Vol II Issue IX

ISSN No : 2230-7850

Monthly Multidisciplinary Research Journal

Indian Streams Research Journal

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Welcome to ISRJ

RNI MAHMUL/2011/38595 **ISSN No.2230-7850**

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

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Indian Streams Research Journal
Volume 2, Issue.11,Dec. 2012
ISSN:-2230-7850
Available online at www.isrj.net
ORIGINAL ARTICLE

THE FUTURE OF HIGHER EDUCATION: M-LEARNING

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Abstract:

The evolution of handheld portable devices and wireless technology has resulted in radical changes in the social and economic lifestyles of modern people. Today, many technological devices are produced in portable form and people have become accustomed to them. These devices are reshaping users' daily lives in different ways. But the development of digital technologies has so far been limited to social communication and few people have regarded mobile learning as a core pedagogical activity in higher institutions of learning. Although this model has been used as a minor adjunct to learning activities such as lectures and assignments, it is still not the primary mode of delivery in higher education. Currently, the instructional technology transmitted by means of mobile technology is mainly social and, to a lesser extent, economic.

KEYWORDS:

: Higher Education, EFA, M-Learning, GPS

INTRODUCTION:

Advanced mobile devices such as “smart” cellular telephones are very popular among people primarily because they are wireless and portable. These functionalities enable users to communicate while on the move. The popularity of these devices is therefore a consequent of their ability to function at multiple levels. Moreover, the intense commercial competitiveness in the mobile device industry is forcing manufacturers to be very innovative, constantly striving to introduce new features that can give them a competitive edge.

Against this backdrop, visionary educators, designers and developers should begin to consider the implications of these devices for the modern teaching and learning environment. In such an environment, contents and services can be relayed to a university student by personal wireless mobile devices. This will add another layer to the personal computer-based model of teaching and learning. This also means e-learning will take place in conditions that will be radically different from those educators and learners are familiar with. Providing university students with services, content instruction and information outside the traditional learning space is becoming more acceptable among education providers who predicate their services on the routine use of advanced information and communication technologies.

Mobile learning is part of a new learning landscape created by the availability of technologies supporting flexible, accessible, personalized education. Learners' everyday uses of mobile phones and other devices such as games consoles, which can also be used for learning, are now major drivers for the rapid uptake of mobile learning throughout the world. Crucially, mobile learning can contribute to the

global commitment to provide quality education for children, youth and adults, as expressed in the goals of Education for All (EFA).

MEANING OF MOBILE LEARNING:

The term M-Learning, or "mobile learning", has different meanings for different communities. Although related to e-learning and distance education, it is distinct in its focus on learning across contexts and learning withmobile devices.

One definition of mobile learning is: Any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies.

In other words mobile learning decreases limitation of learning location with the mobility of general portable devices.

The term covers: learning with portable technologies including but not limited to handheld computers, MP3 players, notebooks and mobile phones. M-learning focuses on the mobility of the learner, interacting with portable technologies, and learning that reflects a focus on how society and its institutions can accommodate and support an increasingly mobile population. There is also a new direction in M-Learning that adds mobility of the instructor and includes creation of learning materials "on-the-spot, "in the field" using predominately smartphone with special software such as AHG Cloud Note. Using mobile tools for creating learning aides and materials becomes an important part ofinformal learning.

M-learning is convenient in that it is accessible from virtually anywhere. M-Learning, like other forms of E-learning, is also collaborative; sharing is almost instantaneous among everyone using the same content, which leads to the reception of instant feedback and tips. M-Learning also brings strong portability by replacing books and notes with small RAMs, filled with tailored learning contents. In addition, it is simple to utilize mobile learning for a more effective and entertaining experience.

SCOPE OF M-LEARNING:

It is widely accepted that the key to mobile learning lies in taking advantage of the learning opportunities offered by mobile technologies, and that this typically happens when learners are not at a fixed, predetermined location, so that they are able to engage in situated learning and make use of context-specific resources. Mobile learning also enables learners to move seamlessly across different settings and to connect up learning in different locations.

Mobile learning needs to be understood as an emerging repertoire of learning and teaching practices rooted in the belief that interaction and collaboration within a traditional classroom are often not as effective as they could be. Mobile learning has been described as 'disruptive' and 'paradigm-shifting', particularly when its focus is on learning outside traditional classrooms or overcoming the perceived inadequacies of existing curricula and forms of assessment. Mobile learning emphasizes integration of learning with life and work, so that education is no longer seen as a separate activity that has to take place in a school, university or other establishment. This creates tensions between traditional education, focused on a set curriculum and individual attainment, and mobile learning, which is constructed around learners' interests and needs in relation to diverse situations and contexts.

DEVICES AND NETWORKS

The devices used in mobile learning are commonly:

- Mobile phones (cell phones)
- Personal listening devices such as mp3/mp4 players
- Lightweight, portable computers such as slates, tablets, netbooks and small laptops

However the range increases daily and includes games consoles, digital voice recorders, e-book readers, electronic dictionaries, and assistive technologies for learners with disabilities. Devices are increasingly multi-functional, with the ability to support speaking, listening, watching, reading, writing, searching for information, performing calculations, playing games and much more. Choice of device varies with age, location, task and other factors. Teenage and young adult learners typically use cell phones and personal media players. Mature learners may have personal digital assistants (PDAs), smartphones and laptops as part of their equipment for work.

Equally important are the networks and infrastructures which enable the devices to be connected to one another and to the Internet, including cable-free solutions that allow learners to move around and still

stay connected. GPS (global positioning system) navigation makes it possible to identify a learner's location; its uses include sharing context-specific resources and delivering information relevant to a journey or a particular place.

CHANGES IN PEDAGOGICAL PRACTICES

Mobile learning eliminates the need to have special computer rooms and offers teachers full freedom to let students work with online applications whenever they need to. With a practical learning task such as cooking or machine maintenance, the mobile device allows learners to communicate and retrieve information with one hand while continuing to perform their job or practise a skill. Mobile learning is often 'content-light', and it is used more as a tool that helps learners access audio materials, receive and send text messages, respond to quizzes, participate in instant chat, make brief notes, or reflect on their learning.

Classroom dynamics: Mobile learning provides new means of communication and collaboration, and a way to connect classroom learning with learning elsewhere, the journey home and learning between lessons.

Connecting remote learners: Providing distributed learners with opportunities to exchange information, ask questions, and practise new skills in situ.

Learners as knowledge producers: When learners are commenting, discussing, or creating and sharing digital resources, the teacher's traditional authority function shifts towards a more collaborative or mentoring role. Learner-generated content represents a significant pedagogical resource and a shift towards authentic learning.

Experience capture: In work settings, recording and note-taking is facilitated, as part of collecting evidence of learning, or as a way to combine formal and informal learning.

Lifelong learning: Over time, students become more able to take responsibility and the habits of lifelong learning can take root. This is facilitated by mobile access to social networks that can support a person's learning goals and career development over a lifetime.

In reality, many schools and colleges forbid the use of mobile phones on their premises, thereby forcing some teachers to use them in their classes in a clandestine way. Clear institutional policies are needed, and students who only have experience of using mobile phones for social reasons need instruction in how to use these tools responsibly for education. Integration of mobile learning with institutional learning management systems, or virtual learning environments, is equally important.

Key advantages of using M-Learning in education

Benefits for learners:

Improved access to education

Use of relatively inexpensive everyday technologies

Better opportunities to acquire skills at one's own pace, with a degree of privacy that may be missing when using shared computer facilities or relying on equipment belonging to somebody else. This is particularly important for women and girls.

Good support for preferred modes of interaction, e.g. accessing audio content or participating in social networks on the move.

RELEVANCE TO AUTHENTIC LEARNING NEEDS

Catering for interests beyond what is provided in class, through access to additional content such as podcasts or free learning materials (e.g. Open Learning)

Handheld devices are often an everyday part of business, so learning can contribute directly to enhancing employability, life skills and work practices

SUPPORT FOR VITAL COMMUNICATION

Opportunities for learners to give immediate feedback on their learning experience

Better assessment and diagnosis of learning problems as they occur

Psychological support for those at risk of dropping out, through social networks or personal guidance from a mentor

Benefits for educational establishments

Attracting underserved populations of potential students

Learning materials can become accessible to a larger audience, through podcasts, mobile applications, blogs and e-books, which are seen by potential students

Catering for disadvantaged social groups for whom mobile learning presents an opportunity to

improve their life chances

Improving teaching quality

Revitalizing the curriculum, rethinking teaching methods and implementing improved feedback to learners

Turning geographically dispersed learners into a valuable teaching resource by enabling them to contribute their local knowledge and research data more easily

Supporting learner retention, progression and transition

Supporting continuing education

Making the learning experience more tailored to the changing needs of individuals, encouraging learners to return for knowledge updating and further study

Benefits for education systems nationally and internationally

More equitable access to education, for those suffering exclusion for social or economic reasons

A culture of lifelong learning; learners taking part in organized education but also habitually using personal technologies to support inquiry and knowledge building whenever the need arises

A culture of life-wide learning, whereby individuals recognize the value of learning in unconventional or everyday contexts and are enabled to realize the full breadth of their potential contributions to society

A stronger global, intercultural perspective, fostered by increasing learner mobility which thrives on unconstrained access to learning resources and flexible study

Key challenges and limitations

Finance challenges:

Approaches to the implementation of mobile learning have included sponsorship from device manufacturers which has enabled organizations to provide whole cohorts of learners with devices. Whilst this is useful as a springboard, it raises issues of ownership and sustainability. Recent thinking favours use of learners' own devices or assisting them to buy an inexpensive device.

MANAGEMENT CHALLENGES:

Educational establishments face the challenge of persuading educators that mobile technology is a serious option for education rather than a gimmick. Established educators resent the loss of control implied by mobile learning activities that are learner-led and take place outside the classroom. Uncertainty about digital content rights management may inhibit production of mobile-friendly content. Development of mobile applications requires up skilling or employing specialist staff.

COMPETENCE CHALLENGES:

Educators often lack the competences required to develop mobile learning opportunities for their students. Conventional assessment or evaluation practices are put under scrutiny as mobile learning may call for different outcomes. Learners may be familiar with mobile devices in general but not as learning tools. Educators may not feel competent to support learners who are primarily focused on real-life learning, and those who expect mobile learning to cater to their individual preferences or needs.

USABILITY CHALLENGES:

The need to keep a mobile device charged for longer periods of use remains an issue. Small screen size can limit activities such as reading, although many learners are content to read in this way. Costs of connectivity must be considered alongside the cost of the mobile device, as both teachers and learners perceive this as a barrier to widespread use. Environmental factors such as sunshine and rain impact on the practicality of learning outdoors (OLPC). Unwanted noise and interruptions can impact on the quality of learning in public areas and when travelling.

CONSTRAINTS ON MOBILE LEARNING IN RURAL AREAS:

Well established broadband technologies such as DSL (Digital Subscriber Line) which use telephone lines, and Cable Internet, which uses the cable television infrastructure, are less prevalent in areas of low population density. Wireless Internet Service Providers provide broadband built around wireless networking, however hotspots are small so coverage is sparse unless roaming is used. Satellite Internet has the ability to provide broadband on a truly global basis but is also amongst the most expensive.

WiMax is expected to become the most dominant broadband technology in rural areas in the near future, largely due to its low cost of deployment.
Possible negative consequences of the use of mobile technology in education:
With excessive use of mobile technologies, human relationships can become compromised and stress levels, or feelings of overload, can rise. Pervasive use of mobile devices may entail loss of privacy and attacks on personal security. Mobile learning requires some financial investment and teacher training.
From a pedagogical perspective, education can become trivialized if it is reduced to learning nuggets and a 'grazing' ethos whereby real depth of understanding is no longer valued.

TECHNICAL CHALLENGES INCLUDE:

§ Connectivity and battery life
§ Screen size and key size
§ Ability for authors to visualize mobile phones for delivery
§ Possibilities to meet required bandwidth for nonstop/fast streaming
§ Number of file/assets' formats supported by a specific device
§ Content security or copyright issue from authoring group
§ Multiple standards, multiple screen sizes, multiple operating systems
§ Reworking existing e-Learning materials for mobile platforms

Social and educational challenges include:

§ Accessibility and cost barriers for end users Digital divide.
§ How to assess learning outside the classroom
§ How to support learning across many contexts
§ Content's security (or) pirating issues
§ Frequent changes in device models/technologies/functionality etc.
§ Developing an appropriate theory of learning for the mobile age
§ Conceptual differences between e- and m-learning
§ Design of technology to support a lifetime of learning
§ Tracking of results and proper use of this information
§ No restriction on learning timetable
§ Personal and private information and content
§ No demographic boundary
§ Disruption of students' personal and academic lives
§ Access to and use of the technology in developing countries

BEST PRACTICES IN TEACHING AND LEARNING INDIVIDUAL AND MASS EDUCATION:

Mobile learning works best when used to support learner-led inquiry, communities and social networks, work-based, field-based and game-based learning, continuous reflection, as a way to collect evidence of achievement, to promote social inclusion and to sustain lifelong learning (e.g. MOTILL [4]). Learners should be encouraged to collaborate with teachers to define how a mobile device can best support their learning, and to share this knowledge with others. By attending to the needs of learners with disabilities, learning provision is also improved for those who have hidden disabilities and those who learn more effectively when material is presented in alternative ways (EU4ALL [5]).

In mass education, mobile learning should be used to support wide-scale literacy and numeracy increase and teacher training. It can improve classroom interaction by giving learners the chance to communicate their ideas by texting or responding to surveys through their mobile phones, which helps to overcome shyness and leads to improved participation. It can also be used to offer a personalized learning experience within a large group. Mass distance education can be enhanced by using mobile devices as an additional means of contact and a way to capture experiences and data from different parts of the globe.

Teacher training:

Teacher education for mobile learning should cover mobile pedagogy as well as some technical training to build confidence. Teachers need opportunities to use mobile technology for personal learning and preparation of teaching materials, and to share resources an practical case studies (TESSA [6]). Informal mutual support pairings and networks are beneficial, since access to technical assistance may be difficult in remote locations and these structures also help teachers keep abreast of rapid developments in technology and pedagogy.

GENDER-RELATED AND CHILD EDUCATION:

Mobile devices appeal to girls and women as well as boys and men, although they may favour different activities. Mobile learning supports empowerment of underprivileged, marginalized groups, particularly women and children in rural areas. Developing literacy and numeracy skills leads to reduced dependence on others. For example, women can take part in mobile learning programmes which enable them to receive text messages on the phone to practise their reading and writing. Mobile games have been used by children and elders in rural areas in India to learn the English language.

LEARNERS WITH DISABILITIES:

The organizer functions usually included in mobile devices are useful for those with learning difficulties, to help them organize their lives and achieve some independence if relevant. Dictionaries downloaded to mobile phones or games consoles, are helpful as reference tools for learners with dyslexia and other learning difficulties. Text-to-speech conversion and voice recognition are valuable for users with disabilities or learning difficulties (Excellence Gateway).

Institutional responses and policies

Institutional responses may treat mobile learning as a subset of e-learning but this approach is limiting when it does not recognize the unique characteristics of mobile learning. Institutional responses to emergent technologies should consider five perspectives (according to JISC Report):

1. Rules And Regulations:

Key policies will concern use of mobile devices on institutional premises and setting expectations about ownership and use.

2. Roles and responsibilities:

It may be necessary to train staff or to employ people with relevant experience in technical support or development. Experience of mobile pedagogies needs to be bought in or developed internally.

3. Rewards:

Extra effort associated with the adoption of mobile technologies should be rewarded through appropriate forms of recognition and reward.

4. Relationships:

Influencers and champions will help spread the word about the effectiveness of mobile learning. Semi-formal networks are good ways of sharing case studies and best practices.

5. Routines:

The introduction of mobile technology may provoke resistance or uncertainty. New routines need to be defined to smooth the path during the process of change.

Suggestions and recommendations

There is an exceptionally good alignment between the benefits of mobile learning and the goals of Education for All. However a number of actions need to be taken by those who are able to influence the development of mobile learning:

Recognize the value of learning in unconventional, informal or everyday contexts and enable learners to realize the full breadth of their potential contributions to society

Enable geographically dispersed, disadvantaged learners to become a valuable teaching resource by providing mobile technologies to help them share their local knowledge and expertise

Invest in further development of mobile pedagogies that are distinct from e-learning

Fund further research on mobile learning, particularly longer-term and larger-scale studies that are focused on vital educational goals and those that explore orchestration of out-of-school learning

Work with educational institutions to develop workable mobile learning policies

Train teachers, to raise awareness, build confidence, and impart new skills and knowledge for the redesign of existing curricula and forms of assessment

Reward teachers for becoming life-long and life-wide learners themselves through their personal use of mobile technologies to reflect on their teaching practices and to extend their knowledge

Promote and develop innovative donor initiatives to assist with the costs of introducing and sustaining mobile learning among the most vulnerable and underserved populations

Work with telecommunications companies to enable more affordable mobile access and Internet browsing

Work with publishers of learning materials to develop business models that will allow more flexible and lower-cost or free access, remixing and reuse on mobile devices

REFERENCES:

"Guidelines for learning/teaching/tutoring in a mobile environment"
§. MOBIlearn. October 2003. pp. 6. Retrieved June 8, 2009.
"Mobile Learning Community"
§. Mobile Learning History. 2010.
§Mobile learning for quality education and social inclusion. A policy brief, UNESCO. Dec 2010
Wireless Coyote
§Wayne C. Grant. (1993). Wireless Coyote: A Computer Supported Field Trip, Communications of the ACM - Special issue on technology in K 12 education, Volume 36 Issue 5, May 1993, 57-59
§OpenLearn – Repository of free learning materials at The Open University,http://www.open.ac.uk/openlearn/home.php
§OLPC – One Laptop Per Child initiative,http://laptop.org/en/
§EIA – The English in Action project in Bangladesh,http://www.eiabd.com/eia/
§MOTILL – Mobile technologies in lifelong learning: best practices,http://www.motill.eu
§EU4ALL – Technology-enhanced learning accessible to all,http://www.eu4all project.eu/
§TESSA – Teacher Education in Sub-Saharan Africa, http://www.tessafrica.net/
§Excellence Gateway – Advice on accessibility for learners with disabilities, http://www.excellencegateway.org.uk/ JISC. Institutional Responses to Emergent Technologies. Landscape Report. 2010. http://jisciret.jiscinvolve.org/wp/landscape-report/