

REACHING THE RURAL DROP-OUTS: CAPACITY BUILDING THROUGH MOBILE LEARNING

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Abstract

This paper tries to answer two questions: How to bring the school drop-outs into the mainstream graduate study? How does mobile learning enhance the learning capacity of those learners? In India nearly half of the students enrolled in the schools dropped out and the pursuance of higher education is very low when compared with developed countries. Still, India remains a largest higher education sector next only to USA and China. This study explains how a preparatory course helps the rural drop-outs to qualify themselves to pursue graduate programme through distant education. It also explains how mobile learning helps them to enhance their capacity in learning despite their rural background and other disadvantages. This study finds a significant increase in their learning capacity and mobile learning seems to be a viable alternative where conventional system could not reach the rural drop-outs. This paper explains these issues out of the study conducted among the distant learners of Vinayaka Missions University located at Salem in India.

Keywords: Capacity building, distance education, drop-outs, mobile learning

Introduction

Empowering the disadvantaged learning community needs a combined effort of policy and technology. India has the third largest higher education system in the world, next only to China and the United States. Before Independence, access to higher education was very limited and elitist. There were 20 Universities and 500 Colleges at the end of British colonial rule in India. At present, there are 504 Universities and 25,951 Colleges including 2,565 Women Colleges [1]. Despite such a large and extensive education system, India is woefully short of adequate higher education institutions in view of its young population. India has more than 100 million people in the 18-24 yrs age group. Only 10% of these have access to higher education.

Distance Education in India

Distance education in India had its genesis in the early 1960s. Since then it has expanded rapidly. In 2005, there were 12 open universities and 106 dual mode university distance education institutes in the country, catering to over 2.8 million students. Each year, nearly 1.3 million students register for various courses in these universities. The emergence of distance education has been a major development over the last two decades. There are diverse types of providers offering a variety of programs [2].

Despite the massive increase in student numbers, the fact that enrollment as a percentage of the population of the relevant age group remains poor in India. At the same time, it is important to recognize that enrollments in higher education suffer because of the slow progress in primary and secondary schooling. Though India achieved 100 percent school enrollment, 40 percent of the children drop out before they complete primary school. The rural background still remains predominant. The vast majority of the population of India has always lived in the rural areas. The 2001 Census found that 72% of our population still lives in villages, while 28% is living in cities and towns [3].

Enrollment and Drop-Outs in School Education

The following table shows the trends at the all-India level and at Tamil Nadu from the classes I to XII.

Table I
Enrollment from Classes I to XII

	Classes I-V			Classes VI-VIII		
	Boys	Girls	Total	Boys	Girls	Total
India	71469118	64760844	136229962	30727457	26060412	56787869
Tamil Nadu	3122300	2924831	6047131	1932515	1777446	3709961

	Classes IX-X			Classes XI-XII		
	Boys	Girls	Total	Boys	Girls	Total
India	15915437	12307017	28222454	9145096	6799144	15944240
Tamil Nadu	1057914	1005098	2063012	597058	658453	1255511

Source: Annual Report 2009-2010, Ministry of Human Resource Development, Government of India, pp.340-41

Working children are a normal phenomenon in India. They earn money to contribute to their family's income. Poor parents do not encourage their children to go to school. Approximately 6.3 million children live in the state of Tamil Nadu. According to a recent survey, 70,000 of them do not go to school because they are working. There are several reasons cited for the drop-outs [4]. The major reasons for dropout among rural children are:

- Child not interested in studies
- Parents not interested in studies
- Unable to cope
- To work for wage/salary
- Participation in other economic activities
- Attend to domestic duties
- Financial constraints
- Cultural barrier in the case of girl child

The table shows the trends in drop-outs at all-India and Tamil Nadu levels from the classes from I to X.

Table II
Drop-out levels from Classes I to X

	Classes I-V			Classes I-VIII			Classes I-X		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
India	26.2	24.8	25.5	44.3	41.4	43.0	56.4	57.3	56.8
Tamil Nadu	8.1	8.9	8.5	9.5	8.7	9.1	38.9	36.5	37.7

Source: Annual Report 2009-2010, Ministry of Human Resource Development, Government of India, pp.340-41

M-Learning

Mobile learning is increasingly applied in distance education. M-learning is accessible from virtually anywhere, which provides access to all the different learning materials available. It is also collaborative and sharing. It is almost instantaneous among everyone using the same content, which leads to the reception of instant feedbacks. Several studies have revealed the importance of mobile learning [5].

The relevance of mobile learning in developing countries is as significant as in developed countries. It is believed that mobile learning in developing countries is not different from developed countries. The use of wireless technologies can help to increase collaborative learning and communication, as well as independent learning among learners, because of the mobility and capacity of the devices. There is an increasing and unprecedented adoption of wireless technologies in developed as well as developing countries [6]. Using wireless technologies in education may contribute to combating the digital divide in developing countries, as this technology is generally cheaper than desktop computers, particularly mobile phones and PDAs [7]. In developed as well as developing countries of Asia, cell-phone usage for learning has proved to be beneficial for both instructors and learners, not only as a cost-efficient method, but as an effective educational tool [8]. Studies have also been undertaken to reveal the prospects and problems in m-learning initiatives in India [9]. Mobile learning shows the significance of collaborative learning and self-motivation as well [10].

Study Framework

This experimental study was conducted among the distant learners of the Vinayaka Missions University located at Salem in India. Distance learning in the university was started in 2005 with the objective of widening access to higher education for diversified learners at national levels.

This experimental study was conducted among the students who studied CPP (Certificate in Preparatory Program). The duration of the program was six months. The objective of the course was to enable to learners who have no formal education. Any one who completed 18 years of age are eligible to apply. The scope of the course is to make such deprived learners to join degree programs. This criterion attracted more rural drop-outs to enroll in the program. More than 1000 students were enrolled in the program.

This program consisted of preparatory courses in social sciences and commerce. The syllabus was an intermediary level between school and college. It was designed to fulfill the qualifying level for the admission to graduate programs in arts and commerce. The contents of the course have been designed in a way to reflect both flexibility and quality.

The experiment was conducted among 10 students who studied this program. They were from rural areas of different parts of Tamil Nadu, a southern state of India. Like experimental group, the control group consisted of 10 students from the same background. The age group of students ranged from 19 to 24. The duration of experimental study continued for 24 days.

Methodology

Successive steps were initiated in the M-Learning. These included preparation of mobile content, delivery mechanism, discussions, answering questions and evaluation. Smartphones and iPhones were used for the study.

Mobile Content

Among the two courses, one course, namely, social science was selected for this experiment. The self-learning material of this course was organized in twelve lessons. The task of the instructor was to prepare questions with multiple answer formats from the self learning material delivered to the

students. From each lesson 20 such questions were prepared by the tutor. In total, the course had 240 questions. An example of mobile content is as follows:

Program: CPP

Course: Social Science

Lesson 1: Social Sciences: Origin and Development

Question 1: Which one of the following is not a social science?

- a. Sociology
- b. Political Science
- c. Economics
- d. Physics

Question 2: Who wrote Das Kapital?

- a. Queen Elizabeth
- b. John Milton
- c. Karl Marx
- d. Max Weber

Delivery Mechanism

The prepared contents of 240 questions with multiple choice answers were sent to the mobile learners. Every day 10 questions were sent. Questions were sent at 10 am every day. Mobile learners can refer the printed self-learning material already delivery to them. They were also permitted to chat with fellow learners about the right answers. They should send the answers by next day 9 am. Subsequently, the next exercises would start from 10 am. Delivery of contents and subsequent answering continued for 24 days.

Discussion Forum

After receiving the questions through SMS, discussions were permitted with the tutors as well as the fellow mobile learners. The discussion and chats were voluntarily initiated by students themselves. Play impulse rather than study anxiety was noticed during the experimental study.

Evaluation and Feedback

An automated system of evaluation was done and feedback was sent to the students instantly. The evaluation and feedback format is as follows:

Lesson 1: Social Sciences: Origin and Development

Correct Answer String: d c a d b c a c d a

Tutor Comments on the level of scores:

- 0-4 – Poor, Need more effort
- 5-7 – Good, Improve further
- 8-10 – Excellent

Findings

As stated earlier, the study compared the performance of 10 mobile learners with 10 non-mobile learners. The Mobile learners were rural based and the non-mobile learners were urban based. However, both were drop-outs in school education. The urban based learners were accessible to make use the face to face counseling session at study centres. The experimental group had rural background and attending the counseling sessions was difficult. The control group (non-mobile learners) was given the printed self-learning material and 12 days face to face counseling sessions at study centres. After the experiment of m-Learning, the performance of the control group and the experimental group was as follow:

Table III
Comparison between Mobile and Non-mobile Learners

S.No	Particulars	Numbers
1	Number of students for experiment	20
2	Control group	10
3	Experimental group	10
4	Average score of Control group (Non-Mobile Learners)	60
5	Average score of Experimental group (M-learners)	68

Failures

The failures were due to both human and technology. In the case of questions sent to the students, every day one student reported 'not-receiving.' Out of 2400 SMS in total, 200 SMS could not be delivered in time. Occasionally, few students received incomplete messages shown as 'some texts missing' and the tutor experienced network failures in sending questions. Receiving answers from the students almost successful. However, 20 % of the answers were received late. Correct answers constituted 82 %.

Conclusion

This study has addressed two issues. One is the policy to educate the drop-outs, and the other is to enhance their learning capacity through mobile. The distant education course, namely, the preparatory program enabled the rural drop-outs to prepare themselves to join degree program and continue their higher education. M-learning had enhanced their capacity to overcome their limitations. This study reveals that mobile learners scored higher than the non-mobile learners. Mobile device proves to be a technology for sustainable distance learning. The preparatory program establishes a new mission in distance education. It provides a new opportunity for the disadvantaged learners and takes up a new challenge to extent the higher education to the disadvantaged groups hitherto the conventional system could not envisage.

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