

## **Implications of Mobile Learning in Distance Education for Operational Activities**

### **Abstract**

As the distance education started more and more proliferating, it had to make more and more use of information communication technology (ICT). In fact it has already crossed a stage wherein ICT became an indispensable part of distance education. This is true from 3<sup>rd</sup> generation of distance education onwards. Thus the wedlock of distance education and ICT has been already endorsed and is universally accepted. Usage of ICT is also proceeding towards maturity – starting its journey from print, audio, etc. to intelligent computerized system. E-mail and discussion forums are used exhaustively now-a-days. ICT not only has its implications for developmental and academic activities, but also a crucial role to perform in operational activities.

While speaking on the options in ICT there have been discussions on possible usage of mobile learning (M-learning) as a step ahead of e-learning. If one looks into the comparative figures of users of Internet and mobile, it can be understood that mobile could be the best possible media for communicating quick and small chunks of information to the learners. Mobility of the media with the user without much technological pre-requisites is a crucial aspect of the mobile which goes much ahead of Internet. This particular aspect has tremendous implications in operational activities of distance education. This paper discusses the possible implications of mobile as a media in various operational activities like pre- admission information, admission process, exams, results, any change of subject, study centers, etc. Mobile learning has lot of potential for quick and wide reaching out to the geographically wide-spread learners, even though they have no Internet connectivity.

## **Introduction**

The four elements of flexible learning according to Guha (2003: 27) are accessibility, choice and control, responsibility and support. But for this the utilization of technology is a must, which is no more a learner's choice and acceptance of the same is a challenge for some. To survive in the digital world these 'immigrants' into the digital world have to adapt to the new digital environment (Prencky, 2001 as quoted by Ward, 2004).

On this background mobile technologies are a familiar part of the lives of most teachers and students today. We take it for granted that we can talk to other people at any time, from wherever we may be; we are beginning to see it as normal that we can access information, take photographs, record our thoughts with one device, and that we can share these with our friends, colleagues or the wider world. Newer developments in mobile phone technology are also beginning to offer the potential for rich multimedia experiences and for location-specific resources. The challenge for educators and designers, however, is one of understanding and exploring how best we might use these resources to support learning (Naismith, et al: 2008). The whole world is going mobile. Phones, computers and media devices now fit in our pockets and can connect us to a variety of information sources and enable communication nearly everywhere we go. There is considerable interest in exploiting the almost universal appeal and abundance of these technologies for their educational use (Naismith, et al: 2008).

## **What Comprises Mobile Learning?**

Mobile learning is defined as the provision of education and training on mobile devices: Personal Digital Assistants (PDAs), smart phones and mobile phones. One of the characteristics of mobile learning is that it uses devices which citizens are used to carrying everywhere with them, which they regard as friendly and personal devices, which are cheap and easy to use, which they use constantly in all walks of life and in a variety of different settings, except education. The following fig 1 gives the classification of mobile technologies on two- fold dimensions – personal vs shared and portable vs static as given by Naismith, et al (2008).

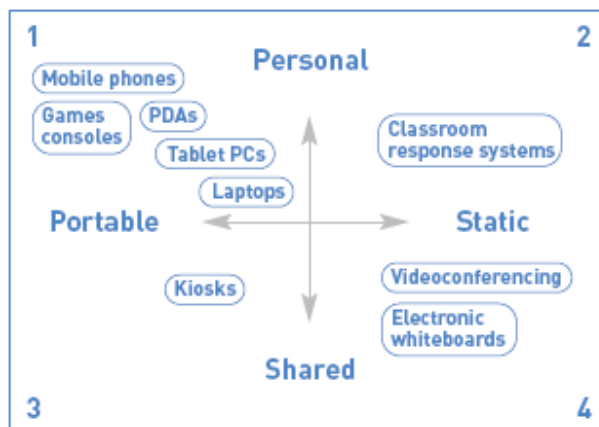


Fig 1: Classification of mobile technologies

### Why Mobile Learning?

According to Attewell (2005) as quoted by Yousuf (2007) and Becking et al (2008), there are several advantages inherent in mobile learning over Internet:

- helps learners to improve literacy and numeric skills
- helps learners to recognize their existing abilities
- can be used for independent and collaborative learning experiences
- helps learners to identify where they need assistance and support
- helps to overcome the digital divide
- helps to make learning informal
- helps learners to be more focused for longer periods
- helps to raise self-esteem and self-confidence
- it is portable from one place to another
- more wide spread and popular than Internet
- not much technological pre-requisites
- cost is pretty affordable as comparatively less recurring cost and one-time investment
- provides real time and location independency

### What are the Implications for the Operational Activities of Distance Education?

The following fig 2 shows a typical student support system in any distance education system. To strengthen the operational system this structure depicted here needs to be multi-channelled.

Student peer group

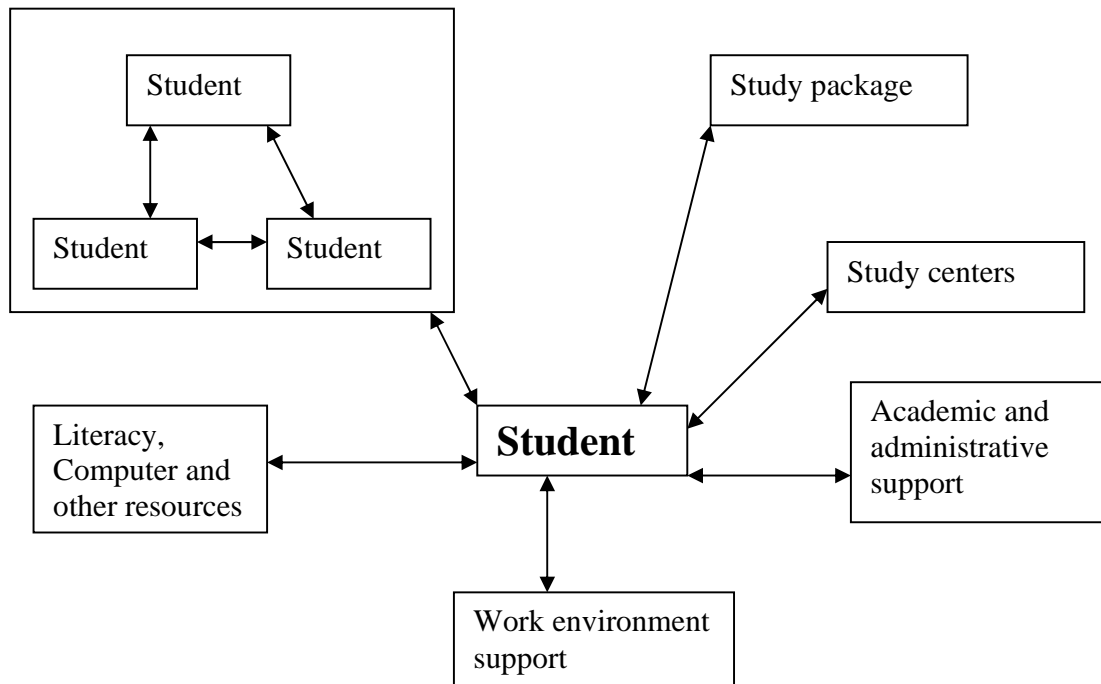


Fig No. 2: Model Support System (From Dekkers, J, 1996: 90)

The common problems of distance learners can be summarized as follows:

- Lack of personal contact and immediate instructor feedback that some learners prefer (Brown, 1996; Carr, 2000; Garland, 1993; McGivney, 2004)
- Sense of isolation (Galusha, 1997; Gibson & Graff, 1992; Heverly, 1999; Sweet 1983; Wojciechowski & Palmer 2005)
- Requirement of pre-course orientation to help manage courses (Ashby, 2004)
- Requirement of the tutor support counseling sessions during course of study (Ashby, 2004)
- Improved information and formative advices (Ashby, 2004)

### **Experiences and Feedback by YCMOU Students regarding Mobile Usage**

We are state open university in India. Our students are basically rural students not having much technological comfort. During the admission procedures we display lot of information and instructions on website for B Ed and M Ed programs. We also use e-mail facility for them to answer their queries. Here are some of the experiences with these students.

- Since we print e-mail ID in the prospectus, they do have to send the initial mail to ask question. But in 95 % of the cases they mention their mobile number and expect that the answer would be given through mobile – either voice or SMS. They feel it is very crucial to have that kind of facility. In fact many of them give their mobile numbers in place of personal contact numbers.
- When the admission forms were examined, not even 1 % of them had e-mail Ids, but more than 94 % applicants were using mobiles. Thus, mobile can be used as a support media for providing crucial information. There is certainly a lot of scope.
- During the online admissions, when they used to get stuck up 98 % of them said that they would prefer having a mobile helpline for quicker communication.
- This is not only true for the applicants, but even the study center personnels are more comfortable and competent to use mobiles than computers and Internets. It gives them the confidence of sureshot contact with the person they want to get in touch with.
- Apart from the administrative reasons, even the M Ed student use mobile services for guidance – not only for taking an appointment with the guide, but also for the small query they come across while working at their research at a distance. Mobiles in this manner is being used by 80 % of M Ed students.
- Over 70 % of M Ed students are in touch with each other so as to ask queries or to share difficulties.

- About 55% M Ed students used mobile facility for networking for combined studies in teh form of self-help-groups.

Thus, mobile learning can provide helps in various dimensions right from pre-admission counseling, admission, counseling, exams and results. The portability of mobile technology allows the learning environment to be extended beyond the classroom. The personal nature of mobile devices makes them well suited for learning applications outside of formal education. The following fig 3 shows how technology, especially mobile technology , can be used in counseling.

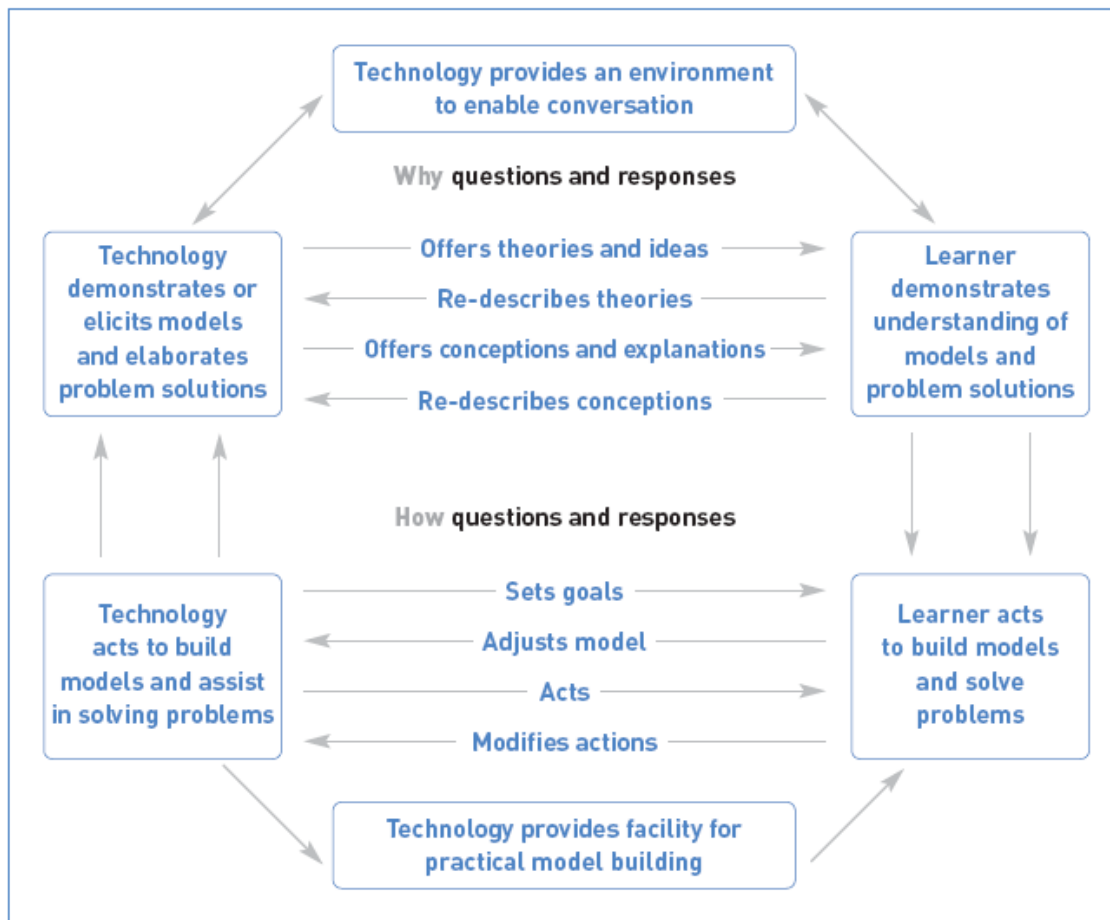


Fig 3: Role of technology in supporting conversational learning for counseling

Similar to e-Learning, mobile technologies can also be interfaced with many other media like audio, video, the Internet, and so forth. Mobile learning is more interactive, involves more contact, communication and collaboration with people (Vavoula, 2005). The increasing and ubiquitous use of mobile phones provides a viable avenue for initiating contact and implementing interventions proactively. For instance, Short Message Service (SMS) is highly cost-effective and very reliable method of communication. It is less expensive to send an SMS than to mail a

reminder through regular postal mail, or even follow-up via a telephone call. Further, no costly machines are required (which is clearly the case in terms of owning a personal computer).

Besides SMS, distance learners can use mobile phones/ MP3 players to listen to their course lectures, and for storage and data transfer. New technologies especially mobile technologies are now challenging the traditional concept of Distance Education (Yousuf, 2007). Today the more and more rapid development of the ICT contributes to the increasing abilities of the mobile devices (cell phones, smart phones, PDAs, laptops) and wireless communications, which are the main parts of the mobile learning. On the other hand for the implementation of mobile learning it is necessary to use a corresponding system for the management of such type of education. (Georgieva, 2006).

The use of mobile technologies can help today's educators to embrace a truly learner-centred approach to learning. In various parts of the world mobile learning developments are taking place at three levels:

- The use of mobile devices in educational administration
- Development of a series of 5-6 screen mobile learning academic supports for students
- Development of a number of mobile learning course modules.

### **Some Key Issues in Using Mobile Technology**

Learning and teaching with mobile technologies is beginning to make a breakthrough from small-scale pilots to institution-wide implementations. In order for these implementations to be successful, educators and technology developers must consider the following key issues:

- **Context:** gathering and utilizing contextual information may clash with the learner's wish for anonymity and privacy.
- **Mobility:** the ability to link to activities in the outside world also provides students with the capability to 'escape' the classroom and engage in activities that do not correspond with either the teacher's agenda or the curriculum.
- **Learning over time:** effective tools are needed for the recording, organization and retrieval of (mobile) learning experiences.
- **Informality:** students may abandon their use of certain technologies if they perceive their social networks to be under attack.
- **Ownership:** students want to own and control their personal technology, but this presents a challenge when they bring it in to the classroom. (Naismith, et al: 2008).

## Discussions

Mobile technology can effectively support a wide range of activities for learners of all ages. While implementation examples can be broadly categorised within the main theories and areas of learning relevant to mobile technology, the most successful adopt a blended approach to their use. Mobile technologies provide for each student to have a personal interaction with the technology in an authentic and appropriate context of use. This does not mean, however, that the use of mobile devices is a panacea. Significant technological and administrative challenges are encountered along with a more ill-defined challenge: how can the use of mobile technologies help today's educators to embrace a truly learner-centred approach to learning? (Naismith, et al: 2008)

**Guidelines for effective implementation as given by Naismith, et al (2008)** are as follows:

1. Investigate a cost model for infrastructure, technology and services. Various costs must be considered when implementing mobile learning. In addition to the significant initial capital expenditure required to purchase devices and networking equipment, there is the ongoing cost of technical support and also various 'hidden' costs.
2. Study the requirements of all those involved in the use of the technology (learners, teachers, content creators) to ensure that it is usable and acceptable.
3. Assess that the technology is suited to the learning task and examine advantages and disadvantages of each technology before making a decision on which one to use.
4. Assign the necessary roles for initiating and thereafter supporting mobile learning.
5. Develop procedures and strategies for the management of equipment when it is provided by the institution. These procedures include the need to develop strategies for assigning equipment to students, restricting students' off-task use (if desired), synchronising hand-held to desktop, tracking, reviewing and collecting students' work, devising and implementing parental agreements for managing loss and theft, hardware management and routine backup procedures.
6. Provide training and (ongoing) technical support to the teachers to enable them to use mobile technologies to enhance current and to enable new instructional activities.
7. Consider the use of mobile technologies for student administration tasks. Mobile devices can be used to maintain accurate lists of classes which can be used in conjunction with rich information sets about students to help to draw out individual students' needs.
8. Consider the use of mobile technologies to support collaborative and group learning.
9. Discover and adopt suitable applications that match the needs of your specific classroom and map directly to your curriculum needs.
10. Ensure security and privacy for the end users.



## Conclusion

Each innovation is going to bring a number of challenges for us, but making the system user-friendly, keen monitoring and research in this regard are certainly going to help. In turn, there is no simple formula or one “right way” to go about usage of ICT for educational purpose. It is a long process of consultation and negotiations, made particularly difficult, on the other hand, by the unpredictability and rapid change in the elements (both technical and human), which make up the network. Distance learning uses a combination of hard and soft technologies. Hard technologies are bits and bytes, electrons and pixels, satellites and search engines. Soft technologies are processes, approaches, sets of rules and models of organization. One must concentrate on getting the soft technologies right. The hard technologies change. Indeed they change quite rapidly. These soft technologies are the working practices that underpin the rest of today’s modern industrial and service economy: division of labor, specialization, teamwork and project management. If you get the soft technologies right, the hard technologies will take care of themselves (Daniel, 2000: 451- 457).

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