Management Development Programme for University Deans/ Principals of Colleges

On

Use of New Media, New Technology and Innovations for Improving Quality of Higher Education

3 days Workshop from 21-23 December, 2016

India Habitat Centre, New Delhi

Report

Introduction

There has been a sea change in communication, sharing of knowledge and development of skills in this digital age through New Media, New Technology and Innovations all over the world. Researches in education have provided clues and techniques about how students with different orientation, knowledge and cultural make up, learn, acquire skills and apply them in real life situations. The methods of teaching and learning in this digital age has given opportunity to bridge the gap between what is taught in world known institutions in a particular subject and what can be taught in remotely located institutions in the developing world.

To share and demonstrate how it happens, SEED-CHEST in collaboration with LMP Education Trust organized 3 day workshop from 21-23 December, 2016 at India Habitat Centre, New Delhi. The workshop also focused on a UGC and MHRD Policy imperatives to create and use the Massive Open Online Courseware on Swayam Portal.

The Objective and outcome of the workshop were:

Objectives

1.To share knowledge / information on Fourth Industrial Revolution- the digital age

2.To discuss and demonstrate:

(a) use of New Technology of communication in sharing of knowledge and development of skills through, Moocs and New Media and Technology

(b) use of new media and technology for planning, management and monitoring of quality of education with the least cost.

(c) use of hardware and software devices like, desk top, lap top, mobiles, servers, clouds for New Media and Technology

(d) To share and discuss the UGC and MHRD policy imperatives of: use of MOOCs on Swayam portal and the system of support and credit transfer for learning on Moocs.

Outcome:

1. Participants will be able to fully understand and appreciate the use of New Media and Technology for improvement of quality of higher education. They would be able to acquire knowledge & skills to choose appropriate technology for teaching-learning and management at the institution level.

2. Participants will develop confidence and skills to handle issues arising out of New Technology for quality improvement of Higher Education.

Brief Report

SEED-Centre for Higher Education Studies and Training conducted 3day workshop on use of New Media and Technology for improvement of quality of higher education for Principals of Colleges and Deans of universities under its Management Development Programme in collaboration with LNP Education Trust at India Habitat Centre New Delhi from 21-23 December,2016. Principals of leading colleges of Delhi, Punjab, Assam, Meghalaya and senior faculty members from leading Universities participated in this workshop. The Programme was inaugurated by Dr. Bikas C. Sanyal former advisor of Dy. Director General, UNESCO, Paris, and Consultant Higher Education, IIEP, Paris and Director, India House, Cite Universitaire, Paris. He presented a paper on New education Technology and future of Higher Education. In the opening remark Dr. G.D. Sharma, former professor NUEPA and Secretary, UGC, Director, CEC and President , SEED spoke about Fourth Industrial Revolution and implications for Higher Educations . Professor MM Pant, former Pro –Vice Chancellor, IGNOU and Technology expert spoke on themes related to New Media and Technology and actively guidicd the programme. Dr. NV Varghese, Director, Centre for Policy Research in Higher Education, NUEPA spoke on New Technology for Higher Education with focus on MOOCs. Dr. Sunil Mehru, Jt. Director, Consortium of Educational Communication, New Delhi spoke on E-Content development and MOOCs initiative by CEC. He also showed examples of E-Content and videos on education. Shri IB Saxena, a Technology expert spoke on Block-Chain and Unified Payment Interface. Dr. Pankaj Mittal, Former VC, BPS Women's University, Haryana and additional Secretary, UGC, spoke on SWAYAM Project and UGC initiative on programme of PG Course on MOOCs. She also gave away diploma certificate to participants of International Diploma Programme in Educational Leadership- Higher Education and spoke on making higher education more relevant to societal need. She also shared her experience in implementing this concept in BPS Women's'University, Haryana, There was very lively sharing of experiences by the participants of the workshop. Professor Pant provided detailed knowledge of technology use and future of technology development greatly impacting the teaching-learning and management of higher education. The Valedictory address was given by Dr. Sahid Rasool, Director, Common Wealth Education Communication for Asia. He gave away certificates to Participants and made very effective presentation of role of Common Wealth Education Communication for Asia in promotion of technology in education and MOOCs. The participants expressed their appreciation for the conduct of the programme.

Participants and Resources persons of Worksop

Participants listnining to lecture given by Prof.Pant

Participants in attentive form

Tentative Time Table

Time Table is given in Axxuare-1

Resource Persons

List of resource Persons is given in Annexure -2

Reading and Reference material

List of reading and references is given in Annexure -3

About topics and sessions

Outlines of topics and sessions are given in Annexure-4

Participants

List of participants is given in Annexure -5

Venue of the Workshop

Maple

India Habitat Centre, Lodhi Road, New Delhi

Entry from Gate No. 3

Stay Arrangements

Stay Arrangements for participants from outside Delhi were made in the Guest House of National University of Educational Planning and Administration, 16 B Aurobindo Marg, New Delhi (located in NCERT Campus).

The workshop was convened by

Dr. G.D Sharma

MM Pant

The workshop was Cordinated by Dr. S.C. Sharma with support of

Mrinal Sharma

Mr. Janpriya

Programme Schedule

Theme : Use of new media and technologies for improving quality of higher Education
Dates : Wednesday 21st, Thursday 22nd and Friday 23rd December 2016
from 10 am to 5:00 pm everyday
Venue : Maple : India Habitat Centre, New Delhi (entry from Gate no.3)

Day 1: Overview and Mega Trends
Session 1.1 (Inaugural Session) :
10 am to 10: 30 am The Opening remark on dawn of the fourth Industrial Revolution :
GD Sharma
10-30am – 11-30am New Technology and future of Higher Education= Bikas Sanyal

Tea Break: 11-30am to 11.45 am

Session 1.2: 11:45 am to 1:00 pm MOOCs and challenges for Higher Education-
NV Varghese

LUNCH Break: 1:00 pm to 2:00 pm

Session 1.3: 2:00 pm to 3:30 pm: Mega Trends in Computer Technologies:
MM Pant

Tea Break: 3:30 pm to 3:45 pm

Session 1.4: 3:45 pm to 5:00 pm: Innovative Pedagogies, e-learning,
Learning styles and quality learning: MM Pant\

Day 2: Focus on MOOCs

Session 2.1: 10 am to 11:30 am: Tipping points for future technologies:
MM Pant and presentation by   IB Saxena   on Black chain.

Tea Break : 11:30 to 11:45 am

Session 2.2: 11:45 am to 1:00 pm: Creating Contents on MOOCs and Schemes of Assistance-
Speaker - Dr. Sunil Mehru,
 LUNCH Break : 1:00 pm to 2:00 pm

Session 2.3: 2:00 pm to 3:30 pm: The SWAYAM Project :
Pankaj Mittal

Tea Break :3:30 pm to 3:45 pm

Session 2.4: 3:45 pm to 5:00 pm- Learning with MOOCs :
MM Pant

5.00 PM to 6 PM Award Ceremony for IDEL-HE Participants
 Chief Guest: Bikas Sanyal and
 Guest of honour Dr. Pankaj Mittal Former VC, BPS University, Harayana

Day 3: Affordable Quality Higher Education with new media and Technology

Session 3.1: 10 am to 11:00am: The participant Sharing experience by participants and must
other well expert Impact of Big Data and
Learning Analytics on Higher Education: MM Pant

Tea Break : 11:30am to 11:45 am

Session 3.2: 11:45 am to 1:00 pm: The Impact of Block chains on Higher Education :
- MM Pant

LUNCH Break: 1:00 pm to 2:00 pm

Session 3.3: 2:00 pm to 3:30 pm:
Deploying New Media and Technology for Management:
GD Sharma and MM Pant

Tea Break: 3:30 pm to 3:45 pm

Session 3.4 :3:45 pm to 4 .15pm
Open Session

Session 3.5 4:15pm to 5.30pm
 Valedictory function
Dr. Sahid Rasool,
Director, CEMCA, New Delhi

Resource Persons

Dr Bikas C Sanyal, Ph D, D.Sc (Honoris Causa)
Former Special Adviser, UNESCO
Former Vice Chairman UNESCO Institute for Capacity Building in Africa
Knight of the Legion of Honour (France, 2007)
Pravashi Bharatiya Samman Awardee (2014).

Dr. G,D, Sharma, Ph.D. D. Litt (Hon. Causa)
Former Head, Higher Education Unit. NUEPA, Secretary, UGC, Director, CEC, New Delhi

Professor MM Pant, Former PVC IGNOU, Professor IIT, Kanpur, and eminent educationist
and Technology Expert

Professor NV Varghese, Former Head, Governance and Management in Education at   IIEP,
(UNESCO) Paris, Presently Director, Centre for Higher Education Policy and Research,
NUEPA .New Delhi.

Dr. Pankaj Mittal, Former VC, BPS Women's University, Haryana , Presently Additional
Secretary, University Grants Commission,
 New Delhi.

Dr. Sahid Rasool, Director, Common Wealth Education Communication for Asia, New Delhi

Dr. S.C. Sharma, Former Principal, Ram Lal Anand (Eve) College,
 New Delhi

Dr. Sunil Mehru, Jt. Director, Consortium of Educational Communication,
New Delhi

References and Reading Material

1. Fourth Industrial Revolution – World Economic Forum, Jan, 2016

2 . The Sixth Technological Mega Trends shaping Future- By Spaces, Report published by World Economic Forum- Global Agenda Conference on the future of software and society,25-4-2016

3. Technology Tipping Point and Societal Impact- World Economic Forum,Survey Report published by World Economic Forum- Global Agenda Conference on the future of software and society,2015

 4. Fostering Quality of Teaching in Higher Education : Policies and Practices-

- Fagrica Henkrd and Borah Rosegeare, Institutional   Management in Higher Education,

5. Guidelines for Development and Implementation of MOOCs, Dept. HE, MHRD,2015

6. Credit Framework of online learning courses through Swayam, UGC, July,2016

7. Credit Framework of online learning courses through Swayam, AICTE,July,2016

8. Innovative Pedagogy In Higher Education to become effective teachers in 21st Century- Chales Kivumja, International Journal of Higher Education, Vol.3 No.4 Sept,2014(online)

9. The Block chain for Education – An Introduction- Audrey Watters, April,2016 Blog.

10. Adoption of E learning Resources for Innovative Teaching & Learning Practices-
- K Srinivasan, College Post- The Journal of Higher Education,April-June,2014

11. Remodelling Education through Adaptive Learning A new learning Path -
-Dr. M. Prakash, College Post- The Journal of Higher Education April-June, 2014

About the Topics and Sessions

Over View of Session 1.1a

Fourth Industrial Revolution

The First Industrial Revolution- Breakthrough in sources of energy-
From animal and human sources to steam has caused the first Industrial Revolution
The Second one was through converting steam power to electricity
The Third one was electronic and Communication

The fourth one is built over third one with the advent of AI Software and Communication Technology Influencing all the fields of human, animal and plant life.

Over view of Session 1-1b

The new technology is required to confront the challenges facing higher education. These challenges are:

- Acceleration in the demand for places in higher education including for those deprived so long.
- To equip the graduates to compete in today's knowledge economy with reformed curricula, adapting adequate structure, methods of delivery and assessment
- To measure the relevance (quality) of higher education
- To facilitate inter stake-holder (students, Teachers, institutions, corporate sector, government) co-operation for updating content, structure, methods of delivery and assessment.
- To make the management of the complex reformed system to make it more effective and efficient.
- To reduce cost and increase funding sources to reduce state burden. We discuss selected emerging technologies and their impact on higher education was discussed.

Over view of Session – 1.3

<u>Megatrends in Computer Technology:</u>
The recent developments in digital technology have far-reaching   implications.
These technology shifts are fundamentally providing two things:
1. Digital connectivity for everyone to everything, anywhere and at anytime; and
2. The tools for analysing and using digital data in new ways.
The 10 most important technologies related to computing that will shape the future are:
1: Big Data
2: The Internet of things
3: Virtual Reality/ Augmented Reality
4: 3-D Printing
5: Block chain Technology
6: Computational Thinking
7: Robotics and Drones
8: Machine Intelligence
9: Mobile Ubiquitous Computing

These trends will greatly impact the world of higher education. The potential is huge. Imagine the positives of being able to access any course you want, just when and where you need it, on whatever device. These changes will not happen overnight, but are well on their way to reality and most of us don't realise it. The potential for a steep increase in the cognitive capital of nations is great. At the same time, there are real concerns. With data created on everything, will there be acceptable levels of privacy for individual lives? With accessibility greatly enhanced and a path to almost everything possible on the internet, how can we sufficiently protect intellectual property or secure financial data? The challenges of navigating the transition are great as well.

This session gave an overview of what this means, specific details were shared in some future sessions with appropriate titles.

Over view of Session –1.4

<u>Innovative Pedagogies, e-learning, learning styles and quality learning</u>

Traditionally higher education has been about pushing the frontiers of knowledge in all disciplines, and sharing the results of most recent advancements with research scholars and masters students. In due course, some of these advanced topics percolated to the undergraduate courses as well. This was followed by some large Universities becoming known for the quality of teaching at the Undergraduate level. When higher education was accessible only to a few selected and talented ones, there was less importance given to pedagogy, which was given as part of teacher training, given to School teachers in B.Ed. programs. It is quite interesting that while University departments of education taught pedagogy to School teachers, they never shared it with fellow teachers in other Faculties or Departments. With the goal of increasing GER to increase access to Higher education, and increase in adoption of online learning ad MOOCs, the importance of good pedagogy is now being appreciated. In an Internet world, Heutagogy seems to be the key model, transcending andragogy and traditional pedagogy.

Some innovations such as Flipped Learning, Threshold concepts, learning styles, Social learning and mastery learning was discussed in detail to appreciate how the quality of both face to face and online learning   can be greatly enhanced.

Over view of Session –2.1

<u>Tipping point for Future Technologies:</u>

In our session of Megatrends in Computing we had described a number of Computing related technologies that will be available in the future and how they could impact the realm of higher education.

And important question is when? The time gap between the demonstration of a technology, its Commercial development and its adoption by the consumer can be quite significant. The consulting firm Gardner is famous for a curve labelled ' the hype cycle' which describes the unrealistic and perhaps irrational expectations when a new technology is announced, then a reality check with a trough of disillusionment that is finally followed by a measure of realistic expectation. On the user side, Everett Rogers has a theory of diffusion of innovations which follows the classic Bell curve with about 2.5% being innovators, 13.5% being early adopters, 34% being early followers, 34% being late followers and 16% being laggards .In this session we will share reports of think tanks that predict the 'Tipping points' at which various technologies will become common as also the number of years for their acceptability and adoption in the higher education system.

Over view of Session –2.4

Learning with MOOCs

From the early experiment of CCK08 by George Siemens and Simon Downes, there has been a steep rise in the growth of MOOCs. Since the great success of these experiments, several universities had started offering MOOCs and Coursera, Udacity and edXwere established, The New York Times declared 2012 as "The Year of the MOOC". Government of India has also developed its own MOOC platform, called SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds). I have therefore said that the story of MOOCs is the story of the ugly duckling of distance learning that recently turned into the swan of MOOCs. One of the big disappointments with MOOCs is their relatively low completion rates.

 A very important factor in this is that while getting enrolled in a MOOC is very easy, completing it successfully is very challenging, because most students in India, even at the University level are passive and not active learners. This session addresses the issue of transformation of a typical passive learner who attends classes because of the mandatory requirement of attendance, before he can appear for the final degree awarding examination to an active learner responsible for his learning.

Skills like time management, effective self-learning from a video and text were covered, as is social and peer learning.

Over view of Session – 3.1

The Impact of Big Data, And Learning Analytics on Higher Education:

Learning Analytics is an emerging and developing field that deals with the process of measuring and collecting data about learners and learning with the aim of improving teaching and learning practice through analysis of that data Learning Analytics is a new field enabled by the advance of big data sets, increasingly sophisticated analytical tools such as visualisation software, improved data formats and advances in computing technology. The 3Vs of Big Data namely, volume, variety and velocity are applicable to data about learning as well. Scientific disciplines (Physics, Biology, Climate Sciences) have been using analytics since the 1970s and learning is a relative latecomer to this field of inquiry. But over the last decade there has been a surge of interest as evidenced by the proliferation of research journals in the field, including the Journal of Educational Data Mining and the Journal of Learning Analytics, and a host of international conferences such as the International Conference of the Learning Sciences and the Conference on Learning Analytics and Knowledge The internet, mobile devices and a plethora of Learning Management Systems (LMS) are all leaving "learner-produced data trails" that can provide an insight into the learning process and opportunity for improvement Higher education practitioners, who often lacked the agile evidence-base required to implement change, are now looking to analytics.

A variety of tools and approaches is used in Learning Analytics to provide educators with quantitative intelligence to make informed decisions about student learning. Data is collected from a broad range of sources including behavioural data taken from online learning systems and functional data taken from student admissions systems and progress reports A range of statistical methods is then applied to this data, including prediction modelling, social network analysis, relationship mining , and data for human judgement.

This session will dealt with how such data can be used to personalise the learning.

Over view of Session – 3.2
The Impact of Block chains on higher education:

The Block chain is a method for making secure, online transactions. "A block chain is a publicly shared immutable ledger – an append only log of transactions which uses crypto-currency techniques to minimise any security risk," "Transactions are contained in blocks which are linked together through a series of hash pointers. Any tampering of a block can be detected since the hash pointer to it would no longer be valid. As a ledger system it is very open. In addition to the source code being openly available a key feature of block chains is that in principle every user has their own copy of the entire block chain.

New platforms – notably Ether Launched last year – offer sophisticated "smart contracts" that allow anything of value to be exchanged securely between multiple parties. Blockcerts from MIT's Media Lab "is an open standard for creating, issuing, viewing, and verifying block chain-based certificates" –The UK Open University is also considering offering micro-credentials as Badges using the Block chain technology Block chain is the basis of Internet of Things, it may be used in intelligent library in the future. Block chain technology could be an important instrument to secure the integrity of scholarly communication. Publications and research data. For a thought-provoking, and somewhat futuristic take on block chain "ledgers" in education, see Learning is Earning 2026 - http://www.learningisearning2026.org/ Block chain Technology implementations are broadly in 2 broad domains : smart contracts and crypto currencies such as Bit coins. The application of Bit coin is straight forward, towards payment of tuition and other fees, and Scholarships to students and salaries to Faculty and other staff
The application of Smart contracts can be an extension of the idea of putting music on a Block chain ecosystem as in Mycelia. Independent Educators can reach out to their learners, without an Institutional intermediary or even a MOOC platform

List of the participant of 3 day Workshop at India Habitat Centre, New Delhi

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