Editorial

From Information to Optimization: Potential of Learning Analytics in Distance Education

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Technological innovations in the field of open and distance education have captured the attention of teachers to apply new ways of designing learning and delivering instruction. These have also attracted the attention of researchers to discover new fields of studies and seek solutions to educational problems. Technology integration in teaching and learning has widely benefitted to optimize learners' potential and come up as an emerging field in which learners are facilitated according to their intellectual and cognitive needs and competencies. It has drastically changed the concept of traditional teaching and learning and provided strength to the distance education systems in creating such interactive learning environments in which learners can excel at their best.

Web-based learning environments in distance education offer such functionalities in which learners can get individualized self-paced education without any constraints of time and space. The learners are provided with a wide range of learning opportunities in which they can have unlimited access to massive amount of information and interactions through World Wide Web. They create and manage documents as assignments or project work, communicate with their peer and teachers and interact with digital resources. These learners' interactions in web based learning environments are stored on the servers (be it LMS or other applications) as a large amount of data that can be tracked and used to determine learners' behavior. This data provides useful information to understanding how the learners are interacting with their course content, peer, and teachers for attainment of learning outcomes. Further benefits are for initiating predictive, diagnostic, descriptive, and prescriptive analysis.

This concept has emerged new fields of study like learning analytics, big data analytics, educational data mining or business intelligence. TEKRI (Technology Enhanced Knowledge Research Institute), Athabasca University defines learning analytics as the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs (source: https://tekri.athabascau.ca/analytics/).

Learning analytics has great potential in distance education from information gathering to optimization of learning. We can make decisions about effective teaching learning strategies, media selection and implementation, assessment and evaluation, research and development, and quality assurance practices in open and distance learning (ODL). The learning management systems (LMSs) provide information about teachers and learners through log reports. Applications like xAPI (Experience API) help us in collecting data about activities (online and offline) for improving our learning solutions, tracking of learning activities, understanding what learning is

happening and its impact of learner's success. These have significant relations to issues like student engagement and retention in ODL.

Specific techniques and processes can be used to analyze these datasets (data related to administrative, academic and personal attributes) to develop a visual representation in the form of graphs, figures and network diagrams for better understanding and decision making about teaching learning processes and intervening variables. Lessons, courses, curriculum, new programs and assessment strategies can be designed and developed based on the recommendations of learning analytics results. Monitoring learning processes, problem identification, discovering similarities and differences in learner's activity, reflective practices, improvement in teaching resources, comparisons, team work, discussion and interactive activities, assessing behavior and student performances to improve learning are some area in which learning analytics can be very helpful in distance education. Revision of previous work to sustain current practices and to improve future activities in the field of distance education in order to facilitate teachers and guide learners is the main focus of learning analytics. In order to expand the use of learning analytics within distance education, training of ODL teachers and practitioners is necessary in this emerging field so that maximum benefit can be attained from learning analytics from informing to optimize opportunities for learning. While there are benefits, there is a serious concern about permission from learners to use that data. ODL institutions capture lot of personal data for admissions and during study data about their study behaviours. There has to be code of ethics, transparency and consent before making use of data. Developing relevant policies for data protection is a right approach in this direction.

There are eight papers and one conference report in this issue. These touch upon various issues on how open and distance learning can gain more like analysing learners' expectations and perceptions, assessment of current ODL practices for propagation of higher education among the tribals, gender equity, applications of MOOCs and eLearning strategies. Gowthaman et al. examine the ODL policy in India in the light of recognition of qualifications acquired through distance education. This has been a crucial issue because observing certain irregularities and dubious standards, the Supreme Court of India and the University Grants Commission, a statutory body to maintain standards of higher education in India, stopped distance courses from certain deemed universities unless quality standards are maintained. This article further looks into employment opportunities, instructional delivery mode, learner support services, choice based credit system and MOOCs etc. The authors recommend that a flexible ODL policy is needed to support learners' needs to enhance skills and making them industry ready.

In the next article, Ankuran Dutta and Anamika Ray discuss various initiatives of community media and video. Community radio is already a very successful experiment for community development and in this article the authors trace out the growth and development of community video in India. Dristi, Video SEWA, Video Volunteers, Digital Green, Deccan Development Society, Hope etc are some of the initiatives contributing to community development in the form of participatory video programmes in different states of India. The authors suggest a sustainable model of community video production and delivery which can be adopted by other countries suited to their socio-economic conditions.

Third article is by Amit Chaturvedi and Subash Ranjan Nayak. They report on the efforts made towards increasing access to higher education in tribal areas in the state of Madhya Pradesh, India through open and distance learning. They report that how certain under graduate programmes, like Bachelor Preparatory Programme (BPP), and Computer Literacy Programme (CLP) are changing the lives of tribal communities by empowering them with knowledge and skills. The authors suggest the use of Mobile e Learning Terminal (MeLT) van which can allow access to academic counselling through trained / experienced subject experts for the learners in tribal areas.

Gender equity is very important for human and educational development. In Asian context it needs to be treated on priority due to cases of gender discriminations coming in light every now and then. Countries such as—Korea, Japan, China and Singapore report high human development index and women are more privileged in access to educational opportunities which is not the case in countries like India, Pakistan, Bangladesh or Afghanistan etc. Ritimoni Bordoloi and Prasenjit Das in their paper analyse the status of gender inequality in some select asian countries and give suggestions on how with the help of open distance education the gender inequality can be reduced and capacity building among women be accelerated.

Anil K Dimri in his article looks at the advantages eLearning can bring to people in terms of access to information, interactivity and personalised learning. He reports on the Government's efforts for Digital India and how with the help of eLearning remote and hilly areas can be connected with mainstream educational mechanisms by developing them as Central Digital Villages and Cluster Digital Learning Centers to provide essential digital services to the villagers.

Next article also looks at eLearning and emergency management in tertiary education. Kofi AYEBI-ARTHUR in this study presents an interesting case of increased adoption of eLearning in a university after the country was affected by seismic events. This study establishes that with the use of eLearning we can get ready for disaster management to reduce vulnerability to hazards.

In the next article, Gaurav Singh and Rashmi Chauhan check out an initiative of Ministry of Human Resource Development, Government of India the 'SWAYAM' (Study Webs of Active – Learning for Young Aspiring Minds) portal to digitalize the education system and to reach the remote areas all over the India to achieve the objectives of education for all. They find that although the teachers have basic idea about this MOOC initiative however a confusion persists about the role of MOOCs for teacher education. The authors are hopeful about bright future of MOOCs in India.

Last article is by Amit Kumar Srivastava and Bhanu Pratap Singh in which they investigate the perception of students of ODL about adoption of emerging technologies. They further find that the students are willing to be part of technology enabled learning process e-learning programmes especially MOOC's.

Enjoy reading the papers and share your feedback. Your contributions as original articles are also welcome!