

Ekalavyaism – Harness Neglected Skills to Build Talented Resource Pool

Theme: Skill Development

Sub-Theme: Skill Development for National Development

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Introduction

Every human being has the right to have the opportunity to make a better life for oneself. Unfortunately, too many children in the world today grow up without this chance because they are denied their basic right to even attend primary school. At least 1.2 billion poor people cannot read or write. This restricts their ability to carry out every day activities such as read signposts, understand medicine labels, confirm commercial transactions and avoid being cheated.

Sustainable end to world poverty as well as the path to peace and security requires that citizens of every country are empowered to make positive choices and provide for themselves and their families. Also, absence of opportunity to access education at an affordable cost withers away talents, and leads to loss of skilled human resource pool. Increasing the pool of literate people is essential to harness the poor, underprivileged and neglected masses; and to attain inclusive growth.

In this backdrop, it will be not out of place to cite the story of Ekalavya narrated in the great Indian epic Mahabharata.

Legend of Ekalavya

Ekalavya was from humble origin but bright, enthusiastic and brave. He had great desire for learning the art of archery from Dronacharya, who was the teacher of the Pandava and Kaurava princes of the royal family of Hastinapur.

Ekalavya approached Dronacharya but the great teacher declined to accept him as disciple because he belonged to lower caste. Being refused by Dronacharya, Ekalavya returned home disappointed and sad; and he became more strongly determined to learn archery.

Ekalavya installed a clay idol of Dronacharya near his house and worshipped as his teacher. Every day in the morning, evening and at night, he prayed before the idol of Dronacharya and with relentless diligence he took self-lessons in archery. With his deep concentration, strong determination and sincere dedication, Ekalavya acquired excellent knowledge in bow and arrow; and became a skilled expert in the art of archery.

As it so happened, on one pleasant and peaceful afternoon Dronacharya and his favourite disciple, the third Pandava prince, Arjuna, were walking near the hut of Ekalavya. The tranquility and silence was broken by constant barking of a dog. Ekalavya did not like the dog barking as it disturbed the concentration on his practice of archery. Before the dog could stop barking or move elsewhere, Ekalavya fired seven arrows in rapid succession to fill the dog's mouth without injuring it.

Dronacharya and Arjuna were amazed to see the dog with its mouth sealed with arrows. They decided to trace the exceptionally skillful archer and reached the spot where Ekalavya was practicing with his bow and arrow in front of the clay idol of Dronacharya. It took no time for Dronacharya to understand and realise that Ekalavya was highly talented and superior to Arjuna, who was considered as the best archer on earth. Also, Arjuna feared that Ekalavya could eclipse him in skill with the bow and arrow.

Concept of 'Ekalavyaism'

The legend of Ekalavya inspires that one can turn one's dreams into reality with sincere efforts and unflinching eagerness to learn. Ekalavya's effort to learn is a classic example of self-learning with meditative mind without the physical appearance of the teacher. Ekalavya's story gave rise to the concept of "Ekalavyaism", which is a sentiment, a philosophy for self-learning with self-meditated mind.

Distance Education System

Often, educationists discuss the important role of the teacher and the relevance of face-to-face interaction between teachers and students. There is a school of thought that without teacher-student interaction students may not learn to their potential. However, what is needed for universalisation of education is application of the concept of "Ekalavyaism" from which the concept of Distance Learning emerged.

Distance Learning is an educational process that occurs when instructions are delivered to students physically remote from the location or campus of programme origin, the main campus or the primary resources that support instruction. In this process, the requirements for a course or programme may be completed through remote communications with instructional and support staff, including either one-way or two-way written, electronic or other media forms.

Though correspondence course is the first generation of distance learning system, there are a variety of distance learning solutions for every educational need. With technological advancement, distance education today involves teaching through the use of telecommunication technologies to transmit and receive various materials through voice, video and data. These avenues of teaching often constitute instruction in a closed system limited to students who are pursuing educational opportunities as part of a systematic teaching activity or curriculum and are officially enrolled in the course. Examples of such analog and digital technologies include telecourses, audio and video teleconferences, closed broadcast, cable television system, compressed and full-motion video, fibre optic networks, interactive videodisks, and satellite-based computer networks.

Technology enables the student to view video images of lecturers and create a mental image of the lecturer. It is then up to the student to establish the remote mental connection with the teacher.

Open CourseWare

Modern technology allows access to information and knowledge through initiatives such as Open CourseWare (OCW).

OCW is class material such as syllabi, reading lists, lecture notes and other documents that are used in actual classroom and is made available to the public for free. It is an open digital publication of high quality educational materials organised as courses, and often includes course planning materials and evaluation tools as well as thematic content.

Self-educators, homeschoolers, unschoolers and anyone who is interested in learning on one's own can take recourse to and access OCW.

Massachusetts Institute of Technology

Back in 2001, Massachusetts Institute of Technology (MIT) announced its intention to make most of its courses and course materials freely available on the internet over the next few years. Today, MIT has advanced significantly towards this goal with the school's OCW Web-site providing access to syllabi, lecture notes, assignments, problems and solution sets, tools and tutorials, a growing library of video lectures and exams. OCW initiative has enabled to make the core teaching materials for all MIT graduate and undergraduate classes available at no cost to the internet users around the world. In other words, OCW is a web-based resource for teachers and learners around the globe.

Open Courseware Consortium

Subsequently, the OpenCourseware Consortium was formed as a collaboration of more than 200 higher educational institutions and associated organisations from around the world for creating a broad and deep body of open educational content using a shared model. Many of the world's leading academic institutions such as University of Michigan, Tufts University, Open University Netherlands, Universidad Politecnica Madrid, Japan OCW Consortium, China Open Resources for Education etc. now contribute to the open courseware movement in their own unique ways. For example, Rice University runs a very vibrant site called 'Connexions' as a "place to view and share educational materials made of small knowledge chunks called modules that can be organised as courses, books, reports."

Distance Learning in India

Over the years, distance learning has emerged as an accepted and powerful education process in India.

Indira Gandhi National Open University (IGNOU) is the premier institute of distance learning in India established in the year 1985 under an Act of Parliament. IGNOU aims to deliver quality higher education in various disciplines through distance learning to three categories of students:

- Those who reside in remote areas and do not have access to higher education;
- Those who cannot join regular courses due to financial and other constraints;
- Professionals aspiring for additional qualification.

In offering different courses, IGNOU uses third generation tools and has internet-based education.

Besides this National Open University, there are today three other types of institutions in India offering programmes through distance mode. These are - State Open Universities, Directorates of Distance Education (DE) functioning under conventional universities, i.e. Dual Mode Universities (DMU) and private professional institutes. However, the DEs attached to conventional universities are mostly at the first generation level, i.e. correspondence model. Some of the private sector institutions function at third generation level, but majority of them is at the first generation stage only.

Two case examples of advanced level of distance education provided by private and public sector institutions in India are presented below:

Project Ekalavya

Today, in several parts of India, students often struggle with the pace of the fast developing technology. Though talented, they lack resources, experience and exposure, and their skills are inadequate. They are capable of producing excellent work but lack competent guidance. These students are like the 'Ekalavya' of the Mahabharata who wish to perfect their talent but do not have a teacher to lead the way.

What is therefore needed is to bridge the gap between the seekers and providers of knowledge by creating innovative channels of communication. Pursuant to this need, Affordable Solutions Laboratory (ASL) in collaboration with Kanwal Rekhi School of Information Technology (KReSIT) and Indian Institute of Technology (IIT), Mumbai has launched an Open Source Knowledge Initiative. The web portal set up under this project titled "Ekalavya" is developed in-house by ASL. Some of the main functionalities provided in this portal are communication channels between all the participants of the scheme, such as, discussion forums, mail, news, announcements; schedule management; monitoring of programmes; management of central repository of documents, code and other details related to projects, administrative management and personalised web pages with various guidelines and references.

The significant programmes carried out under this scheme are:

- **eGuru** programme designed to provide e-guidance and mentorship to needy students of Bachelor of Engineering, Masters in Computer Application and Masters in Science for electronics, information technology and computer science, in carrying out their final year projects and encouraging them to think of innovative technical solutions to various real life problems.
- **eOutreach** programme creates a bank of high quality Open Source Contents, which include digital audio/video and text contents of specialised lectures and workshops for the benefit of students and teachers.
- **eContent** programme is designed to create open source digital contents in Indian languages through translation and new writings, mainly on topics of relevance to education at all levels.

Centre for Distance and Open Learning, Jamia Millia Islamia

Centre for Distance and Open Learning (CDOL.), Jamia Millia Islamia, a Central University by an Act of Parliament, at Jamia Nagar, New Delhi, was established in 2002 with the aim to join the Open Learning System in providing opportunities for higher education to those who otherwise are not able to draw benefits from the conventional system.

Some of the special features of the distance programmes offered by CDOL, Jamia Millia Islamia are:

- The students can study from their own chosen place.
- The students can study according to their own pace and convenience.
- There is flexibility of choosing the combination of courses from a wide range of disciplines.
- Special printed material known as "Self Learning Material" is provided to the students, which helps them in pursuing the programme through distance mode.
- Providing counseling sessions/contact programmes, workshops, audio visual aids and practical experience to the students through Student Support Services by establishing a number of study centres and programme centres.

Thus in the tradition of Open Learning, CDOL provides considerable flexibility in qualification, place, pace and duration of study to students. For example the Bachelor's Degree in Education (B. Ed.) of 2 years duration conducted by CDOL can be completed in 6 years if the student so desires.

Presently CDOL offers two programmes: B.Ed. (Distance Mode) and Diploma in Power

Distance Learning in Other Countries

Distance learning courses in other countries such as Australia, New Zealand, United States of America, Mexico, United Kingdom, and Ireland are offered by both public and private educational institutions. These distance education courses help a student receive accredited degrees from the universities in these countries while continuing studies at home; and also help a large number of people not only in continuing their education but in the whole process of democratisation of higher education.

Making Distance Learning Effective

Distance learning has several advantages over traditional teacher-student face to face education system. Distance learning does not require commuting and one can live anywhere and study from anywhere. Besides, classes can be attended at one's convenience and learning could be at self-paced.

However, there are certain factors that are important to consider for making distance learning effective.

These factors are:

- **Technology:** Distance learning system through OCW needs to be strengthened, improved and upgraded with application of new technologies such as semantic web, telepresence, and the likes.
- **Accessibility Option:** Considering the fact that everyone may not be in a position to own a computer, accessibility to OCW may be provided on community sharing basis. Obviously, option for accessibility on individual basis would be inherent feature of this education process.
- **Cost:** The cost of developing and maintaining OCW is fairly high. For example, MIT estimated that OCW would initially cost between \$7.5 million and \$10 million per year. Hence, sourcing of funds is considerably significant. Traditional source of finance is from budgetary allocation of the government. To augment and supplement the traditional fund source, a new avenue of finance could be through industry sponsorship and partnering mode. As part of corporate social responsibility and with growing recognition of distance learning system, industry support would be feasible to obtain. For example, adopting the concept, structure and services of distance learning, IGNOU has identified for launch of an integrated skill development programme through public-private partnership mode.
 - **Industry Linkage:** The learning materials have to be prepared in a manner that meet the requirements of industry and help the students to be employable. Therefore, linkage with industry in developing the course curriculum and study materials is essential.

The Way Forward

As in the competitive world, people prefer to engage in multiple activities, the demand for distance learning courses have significantly increased across the globe. Also, universalization of education underlines the need for making education accessible at all locations at affordable costs. This could be speedily achieved through distance learning system, the importance of which is today recognised globally.

India

As regards India, the population has crossed 1 billion, and about 34% is illiterate, which accounts for nearly 50% of illiterates in the world. Though the Indian achievement with regard to higher education has been substantial in quantitative terms, it has not been enough to provide access for all. As per recent estimate around 12% of the relevant age group in India is enrolling in higher education. This indicates the need for further expansion of higher education system as the world average is 16% and the average percentage in developed countries is 45%. Furthermore, to achieve the targeted economic growth, the major constraint is the availability of skilled manpower. The shortage in India of skilled workforce is not only in high-tech skills but also in basic skills. India needs to create 500 million skilled technicians by the year 2020.

In this context, distance education is a vehicle that could be meaningfully used in India (as well as in other developing countries) to harness the talent of human resources that is presently neglected on account of inaccessibility to education by a significant population who are residing in remote places and cannot afford the present cost of education. Distance learning open source knowledge medium facilitates to strengthen and sharpen the skills of those who do not have opportunity to blossom and gradually fade away. It also assists to enrich the pool of national human resources by spreading general, vocational and professional literacy among the neglected masses and untie the unholy alliance of illiteracy and poverty. Talents of 'Ekalavyas' could be effectively harnessed to build up rich resource pool, prevent waste of national human skills, alleviate poverty and promote national development on inclusive basis.

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