

Media Enabling Pedagogy and Curriculum in Open and Distance Learning System in Commonwealth Asia



**Media Enabling Pedagogy and
Curriculum in Open and
Distance Learning System in
Commonwealth Asia**

Biswajit Das



CEMCA

**Commonwealth Educational Media Centre for Asia
New Delhi**

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Author: Prof. Biswajit Das

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For further information, contact:

Commonwealth Educational Media Centre for Asia
7/8, Sarv Priya Vihar, New Delhi - 110016
<http://www.cemca.org.in>

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Foreword

At a time when Thomas Friedman made us believe that 'the world is flat', in his book, "The World is Flat", based on the assumption that technology transfer is faster and increasing availability of bandwidth is creating a level playing field, another luminary Larry Cuban, dismissed the role of technology in classroom in his book, "Oversold and Underused". The paradox is, while the institutions of education, the world over, are liberally investing in technology and experimenting in making use of ICT in teaching and learning seamless, the technology still remains in the periphery of the overall educational system. With online courses and MOOCs gaining currency and acceptance, the pedagogies for online teaching and learning is undergoing a serious debate. Media enable learning, is believed to increase understanding and make learning more rewarding and enriching. CEMCA has been supporting the capacity building of Open Educational Institutions for better leveraging of the dividends of use of technology. Various initiatives have been taken to help teachers and institutions but yet the impact is not much visible as was expected.

The United Nation's Technology and Innovation report 2018, highlights the possibilities of utilizing, 'the power of digital platforms and innovative combinations of different technologies' emerging on daily basis, in democratization of educational resources for sustainable development. The report also stresses an "urgent need for a sustained effort by the international community to ensure that the multiple gaps in technology capabilities that separate developed and developing countries are closed". With the arrival of 'digital natives', who are more comfortable with the digital technology, it is important to design new digital pedagogies keeping in view the requirements of this new age learner.

To make meaningful interventions in strengthening the media enable learning, it is also imperative to understand the technological preparedness of Open and Distance educational institutions in adopting to the change. CEMCA, therefore, commissioned this study, "Media Enabling Pedagogy and Curriculum in Open & Distance Learning System in Commonwealth Asia", by Prof Biswajit Das. The study was aimed at surveying various media pedagogies used by the faculty of distance teaching institutions/open universities in the Commonwealth Asian countries, find the gaps and suggest measures to overcome the challenges. Prof Das through a systematic research approach has brought out this report that highlights the present status of technological advances in teaching pedagogies opted by the ODL institutions, their technological preparedness to embrace the change and possibilities offered by the emerging digital platforms. The report also suggests possible measures to be taken to make best use of media technologies for teaching and learning process with appropriate pedagogies.

Hope you find this report useful. The idea of this report is to generate a debate for better use of media technology in teaching and learning for sustainable and inclusive development.

Shahid Rasool
Director CEMCA

Acknowledgement

It gives me immense pleasure in thanking people who profusely supported and encouraged undertaking this project. Being located in the Conventional Educational system and undertaking a project on Open and Distance learning system offers enormous challenges and possibilities. While conventional educational systems are undergoing tremendous change in terms of pedagogical tools and approaches, it is equally important to study the changes undertaken by the basically pedagogy-driven Open and Distance Education system.

I would like to thank Prof. Asha Kanwar, President, COL and Dr. Sanjay Mishra for their support to undertake the project. Prof. Shahid Rasool's unstinted support and confidence on me to undertake the project is incredible. Mr. Thyagarajan's humility and reminder to meet the deadlines always put me on a tightfoot. Being a teacher and looking after the administration put me under additional pressure to meet the deadline. Dr. Manas Ranjan Panigrahi and other colleagues at CEMCA have been extremely supportive and helpful.

I would also like to thank Prateek to undertake the responsibility of following up with the questionnaire and data analysis. Ridhi has been throughout of help and support be it in organising the workshop on research design and questionnaire, collection of relevant literature and following up with the questionnaire. Shibaji organised the material and prepared the list for sending the questionnaire. Finally, I would like to acknowledge friends and colleagues who always extended support and provided valuable information to make it manageable. The frequency of questionnaires sent and the response received are pleasantly surprising. This report may be treated as a tip of the iceberg as much as needs to be probed and studied in the future years.

Prof. Biswajit Das

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Open and distance learning (ODL) has been both a parallel as well as supportive development within K-12 and higher education for over the past one and half centuries in the world.. The Commonwealth Asia region, although bit a late starter, however initiated these developments in the early 70s, keeping pace with global development. Correspondence education (the earlier form of distance education) was formally introduced in the Indian higher education in 1962, and the first Open University in the Commonwealth Asian region was established in Pakistan. Since then, open and distance learning (ODL) vis-à-vis media and technology developments (that act as enablers of ODL) have spread faster in the Asian continent. Though the developments toward access and equity have been tremendous, such a pace does not correspond with research investigations within ODL in this region. It thus became imperative to look into how these ODL institutions at the level of higher education in Commonwealth Asia (particularly the South Asian region) are using various media and technologies for curriculum design, teaching-learning, and quality assurance.

Evolution of Open and Distance Education

Globally, the developments in ODL emanated from correspondence education, passed through the multimedia phase and the provision of learner support and group learning, to the phase of online learning. The convergence of broadcasting, telecommunications, and computing vis-à-vis the emergence of the Net and the semantic web further led to convergence in various modes and forms, resulting in what is called today 'blended learning' and 'ubiquitous learning'. In this chapter, the developments relating to distance learning, open education and open learning, online learning, and blended learning are briefly summarised to have a foundation to further discussion on media-enabling pedagogies discussed in the second chapter.

A comprehensive account of the five generational developments in distance education has been provided by James Taylor (quoted in Bramble & Panda, 2008). This gradual unfolding of ODL contains pedagogical developments in each generation, possible largely by developments in media and technology.

Generation 1: Correspondence education

This is the first generation of distance education, largely dominated by print media that has flexibility of time, place and pace, but contains limited interaction. The pedagogic model was confined to the design of self-learning print materials.

Generation 2: Multimedia education

Further developments in audio-video technologies and that of computer-based learning improved the possibility of interaction through computer-assisted learning and interactive video. The pedagogic model was extended to include audio-video learning materials.

Generation 3: Tele-learning education

Developments in telecommunications and conferencing systems led to still greater interactivity through audio/video/teleconferencing. The pedagogic model went beyond static and one-way interaction to two-way synchronous interaction and instant feedback.

Generation 4: Flexible learning

Further media and technology developments in forms of interactive multimedia, web resources, and computer-mediated communication provided increasing flexibility in individual and group learning, and the pedagogic model included collaborative and interactive learning.

Generation 5: Intelligent flexible learning

This generation technology used CMC with automated response systems, as also the dynamic institutional portal to provide access to institutional processes and resources. Further, in the teaching-learning process, students were exposed to multiple media outputs from a single source (Annand, 2006). This generation provided for highest flexibility and individual freedom to the students.

Models of Distance Education Delivery

In addition to developments in distance education as briefed earlier, Peters (2003) provided a comprehensive account of various models of distance education as follows.

Examination preparation model: At the early stages after the founding of the University of London in 1825, this model allowed for self-study and appearance in examination as external student. This was the beginning of open access to university education, comparable to formal classroom study.

Correspondence education model: Developed in the second half of the 19th century, this model provided for additional teaching texts, assignments, teacher-student communication, besides examination. This enhanced openness further beyond the examination model.

Distance education model: With the developments in various media and technologies (especially broadcasting and telecommunications technologies), mediated teaching-learning, through especially large-scale distance teaching universities and open universities like CRTVU, IGNOU, UKOU, UOA Japan, KNOU, etc., took out-of-classroom education further. Both open education and open learning got practical application with the initiation of this form of education at K-12 to higher education level.

Learner-centred model: This involves independent study along with occasional consultation with the tutor. The programme structure involves flexibility including scheduling and place of study. Contract learning, as is called, spread especially in the United States for decades, and was combined with distance and online learning courses. The Empire State College of SUNY is the best example of such provision of openness.

Multiple mass media model: This model combines independent and distance learning with various mass media programmes, designed in collaboration with discipline experts, media experts and instructional designers. Open learning and Open University represent this form of education.

Network-based distance education model: Various digitised media and learning environments get networked through telecommunications and

convergence technologies to provide combinations of both offline and online learning. The learners have greater openness and flexibility in searching and retrieving information, and making selections suitable to their learning requirements.

Virtual distance teaching university model: Virtual universities provide for anytime anywhere education delivered virtually. These students are in immersive digital learning environments that would require seamless access to broadband on the Net to pursue this kind of learning.

Openness

With these developments in ODL, 'openness' has attracted greater attention, leading to convergence of distance learning, open education, and flexible and distributed learning. Primarily, the various dimensions of openness focus on the following dimensions, including teaching-learning pedagogy:

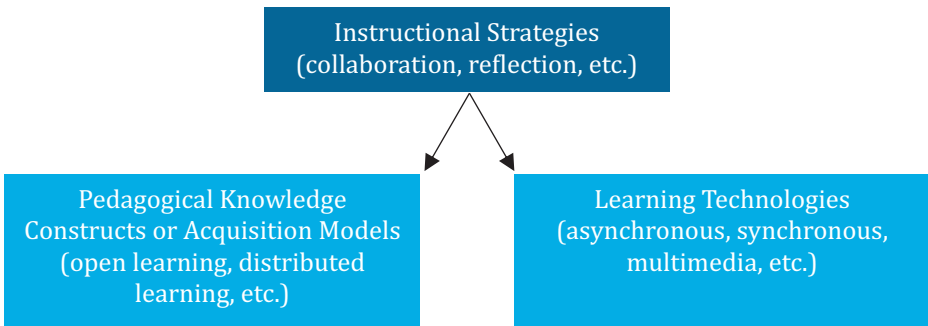
- Open curriculum whereby learners have choice and flexibility to choose curricular areas leading to desired learning outcomes.
- Open admission that allows for on-demand and walk-in admission and non-cohort based credit accumulation.
- Open standards, e.g., learning objects – SCORM sharable courseware object reference model.
- Open source software like MOODLE that is a PHP-based open source LMS.
- Open educational resources that are briefly touched upon below, and discussed comprehensively in the last chapter.
- Open teaching/open tutoring, i.e., seamless access to teaching and resources.

Pedagogical Concerns and Further Developments in Openness

At one point of time when most of the American universities were engaged in offering online learning courses, critical voices were raised against this as contributing to dismantling the very foundation of higher education. Noble (2003) severely commented on basically the hype that cyber world offers

and especially the question of accessibility through cheaper educational standards called 'digital diploma mills'.

In the context of e-learning vis-à-vis various pedagogical models (and, for those who believe in e-learning), open learning, distributed learning, learning communities, communities of practice, and knowledge-building communities have been underlined as significant pedagogic constructs (Dabbagh, 2005). The author further suggests a theory-based pedagogical design for e-learning (as given below) that though sounds very practical and grounded:



These openness and open pedagogies got further fillip with the emergence of social software. The following three categories of social software assume importance in distance and online learning (DOL) (McLoughlin & Lee, 2007):

- i) Social technologies like email, Google Groups, chats and discussion forums that are primarily discourse facilitating systems (synchronous as well as asynchronous).
- ii) Social software applications like YouTube and Flickr for video sharing and associated learning.
- iii) Social networks like MySpace, Facebook, Stickam, Friendster that are relationship management systems and could be used for learning support.

All these social software considerably facilitate flexibility and modularity, mixed with individual and community engagement and reflection, so essential for meaningful learning.

Further to the transformative process of technology-enabled learning, many institutions are moving toward u-learning via m-learning. While e-learning is largely wired, m-learning is wireless, and in case of ubiquitous learning the physical devices gradually disappeared. Starting from a level of hierarchy of productivity (level 1) to communication and collaboration (level 4), Yeonjeong (2011) formulated corresponding technological affordances from content-based individual work to communication-intensive group work. In the cloud computing system of present times, connectivist and networked learning in a ubiquitous environment has been far more real than visualised earlier.

Commenting on the aspects of access and quality in K-12 education, the William and Flora Hewlett Foundation (WFHF, 2015) argued how the higher education system of today is flawed, largely due to the constraints in availability of appropriate resources in discipline core, in the flexibility of teachers to adapt such resources, and in the flexibility of students to use those materials in any scrambled way they like. The Foundation that promotes OERs pleaded for greater use of open materials (basically instructional materials) that are curriculum-based and of high academic standards, and especially that are aligned to common standards. OERs can strengthen pedagogy while at the same time reduce costs.

In the context of OER, it is imperative also to examine its limitations and its contribution to open pedagogy. Bates (2016), in a recent blog, underlined that it is becoming increasingly difficult to locate OERs appropriate to one's curriculum and context; that large portion of OERs are of poor quality; that the OERs benefit less to teachers in comparison to students; that there is the question of ownership of knowledge by the creator; and that OERs are very narrowly conceptualised. Tony Bates further pleads for open pedagogy, rather than just OER, underlining that the teaching methods need to be more open (rather than closed), i.e., the knowledge management needs to be done by the students rather than by the teachers. This could be possible more through project-based and/or problem-based learning. While knowledge is being available anywhere, from many sources, it, therefore, is not confined to be branded only from 'educational' sources. Hence, it may be appropriate to talk of 'open resources' rather than 'open educational resources' (that are generally approved, rather than openly accessible) in the context of open

pedagogy. Wiley (2013), a couple of years back, had proposed 'free' in terms of access, reuse, revise, remix, and redistribute to have full-fledged OERs; and that open pedagogy is possible only when there is free access and 4R permissions.

Subsequent developments like Massive Open Online Courses (MOOCs) are part of the OER movement, and also need to be examined from the point of view of pedagogy (along with other ICT-enabled education).

Media Attributes for Curriculum Design

In case of mediated learning as distance education provides for, media selection and deployment assumes considerable significance. For integrating media into the curriculum design, three approaches are generally considered: i) supplementary approach (where various media inputs stand parallel to the printed text), ii) complementary approach (where certain course units are exclusively presented through media other than print), and iii) integrated approach (where various media including print are integrated for presentation of course units and various concepts through different media, but are either horizontally or vertically integrated. The best example on pedagogic functions of various media is given by Koumi (2006), as given below, which has become an universal guide to distance educators and instructional designers across the globe.

Comparative merits and distinctive teaching attributes of six different media	
<p>1. Audiovisual (broadcast or cassette) over Print</p> <p>1.1 unique ways to help learning, e.g., drama, animation, demonstration</p> <p>1.2 provision of realistic experiences, e.g., sounds, places, events</p> <p>1.3 the medium's realism has a strong impact on attitudes, appreciations, motivations</p>	<p>2. Audiovisual (broadcast or cassette) over Print</p> <p>2.1 random access at the student's own pace helps the study of:</p> <ul style="list-style-type: none"> • data in quantity, e.g., glossary, study guide • fine details, e.g., equations, photos <p>2.2 student can browse and select more easily</p>

<ul style="list-style-type: none"> 1.4 personalisation of teachers 1.5 breaks the tedium of print 1.6 literacy is not essential 	<ul style="list-style-type: none"> 2.3 print can carry more information 2.4 print is adequate to cover most of syllabus 2.5 easier teacher access/control 2.6 production skills are adequately resourced 2.7 reception is not affected by power cuts 2.8 family does not dispute access
<p>3. Broadcast over Cassette, Print</p> <ul style="list-style-type: none"> 3.1 cheaper for large audiences 3.2 study pacing (obliged by broadcast schedule) 3.3 sense of importance 3.4 sense of community 3.5 sense of immediacy 3.6 non-stop is good for presenting an overview 3.7 recruitment of more students 3.8 public/academic exposure 3.9 national resource 3.10 appearance of top experts 	<p>4. Cassette or Print over Broadcast</p> <ul style="list-style-type: none"> 4.1 student can study when alert and prepared 4.2 student can stop and reflect, annotate notes, hence the medium can carry greater detail 4.3 student chooses repeats 4.4 lessons can have variable length 4.5 lessons can be sub-divided into digestible segments, with interspersed activities 4.6 cassette is better for group discussion 4.7 frequency of lessons can be varied 4.8 can achieve closer integration with print can carry socially sensitive material 4.9 can carry socially sensitive material
<p>5. TV/Video over Radio/audio-cassette</p> <ul style="list-style-type: none"> 5.1 more compelling, in general 5.2 more interesting/glamorous to produce 	<p>1. Radio/audio-cassette over TV/video</p> <ul style="list-style-type: none"> 6.1 student access to (cheaper) equipment 6.2 cheaper to produce and deliver

<p>5.3 engages two senses: vision and hearing</p>	<p>6.3 evoked images are better 6.4 transition is easier to implement 6.5 portability of equipment 6.6 one can listen while driving</p>
<p>7. Video over Audio cassette with notes/visuals</p> <p>7.1 the field of view is pre-determined 7.2 when moving pictures are needed 7.3 pictures and sound can be synchronised 7.4 video has picture-search facility</p>	<p>1. Audio-cassette with notes/visuals over Video</p> <p>8.1 student choice of when to look where 8.2 cost effective when topic needs pictures but not moving pictures 8.3 adequate production skills easier to achieve</p>
<p>1. Audio cassette with notes/visuals over Print</p> <p>9.1 verbal commentary for diagrams is easier to use than margin notices for diagrams 9.2 students can revise more easily from the sparse notes (without replaying the audio) 9.3 (with or without notes) spoken words help pronunciation; pacing/intonation add meaning</p>	<p>1. Radio over all others</p> <p>10.1 the short lead time enables remedial tutorials, errata, news and information</p>

These media-pedagogy characteristics are considered by distance teachers while undertaking curriculum design and development, and also while transacting the curriculum.

In Chapter 2, most relevant literature is reviewed from the viewpoint of media-enabled curricular and pedagogic practices in the context of ODL. Subsequent to this, the research questions of the present study are formulated.

Understanding Pedagogy and Learning Design

Green et al (2010) quoted the learning design framework given by Hong and Sullivan (2009) based on four dimensions. For the pedagogical dimension they suggested three levels of learning design practices in increasing order of depth:

- i) learning as acquisition (learning through increasing efficiency in knowledge acquisition and appropriation),
- ii) learning as participation (learning through participation in peer group and/or learning community), and
- iii) learning as knowledge creation (learning through engagement in innovation and creation at higher level).

The authors, while underlined re-conceptualisation of pedagogy in the context of online learning in higher education, stressed the need for ODL to strive to move toward 'learning as knowledge creation'. Through this process, the authors claimed to have rediscovered their professional identities that facilitated redesign of online pedagogies.

It is imperative to understand 'pedagogy', the theories and principles behind learning (especially learning with ICT), and how to design learning with ICT. In a broader sense, pedagogy is conceived as any set of activities undertaken by one so as to improve the learning of the other. Teachers use pedagogies through their teaching as a systematic activity with rules/principles and contextual practices. This concept of the English-speaking world is understood more practically in non-English speaking Europe as 'didaktik' (Loveless, 2010) that is articulated as a planned, and systematic scaffolding for learning 'bildung' (that means to become an educated person to be able to engage and contribute meaningfully to the society/community). Therefore, pedagogy involves wider socio-cultural

and political meanings. Design for pedagogy involves the compatibility of content, teaching-learning strategies, context (learning environment and/or community of practice), and assessment (formative as well as summative). Therefore, knowledge as building-up and as transformation through interaction between teachers and learners needs to be distinguished from knowledge as merely effective transmission of something which is given. In the process of building-up, the teachers create and provide opportunities and learning tasks to the learners, and this happens in a condition of openness of minds of teachers and learners in connecting to the content being taught/learnt.

A review of learning theories suggests broadly three perspectives within which design for teaching-learning can be generally located (Mayes and Freitas, 2007). These perspectives, as discussed below, can also be extended to the context of ICT-enabled learning and/or e-learning.

- i) Associationist perspective: This is represented by the traditional behaviourist and connectionist theories in which learning is understood as building gradually patterns in associations and skills through sequences of activities. Besides the traditional behavioural objectives given by the behaviourists, Robert Gagne's steps in instructional process and detailed instructional task analysis provide for progressive learning from simple to complex tasks. In design terms, this led to what is called Instructional Systems Design (ISD) that involves analysing, sequencing, and then designing. This perspective of learning that is often criticised and misunderstood as bottom-up sequential/linear approach, has provided for a systematic process of aligning learning objectives, instructional strategies, active learning, and learning outcomes. Most of the current e-learning is dominated by this perspective.
- ii) Cognitive perspective: With emphasis on specifics of memory, attention, reasoning, perception, language, concept formation, etc., significant research was conducted on the processes of thinking, mental models, metacognition, interpretation and construction of meaning, and as to how does new experience interact and build on the existing individual structure of understanding. The procedure of

knowledge acquisition became more important than external expression/ declaration of knowledge. The cognitivist perspective is related to each of the other perspectives, such as to the: a) behaviourist in view of the learning by doing and the importance of feedback; b) constructivist in view of the understanding through practice in-context; and c) situative (discussed later) in view of the engagement in authentic tasks. It supports Jerome Bruner's meaningful learning and Jean Piaget's personal intellectual activity through active experimentation (as against passive absorption), i.e., cognitive constructivism (rather than Vygotsky's socio-cultural constructivism). The aspect of situated cognition (as part of the situative perspective as discussed later) is derived from the cognitive theory perspective within the socio-anthropological research by Jean Lave. In so far as ICT is concerned, as against the behaviourist strategy of direct effective instruction, the cognitivist strategies employ ICT for task-based learning and learning through individual reflection. The conflicting stance of the last part of the twentieth century between academics (that learning must be situated in authentic tasks) and administrators (that learning involves efficient delivery of information) seems to have become subservient after the advent of many communication features of the Web.

- iii) Situative perspective: This perspective views that knowledge is socially distributed and situated in the activities of the community of practice. The learners learn the best and more meaningfully when they are engaged in community practices. Instead of task analysis, here the emphasis is on analysis of the patterns of the successful practices in the community. Therefore, individual identity in the community of practice is more crucial, and learning is seen relating to the behavioural and cognitive aspects to the social aspects of knowledge. One dimension of this is that the social contexts be viewed as fields of practice of authentic and constructivist tasks, i.e., relationship between activities and actual practices (e.g., problem-based learning-PBL, and cognitive apprenticeship). The other dimension involves the relationship between the individual and the groups in the community of practice. Jean Lave and Ettine Wenger's formulation of 'legitimate peripheral

participation' in which novices begin learning from the periphery of practice and move toward the central and higher levels of practice/community activities; and, in the process, what is important is individual identity formation through this engagement in practice and sharing of practices (or, knowledge through practicing). 'Learning of the practice' (i.e., to become a legitimate participant in the community) and 'practice as learning' (i.e., to develop together in the community of practice) are two important dimensions of this view. Practice in peer group or community of practice is learning. This learning is further strengthened when there is established relationship among members of the learning community and the nature of dialogue involved. The e-learning and many features of the networked semantic web today provides facilitation of all of these for learning to be more experiential, meaningful, and qualitative.

Media and Technology Developments

Basically, the global technological developments may be categorised into three – broadcasting, telecommunications, and computing – and, therefore, all the developments in media and technology can be categorised into these three phases. In terms of pedagogy and mediated teaching-learning, the development started with the audio-visual movement, and moved through one-way radio and television and two-way conferencing, to more interactive and collaborative technologies alongside the developments in www and the semantic web. Bates (2005) listed the following technological developments, in the order listed as given in the box, since the 1980s.

- Audio cassettes
- Video cassettes
- Audio-conferencing
- Computer-based learning
- Audio-graphics systems
- Cable TV
- View data/tele-text
- Satellite TV
- Laser video-discs
- Video-conferencing
- Computer conferencing
- Compact discs
- Internet
- Electronic mail
- World Wide Web
- Digital video discs
- Search engines
- Fibre optics

- Mobile phones
- Learning objects
- Wireless networks
- Portals
- E-Portfolios
- Simulations
- Expert systems
- Virtual reality

These technological developments, while applied to distance education, can be categorised into one-way or two-way as given below.

Media, one/two-way technologies and DE applications

Media	Technologies	DE Applications	
		One-way	Two-way
Text & graphics	Print	Self-learning materials (course units and supplementary readings)	Correspondence tutoring Fax
Audio	Cassettes	Audio cassette programmes	Audio conferencing
	Radio	Radio broadcasts	-----
	Telephone	-----	Telephone tutoring
Video	Broadcasting	TV broadcasting	Interactive TV
	Video cassettes	Video cassette programme	Video conferencing
	Cable TV	Cable TV broadcasting	-----
	Satellite TV	Satellite TV broadcasting	-----
Computing	Computers, Telephone, Satellite, fibre optics, ISDN, CD-ROM	Computer assisted learning/ instruction, computer-based training, DVDs, CD-ROM, computer databases	Emails, interactive multimedia, computer conferencing, interactive databases

These media, presented through various technologies facilitate a variety of teaching functions. The latest developments have been online learning and virtual reality.

Pedagogy of Distance Education and Online Learning

As discussed in the first chapter, distance education has evolved from the earlier correspondence education to the current frameworks of networked and blended learning. Throughout its unfolding, besides the goals of access and equity, pedagogy/andragogy has been the central focus of ODL theories and practices. A brief discussion is in order distinguishing three distinctive foundational stances, and the current connectivist learning (that) again has been brought to focus in the last chapter in contexts of OER and MOOCs).

Commenting on the relationship between technology and pedagogy, Anderson and Dron (2012) remarked that while the former is the music, the latter is the actual dance. Both are inseparable, and together enhance human creativity and joyful learning. Further, technological developments starting from the days of correspondence education still remain in use in the present days of web-based technology, and hopefully will continue to be of use in the decades to come. Any technological advancement has, one way or the other, embraced the print technology and artefacts, except that its use has been diversified and multiplied. Described below is a brief account of technological affordances vis-à-vis pedagogy and learning activities that such technologies can enable (Anderson and Dron, 2012).

The cognitivist-behaviourist pedagogy associated with the first generation distance education created an instructional design system which was teacher-led and dealt with students as individuals – learning pathways were tightly-knit and assessment strategies were fully outcome-led and positivist. The shift from behaviourist to cognitivist was visible in the recognition of motivation, attitude, mental models and brain functions, short and long-term memory, and cognitive processes (in place of behavioural outcomes). Multimedia tools and computer modelling were used to address these concerns. Unlike the constructivist pedagogy, in the cognitive-behaviourist stance, the instructional designer and the teacher control learning design and pathways; and related research developments like in ISD, learning styles and models of teaching were associated with this

stance with limited individual flexibility and group learning. However, the developments in out-of-classroom education led to coming out of the craft models of classroom teaching to more systematic instructional design for learning resources, process of teaching-learning, and assessment. The contribution to technology developments ensured more transparency in learning and therefore addressing remedial measures to increase learning efficiency. The same instructional design models are still being pursued even in this age of interactive web networks, especially by those developing and offering MOOCs (especially edX, coursera, udacity, etc.). While the web 2.0 provides possibility of more collaborative and networked engagements, those following cognitivist-behaviourist approach use the semantic web for only information/ knowledge, 'distribution' by using tools like DropBox, Wikis, GoogleDocs, etc. Multimedia tools also focus on high quality content design and distribution, in place of more engaging collaboration. All types of reusable learning objects, reuse of OERs, and learning object repositories follow this stance. So also do data mining and learning analytics. Being low unit cost oriented, it is not surprising that most of the open universities and mega universities use this model in most of their course offerings.

As against this individual construction of knowledge from highly structured and high quality content, the social-constructivist pedagogy, pioneered by the works of John Dewey and L.S. Vygotsky, focused more on collaborative learning and learning from each other. The developments in web technology facilitated this through synchronous and asynchronous communication and interaction. Instead of pre-determined instructional design, there is stress on working together to pursue individually-determined learning goals and learning pathways. The focus is on individual creation of knowledge practiced in the community of practice. There is stress on metacognition and self-regulated learning in which learners themselves take control of their learning and construct new knowledge building on the existing experience and negotiated in the community of practice in-context. Within distance education, the focus shifted to inter-disciplinarity and socio-cultural aspects of knowledge – learning located in contexts and relationships. Technological developments facilitated real-time conversations through conferencing, well as asynchronous engagements, through email, bulletin board, discussion forums (including threaded discussion and voice thread, mobile technologies, networks, etc.) Data

mining, learning analytics tools (including Google Analytics, Moodle Analytics, etc.), and network analysis tools facilitate transparent monitoring and remediation of individual and group learning constraints and difficulties, and negotiation of culturally divergent perspectives and viewpoints.

Following these developments is the connectivism of George Siemens and Stephen Downes who build on the earlier works on distributed cognition, actor-network theory, networked learning, social context of learning, many-to-many communications and interactions, and postulated that individual and collective building of networks and resources and applying to real life problems enhance learning effectiveness; and quality of problems enhance learning effectiveness and quality of learning. Learning is visualised as the capacity to locate, filter and apply knowledge as per individual requirement in-context and at every point of time. Dron (2007) argues that from both pedagogical and organisational points of view, there is a need to establish both networked and personalised learning environments that provide autonomy and control to the learners. The associated pedagogies relate to high level of individual skills to access and use personalised learning networks and ubiquitous resources and networked connections, and individual and collective creation of knowledge in the shared social contexts and networks. In this context, this is how Bloom's taxonomy of cognitive domain created in the highest of the hierarchy 'creation' as the final goal of learning. While knowledge-application hierarchy could be more applicable to the cognitivist behaviourist perspective, analysis-creation hierarchy is more applicable to constructivist connectivist perspective. Instead of the earlier stance of largely technology 'determining' pedagogy, in the connectivist stance technology 'defines' pedagogy (Anderson and Dron, 2012). Technologies like wikis facilitate collaboration, beyond the peer group, in a ubiquitous time and space world. The success lies in institutional policy on open pedagogy and open resources (including institutional student and teacher-created resources). In this process, network analytics facilitates learners to search, locate and use content that is useful and valued.

In a recent work, Qvortrup (2008) proposed four knowledge categories (simple, complex, hypercomplex, and dynamic) and respectively associated

computer functions as representation and simulation, feedback, interaction, and simulation of world knowledge; and argued that 'it is appropriate to conceive of the new technologies as knowledge technologies and to apply a knowledge theoretical communication paradigm to e-learning' (p. 149). In visualising an online classroom, Knowlton (2000) proposed a framework of four quadrants with interactions among the students being the centre – traditional resources (Q1), web resources (Q2), problem-solving activities and evaluations (Q3), and life experiences of the students (Q4) – all of these interact with the teacher to bring in learning effectiveness.

Referring to online pedagogy and collaborative discourse vis-à-vis individual construction of meaning, Dougiamas and Taylor (2003) discuss the 'ways of knowing' (separate knowing, and connected knowing) and stress on learners as connected knowers toward 'productive educative relationships' in online learning. Further, based on the work of Jurgen Habermas relating to communicative action, emancipatory knowledge, and critical self-reflection, these authors examined meaningful engagement of students through connected online dialogue in online learning (especially in the MOODLE that Dougiamas had originally founded) that significantly contributed to further refinement of Moodle toward communities of reflective enquiry. While many institutions globally are using the open source Moodle LMS, it is also imperative to examine if such meaningful and reflective collaborative learning is taking place. In this context, Picciano (2006) suggests three pedagogical elements – planning of instruction with the help of course management software, interaction among teacher and students, and reflective teaching for developing critical thinking skills - and suggested significant implications for policy makers at national and institutional levels for effective implementation of online learning.

ICT and New Pedagogic Models

As it flows from the above discussion, the contemporary developments in ICT have revolutionised the pedagogic applications, whether constructivism or otherwise. In a recent literature review, Attwell and Hughes (2010) quoted the summary by Beetham et al (2009) of various pedagogical approaches that could be useful in institutional mapping of media pedagogies:

- Learning 2.0 – Collaborative knowledge building.
- Learning 2.0 Counter Evidence – Ubiquity, accessibility, ease of use.
- Connectivism – Network of people, content, and tools.
- Community of Enquiry – Participation in social, cognitive, and pedagogic aspects of the community.
- Practical Enquiry – Computer-supported cooperative work (CSCW), facilitating internationalisation of discussion (theory) and action (practice).
- Academic Apprenticeship – Literacy as situated social practice; disciplinary ways of knowing.
- E-Pedagogy – Constructivist and learner-led learning facilitated by digital technologies.

In this context, the authors also focus on communities of practice, activity theory, social constructivism of Vygotsky, scaffolding learning, boundary objects, pedagogic toolkit, rhizomatic knowledge (i.e., community as curriculum), meta cognition, bricolage (making individual meaning from the treasure of the web as second-hand), and learning styles. Each of these is facilitated by the new technologies of the web. They specifically focused on developing meta cognitive abilities (of goal setting, and identifying and using appropriate strategies to achieve those goals); and commented on learning styles by stating that in its place the most appropriate focus could be approaches to learning (surface, strategic, deep approaches) and technological affordances that can facilitate deep learning in students.

Review of Studies

The brief review of research studies presented below largely focuses on learner-centred technologies and social software/technologies vis-à-vis pedagogy in the contexts of distance and online learning. Some of the traditional technologies like print and associated instructional design have not been included in view of looking into the concern as to how far/to what extent the South Asian distance teaching institutions/open universities

have moved toward new media and technologies, and how do they look forward to the future of distance teaching-learning.

In a recent global review of research on the above areas, McLoughlin and Lee (2007) reviewed various pedagogies employed in/through technology use that gives a comprehensive and representative picture of media pedagogies for distance and online learning.

- Distributed intelligence, peer-to-peer learning (iPod Photo and Audio Blogs): Drexel University, USA.
- Student-generated content (Talkback Radio Style Pot casts): Charles Sturt University, Australia.
- Digital and social competencies (Postcast Recording and Discussion): Swathmore College, USA.
- Blended, mobile, and ubiquitous learning (iCube Postcasts, Precasts, Postcasts): University of Connecticut, USA.
- Peer teaching-reciprocal learning (Vodcasts): Bentley College, USA.
- Personalisation of learning (Profcasts supplementing Online Teaching): University of Leicester, UK.
- Peer-to-peer learning and student generated content (Digital Voice Recorders, Mini-camcorders, Audio-Visual Tours): UKOU.
- Cross-cultural collaborative work (Podcast Feed, Blog): Osaka Jogakuin College, Japan.
- Collaborative writing and editing (Wiki-based Encyclopaedia): University of North Carolina, Pembroke, USA.
- Resource-based collaborative learning (Social Bookmarking, RSS Feeds): Macomb Independent School District, Michigan, USA.
- Community of learning (Blog Posts and Bookmarks): University of Michigan, USA.

- Peer-to-peer learning community, self-regulated learning (SRL) (Blogs, Wikis, Podcasts): University of Plymouth, UK.

In a comprehensive review for the Asian continent sponsored by UNESCO, Jung (2005) reported the following innovations in ICT for ODL in Asia:

- Multimedia electronic courseware design (Allama Iqbal Open University, Pakistan).
- My LMS for e-learning (Open University of Malaysia).
- Moodle for online learning (Indira Gandhi National Open University).
- Mobile university (Thailand).
- e-Assessment (University of Phillipines Open University; Univesitas Terbuka of Indonesia; Korea National Open University, South Korea).
- Practical Enquiry – Computer-supported cooperative work (CSCW), facilitating internatioinalisation of discussion (theory) and action (practice).
- Academic Apprenticeship - Literacy as situated social practice; disciplinary ways of knowing.
- E-Pedagogy – Constructivist and learner-led learning facilitated by digital technologies.

The PANdora, sponsored by IDRC, had implemented a few technology innovations for distance learning in the Asian region, the results of which have been reported by the coordinators (Baggaley and Belawati, 2010). The review comprised of nine projects covering 39 researchers from 13 countries. Within the PANdora-sponsored study, Librero, Panda and Khan's (2006) research on instructional design training in the distance teaching institutional in Asia (including South Asia) revealed that the most preferred ID models applied by the faculty included that of Gagne, ADDIE, Dick and Carey, and constructivist models; and that the preferred contents for future training requirement included application of research in ID, selection and use of media, instructional design, and development of multi-media instructional materials.

A passing reference may be made to a review study by Chaudhary and Panda (2005) on educational television and teleconference in Asia-suggested integration of educational media to the teaching-learning process; structuring the programmes at the appropriate cognitive levels of learners; and that though fewer impact studies are available, there is a need to study the impact especially on learners. Similarly, the review by Mishra (2005) revealed effective use of radio, audio, and interactive radio in distance teaching in the Commonwealth Asia. The author suggested to go beyond evaluative research to conduct experimental research on pedagogic designs and student learning in distance education. These may be related to an effectiveness study on print, interactive multimedia and online resources by Dikshit, Garg and Panda (2013) that found interactive multimedia with a variety of learning activities to be pedagogically most effective. The researchers suggested adoption of blended learning design strategies combining interactive online discussion forum and activities through web tools.

In this context, the study by Anand, Saxena and Saxena (quoted in CEMCA, 2013) suggested e-learning platform as the more preferred integrated pedagogic design over CD and DVD based content design. In a recent study by CEMCA (2013), it was found that various communication tools like chat and email, navigation tools like mindmap and flowchart, and assessment tools like assessment rubrics were extensively used by various faculties in the Commonwealth Asia. The various instructional design elements used by the faculty included LMS-based e-content, online projects, group discussion, though simulation was the least preferred pedagogic strategy.

In a study on the National Open University in India, Panda and Mishra (2007) reported stronger faculty disposition to e-learning due to the fact that it enables collaborative learning, and that the pedagogic elements of print, audio, video and animation should be effectively integrated into the e-learning framework/platform. In a recent study on the faculty of Beijing Open University, P.R. China, Chen and Panda (2013) found faculty preference more for open courses and open e-books; and that OERs could be best used for teaching key points, provide explanations to difficult points, deepening the scope of learning, and task-driven teaching. In two successive studies on openness and open sharing at the national open university in

India which has implications for open pedagogy, Santosh and Panda (2016) and Panda and Santosh (2017) found that the faculty across various disciplines adopted free resources, and especially copyright-free resources; that they are willing to share their work free; and that about 59% agreed that sharing of knowledge and resources will lead to innovation in pedagogy.

Research Question

A preliminary review of the status of instructional design for mediated teaching-learning in the Commonwealth Asia region suggested further wider survey on various media pedagogies adopted or used in the distance teaching institutions in this sub-continent. The felt need by CEMCA is also strengthened by the analysis of literature and research studies undertaken in this chapter that suggested lack of a wider survey on what pedagogic strategies vis-à-vis various media are used by the faculty of open universities and distance teaching institutions in South Asia. More specifically, the present research study focused on the following aspects of media pedagogies in ODL:

- Curriculum design and concept mapping (need survey, modularity, credit system, new media technologies, blending, media tools, resource repository).
- Pedagogy implementation (technology infrastructure, skills, capacity building, student access, administrative ecosystem).
- Evaluation (student participation in interactive educational networking, revision and pedagogy revision).
- Learning (repository of study materials, event-based learning, computer game-based learning, incidental learning, transfer of learning, inquiry-based learning, connecting formal and informal learning, skill acquirement-based learning, learning through argumentation, evidence building and reflective commenting).

The survey instrument was designed to cover the above four aspects of pedagogies associated with various media, besides a section to obtain demographic variables of the faculty sample reported in the next chapter.

Based on the objectives of the study, this chapter is organised through the following four sub-heads.

Research Methodology

Since this research study primarily aimed at finding out the institutional practices on media-enabling pedagogies and curricular practices by faculty across various disciplines in both single-mode open universities (OUs) and dual-mode university distance education institutes (DEIs) in Commonwealth Asia, the survey methodology was used by establishing an online survey comprising of questions on the factual status on such practices.

Population and Sample

The population comprised of all the OUs and DEIs of those Commonwealth Asia countries having such established institutions. Those included Bangladesh, India, Pakistan, and Sri Lanka. One OU each and all DEIs from Bangladesh, Pakistan, and Sri Lanka, and the 14 OUs (including the national open university) from India, and 160 DEIs from India (listed by UGC) were selected and included in the Indian sample. The list of these institutions is given in Appendix 1.

The list, along with the emails, of faculty members teaching in those institutions were located from institutional websites; and about 5000+ faculty members were emailed the 'online survey URL' for submitting their responses (the bounce back rate was 40%). Reminders were sent twice, with a gap of seven days each, to the faculty members (whose emails did not bounce back), including requests to institutional heads to expedite the responses. The online survey showed 16 responses received within three weeks of the first dispatch of online survey URL, out of which 15 responses were found complete in all respects. (It may be noted that the faculty members were asked to fill up the online survey if they wish so, and that

their individual responses shall be kept strictly confidential and be used for research purposes only.)

The relevant demographic and other characteristics of the respondents are briefly analysed as follows.

Table 1: Gender

Gender	Count of Timestamp	
Female	8	53.3
Male	7	46.7
Grand Total	15	100.0

Table 2: Age

Age	Count of Timestamp	
25-35	4	26.7
36-45	2	13.3
46-55	5	33.3
56 and above	4	26.7
Grand Total	15	100.0

While the male and female respondents were almost equally divided, the largest majority of them (60%) belonged to the 46-55 and 56 and above age groups

Table 3: Country

Country	Count of Timestamp	
India	13	86.7
Pakistan	1	6.7
Sri Lanka	1	6.7
Grand Total	15	100.0

Table 4: Types of University

Row Labels	Total	
Government	15	100.0
Private	0	0
Grand Total	15	100.0

Responses were received from three countries - Pakistan, Sri Lanka and India – though largely from the last; and all the respondents belonged to public institutions.

Table 5: Type of University Mode

Type of University Mode	Count of Timestamp	
Distance mode	1	6.7
Dual mode university	1	6.7
Open and distance learning	1	6.7
Single mode open university	12	80.0
Grand Total	15	100.0

Table 6: Discipline/Department

Discipline/Department	Count of Timestamp	Percentage
Chemistry	1	6.7
Computer Science	1	6.7
Education	1	6.7
Electronic Media	1	6.7
Faculty of English, School of Humanities	1	6.7
Geography	1	6.7
Geriatric Care, Management	1	6.7

IT	1	6.7
Journalism & New Media	1	6.7
Physics	1	6.7
Public Administration	2	13.3
Sanskrit	1	6.7
Translation Studies	1	6.7
(Blank)	1	6.7
Grand Total	15	100.0

The public institutions comprised of largely single-mode open universities and dual-mode distance education institutions. The respondent faculty belonged to a variety of disciplinary areas, ranging from humanities, social sciences, and education to hard sciences of chemistry, computer science, and physics.

Table 7: Medium of instruction for courses

Degree	English	English, Hindi	English, Hindi, other	English, Tamil, Sinhalese	English, Urdu, other	Other	Urdu	English, other
Graduate	20	40	6.7	6.7	6.7	13.3	6.7	0
Diploma/ Professional	53.3	26.72	6.7	0	0	6.7	0	6.7
Post Graduate	46.7	6.7	6.7	0	0	20	0	0
M.Phil/Ph.D.	66.7	20	6.7	0	0	6.7	0	0

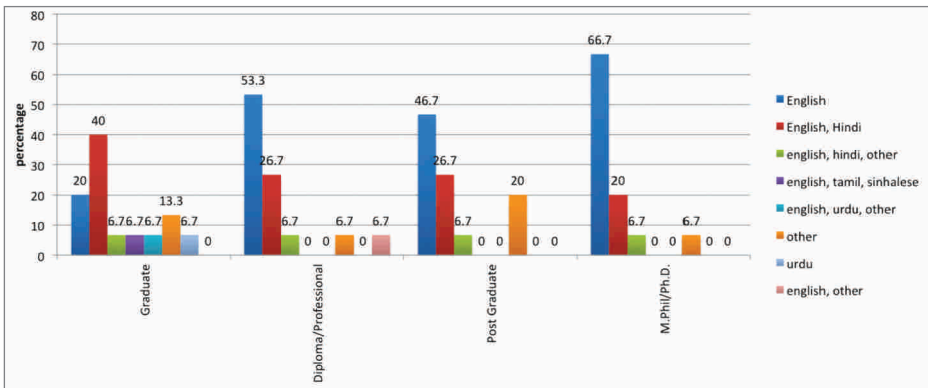


Figure 1: Medium of instruction for courses

Though at the graduate level the medium of instruction was through both English and Hindi language, English medium dominated instruction at the levels of professional diploma, postgraduate, and research degree programmes.

Tools and Techniques

For conducting the survey on media-enabled pedagogies and curricular practices in open and distance learning, a web-based online survey through Survey Monkey was established. Before the finalised questionnaire was put at website, the offline questionnaire comprising 65 questions was prepared that covered the following six sub-sections:

- a) Respondent characteristics.
- b) Conceptualising and concept mapping of media-enabled curriculum.
- c) Curriculum design and development.
- d) Curriculum (pedagogy) implementation.
- e) Evaluation.
- f) Learning.

The questionnaire was emailed to five experts on pedagogy/ instructional design in ODL with a request to comment on the content, structure, and formulation of items. Based on their comments, the questionnaire was revised that finally comprised of 49 questions (59 questions if the sub-parts in any question is considered as one). A copy of the finalised questionnaire is given in Appendix 2.

The questionnaire was uploaded to website at Survey Monkey, and the URL was provided to the faculty members through email to fill up online.

Procedure of Data Collection

Data was collected in November–December, 2017, with two reminders sent to faculty (as well as to institutional heads) with a gap of seven days each. Collected data were tabulated (tables) for frequency and percentages, and also converted to pie-charts and/or histograms as applicable. The results are presented in Chapter 4.

The collected data through the 59-item online questionnaire from 15 faculty members in India, Pakistan and Sri Lanka were tabulated in excel sheets and percentages for variables in each question were calculated. Such tabulations were also represented through pie-diagram or histogram (wherever applicable) for clarity and greater visibility. The questionnaire had five sections as follows:

- A : Background Information
- B : Conceptualising and Concept Mapping of Media Enabled Curriculum
- C : Curriculum Design and Development
- D : Curriculum (Pedagogy) Implementation
- E : Learning.

The data for Section A have been discussed in the third chapter under heading 'population and sample'; and hence the analysis of data for the rest four sections are presented as follows.

Conceptualising and Concept Mapping of Media Enabled Curriculum

Table 8: Conducting a need survey

Responses	Count of Timestamp	
Don't know	1	6.7
No	4	26.7
Yes	10	66.7
Grand Total	15	100.0

Table 9: Need based programme

Responses	Total	Percentage
Academic Need	3	20
Both (academic and market)	12	80
Grand Total	15	100

Generally, need surveys are conducted before deciding to get into the design and development of distance learning programmes; and the institutions and faculty consider both academic and market needs for a programme. About 27% responded that no need survey is conducted for their programmes, and 20% respondents reported academic need survey without going for study of market needs.

Table 10: People consulted during programme

People consulted during programme planning and conceptualising process.	Count of Timestamp	
Academic Experts	4	26.7
Academic Experts, Trainers	1	6.7
Govt. Authorities, Academic Experts	1	6.7
Govt. Authorities, Academic Experts, Trainers	1	6.7
Govt. Authorities, Employers, Academic Experts	1	6.7
Govt. Authorities, Employers, Academic Experts, Trainers	1	6.7
Govt. Authorities, Employers, Industry Experts, Academic Experts	4	26.7
Industry Experts, Academic Experts	1	6.7
Industry Experts, Academic Experts, Trainers	1	6.7
Grand Total	15	100.0

Planning for a programme has been the most important but contentious area in the operation of any distance teaching institution. The dominant decision-making stakeholder has been the academic experts, though about 27% also consult government authorities, industry experts, and probable employers.

Table 11: Developing 'concept map' for course curriculum, 'modular' and 'credit-based' courses

Responses	Total	Percentage
Maybe	7	46.7
Yes	8	53.3
Grand Total	15	100.0

Table 12: Consideration of pedagogies for undertaking curriculum design

Responses	Total	Percentage
To larger extent	11	73.3
To some extent	4	26.7
Grand Total	15	100.0

Some of the finer curriculum design strategies like modularity, credit system, and concept mapping are considered by only 50% of the respondents while designing their curriculum and courses. Further, a large majority (73%) consider various teaching-learning strategies (i.e., pedagogies) at the stage of curriculum design.

Curriculum Design and Development

Table 13: New media technologies and student learning process

Responses	Total	Percentage
Don't know	13	20.0
Yes	12	80.0
Grand Total	15	100.0

About 80% of the faculty are of the view that new media technologies including social networks and MOOCs shall positively impact student learning. This, though, needs to be cross-checked against actual consideration of media at the stage of curriculum design given as follows:

Table 14: Blending and designing the curriculum

Blending of text, image, audio, and video used while designing the curriculum	Total	Percentage
Print, Online	1	6.7
Print, Online, Video Conference	1	6.7
Print, TV, Video, Audio, Radio, Online	1	6.7
Print, TV, Video, Audio, Radio, Online, YouTube, Video Conference	2	13.3
Print, TV, Video, Audio, Radio, Online, YouTube, Video Conference, Skype	1	6.7
Print, TV, Video, Audio, Radio, Video Conference	1	6.7
Print, TV, Video, Audio, Radio, YouTube, Video Conference	1	6.7
Print, TV, Video, Radio	1	6.7
Print, TV, Video, Radio, Online, Video Conference, Skype	1	6.7
Print, Video, Audio	1	6.7
Print, Video, Audio, Radio	1	6.7
Print, Video, Audio, Radio, Online, YouTube	1	6.7
Radio	1	6.7
Video, Online, YouTube	1	6.7
Grand Total	15	100.0

While printed text, audio and video have been the mainstay of media-mix, a few have considered video-conferencing, skype, and YouTube for undertaking media-mix for course design. And, as shown in the table below,

a large majority are in favour of blended teaching-learning, by combining media technologies with face-to-face interactions.

Table 15: Effectiveness of 'blending' of media technologies with conventional teaching

Responses	Total	Percentage
Effective	7	46.7
Neutral	2	13.3
Very effective	6	40.0
Grand Total	15	100.0

Table 16: Media tool and pedagogies for transaction and teaching-learning process

Kind of media tools, and pedagogies associated with those media tools used in course transaction and teaching-learning	Not Used	Used
Print	6.7	93.3
TV	40	60
Radio	20	80
Video	6.7	93.3
Video Conferencing	33.3	66.7
Mobile and tab App-Based Learning	73.3	26.7
Interactive Educational Networks e.g. Piazza (INTRANET)	80	20
Social Media Handles (Twitter, Facebook)	46.7	53.3
Gaming	93.3	6.7
MOOC's /OER	33.3	66.7
Online story telling	93.3	6.7
Online learning platform e.g. Blackboard, MOODLE, WebCT etc	60	40

Blogging	73.3	26.7
Wiki	66.7	33.3

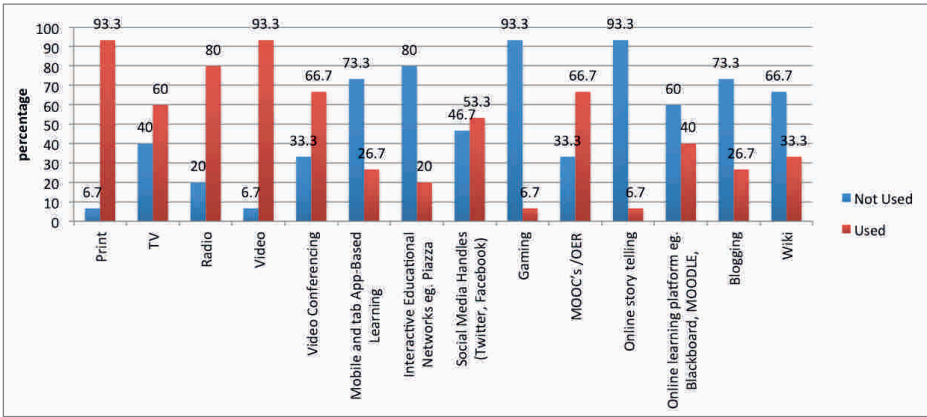


Figure 2: Media tool and pedagogies used in course transaction and teaching-learning

The dominant media tools, with associated pedagogies, used for teaching-learning include printed self-learning texts, video, radio, videoconferencing, MOOCs/OER, television, and social media, in that order. The least reported media (and associated pedagogies) included online storytelling, gaming, interactive educational networks, and blogging.

Table 17: Pedagogies and the tools

Pedagogies associated with the tools	Not at all	To large extent	To some extent
Print for Self-learning	6.7	93.3	0
TV for Self-learning	40	20	40
Radio for Self-learning	13.3	33.3	53.3
Video for Self-learning; Group discussion	6.7	33.3	60
Video-Conferencing for Face-to-face interaction for group learning	40	20	40

Mobile & App Based Learning for Collaborative learning, discussions and review through text based applications	60	13.3	26.7
Interactive Educational Networks, e.g., PIAZZA (INTRANET) for Cooperative learning through INTRANET	73.3	0	26.7
Social Media Handles for Public information sharing and discussion platform	46.7	6.7	46.7
Gaming for reasoning and thinking ability	93.3	0	6.7
MOOC's /OER for self-learning	13.3	20	66.7
Online story telling for reasoning and thinking ability	80	0	20
Online learning platform, e.g, MOODLE for Online collaborative learning; group critical reflection; self-learning	53.3	13.3	33.3
Blogging for self-critical reflection	66.7	0	33.3
WIKI for group critical reflection	73.3	6.7	20

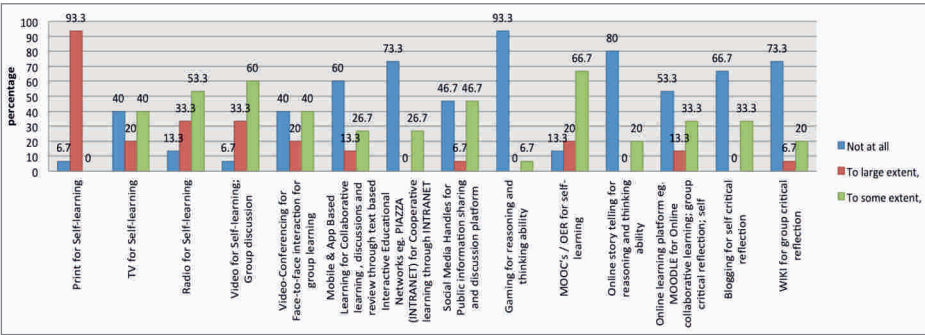


Figure 3: Pedagogies associated with the tools

In the year of 2005, Uttarakhand Open University (UoU) was established by an Act of Uttarakhand Legislative Assembly (vide Act No. 23 of the Uttarakhand). Further details on specific pedagogic function suggest that for 'self-learning' the most used media included printed text, radio, and video; for 'group discussion' the most used media was video; 'collaborative

learning' was facilitated mostly by MOODLE, WIKI, and social media handles. There has been occasional use of blogging and wiki for individual and group critical reflection.d Government) based on the philosophical values of Open and Distance Learning (ODL).

Table 18: Pedagogic tools for discipline requirements

Specific pedagogic tools and techniques adopted for taking care of specific discipline requirements (in humanities, social sciences, management, IT, engineering, sciences, medicine, etc.).	Total
Computer science	1
History	1
Humanities	1
IT	1
Mobile, Telephone, IGNOU website, Video and Radio/CD	1
MOOCS/OER	1
Multiple medium and media	1
Print	1
Print and Audio-Video	1
Print and AV	1
Print Material, Educational Real time TV Lectures, VDOs, Interactive Radio Counselling for English Courses	1
Print Media and face to face sessions (sometime on videoconferencing or Skype), TV and Radio Our own developed online platform called OLIVE	1
Print, Video and Blog	1
Print, OER, Online, Videoconferencing	1
Self-Learning Materials (Printed), e-resources (Self Learning Materials), e-Gyanagar (OER Repository), e-Library (Pro-quest), Audio and Video Lessons	1
Grand Total	15

A variety of pedagogic tools have been used by the faculty from various disciplines to take care of discipline requirements. Though the printed SLM dominates the kitty, there has been fair use of audio, video, conferencing, IRC, blogs, and OERs.

Table 19: Internet accessibility and affordability

Rating of the level of your country in terms of Internet accessibility and affordability. (1 low; 5 high)	Total	Percentage
1	1	6.7
2	2	13.3
3	8	53.3
4	4	26.7
Grand Total	15	100.0

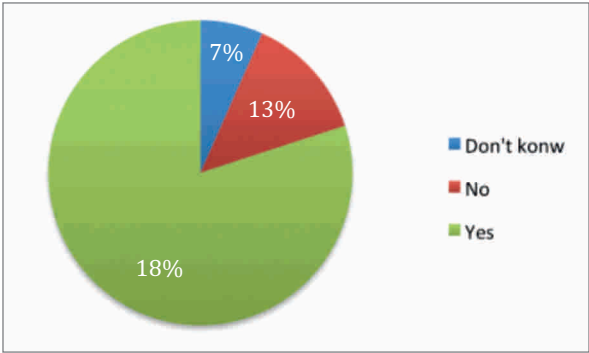


Figure 4: Internet accessibility and affordability.

Internet accessibility has been fair in all the countries; above 80% reporting good accessibility and affordability.

Table 20: Creation of study material

Responses	Toatl	Percentage
Don't know	1	6.7
No	2	13.3
Yes	12	80.0
Grand Total	15	100.0

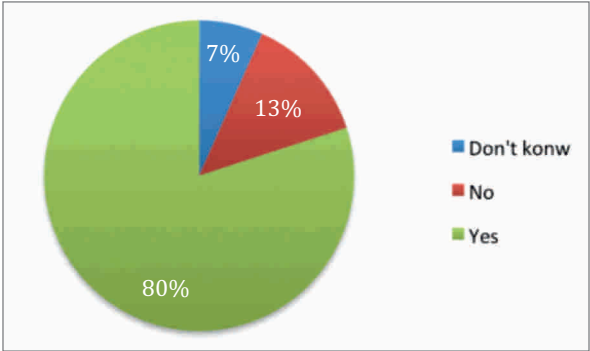


Figure 5: Institution having a repository of study material?

All the institutions, except two, did have a repository of learning resources; and it is surprising that one of the respondents did not have any information on this.

Table 21: Frequency of updating study material

Responses	Total	Percentage
Don't know	1	6.7
Five Year	3	20.0
More than five years	5	33.3

Once in year	1	6.7
Two year	2	13.3
(blank)	3	20.0
Grand Total	15	100.0

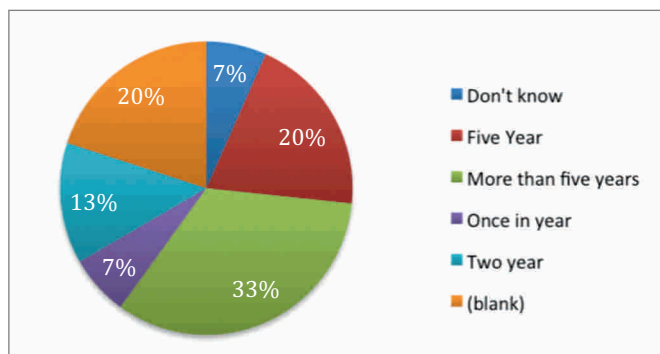


Figure 6: Frequency of updating study material.

Even if a repository exists, the discipline faculties varied in their revision cycle – some revised once in a year, while others took five or more than five years. Surprisingly, one of the respondents did not even know about the provision of revision of study materials.

Table 22: Repository for public access or access by fee

Responses	Total	Percentage
Access by fee	4	26.7
Don't know	6	40.0
Public access	5	33.3
Grand Total	15	100.0

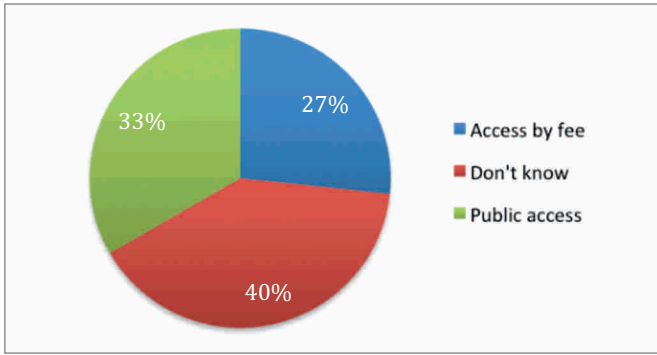


Figure 7: Allowing repository for public access

About one-third of the respondents who belonged to one national open university underlined full public access to learning resources free of cost, though four of the respondents expressed that their institutions charge a fee to provide access to their learning resources. Again surprising to note that about 40% of the respondents did not have any knowledge about their institutional provision.

Curriculum (Pedagogy) Implementation

Table 23: Quality of the media technology infrastructure present in your institution

Responses	Total	Percentage
Bad	1	6.7
Excellent	2	13.3
Good	8	53.3
Neutral	4	26.7
Grand Total	15	100.0

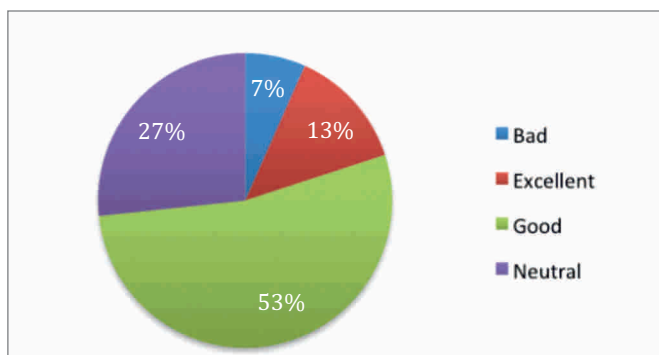


Figure 8: Quality of media technology infrastructure present in the institution

Though about one-fourth of the respondents remained neutral in commenting the quality of their media infrastructure (that may suggest absence of significant provision in their institutions), nearly two-thirds underlined good and/or excellent provision of media infrastructure in their institutions. Only one of the respondents expressed poor infrastructure quality.

Table 24: Measures undertaken for procurement of the desired infrastructure

Possible measures being taken by your institution for procurement of the desired infrastructure.	Total	Percentage
Seeking funds from private non-profit funders	1	1
Seeking Government funding	6	
Seeking Government funding, Seeking funds from private non-profit funders	1	
Seeking internal institution funding, Seeking Government funding	6	
Seeking internal institution funding, Seeking Government funding, Seeking funds from private non-profit funders	1	
Grand Total	15	

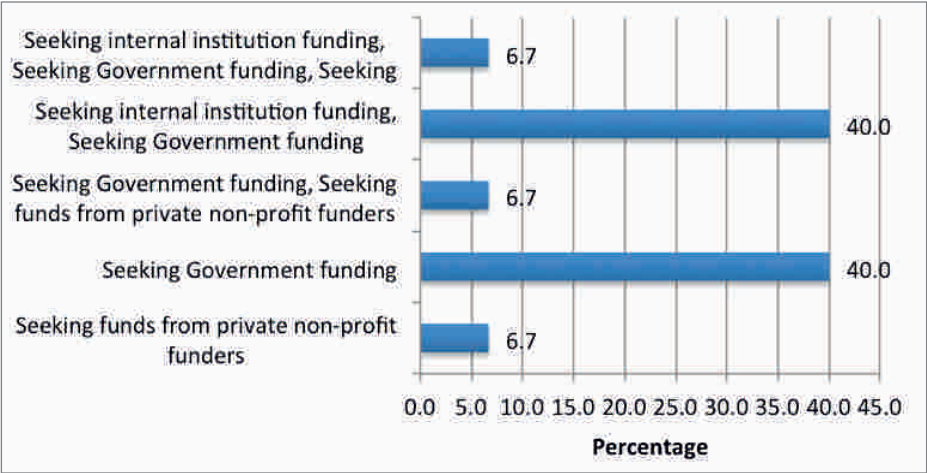


Figure 9: Measures undertaken to procure the desired infrastructure

While about 40% underlined that government is the sole source of funding for their media infrastructure, another 40% combined this with their fund mobilisation from internal sources. A few of the institutions relied exclusively on private non-profit funders.

Table 25: Skills for operating various media tools

Responses	Total	Percentage
Don't know	3	20.0
No	1	6.77
Yes	11	3.3
Grand Total	15	100.0

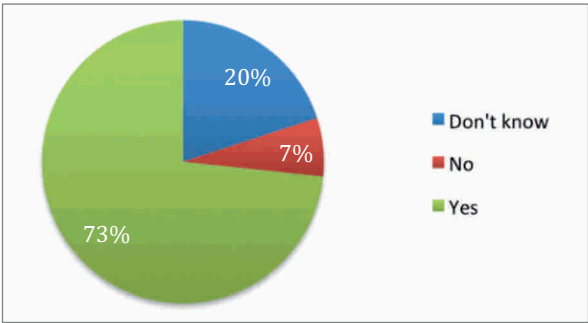


Figure 10: Faculty possessing skills for operating various media tools

It is significant to note that large majority of the respondents expressed full confidence in the ability of in-house experts who can effectively handle various media tools used or proposed to be used by the distance teaching institution. Only one respondent underlined absence of such in-house expertise.

Table 26: Skill familiarity

Responses	Total	Percentage
Excellent	2	13.3
Good	9	60.02
(blank)	4	6.7
Grand Total	15	100.0

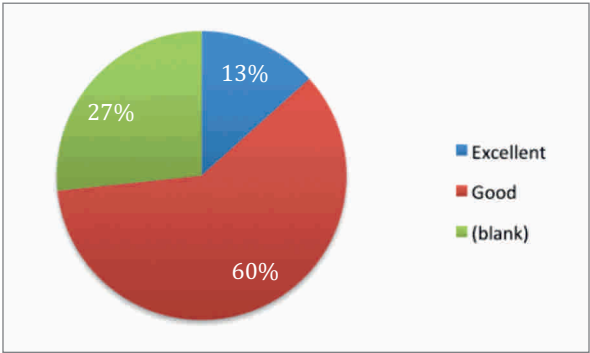


Figure 11: Level of the skill familiarity

Also important to note the responses by majority that such media tool expertise is either excellent or good in their institutions (though about one-fourth of the respondents did not comment on this item).

Table 27: Skill enhancement and capacity building by faculty

Stated possible measures being taken by your institution for skill enhancement and capacity building of your faculty.	Total	Percentage
By preparing self learning manuals	1	6.7
(blank)	14	93.3
Grand Total	15	100.0

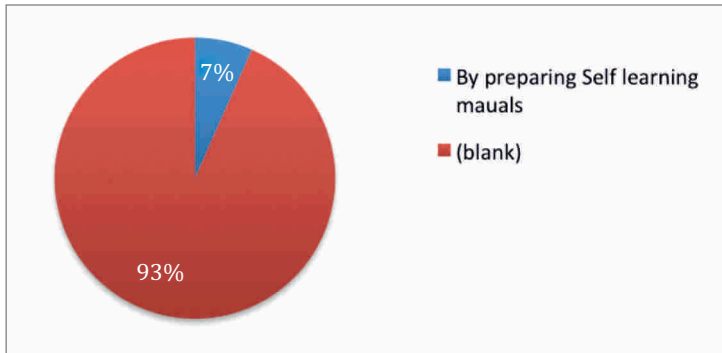


Figure 12: Measures undertaken by the institution for skill enhancement and capacity building

Only one of the respondents had responded 'no'; and the suggested measure to enhance such ability included preparation of self-learning manuals. This though, in no way, is construed to significantly contribute to increase efficiency in other media tools.

Table 28: New media infrastructure/resource training

Responses	Total	Percentage
For profit funding	1	6.7
Govt. funding	10	66.7
Self-sustainable	4	26.7
Grand Total	15	100.0

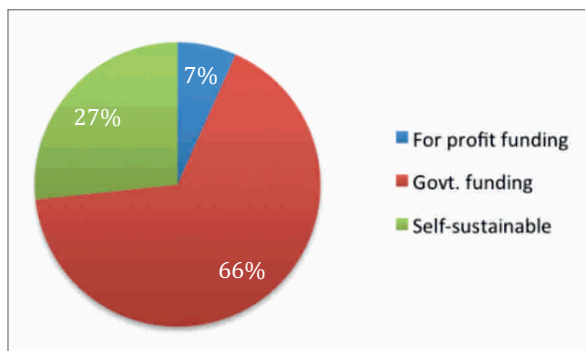


Figure 13: Funding of the new media infrastructure/resource training

In-house capacity building for media tools is being funded largely from government funding, though one-fourth of the respondents noted such activities as self-sustaining; and only one respondent cited for-profit funding source.

Table 29: Possession of technology tools/devices by students

Responses	Total	Percentage
Don't know	6	40.0
No	5	33.3
Yes	4	26.7
Grand Total	15	100.0

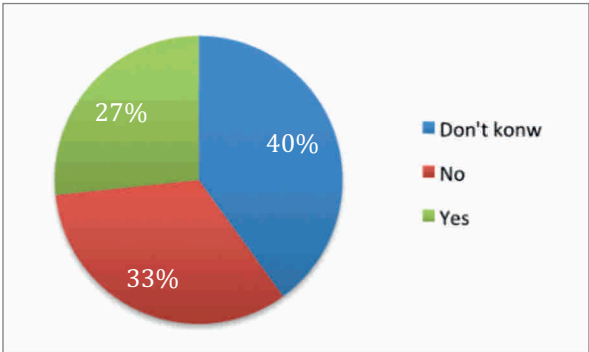


Figure 14: Students compatibility with the technology available at the institution

This is an important issue since compatibility of media systems and facilities between the provider and the receivers largely determine effective use of educational media resources by the latter. Only 27% of respondents reported such compatibility; and about one-third did not think so. 40% of respondents did not have any information on this issue.

Table 30: Free of cost digital learning resources for students

Responses	Total	Percentage
Don't know	3	20.0
No	4	26.7
Yes	8	53.3
Grand Total	15	100.0

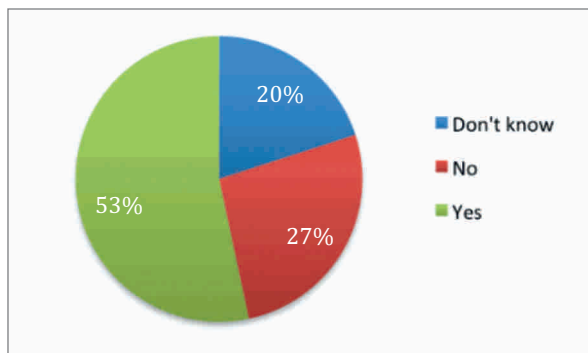


Figure 15: Provision of free of cost digital learning resources

This question may not be construed to be related in any way to free availability of media devices. This is concerned with digitised learning resources in forms of .pdf files, print and media resources available at institutional resource repository, or through other protected websites. Above 53% reported free-of-cost availability to students, though about 26% as a matter of policy did not provide it free to their students. Three respondents though did not have any knowledge on this issue.

Table 31(a): Digital resources provided to the distance learners

Kind of digital resources provided to the distance learners	Total
Access to Library Resources, Internet and Digital Subscribed Journals, Books, Online Platform	1
Digital Library Connect with Higher Education Commission and our own e-Library with more than 40000 e-books and other resources.	1
e-Resources (SLM), e-Gyanagar (OER Repository), e-Library (Pro-quest, Mobile App (OSOU), Audio Video Lessons	1
Not Available	1
SMS	1
Video, Radio, TV, E-Mail Based Services	1
Web Mobile service and OER	1
Website like NPTEL	1
(blank)	7
Grand Total	15

When pondered further on the nature or type of such resources, those 8 who had responded 'yes' to the preceding question noted a variety of such resources like library e-resources, online repository like 'E-Gyankosh', email-based resource services, and link to e-resource repository like NPTEL.

Table 31(b): Ways of providing resources

Ways of providing these resources to them	Total
All the digital resources are available or linked via our official website www.osou.ac.in and Mobile App can be downloaded from Google Play Store	1
Free access in university library and with their e-portal password	1
Not Available	1
SMS	1
Through access devices PW, etc.	1
Through respective delivery modes	1
We provide information about them	1
Web mobile OER	1
(blank)	7
Grand Total	15

The way those resources are made available to the students included e-portal, mobile OER, through email information, and through e-library.

Table 31(c): Level of academic networking (MOU/MOA/others)

Level of academic networking (MOU/MOA/others) of your institution with others.	Total
1	1
3	1
4	1
5	2
6	1

8	1
23	1
100	1
(blank)	6
Grand Total	15

The MOUs or MOAs of the institutions for academic collaboration and networking involved 1–5 or 6 such agreements, though one respondent noted 23 MOUs and another noted 100 MOUs. Six of the respondents did not mention any.

Table 32: Government administrative ecosystem

Government administrative ecosystem with regard to cooperativeness and supportiveness towards education and innovative learning.	Total	Percentage
1	2	13.3
3	7	46.7
4	2	13.3
5	4	26.7
Grand Total	15	100.0

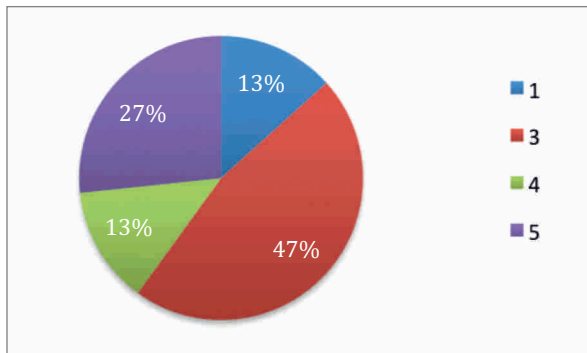


Figure 16: Government administrative ecosystem.

It may be noted that the respondents did not have any positive opinion about favourable administrative ecosystem and support by the government.

This is a crucial issue in so far as the effective use of media resources by both institutions and students is concerned.

Table 33: Blended learning technologies and pedagogies

Willingness and supportiveness of your colleagues at the institution to take initiative to employ blended learning technologies and pedagogies.	Total	Percentage
1	2	13.3
3	7	46.7
4	2	26.7
5	4	13.3
Grand Total	15	100.0

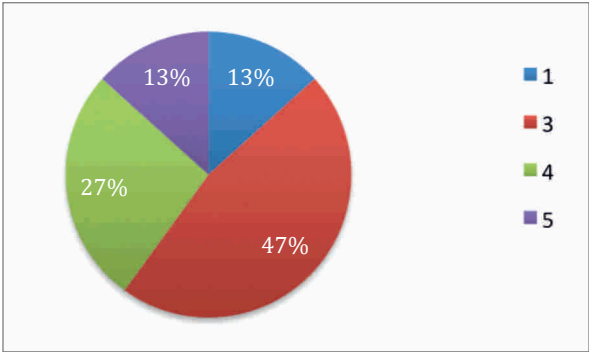


Figure 17: Willingness and supportiveness of colleagues to employ blended learning

It is also important to note that not much help (in terms of willingness and supportiveness) is extended by peer colleagues in fresh initiatives for design and delivery of 'blended learning technologies and pedagogies'. This could be considered as the foremost impediment to blended learning in the distance education institutions.

Evaluation

Table 34: Conventional teaching pedagogies and the students

Responses	Total	Percentage
Never	4	26.7
Often	7	46.7
Very often	4	26.7
Grand Total	15	100.0

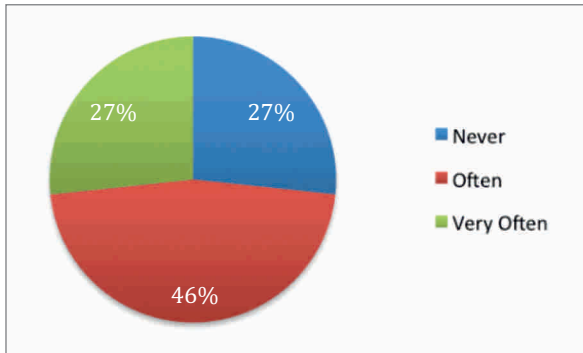


Figure 18: Conventional teaching pedagogies and students

Majority of the respondents (above 72%) opined that the conventional teaching strategies that the DEIs have been following do not match with the expectations of distance learners, though it is interesting to note that above 26% of the respondents did not think so. This clearly reveals conventional education mindset in the distance teachers

Table 35: Participation of students in Interactive Educational Networking

Responses	Total	Percentage
25% to 50%	4	26.7
50% to 75%	4	26.7
Less than 25%	7	46.7
Grand Total	15	100.0

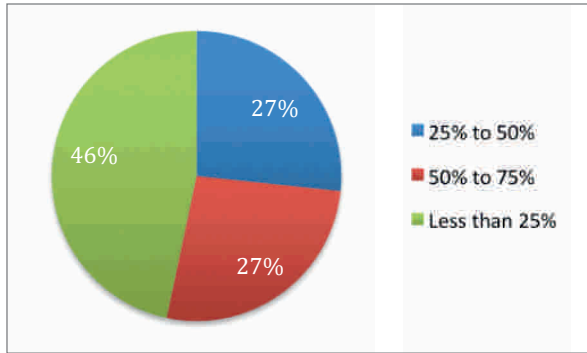


Figure 19: Participation level of the students in Interactive Educational Networking

Even if there is provision of interactive educational networks, a large percentage of the faculty reported low participation level of students in such networked resources. This suggests some kind of incompatibility between the provision and the use. Unless this is adequately addressed, effective use of media technologies, pedagogies and resources shall remain a distant dream.

Table 36: Changes in pedagogies for course curriculum

Responses	Total	Percentage
Not at all	2	13.3
To large extent	5	33.3
To some extent	8	53.3
Grand Total	15	100.0

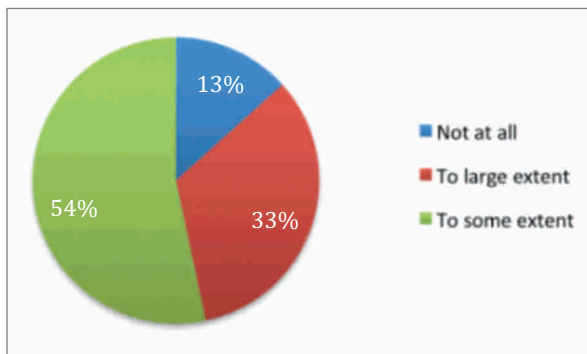


Figure 20: Frequency of revising the course curriculum

Table 36(a): Type of changes made by faculty

The type of changes the faculty make	Total
Content upgradation, clarification of terms/ jargons that might not still not be clear to learners, strategies for ensuring that learning outcomes are being met.	1
Content updation, Presentation of content	1
Introducing mobile applications	1
Introducing new media tools	1
Providing learners online study material, Audio and video lectures online	1
Latest information and strategies, Current research incorporated	1
Make them more user friendly to suit the new generation	1
New changes incorporated	1
Radio	1
Shifting from traditional ODL to ODeL	1
The changes in the pedagogies are made depending upon the feedback received from the students in order to increase the convenience, availability and accessibility of students to the pedagogies.	1
update content	1
(blank)	3
Grand Total	15

Almost 86% of the respondents reported that they generally make some changes in pedagogies while revising their curriculum and teaching-learning resources (depending on the frequency of institutional revision). Such changes included: learning outcomes, corresponding content updation, addition of current research outcomes, making more learner-friendly, addition of new A/V media resources, e-learning support, among others.

Table 36(b): Ways of making changes

Ways of making such changes	Total	Percentage
Based on critical comments received from pedagogy/ instructional design experts.	1	6.7

Based on developments in pedagogic research, based on feedback received from students on learning effectiveness. Based on critical comments received from pedagogy/ instructional design experts.	4	26.7
Based on developments in pedagogic research, based on feedback received from students on learning effectiveness, based on critical comments received from pedagogy/ instructional design experts, based on exigencies and funds available with the institution.	2	13.3
Based on exigencies and funds available with the institution.	1	6.7
Based on feedback received from students on learning effectiveness.	5	33.3
Based on feedback received from students on learning effectiveness, based on critical comments received from pedagogy/instructional design experts.	1	6.7
Based on feedback received from students on learning effectiveness, based on exigencies and funds available with the institution.	1	6.7
Grand Total	15	100.0

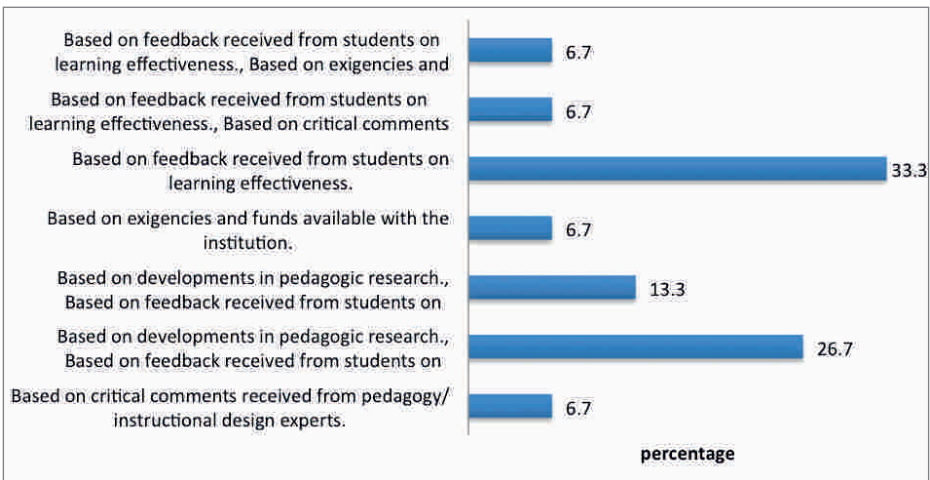


Figure 21: Ways of making such changes

The bases for such changes made by the faculty included in order of importance: student feedback (33%), latest pedagogic research (26%), combined with availability of in-house funds (13%), and comments provided by pedagogy/instructional design experts (6%).

Learning

Table 37: Institution having a repository of study material

Responses	Total	Percentage
May be	3	20.0
Yes	12	80.0
Grand Total	15	100.0

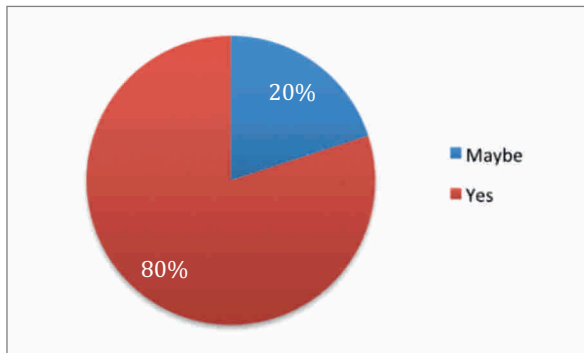


Figure 22: Institution having a repository of study material

About 80% of respondents reported existence of material repository in their institutions, though it is not clear what exactly they meant by 'repository'.

Table 38: Institutional provisions for enabling event based learning experiences

Responses	Total	Percentage
May be	6	40.0
No	5	33.3
Yes	4	26.7
Grand Total	15	100.0

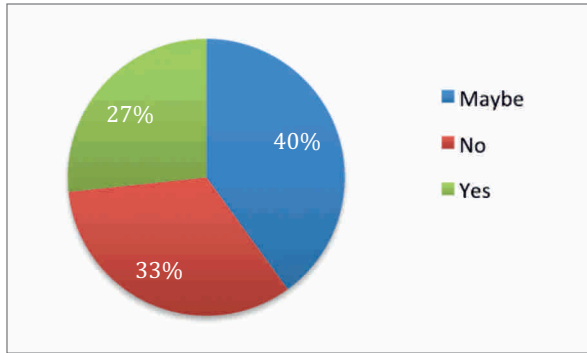


Figure 23: Provisions for enabling event based learning experiences

Table 39: Type of event based learning

Type of event based learning used	Total	Percentage
Crafts projects	2	13.3
Do it yourself engineering	1	6.7
Online sharing group	1	6.7
(blank)	11	73.3
Grand Total	15	100.0

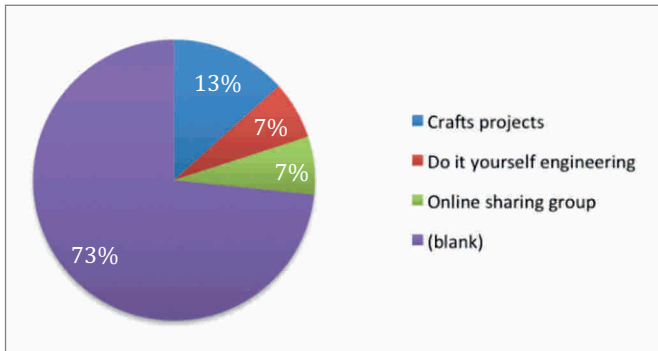


Figure 24: Event based learning

While 26% reported existence of events-based learning, such strategies included crafts projects, do-it-yourself engineering, and online group for sharing.

Table 40(a): Computer game based teaching

Responses	Total	Percentage
May be	7	46.7
No	7	46.7
Yes	1	6.7
Grand Total	15	100.0

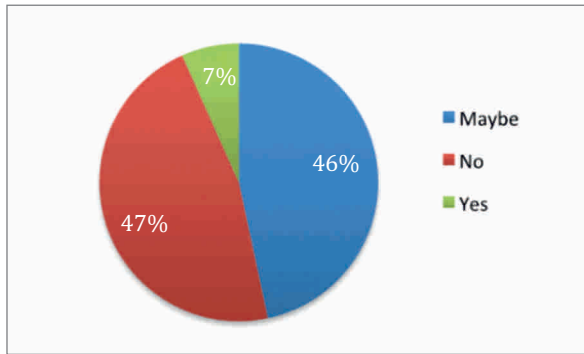


Figure 25: Provisions for computer game based teaching

Table 40(b): Computer game based teaching

Responses	Total	Percentage
I am not sure	1	6.7
No idea	1	6.7
Not applicable	12	80.0
Simulation games	1	6.7
Grand Total	15	100.0

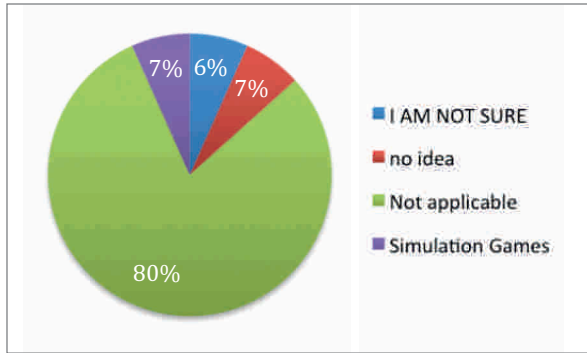


Figure 26: Provision for allowing computer game based teaching

While only 6.7% of responded institutional provision for computer game-based teaching-learning, this was found in form of simulation games. Largest majority did not have this provision.

Table 41: Measures to explore local environment

Responses	Total	Percentage
May be	6	40.0
No	5	33.3
Yes	4	26.7
Grand Total	15	100.0

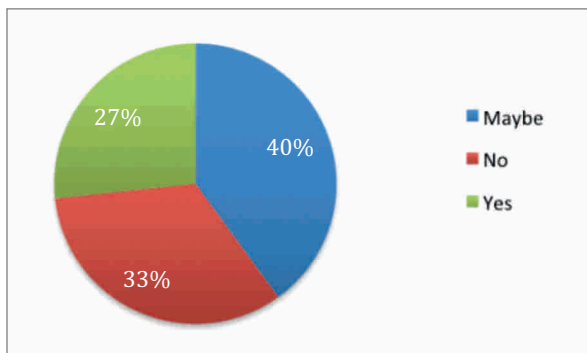


Figure 27: Measures to allow students to explore their local environment

Table 42: Measures for allowing students explore their local environment

Responses	Total	Percentage
Augmented reality based maps	1	6.7
Not applicable	10	66.7
Outdoor MMS	1	6.7
Video blogs	3	20.0
Grand Total	15	100.0

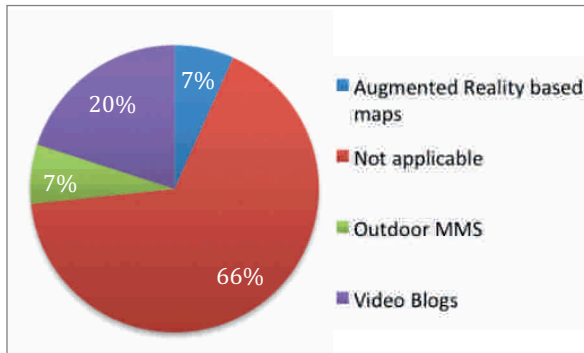


Figure 28: Measures for allowing students to explore their local environment

About 26% reported to have provision for students to explore their local environment. Those included: augmented reality-based maps, outdoor MMS, and video blogs.

Table 43: Opportunities to transfer information and experience across settings

Responses	Total	Percentage
May be	9	60.0
No	3	20.0
Yes	3	20.0
Grand Total	15	100.0

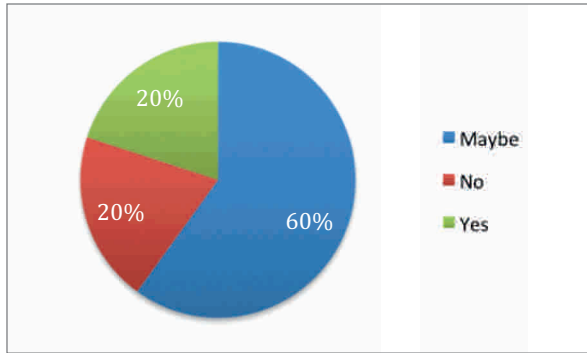


Figure 29: Provision of opportunities to transfer information and experience across settings

Though the question itself is not clear, about 20% of the respondents reported institutional provision for transferring information and experiences across settings.

Table 44: Individual themes based on interest

Responses	Total	Percentage
May be	7	46.7
No	2	13.3
Yes	6	40.0
Grand Total	15	100.0

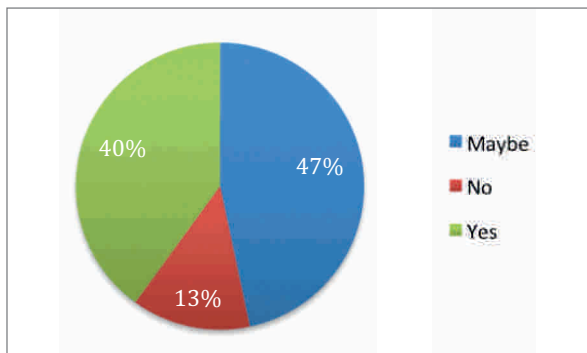


Figure 30: Allowing students to pursue individual themes based on interest

Table 45: Measures for allowing students to pursue individual themes based on interest

Responses	Total	Percentage
Adaptive methods of teaching	1	6.7
Feedback on learner's interest	1	6.7
Not applicable	5	33.3
Self selection of interest areas	8	53.3
Grand Total	15	100.0

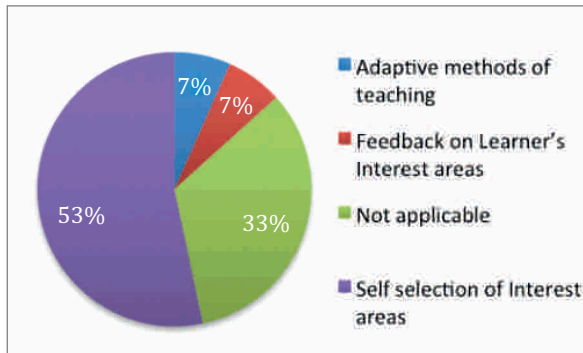


Figure 31: Measures for allowing students to pursue individual themes based on interest

Though this is a very sophisticated provision toward individualised flexible learning, 40% of the respondents reported facilitating personal enquiry-based learning through self selection of content, and adaptive methods of teaching.

Table 46(a): Space for connecting formal and informal learning experiences

Responses	Total	Percentage
May be	6	40.0
No	3	20.0
Yes	6	40.0
Grand Total	15	100.0

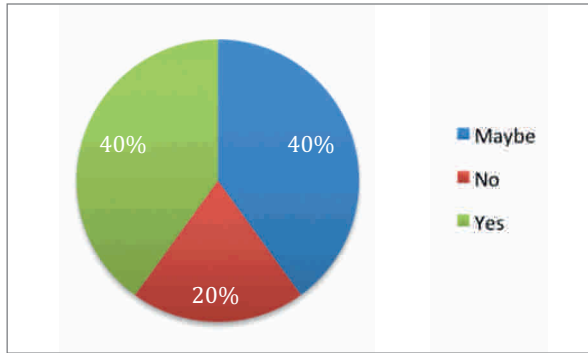


Figure 32: Allowing space for connecting formal and informal learning experiences

Table 46(b): Measures for connecting formal and informal learning experiences

Responses	Total	Percentage
Not applicable	7	46.7
Online vocational activities	2	13.3
Partnerships with online youth clubs	1	6.7
Virtual tours to institutions	5	33.3
Grand Total	15	100.0

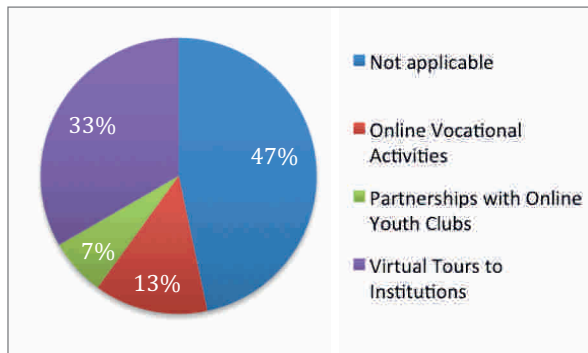


Figure 33: Measures for connecting formal and informal learning experiences

This is an important area of curriculum design in which formal institutional learning and informal community learning are combined/connected to make sense and derive further meaning in learning. While 40% of the

respondents reported institutional provision, such strategies included: online skill-based activities, online youth club membership, and institutional virtual tour.

Table 47(a): Allowing provision for goal and 'skill acquirement' based learning

Responses	Total	Percentage
May	4	26.7
No	3	20.0
Yes	8	53.3
Grand Total	15	100.0

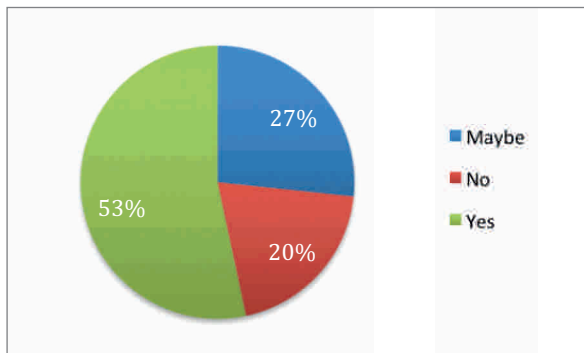


Figure 34: Allowing for goal and 'skill acquirement' based learning

Table 47(b): Measures for goal and 'skill acquirement' based learning

Responses	Total	Percentage
Individual online skill based projects	2	13.3
No idea	1	6.7
Not applicable	7	46.7
Participatory online skill based projects	4	26.7
(blank)	1	6.7
Grand Total	15	100.0

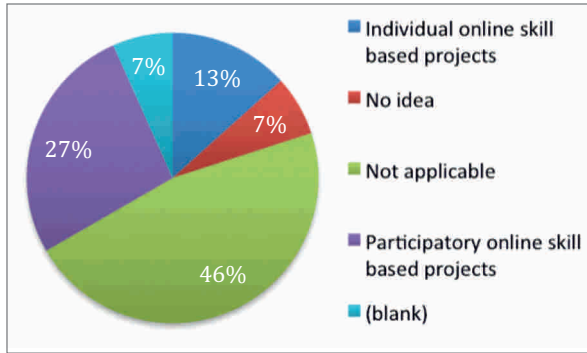


Figure 35: Measures for goal and 'skill acquirement' based learning

Above 53% of the respondents underlined institutional/course provision for skill acquirement-based learning that included online skill-based projects (both individual as well as collaborative).

Table 48(a): Provision of learning through argumentation

Responses	Total	Percentage
May	5	33.3
No	6	40.0
Yes	3	20.0
(blank)	1	6.7
Grand Total	15	100.0

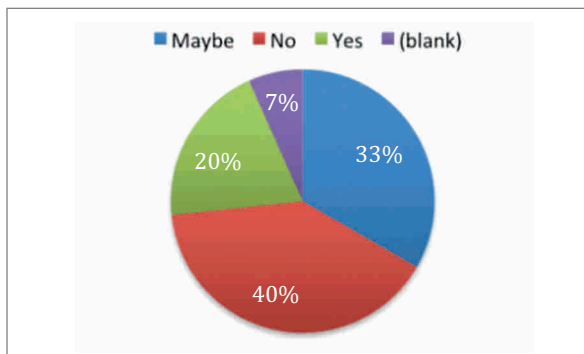


Figure 36: Provision of learning through argumentation

Table 48(b): Measures for learning through argumentation

Responses	Total	Percentage
Not applicable	8	53.3
Use of models	2	13.3
Virtual classroom norms	4	26.7
(blank)	1	6.7
Grand Total	15	100.0

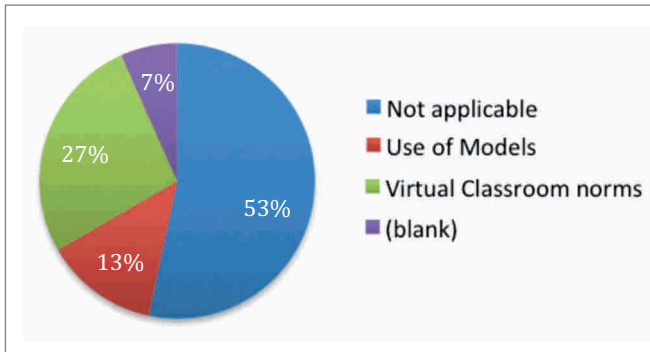


Figure 37: Measures for learning through argumentation

Only 20% of the respondents reported provision of the strategy of learning through argumentation in the form of virtual classroom and use of models.

Table 49: Provision to develop transferable skills

Responses	Total	Percentage
May be	6	40.0
No	6	40.0
Yes	3	20.0
Grand Total	15	100.0

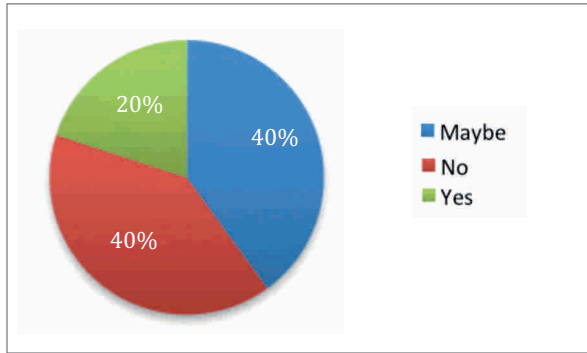


Figure 38: Provision to develop transferable skills such as curation, evidence building and reflective commenting

When it comes to the strategy of transferable skills through curation, reflective comments, and building evidences, only 20% of the respondents used this strategy.

The present study was aimed at surveying various media pedagogies used by the faculty of distance teaching institutions/open universities in the Commonwealth Asia countries. The survey yielded the following broad/main findings:

Main Findings

- Generally, initiation of any programme is based on need survey conducted by the institution. Also, generally academic experts are consulted, while government authorities and employers/industry experts are also involved in the process.
- Only half of the respondents noted developing concept maps, and credits and modular system for course design. Also, to a largest extent, pedagogic consideration form a part of curriculum design and multimedia strategies.
- The general agreement has been that new media technologies shall benefit student learning, though the dominating blending of media include print, audio, video, and conferencing. The agreed perception is that blending of various media with conventional teaching will be most effective for distance learners. On the other hand, the actual use includes print, radio, video, OER/MOOCs, interactive educational networks, and social media handles. The pedagogies associated with these media tools include print, OER and radio for self-learning, MOODLE for collaboration, blogging for critical reflection, and social media handles for information sharing.
- Institutions generally create a repository of study materials, and most often, five years or more is taken for next revision of materials after its first launch/revision. While some open up the repository to the public for free, some others charge a fee to access the learning materials.

- Though the institutions have made infrastructure at reasonably average/good level, generally public funding is sought for to deploy and maintain media infrastructure.
- The faculty, to a considerable extent, has the skills to operate various media tools, and the training on media use is generally funded by the government. On the other hand, they
- view that there may not be acceptable level of compatibility between institutional provision and student possession of personal technology tools/devices.
- Generally, digital resources are made available on the institutional website. On the other hand, there is a mixed feeling regarding supportive administrative and government ecosystem for media-based learning, as also faculty willingness to go for blended learning.
- Generally, to some extent only, changes in pedagogies are made while revising curriculum and courses; and the main sources for such updating are instructional designers, research studies, and feedback received from the students.
- Event-based learning experiences are adopted by a few, though computer game-based learning is rare; so also exploration of local environment and transfer of learning.
- There is a mismatch between faculty perception of possession of skills for handling media and associated pedagogies and the actual institutional provision for this. This is critical.

Discussion and Implications

The findings of the present study clearly indicate that integrated media use for blended learning is the Call of the day, with specific suggestion that print and audio and video can be used for self-learning, conferencing and online discussion forums for interaction and collaboration, and blogs and wikis for reflective activities and practices (both individual and collaborative). Further, as part of information and academic support, emails, sms, and social media and technologies are to be integrated with the media-enabled

curriculum design itself. These needs are to be linked to OER and other resource repository and integrated learner support. Some of the research studies and reflective reportings as discussed in Chapter 2 indicated strengthening the traditional media of audio-video and conferencing as the integral part of curriculum design and transaction. While these need to be 'integrated' within the curriculum, the faculty preference for and the contemporary developments in new media and technologies require further attention.

The current research and deliberations are moving away from OER to what is called 'open education practices' (OEP) and open pedagogy (Ehlers, 2011; Hegarty, 2015; DeRosa and Robinson, 2017). While critiquing open educational resources, Knox (2013) argues that learnification as explained in the OER movement is more of a provision, rather than a theoretical construct. Learning everything to autonomous learning reduces the role of the teacher and the institution that might be construed as disregard for them. In fact, OER so far has focused on dissemination strategies, rather than pedagogy of learning; McLoughlin and Lee (2007) argue that besides the conventional practice of group collaboration for communication, dialogue and share activities, social software underpinning Pedagogy 2.0 'can also be embedded in learner-centred pedagogical frameworks' (p. 671); can provide for support in multiple forms; and can bring in congruence between learner self-regulation, self-direction and self-construction on one hand and group critical reflection on the other.

The current OER movement in especially the Asian Commonwealth region provides for scanty attention to pedagogies associated with OER. In a recent work, Panda (2017a) points out that a good OER may not result by simply combining technology tools and resources/content, rather there should be consideration for appropriate and tested online learning pedagogies, and especially engagement in authentic tasks essential for critical and reflective learning (that the current OER frameworks are lacking). Similar is the case with MOOCs. While the faculty use of OER does not necessarily lead to creation of a MOOC, similarly a MOOC course in the archive does not become an OER. The current MOOCs framework is highly instructivist (i.e., xMOOCs), the constructivist, situative and connectivist pedagogies can be very well associated with any MOOC, including eMOOC (Panda, 2017b). The constructivist course on learning design by UKOU, the situative course on

clinical neurology by Coursera, and the eMOOC on connective knowledge by Siemens and Downes are pointers to this direction.

The faculty could consider an excellent analysis and discussion on open pedagogies by Hegarty (2015) and the eight attributes – participatory technologies, people and trust, innovation and creativity, sharing, connected community, learner generated, reflective practice, and peer review. OERs are not just repositories of content, but more importantly to be designed as such for collaboration and engagement (DeRosa and Robinson, 2017).

Important research is coming up to go beyond OER to open educational practices that are 'usage of resources in the frame of open learning architectures' (Ehlers, 2011, p. 3). The author further suggests that it is important to consider degrees of openness vis-à-vis OER pedagogy – low openness (reproductive approaches), medium openness (pre-determined learning objectives, but teaching-learning following open educational models, and high openness (both objectives/learning goals and learning pathways determined by the learners). There is a need to synchronise both openness in resource creation and openness in pedagogical models. In this context, a very useful comment has been made by Mishra (2017) who argues that there should now be a rethinking on the idea of 'open' by making it more inclusive, and that our understanding and experiences so far while practicing face-to-face, distance, and online education should be fed into the creation and use of OERs (that is unfortunately not reflected in the current frameworks of OERs and MOOCs).

It is expected that the brief literature review, the findings of this research study, and the discussion on implications shall contribute to further thinking and affirmative action by the faculty of distance teaching and open universities in the Asian Commonwealth and elsewhere to reconsider pedagogies associated with various media and technologies in their curriculum design and distance teaching-learning.

While underlining the massive and excellent work on distance learning technologies undertaken by the IDRC in 11 Asian countries, Baggaley and Hoon (2005) remarked that “New learning technologies that currently enjoy no foothold at all in North America and Europe are developing rapidly in remote and financially disadvantaged Asian institutions; and software

techniques are being pioneered there which promise cost saving for DE institutions internationally” (p.12). Under this PANDora's box, tremendous technology and pedagogy innovations for DLT have taken place in the Asian countries that are being mainstreamed through both government policies and institutional and faculty adoption of DLTs. In this context, Latchem and Jung (2010), in a recent comprehensive work on blended learning in Asian countries, suggested that the faculty need to proceed more toward 'student-centred, teacher-facilitated and collaborative knowledge building' (p. 130) and that instructional design needs to fully exploit the potential of all possibilities of online communication and community networks. As suggested by them, and that is equally applicable to the outcomes of the present research study, two crucial factors hold the key to effective pedagogy design for emerging technologies in DE – understanding how learners learn, and continue extensive professional development.

Recommendations

Based on the main findings of this study, the following recommendations relating to media-enabled curriculum design and distance learning pedagogies for DEIs and their faculty are to consider:

- Before finalising initiation of any programme, a need survey should be undertaken, followed by programme and course concept maps and credits for various media components as well as various components of distance teaching-learning.
- Printed SLM still remains the mainstay of the resource basket though a few institutions have been using audio-video, radio-television, and occasionally conferencing systems. It is time now for institutions to categorically specify institutional media and teaching-learning policies, including actual integration of technologies and associated pedagogies into their teaching-learning. (As noted earlier, the faculty have generally viewed blending of technologies with associated pedagogies for 'blended learning' as the most effective DE practice in the Asian Commonwealth).
- DEIs need to consider an integrated media-enabled curriculum design with due consideration to specific pedagogies associated with each

media/technology, rather than taking up a generic approach to curriculum design.

- Creation of institutional resource repository, seamless linkage to national MOOCs platform SWAYAM, and adoption policy and practice of creating and using OERs remain important goals for DEIs to achieve. Concerted institutional and faculty efforts are needed to ensure an integrated platform of teaching-learning and learner support for distance learners.
- It may not sound to be anything new, but of crucial importance is continuing faculty development and updating as well as faculty pursuance of action research on integrated media pedagogies (including OERs and MOOCs), blended learning, and emerging social technologies and networks.

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List of Universities / institutions

APPENDIX 1

Sl. No.	List of University/Institution	Number of faculty
INDIA		
1.	Aligarh Muslim University, Aligarh 202 001	
2.	Andhra University, Waltair, Vishakhapatnam 530 003	
3.	B.R.A. Bihar University, Muzaffarpur, Bihar 842 001	
4.	Banaras Hindu University, Varanasi 221 005	
5.	Bangalore University, Jnana Bharathi, Bangalore 560 056	
6.	Bharathiar University, Coimbatore 641 045	
7.	Bharathidasan University, Tiruchirapalli 620 023	
8.	BPS Mahila Vishwavidyalaya, Khanpur Kalan, Sonipat	
9.	D.D.U. Gorakhpur University, Gorakhpur 273 009	
10.	Devi Ahilya Vishwavidyalaya, Takshila Parisar, Khandwa Road, Indore 452 001	
11.	Dr. B.A. Marathwada University, Aurangabad 431 004 (M.S.)	
12.	Dr. H.S. Gour Vishwavidyalaya, Sagar 470 003	
13.	Gauhati University, Gopinath Bardoloi Nagar, Guwahati 781 014	
14.	Goa University, Teleigao Plateau, P.O. Bambolim, Goa 403 202	
15.	Gujarat University, Nairangpura, Ahmedabad 300 009	
16.	Guru Ghasidas University GGU Campus, Bilaspur 495 009	

17.	Guru Jambheswar University of Science & Technology, Hisar 125 001	
18.	Guru Nanak Dev University, Amritsar 143 005	
19.	Himachal Pradesh University, Shimla 171 005 (H.P.)	
20.	Jadavpur University, Calcutta 700 032	
21.	Jai Narayan Vyas University, Jodhpur 342 001	
22.	Jamia Millia Islamia, New Delhi 110025	
23.	Jawaharlal Nehru Technological University, Hyderabad 500 072	
24.	Jawaharlal Nehru University, New Delhi 110 067	
25.	Kannur University, Mangattuparamba, Kannur 670 567	
26.	Karnatak University, Pavati Nagar, Dharwad 580 003	
27.	Kumaun University, Nainital 263 001	
28.	Kurukshetra University, Kurukshetra 132 119	
29.	Madurai Kamaraj University, Palkalai Nagar, Madurai 625 021	
30.	Maharshi Dayanand Saraswati University, Ajmer 305 001	
31.	Manipur University, Canchipur, Imphal 795 003	
32.	Maulana Azad National Urdu University, Hyderabad 500 032	
33.	Mizom University, Post Box No. 190, Aizawl	
34.	Nagpur University, Amba Vihar, South Ambazari Road, Nagpur 400 022.	
35.	North Bengal University, Siliguri , Darjeeling 734 013	
36.	North-Eastern Hill University, P.O. NEHU Campus, Mawkyroh Umshing, Shillong 793 022	
37.	Osmania University, Hyderabad 500 007	
38.	Panjab University, Chandigarh 160 014	
39.	Patna University, Bari Path, Dariyapur, Patna 800 004 (Bihar)	

40.	Pondicherry University, Lawspet, Puducherry 605 008.	
41.	Pt. Ravishankar Shukla University, Raipur 492 010	
42.	Punjabi University, Patiala 147 002	
43.	Ranchi University, Morabadi Campus, Ranchi 834 008	
44.	Rani Durgawati Vishwavidyalaya, Jabalpur 482 001	
45.	Sambalpur University, Jyoti Vihar, Sambalpur 768 019	
46.	Sant Gadge Baba Amravati University, Amravati 444 602	
47.	Sardal Patel University Vallabh Vidyanagar 388 120	
48.	Saurashtra University, University Road, Rajkot 360 005	
49.	Sri Venkateshwara University, Tirupati 517 502	
50.	University of Allahabad, Allahabad 211 002	
51.	University of Burdwan, Burdwan 713 104	
52.	University of Calcutta, 92, A.P. Chandra Road, Calcutta 700 009.	
53.	University of Calicut, Calicut 673 535	
54.	University of Delhi, Delhi 110 007	
55.	University of Hyderabad, Hyderabad 500 046	
56.	University of Jammu, Jammu 180 006	
57.	University of Kashmir, Hazarat Bal, Srinagar 190 006	
58.	University of Kerala, Guest House Building, Kariavattom 695 581	
59.	University of Lucknow, Lucknow 226 007	
60.	University of Madras, Centenary Building, Chepauk, Chennai 500 005	
61.	University of Mumbai, Vidya Nagari, Mumbai 400 098	
62.	University of Mysore, Mysore 670 005	
63.	University of Pune, Ganesh Khind, Pune 411 007	
64.	University of Rajasthan, Jaipur 302 004 (Rajasthan)	

65.	Utkal University, Vani Vihar, Bhubaneshwar 751 004	
66.	Uttarakhand Open University, Uttarakhand	51
67.	Yashwantrao Chavan Maharashtra Open University (YCMOU), Nashik	41
68.	Vardhman Mahaveer Open University, Kota	25
69.	U. P. Rajarshi Tandon Open University, Allahabad	32
70.	The Krishna Kanta Handiqui State Open University, Guwahati	48
71.	Karnataka State Open University, Mysore	68
72.	Netaji Subhas Open University, Kolkata	15
73.	Odisha State Open University (OSOU), G.M. University, Sambalpur	25
74.	Dr. Babasaheb Ambedkar Open University, Ahmedabad	36
75.	Dr. B.R. Ambedkar Open University, Hyderabad	43
76.	Tamil Nadu Open University, Chennai	6
77.	Indira Gandhi National Open University (IGNOU), New Delhi	427

PAKISTAN

1.	International Islamic University, Islamabad	2
2.	Virtual University of Pakistan, Raiwind, Lahore	45
3.	Foundation University, Islamabad	2
4.	University of Faisalabad, Faisalabad	3
5.	Riphah International University, Islamabad	1
6.	Modern Institute of Information and Management (MIIM) Distance Education	3
7.	Directorate of Distance Education City Campus, Gomal University	3
8.	IIM	371
9.	Allama Iqbal Open University, Pakistan	

SRI LANKA

1.	University of Colombo, Sri Lanka	71
2.	Open University of Sri Lanka	9
3.	Rajarata University, Sri Lanka	3
4.	University of Moratuwa, Sri Lanka	11
5.	University of Jaffana, Sri Lanka	85
6.	University of Siri Jayawardenepura, Sri Lanka	353
7.	University of Peradeniya, Sri Lanka	5

BANGLADESH

1.	Bangladesh Open University, Bangladesh	128
	Total	7849

APPENDIX 2

Questionnaire for media enabling pedagogy & curriculum in open & distance education institutions (ODE) reg:

Dear Colleague:

We at the Centre for Culture, Media & Governance (CCMG), Jamia Millia Islamia are conducting a survey on “Media Enabling Pedagogy & Curriculum in Open & Distance Education Institutions”, sponsored by the “Commonwealth Educational Media Centre for Asia”, New Delhi.

The objective is to tap the status of educational media and technologies, and more specifically the (innovative) pedagogies, used by Open Universities and Dual- Mode University distance teaching institutions in South Asia.

We shall be grateful to you to fill up this online survey, which will take about 15-20 minutes to complete. We assure you that your responses shall be kept confidential and be used for research purposes.

Thank you in advance once again.

Prof. Biswajit Das Director Centre for Culture, Media & Governance (CCMG)
Jamia Millia Islamia, New Delhi, India.

*** Required**

1. Name

2. Gender*

Mark only one oval.

Female

Male

Other

3. Age*

Mark only one oval.

25-35

36-45

46-55

56 and above

4. Country*

Mark only one oval.

India Pakistan Bangladesh Sri Lanka

5. Type of University*

Mark only one oval.

Government Private Other:

6. Type of University Mode*

Mark only one oval.

Single Mode Open University Dual Mode University Other:

i) Name of your Institution *

ii) Discipline/Department

iii) What is the medium of Instruction for your courses: *

Check all that apply.

English Hindi Urdu Tamil Bangla Sinhalese Other

For Graduate Course

For Diploma/Professional

For Post Graduate

For M.Phil/Ph.D.

Sections I:

Conceptualizing and Concept Mapping of Media Enabled Curriculum.

(This section requires you to indicate the considerations, especially media and pedagogy considerations, that you make while conceptualizing new programmes/ courses in your university.)

10. Does your university conduct a need survey before developing a programme?*

Mark only one oval.

Yes

No

Don't know

11. What type of need does your programme cater to?*

Mark only one oval.

Academic Need

Market Need

Both

12. Who all are generally consulted during programme planning and conceptualizing process?*

Check all that apply.

Govt. Authorities

Employers

Industry Experts

Academic Experts

Trainers

13. Do you develop 'concept maps' for holistically representing each programme and course curriculum, including 'modular' and 'credit-based' courses?*

Mark only one oval.

Yes

No

Maybe

- 14. Do you think pedagogies (teaching-learning strategies) are also considered while undertaking curriculum design?***

Mark only one oval.

To larger extent

To some extent

Not at all

Sections II:

Curriculum Design and Development

(This section requires you to indicate the blending of media and technologies, including their pedagogic representations, that you undertake while designing and detailing out your curriculum and various courses)

- 15. Do you think that incorporating new media technologies like videoconferencing gaming, app-based learning, interactive web, mobile learning, social network-based learning, MOOCs, etc.) benefit student learning process?***

Mark only one oval.

Yes

No

Don't Know

- 16. How much blending of text, image, audio, and video is used while designing the curriculum?***

Check all that apply.

Print

TV

Video

Audio

Radio

Online
YouTube
Video Conference
Skype

17. How do you rate the effectiveness of 'blending of media technologies with conventional teaching?*

Mark only one oval.

Very effective
Effective
Neutral
Least effective
Not at all effective.

18. What kind of media tools, and pedagogies associated with those media tools, are being used in your course transaction and teaching-learning?*

Media Tools

Mark only one oval per row.

Used Not Used

Print

TV

Radio

Video

Video Conferencing

Mobile and tab App-Based Learning Interactive Educational Networks
eg. Piazza (INTRANET) Social Media Handles (Twitter, Facebook)
Gaming

MOOC's /OER

Online story telling

Online learning platform e.g. Blackboard, MOODLE, WebCT etc.

Blogging

Wiki

19. Pedagogies associated with the tools*

Mark only one oval per row.

To large extent, To some extent, Not at all

Print for Self-learning

TV for Self-learning

Radio for Self-learning

Video for Self-learning; Group discussion Video-Conferencing for Face-to-face interaction for group learning Mobile & App Based Learning for Collaborative learning , discussions and review through text based applications Interactive Educational Networks e.g. PIAZZA (INTRANET) for Cooperative learning through INTRANET.

Social Media Handles for Public information sharing and discussion platform Gaming for reasoning and thinking ability MOOC's / OER for self-learning

Online story telling for reasoning and thinking ability Online learning platform e.g. MOODLE for Online collaborative learning; group critical reflection; self learning. Blogging for self critical reflection

WIKI for group critical reflection

- i) List the specific pedagogic tools and techniques you adopt for taking care of your specific discipline requirements (in humanities, social sciences, management, IT, engineering, sciences, medicine, etc.) ***
- ii) Rate the level of your country in terms of Internet accessibility and affordability ***

Mark only one oval.

22. Does your Institution create a repository of study material? *

Mark only one oval. Yes Skip to question 23.

No Skip to question 24.

Don't know Skip to question 24.

23. If, yes, how often you update your study material?*

Mark only one oval.

Once in year

Two year

Five Year

More than five years

Don't know

24. Do you allow this repository for public access or access by fee?*

Mark only one oval.

Public access

Access by fee

Don't know

Sections III:

Curriculum (Pedagogy) Implementation

25. Rate the quality of the media technology infrastructure present in your institution *

Mark only one oval.

Excellent

Good

Neutral

Bad

Worse

26. Please select below stated possible measures being taken by your institution for procurement of the desired infrastructure.*

Check all that apply. Seeking internal institution funding

Seeking Government funding

Seeking funds from private non-profit funders

Seeking funds from private for-profit funders.

27. Does faculty in your institution possess skills for operating various media tools?*

Mark only one oval.

Yes Skip to question 28.

No Skip to question 29.

Don't know Skip to question 30.

28. If yes, rate the level of the skill familiarity*

Mark only one oval.

Excellent

Good

Bad

Worse

Skip to question 30.

29. If no, please select below stated possible measures being taken by your institution for skill enhancement and capacity building of your faculty.*

Mark only one oval.

Short-term/Refresher/ Skill-based programmes

Employing more of well skilled staff.

By outsourcing activities/ tasks

By preparing Selflearning manuals

30. How is the new media infrastructure/ resource training is being funded.*

Mark only one oval.

Self-sustainable

Govt. funding

Non-profit funding

For profit funding

31. Do the students have personal technology tools/ devices compatible with the technology available at the institution?*

Mark only one oval.

Yes

No

Don't know

32. Are students provided free of cost digital learning resources relating to their curriculum/ courses?*

Mark only one oval.

Yes

No

Don't know

i) If yes what kind of digital resources are provided to the distance learners?

ii) If Yes again, state how are these resources provided to them?

iii) Rate the level of academic networking (MOU/ MOA/others) of your institution with other-

A memorandum of understanding (MoU), Memorandum of Agreement(MoA), Other agreement etc.

36. Rate your govt. administrative ecosystem with regard to cooperativeness and supportiveness towards education and innovative learning

Mark only one oval.

37. Rate the willingness and supportiveness of your colleagues at the institution to take initiative to employ blended learning technologies and pedagogies*

Mark only one oval.

Sections IV:

Evaluation

- 38. How often do you feel that the conventional teaching pedagogies are not catering the interest of the students?***

Mark only one oval.

Very Often

Often

Never

- 39. Rate the participation level of the students in Interactive Educational Networking.***

Mark only one oval.

Less than 25%

25% to 50%

50% to 75%

More than 75%

- 40. To what extent do you make significant changes in pedagogies while revising the course curriculum?***

Mark only one oval.

To large extent

To some extent

Not at all

i) Please specify the type of changes you make.

ii) How do you make such changes?*

Check all that apply.

Based on developments in pedagogic research.

Based on feedback received from students on learning effectiveness.

Based on critical comments received from pedagogy/ instructional design experts.

Based on exigencies and funds available with the institution.

Sections V:

Learning

43. Does your Institution create a repository of study material? *

Mark only one oval.

Yes

No

Maybe

44. Does your Institution have provisions for enabling event based learning experiences (e.g. do-it-yourself science, engineering and crafts projects, and Online Sharing group)?*

Mark only one oval.

Yes Skip to question 45.

No Skip to question 46.

Maybe Skip to question 46.

45. If yes, then select the following event based learning.*

Mark only one oval.

Do-it-yourself science

Do it yourself engineering

Crafts projects

Online sharing group

46. Does your Institution have provisions that allow for computer game based teaching (incidental learning)?*

Mark only one oval.

Yes

No

Maybe

47. What measures does your Institution provide for allowing computer game based teaching? Please Specify.*

Mark only one oval.

Multiplayer Games

Simulation Games
Strategy Games
Not applicable
Other:

- 48. Does your Institution have measures to allow students to explore their local environment (incidental learning)?***

Mark only one oval.

Yes
No
Maybe

- 49. What measures does your Institution provide for allowing students explore their local environment? Please Specify.***

Mark only one oval.

Video Blogs
Augmented Reality based maps
Outdoor MMS
Not applicable

- 50. Does your Institution provide opportunities to transfer information and experience across settings?***

Mark only one oval.

Yes
No
Maybe

- 51. Does your Institution allow students to pursue individual themes based on interest (personal inquiry based teaching methods)?***

Mark only one oval.

Yes
No
Maybe

52. What measures does your Institution provide for allowing students to pursue individual themes based on interest? Please Specify.

Mark only one oval.

Self selection of Interest areas

Adaptive methods of teaching

Feedback on Learner's Interest areas

Not applicable

53. Does your Institution allow space for connecting formal and informal learning experiences?*

Mark only one oval.

Yes

No

Maybe

54. What measures does your Institution provide for connecting formal and informal learning experiences? Please Specify.

Mark only one oval.

Partnerships with Online Youth Clubs

Virtual Tours to Institutions

Online Vocational Activities

Online Internships

Online Hobby Clubs

Not applicable

55. Does your Institution allow provision for goal and 'skill acquirement' based learning?*

Mark only one oval.

Yes

No

Maybe

56. What measures does your Institution provide for goal and 'skill acquirement' based Learning? Please Specify.

Mark only one oval.

Individual online skill based projects

Participatory online skill based projects

Not applicable

Other:

57. Does your Institution provide learning through argumentation?

Mark only one oval.

Yes

No

Maybe

58. What measures does your Institution provide for learning through argumentation? Please Specify.

Mark only one oval.

Online Clickers or buzzers

Argument Visualization tools

Virtual Classroom norms

Use of Models

Not applicable

59. Does your Institution create provision to develop transferable skills such as curation, evidence building and reflective commenting? *

Mark only one oval.

Yes

No

Maybe

APPENDIX 3

Detail Responses of Each Repondent

[R = Respondent]

Name	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
Gender	2	2	1	2	1	2	2	1	1	1	1	2	1	1	2
Age	46-55	46-55	56 and above	56 and above	56 and above	46-55	25-35	25-35	36-45	25-35	25-35	56 and above	36-45	46-55	46-55
Country	India	Pakistan	Sri Lanka	India	India	India	India	India	India	India	India	India	India	India	India
Type of University	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.	Govt.
Type of University Mode	Distance Mode	Single Mode Open University	Single Mode Open University	Single Mode Open University	Single Mode Open University	Single Mode Open University	Single Mode Open University	Single Mode Open University	Single Mode Open University	Single Mode Open University	Single Mode Open University	Dual Mode University	Single Mode Open University	Open and Distance Learning	Single Mode Open University
Discipline/ Department		Education	Chemistry	Physics	Journalism & New Media	Electronic Media	Geography	Computer Science	Sanskrit	Public Administration	Geriatric Care, Management	Translation Studies	Faculty of English, School of Humanities	Public Administration	IT
What is the medium of Instruction for your courses: [For Graduate Course]	English, Hindi	Urdu	English, Tamil, Sinhalese	English, Hindi	Other	English, Hindi	English, Hindi	English	Other	English, Urdu, Other	English	English, Hindi	English	English, Hindi	English, Hindi, Other
What is the medium of Instruction for your courses: [For Diploma/ Professional]	English, Hindi	English	English	English	English	English, Hindi	English, Hindi	English	Other	English, Other	English	English	English	English, Hindi	English, Hindi, Other
What is the medium of Instruction for your courses: [For Post Graduate]	English, Hindi	English	English	English	Other	English, Hindi	English, Hindi	English	Other	Other	English	English	English	English, Hindi	English, Hindi, Other

What is the medium of Instruction for your courses: [For M.Phil/Ph.D.]	English	English	English	English	English	English	English	English	English	English	English, Hindi	English, Hindi, Other
Does your university conduct a need survey before developing a programme?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
What type of need does your programme cater to?	Both	Both	Both	Both	Both	Both	Both	Both	Both	Both	Both	Both
Who all are generally consulted during programme planning and conceptualizing process?	Academic Experts	Govt. Authorities, Employers, Academic Experts, Trainers	Govt. Authorities, Employers, Industry Experts, Academic Experts	Academic Experts	Academic Experts, Trainers	Academic Experts, Trainers	Academic Experts	Academic Experts	Academic Experts	Academic Experts	Academic Experts	Govt. Authorities, Employers, Experts, Trainers
Do you develop 'concept maps' for holistically representing each programme and course curriculum, including 'modular' and 'credit-based' courses?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do you think pedagogies (teaching-learning strategies) are also considered while undertaking curriculum design?	To some extent	To larger extent	To some extent	To larger extent	To some extent	To larger extent	To some extent	To larger extent	To some extent	To larger extent	To larger extent	To larger extent

What kind of media tools, and pedagogies associated with those media tools, are being used in your course transaction and teaching-learning? [Blogging]	Not Used	Used	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	Used	Not Used	Used	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used
What kind of media tools, and pedagogies associated with those media tools, are being used in your course transaction and teaching-learning? [Wiki]	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	Used	Not Used	Used	Used	Not Used	Not Used	Not Used	Not Used	Not Used
Pedagogies associated with the tools [Print for Self-learning]	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent	To large extent
Pedagogies associated with the tools [TV for Self-learning]	Not at all	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	Not at all	Not at all	Not at all	Not at all	Not at all	Not at all	Not at all	Not at all	To large extent
Pedagogies associated with the tools [Radio for Self-learning]	Not at all	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To large extent
Pedagogies associated with the tools [Video for Self-learning; Group discussion]	Not at all	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To some extent	To large extent

List the specific pedagogic tools and techniques you adopt for taking care of your specific discipline requirements (in humanities, social sciences, management, IT, engineering, sciences, medicine, etc.)	History	Print Media and face to face sessions (sometimes on video-conferencing or Skype), TV and Radio	Print, OER, Online, videoconferencing	Print	MOOCs/OER	Multiple medium and media	Print, video and blog	Computer science	Humanities	Print and Audio-Video	Self Learning Materials (Printed), e-resources (Self Learning Materials), e-Gyanaghar (OER Repository), e-Library, e-Library (Proquest), Audio and Video lessons	Print and AV	Print Material, Educational Real-time TV Lectures, VDOs, Interactive Radio Counselling for English Courses	Print, telephone, IGNOU website, video and radio/CD	IT
Rate the level of your country in terms of Internet accessibility and affordability	1	3	4	2	2	4	4	3	3	3	3	3	3	3	4
Does your Institution create a repository of study material?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Don't know	No	Yes	Yes	Yes	Yes	Yes
If, yes, how often you update your study material?		Five Year	Five Year	More than five years	Don't know	Five Year	Two Year	Two Year			Once in year	More than five years	More than five years	More than five years	More than five years
Do you allow this repository for public access or access by fee?	Don't know	Don't know	Don't know	Public access	Access by fee	Access by fee	Don't know	Public access	Don't know	Access by fee	Public access	Public access	Public access	Public access	Access by fee

For profit funding	Self-sustainable	Govt. funding	Self-sustainable	Govt. funding	Govt. funding	Govt. funding	Govt. funding	Govt. funding	Govt. funding
How is the new media infrastructure/resource training is being funded.	No	Don't know	Don't know	Yes	Don't know	Yes	No	Yes	Yes
Do the students have personal technology tools/devices compatible with the technology available at the institution?	Don't know	Don't know	Yes	Don't know	Yes	Yes	No	No	No
Are students provided free of cost digital learning resources relating to their curriculum/courses?	Yes	Don't know	Yes	Don't know	Yes	Yes	No	No	No
If yes what kind of digital resources are provided to the distance learners?	Digital Library connect with Higher Education Commission and our own eLibrary with more than 40000 ebooks and other resources	Video, Radio, TV, E-mail based services	Web Mobile service and OER	Don't know	Website like NPTEL	Sms	e-Resources (SLM), e-Gyana-gar and Digital Repository), e-Library Journals, (Proquest), Online Mobile App (OSOU), Audio Video Lessons	Access to Library Resources, Internet and Digital Subscribed Journals, Books, Online Platform	Not Available

If Yes again, state how are these resources provided to them?		Free access in university library and with their e-portal password.		Through respective delivery modes	Web mobile OER		We provide information about them	Sms		All the digital resources are available or linked via our official website and Mobile App can be downloaded from Google Play Store	Through Access Devices PW etc.	Not available		
Rate the level of academic networking (MOU/ MOA/others) of your institution with other-	100					8	3	5		4	1	6	5	23
Rate your govt. administrative ecosystem with regard to cooperativeness and supportiveness towards education and innovative learning	1	5	3	3	1	5	3	3		5	3	3	5	4

Rate the willingness and supportiveness of your colleagues at the institution to take initiative to employ blended learning technologies and pedagogies	1	4	3	4	1	4	1	4	3	3	3	3		
How often do you feel that the conventional teaching pedagogies are not catering the interest of the students?	Never	Often	Often	Never	Never	Very Often	Very Often	Often	Often	Often	Very Often	Never	Often	
Rate the participation level of the students in Interactive Educational Networking.	Less than 25%	50% to 75%	Less than 25%	Less than 25%	Less than 25%	Less than 25%	50% to 75%	25% to 50%	Less than 25%	50% to 75%	50% to 75%	Less than 25%	25% to 50%	25% to 50%
To what extent do you make significant changes in pedagogies while revising the course curriculum?	Not at all	To large extent	To some extent	To large extent	Not at all	To large extent	To some extent	To some extent	To some extent	To some extent	To large extent	To large extent	To some extent	To some extent

Please specify the type of changes you make.	Shifting from traditional ODL to ODeL	Make them more user friendly to suit the new generation	Content updation, Presentation of content	Update content	Introducing new media tools	Providing learners online study material, audio and video lectures online	New changes incorporated	Radio	The changes in the pedagogies are made depending upon the feedback received from the students in order to increase the convenience, availability and accessibility of students to the pedagoges.	Latest information and strategies, current research incorporated	Content updation, clarification of terms/jargons that might not be clear to learners, strategies for ensuring that learning outcomes are being met.	Introducing Mobile Applications
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How do you make such changes?	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.	Based on feedback received from students on learning effectiveness.
Does your Institution create a repository of study material?	Maybe	Yes	Yes	Yes	Maybe	Yes	Yes	Yes	Yes	Maybe	Yes	Yes	Yes	Yes	Yes

Does your Institution have provisions for enabling event based learning experiences (e.g. do-it-yourself science, engineering and crafts projects, and Online Sharing group)?	Maybe	Yes	Maybe	Maybe	Yes	No	No	No	Yes	No	Maybe	No
If yes, then select the following event based learning.		Crafts projects			Do it yourself engineering				Crafts projects	Online sharing group		
Does your Institution have provisions that allow for computer game based teaching (incidental learning)?	Maybe	Maybe	Maybe	No	No	No	No	No	No	Maybe	Maybe	Yes
What measures does your Institution provide for allowing computer game based teaching? Please Specify.	Not applicable	Simulation Games	Not applicable	Not applicable	Not applicable	No idea	Not applicable	Not applicable	Not applicable	Not applicable	I am not sure	Not applicable

Does your Institution have measures to allow students to explore their local environment (incidental learning)?	No	Yes	Maybe	Maybe	No	Yes	Maybe	No	Maybe	No
What measures does your Institution provide for allowing students explore their local environment? Please Specify.	Not applicable	Augmented Reality based maps	Not applicable	Not applicable	Not applicable	Video Blogs	Not applicable	Not applicable	Not applicable	Video Blogs
Does your Institution provide opportunities to transfer information and experience across settings?	No	Yes	Maybe	Maybe	Maybe	Maybe	Maybe	No	Maybe	Yes
Does your Institution allow students to pursue individual themes based on interest (personal inquiry based teaching methods)?	No	Yes	Maybe	Maybe	No	Maybe	Maybe	Yes	Maybe	Yes

What measures does your Institution provide for allowing students to pursue individual themes based on interest? Please Specify.	Not applicable	Adaptive methods of teaching	Not applicable	Self selection of Interest areas	Not applicable	Not applicable	Self selection of Interest areas	Self selection of Interest areas	Feedback on Learner's Interest areas	Self selection of Interest areas	Self selection of Interest areas	Self selection of Interest areas	Self selection of Interest areas
Does your Institution allow space for connecting formal and informal learning experiences?	No	Yes	Maybe	Maybe	No	Yes	Maybe	Maybe	Yes	Yes	Maybe	Maybe	Yes
What measures does your Institution provide for connecting formal and informal learning experiences? Please Specify.	Not applicable	Virtual Tours to Institutions	Not applicable	Not applicable	Online Vocational Activities	Virtual Tours to Institutions	Not applicable	Partnerships with Online Youth Clubs	Virtual Tours to Institutions	Virtual Tours to Institutions	Not applicable	Online Vocational Activities	Virtual Tours to Institutions
Does your Institution allow provision for goal and 'skill acquisition' based learning?	Maybe	Yes	Maybe	No	Yes	Maybe	Yes	Maybe	Yes	Yes	No	Yes	Yes

What measures does your Institution provide for goal and 'skill acquisition' based Learning? Please Specify.	Not applicable	Participatory online skill based projects	Not applicable	Not applicable	Participatory online skill based projects	Not applicable	Individual online skill based projects	Not applicable	Participatory online skill based projects	Participatory online skill based projects
	Maybe	Yes	No	Maybe	Maybe	No	Yes	No	Maybe	No
Does your Institution provide learning through argument-tation?	Not applicable	Virtual Classroom norms	Not applicable	Not applicable	Use of Models	Not applicable	Use of Models	Not applicable	Use of Models	Virtual Classroom norms
	Maybe	Yes	No	Maybe	No	Maybe	Yes	No	Maybe	Yes
What measures does your Institution provide for learning through argument-tation? Please Specify.	Not applicable	Virtual Classroom norms	Not applicable	Not applicable	Use of Models	Not applicable	Use of Models	Not applicable	Use of Models	Virtual Classroom norms
	Maybe	Yes	No	Maybe	No	Maybe	Yes	No	Maybe	Yes
Does your Institution create provision to develop transferable skills such as curation, evidence building and reflective commenting?	Not applicable	Virtual Classroom norms	Not applicable	Not applicable	Use of Models	Not applicable	Use of Models	Not applicable	Use of Models	Virtual Classroom norms
	Maybe	Yes	No	Maybe	No	Maybe	Yes	No	Maybe	Yes



Brief Profile of the Author

Dr. Biswajit Das is Professor and founding Director of Centre for Culture, Media & Governance. He has over three decades of teaching and research experiences in the field of theory, method and history of Communication in India. Prior joining the centre, he worked with national and international agencies in conducting communication research and training. Prof. Das taught Sociology of Communication in Department of Sociology, Jamia Millia Islamia offering courses on Media and Society, Culture Media and Society and Media Education. Prof. Das taught Communication Theory and Development Communication in AJK-MCRC, Jamia Millia Islamia, Mudra Institute of Communication, Ahmedabad and other central universities. Prof. Das has been in the advisory board of several universities and colleges in devising course curriculum.

Prof Das has been a visiting Professor at York University, and fellow at the University of Windsor, Canada, Fellow at MSH, Paris, INALCO, Paris, Charles Wallace Trust, London and the Indian Institute of Advanced Studies, Shimla, India.

Prof. Das has been a member of Innovation Council of I&B Ministry, Govt. of India and member of joint committee constituted by University Grants Commission (UGC), MHRD and Information and Broadcasting Ministry to monitor media related courses in the country. Besides, he has been in the advisory board of Consortium of Education Communication (CEC), New Delhi and National Council Rural Institute (NCRI) and several other distinguished bodies such as UGC, ICSSR and councils of Govt. of India.

His research has been supported by the Indo-French Scholarship (MSH), Shastri Indo-Canadian Institute, Charles Wallace India Trust, Ford Foundation, SSRC (New York), UNESCO, UNDP, IDRC, UGC and ICSSR and HIVOS, Netherland. He is the co-editor of the Sage series on 'Communication Processes', of which the first volume on *Media and Mediation* (2005), the second one on *The Social and The Symbolic* (2007) and the third one on *Communication, Culture and Confrontation* (2010). Prof. Das has published in various national and international journals.

Currently, Prof. Das is the member of Open Education Resource, MHRD, Coordinator, Centre for Potential with Excellence in Media and Communication Studies (2016-21), Coordinator, Special Assistance Programme, UGC, MHRD and heading as Principal Investigator of e-PG Pathshala programme in Media and Communication Studies, UGC, MHRD.

Currently, Prof. Das is the founding President of All India Communication and Media Association in India. He can be reached at [biswas\[dot\]das\[at\]gmail\[dot\]com](mailto:biswas[at]das[at]gmail[dot]com)



Commonwealth Educational Media Centre for Asia (CEMCA)

7/8 Sarvapriya Vihar, New Delhi - 110016, India

Tel: +91-96501 54010, +91-11-2653 7146/48

Fax: +91-11-26537147

www.cemca.org.in