. (2014) [27] have conducted a Study entitled as "Mobile Learning: How Students Use Mobile Devices to Support Learning."

Objective of the Study:

1. To begin to investigate whether mobile devices are currently used to enhance or

support learning in a graduate level Occupational Therapy program in order to facilitate student achievement.

Findings of the study:

1. Quantitative results revealed that 45 of the 46 student participants reported using their mobile devices for academic purposes.
2. 91% of students reported feeling very comfortable using mobile devices and 97% reported using mobile devices multiple times a week.
3. The findings of the present study provide valuable information regarding the use of mobile devices by students to support learning outside of the classroom.
4. The findings indicate that students have employed various strategies to ensure their academic success.
5. The findings indicate that students are using their mobile devices to enhance learning outside of the classroom.

Mohamad, I. & AlAmeen, A. (2014) [28] have conducted a study entitled as "Designing an Effective Mobile-learning Model by Integrating Student Culture."

Objective of the study:

1. To design an effective model by integrating culture to maximize the benefits of mobile learning.

Findings of the study:

1. Utilizing mobile technology at learning environment is an important issue because it has an impact on both students and instructors on learning environment, the students' awareness and understanding will increase with utilizing mobile.
2. Integrate mobile with other learning tools, this integration will reduce time, efforts from teacher to achieve learning tasks, and became teaching process enjoyment to teachers and student because mobile will enable collaboration and communication between student and teacher at learning environment.
3. Both the devices and tools of technical subsystem and the employee's skills and attitudes of social subsystem are critical factors of the organization.
4. The design of a mobile learning system needs to consider that all the subsystems are working in harmony.

5. Cultural difference is also an important factor as well as motivation, collaboration, and communication.

Baran, E. (2014) [29] has conducted a study in m-learning entitled as "A Review of Research on Mobile Learning in Teacher Education."

Objective of the study:

1. To address trends and gaps observed in the literature regarding the integration of mobile learning into teacher education.

Findings of the study:

1. There is an increasing trend in integrating mobile learning in teacher education contexts.
2. Theoretical and conceptual perspectives are scarcely reported.
3. Variations exist in perceptions, attitudes and usage patterns.
4. Engagement with mobile learning and devices is primarily reported as being beneficial.
5. Challenges were scarcely reported.

Alawi, A.A.A.G., Shwal, M. & Nasreen, N. (2015), [30] have conducted a study entitled as "Interaction Triangle of Mobile Learning & ELearning and Computer Tools (CUAELML) in the Basic Class: Attitudes & Opinions of Pre-Service Teachers."

Objectives of the study:

1. To analyze the effectiveness of mobile learning (ML) on the computer usage regarding the pre-service teachers' opinions of basic class.

2. To investigate the pre-service teachers' attitude of e-learning (AEL) on computer usage (CU).

3. To study the influences of pre-service teachers' attitude of e-learning (AEL) on mobile learning (ML).

Findings of the Study:

1. As a result, the m-learning with e-learning has a strong positive effect on the learning of basic class according to the opinions of pre-service teachers.
2. Using the Internet connection of many Journals and Magazines encourages teachers of basic class and researchers to interact with m-learning, computer and e-learning.

Boyinbode, O. & Fasunon, D. (2015) [31] have conducted a study entitled "Deploying an Interactive Mobile Learning System in the Classroom."

Objectives of the study:

1. Comparing responses of the students via their devices.
2. Making student informally use their handheld devices for educational purposes.
3. Helping teachers more efficiently manage their classrooms and students' learning.
4. Creating a forum where student can share ideas based on a particular course.
5. Creating an interactive classroom learning environment that should result in better student engagement and academic performance.

Findings of the study:

1. It is finding that an interactive mobile learning system with a web based IMLS that is suitable for use as supplement with FUTA traditional classroom learning system.
2. This analysis showed that students actually approve of M-Learning as a supplement to the classroom learning.
3. It is also finding that if IMLS is implemented, it will make classroom learning more interactive, relief lecturer fatigue, improve student engagement and their literacy skills.

Al-Emran, M. Elsherif, M, H. & Shaalan, K. (2016) [32] have conducted a study entitled as "Investigating attitudes towards the use of mobile learning in higher Education".

Objectives of the study:

1. To exploring students and educators' attitudes towards the use of M-learning in higher educational universities within Oman and UAE.

Finding of the study:

1. It is found that the total average score of the students' attitudes was (3.43) and the score average of their usefulness perception of using mobile devices in their study was (3.27).
2. It is found that a significant difference among the students' attitudes in terms of their Smartphone ownership where the differences were in favour of both devices (Smartphone and tablet), i.e. students "learners" who have both devices and

familiarity with mobile technology were more positive towards the use of such technology in learning than the others.

3. Results indicated a statistical significant difference among the students' attitudes in terms of their country of residence where the differences were in favour of students resident in UAE.

4. Results revealed that there are statistical significant differences among the students' attitudes with regard to their age.

5. Results revealed that 99% of the students have mobile devices (Smartphone/tablets) while only 1% has not.

6. It is findings that 41.5% of the students were using their mobile devices (smartphone or tablet) for browsing the Web and accessing their emails while 16.7% of them were using their mobile devices in their education.

7. The results indicated that both students and educators' genders have positive attitudes towards M-learning.

8. Results revealed that almost all of the educators have positive attitudes with regard to their academic ranks, academic experience and Smartphone ownership towards M-learning.

V. CONCLUDING REMARKS

In this paper, an attempt was made to review the studies conducted in India and Abroad on mobile learning, which included the studies of Investigators. From the above review of literatures we can see that maximum research findings about the mobile learning are positive, they are interested in this new interdisciplinary issues. We can see that in West Bengal very few researches are done on that topic. That is to say that, mobile learning is still in the mother's womb. In Indian context we can see that some research works are conducted. The result of research reveals that students have positive attitude towards mobile learning. We all are very aware and conscious about importance of mobile learning but unfortunately in India there are some problems to utilize it, it may be because of some economical, political and social, family related, personal, communication related hindrances. On the other hand if we have look to abroad context mobile learning taking a good place

on very early time of 21st century. The researchers done on various aspects of mobile learning such as- attitude, impact, present status, role in education sector, interaction, effectiveness, usability, application etc. We can also see that students and teachers all wants to use mobile devices as their educational means. We can understand that importance of mobile learning is meaningful for us. In the age of technology every students wants to learn through any technical device. Mobile learning devices are light full and relatively inexpensive opportunities, as the cost of mobile devices are significantly less than PCs and laptops. It will be a continuous and situated learning support and it will also help to improve levels of literacy, numeracy and participation in education amongst young adults.

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