Open Access Book

Musings on Distance Education

SANJAYA MISHRA

Continued from the back cover….

During and in the wake of the COVID-19 pandemic there has been a mad rush to resort to technology, and especially online learning technology to fill the gap left by widespread school closures across the education sector. Few took the time—arguably there was no time—to prepare the ground for online distance learning. This hasty adoption of online distance education as an emergency response in unfamiliar educational settings caused more damage than good to its promise and potential. A lifetime of reflections by Sanjaya Mishra in this book offers a treasure trove of ideas, advice, and pathways for us in our desperate bid to reimagine and re-engineer our compromised education systems.

Som Naidu, PhD, D.Litt., PFHEA.
Principal Associate (Technology, Education and Design Associates),
Executive Editor, *Distance Education*

Dr Sanjaya Mishra is endowed with a sensitive and reflective mind. This blog-book documents his thoughtful reflections on developments in ODL and Online Education over some time. His years of experience in the global arena make the stories richly educative.

Prof Marmar Mukhopadhyay
Chairman, Educational Technology Management Academy, India

Dr Mishra provides a wide-range angle on ODL, essential for all interested in critical appreciation of conceptual and operational dynamics of the system.

Prof. V.S. Prasad
Former Vice Chancellor, Dr. B.R. Ambedkar Open University
and Former Director, National Assessment and Accreditation Council, India

No matter how strong trees are when they are alone, they are even stronger when they come together as a forest. In this book, I see that many thoughts from Dr. Sanjaya Mishra come together to form an intellectual forest.

Dr Aras Bozkurt
Associate Professor of Distance Education
Anadolu University, Türkiye and Editor, *Open Praxis*, ICDE.

"Self-Talk" portraits an inspiring story of a reflective practitioner in the pursuit of open, distance, and online learning over two and a half decades. This book unveils a collection of critical and reflective writings on various aspects of open and distance learning (ODL), ranging from conceptualization, roles and responsibilities of individuals and institutions, quality, equity, learner-support, open educational resources, and especially on technology-enabled learning. It is a thought-provoking resource which provides many useful insights not only for ODL practitioners, but for all life-long learners.

Shironica P. Karunanayaka
Senior Professor in Educational Technology
Open University of Sri Lanka

Online education has a practice that transcends the classroom, and a heritage that predates the internet. The reflections of those who witnessed the evolution of open and distance education into their various

forms today contain valuable clues as to their trajectory – and possible destiny. Mishra's publications as a reflective practitioner across 30 critical years of development, which in part trace the growth of IGNOU, give insight into the varying challenges and opportunities faced by decision-makers and practitioners. Always insightful and thoughtful, this book gives glimpses into the maturing of open education and the endurance of good thinking.

Dr Mark Nichols
Executive Director
Learning Design and Development Open Polytechnic (a business division of TePūkenga), and host of the 'Leaders & Legends of Online Learning' podcast.

Self-Talk -- the book provides readers with a critically informed and accurate analysis of the changing roles of the teacher and student in open and distance learning over the last 25 years. Throughout this work Sanjaya places his finger on many of the key innovations that have hallmarked this development, complete with a cornucopia of ideas, anecdotes, and experiences. From his early years with IGNOU to the international stage, experimenting with satellites, radios and other forms of media, in tandem with the journey from physical to virtual libraries and OEP, this journey leads him on to newer thinking around the use of more social media style approaches. In all, you see in this epic journey of transference a maturing from enthusiastic inciteful innocence into enthusiastic wisdom.

Professor Michael Sankey
Director Learning Futures and Lead Education Architect
Charles Darwin University
and President, Australasian Council on Open, Distance and eLearning (ACODE)

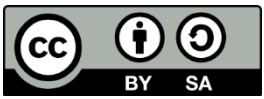
The depth and details of the deliberations in Open and Distance Learning in the book by Mishra are nothing short of astounding. The sincerity of the reflections is filled with the assessment of events, with questions and proposals, solutions, and foresight. 'Self-Talk' takes one through the past, present, and future of ODL.

Rozhan M. Idrus
Former Professor of Open and Distance Learning
Universiti Sains Malaysia

Self-Talk

Musings on Distance Education

Sanjaya Mishra
Director: Education
Commonwealth of Learning, Canada



This book is a compilation of several blogs and other writings of Dr Sanjaya Mishra. These are presented to share these thoughts for information, knowledge dissemination, discussion, and debate. It is available for download on Zenodo (https://zenodo.org/communities/de101) at no cost. If you happen to buy the hard copy, thank you. The proceeds of the sales will be donated. The information provided within this eBook is for general informational purposes only. While the author has tried to update and provide additional commentary as notes, mostly the writings retain the original flavour. Please use your discretion to interpret these in your own contexts as these are author's personal thoughts. By presenting these in a collective volume, the author intends to share these in best interest of development of distance education. If any of the designations and/or expression is not suitable to you, the author expresses his advance apologies. Opinions expressed are those of the author, and do not in any way represent the views of his current and past employers. All links were working at the time of final review before release of the publication.

CONTENTS

Preface

Rationale

This book is the result of a journey I started as an accidental distance educator. By chance, I joined one of the regional centres of Indira Gandhi National Open University in 1993 and became a student of distance education. Over the years, I have followed a reflective practitioner approach in distance and online learning. This resulted in many research papers, articles, presentations at conferences, and discussions with colleagues. Some of these were short and published in magazines that are no longer in circulation and have become inaccessible. With the emergence of Web 2.0, it became easier to write blogs and share one's ideas to a wider audience. As someone who experimented with new technologies, I began blogging as TeachKnowLogist. These blogs are available online, but I do not often write them these days. I also am not sure whether they will remain available online for long, due to the ephemeral nature of free content on the Web. Thus emerged the idea of compiling some of my write-ups that are available in nonstandard publications or 'grey literature'. The idea is to put together some of these ideas to make them available in one source.

Talking to Oneself

The compilation covers my writings since 1996. Thus, you must read the specific write-ups in their contexts. On reflection, I think many of the ideas discussed are still relevant, and there might be lessons beyond the scenarios described. Many of these are conceptual, as well as critiques of developments and practices in open and distance learning. Every author expects that what they write will be read by many people. In my case, probably a small number of people read it. That is why I called this compilation, *Self-Talk: Musings on Distance Education*. When what you write has no impact, it is like talking to yourself. In fact, blogs are for self-reflection; they help in clarifying our own

thoughts, and they give opportunities to learn and improve. From that perspective, it has been a personal learning journey. It is also personally gratifying that ideas written years back are still relevant in today's context. While the write-ups have been edited to make them more presentable, the substance remains unchanged. The source of the original work is also provided, where available.

Open, Distance and Online Learning Today

The field of open and distance learning has undergone tremendous changes due to the impact of technology. Being a technology-mediated system of teaching and learning, it obviously is a dynamic field. However, the field has struggled to emerge as a strong discipline, and it remained a second-chance, second-class option until the COVID-19 pandemic, when everyone tried to adopt some sort of distance learning, under various nomenclatures. Those who had once been critical of distance learning became stakeholders and champions of it! They were worried about the quality of distance education before the pandemic but did not ask many questions when everyone suddenly had to 'pivot' to online learning. While I am sure they will revert to business as usual, there is much that we can learn as a civilization. We need to prepare for future disasters. For education and lifelong learning, open and distance learning is the answer. Better understanding of the philosophical foundations as well as best practices of quality distance learning are key to sustainable education.

The book contains 45 chapters, each addressing a new idea or concept. Some are explanatory, while others are critiques of a situation or experience. The purpose of compiling these will be fulfilled if it reaches the right audience.

Sanjaya Mishra, PhD

Distance Education

1

Revisiting the Definition of Distance Education[1]

As the COVID-19 pandemic continues to rage, there is a growing realisation about the importance of distance education to improve access and equity, and to support teaching and learning at all levels. At the same time, we see the emergence of new terms that can cause confusion about the differences and similarities between phrases such as 'emergency remote teaching', 'online learning', 'blended learning', 'hybrid learning', and 'hyflex learning', which are often used interchangeably and indiscriminately. My advice is: 'Let's not get carried away by old wine in new bottles!'

So, let us revisit the history of the definition of distance education. For many readers of the Commonwealth of Learning (COL) blog or for distance education professionals, this may be repetitive. (In distance education, repetition is considered a virtue, as the learner needs to be constantly reminded about what they are learning, through definitions, explanations, analogies, illustrations, recapitulations, and summaries.) Experts indicate that references to the earliest practice of distance education appeared in an advertisement for short-hand training, published in the *Boston Gazette* way back in 1728. In the beginning, distance education was referred to by different names, such as correspondence education and independent learning. In fact, the International Council for Open and Distance Education, founded in 1938, was known as the International Council for Correspondence Education. Its current name was adopted at the 1982 World Conference on 'Learning at a Distance', held in Vancouver, Canada. Writing in the 1980s, Desmond Keegan gave an analytic definition of distance education, which included five key characteristics:

- Quasi-permanent separation of teacher and learner in the learning process (this distinguishes it from traditional face-to-face education).
- Influence of an educational organisation in the planning, design, and delivery of learning resources and opportunities (this distinguishes it from private self-study).
- Predominant use of technical media for delivery of learning content.
- Provision of two-way communication between student and teacher, and student and student.
- Quasi-permanent absence of learning groups (making it possible to arrange face-to-face meetups for didactic and social purposes).

Later, Jim Taylor classified distance teaching and learning into five generations:[2] correspondence (primarily dependent on text delivered by post), multimedia (use of print, audio, video, and computer-based training), tele-learning (use of televised courses, radio, and interactive video conferences), flexible learning (interactive multimedia online, web-based courses), and intelligent flexible learning (web-based, multimedia, and automated response systems). Today, with the use of chatbots, artificial intelligence, and intelligent tutoring systems, along with traditional technologies such as print, these classifications may not be useful. However, they help us recognise that distance education means different things to different people. In 2001, I identified online learning as the new generation of distance education[3] in the evolutionary growth of open, flexible, and distance learning!

According to Michael Moore, the distance in distance education is transactional, a function of the 'structure' and 'dialogue' that a course offers. So the media used can influence the structure and dialogue in a course, and if it is truly a distance education course, the course design should consider the characteristics identified by Keegan. Also, historically, we know that distance education has a strong theoretical[4] and practical background, particularly in its focus on designing instructionally sound learning materials, and the systematic planning and management required for the effective delivery of quality courses. In fact, Otto Peters called distance education the 'industrialisation of teaching and learning'. When Taylor's fifth generation of

distance education became popular as online learning, it was due to the flexible affordances offered by technology that helped learners to access teaching and learning asynchronously. It also increased two-way communication and created opportunities for a strong teaching presence, cognitive presence, and social presence, fostering the community of inquiry[5] model in course design and delivery. Distance education and online learning both require substantial planning, design, and preparation before delivery.

The COVID-19 pandemic forced the educational community to embark on emergency remote teaching, meaning 'a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances'.[6] This also meant some remote teaching solutions were used to deliver a course (whether it was initially face-to-face or blended or hybrid). As such, these courses used synchronous technologies, replicated classroom pedagogies, and were not expected to be like robust online or distance education courses — planned, designed, and deliberate. Most of these offerings had Keegan's five characteristics of distance education to some extent. But they did not follow the theoretical and practical principles for designing and delivering distance education. One such principle is that course design in distance education follows the deliberate practice of understanding learner access to technology, and accordingly uses a mixture of media to deliver teaching and learning. During the pandemic, there was no opportunity for analysis, and instead of increasing access, online learning exacerbated the inequities already present in the system.

Today, online learning is offered by many organisations other than traditional educational providers. The emergence of massive open online courses (MOOC), which were taken up by many in the last year (2020–2021), has shown that online learning is a great lifelong learning opportunity that can help achieve Sustainable Development Goal 4.[7] Can these courses qualify as distance education courses? Yes and no. Yes because most meet the five characteristics, but no because the definition of distance education contains the inherent assumption that the qualifications offered by the supporting organisation are recognised. So when MOOCs lead to credits toward qualifications, I consider them to be distance education. Thus, online learning offered in general under the aegis of a private provider supported by an educational institution, while following the principles of distance education, may still not be considered legitimate for calculating the gross enrolment ratio in a country. This points to the need for a qualification framework that

recognises online micro-credentials (such as MOOCs and other forms of online learning). In India, MOOCs are mostly offered as graduate-level courses, and up to 40% of credits earned can be used towards earning a degree at an educational institution.

What about blended learning? As it is often defined, blended learning is the thoughtful use of face-to-face and online learning.[8] This means blended learning can be considered a form of distance education, with all the five characteristics of distance education.

When 'open' is used along with distance education, it indicates an 'opening up' of educational opportunities by reducing barriers. Distance education enhances access to quality educational opportunities, but it is not necessary for all distance education courses to follow the principles of open education.[9] At the Commonwealth of Learning, our focus is on open and distance learning to increase access to and improve the quality of education and training. While many other organisations are now offering online courses, they are not necessarily practicing distance education. Some of these are for private self-study for professional development and lifelong learning. COL's role is unique, and we focus on working with governments and educational institutions to use the best practices of open and distance learning to bring quality education and training to the last person in the queue.

Source: Mishra, S. (11 May 2021). *Revisiting the definition of distance education*. Commonwealth of Learning. https://www.col.org/news/revisiting-the-definition-of-distance-education/

2

Innovations in Distance Education[10]

Innovation has become a buzzword in all walks of life, and distance education is no exception. The Asian Association of Open Universities (AAOU) Conference in Tehran in 1995 was probably the first such occasion to devote a fully-fledged discussion to innovations in distance learning. But if we closely look at the deliberations there and elsewhere in the distance education literature about what innovation is, it becomes clear that there is much to be desired. While some would consider the use of an existing technology in a new context as innovation, others would consider a new teaching–learning programme an innovation. Broadly, innovation is the act of starting something new. It could be a new idea, a new product or a new process. Two important concepts are related to innovation: creativity and change. Innovation is a creative process, and it advocates for change in a current practice. The change can be radical or incremental. However, innovation is different from invention. Innovation is the application of ideas in practice. As such, distance education itself is an innovation in the field of education!

We can all be creative and innovative, but contrary to popular belief, innovations are not always appreciated. Alexander Graham Bell, who invented the telephone, was turned down by Western Union, who told him it was a 'useless toy'. Scott Berkun, author of *The Myth of Innovation*, states, 'Every great idea in history has the fat red stamp of rejection on its face.'[11] Does that mean we should stop thinking and innovating? No. The real innovators endure and persist. There may be rejection due to ego, pride, politics, priorities, fear, greed, etc., but innovators survive through their convictions and belief in what they have striven to create. Fortunately, history shows that when institutions do not recognise innovations, entrepreneurship

is the result.[12] But this is also a sign of institutional failure to accept innovations internally, experiment, and institutionalise ideas if they come from a person low in the social hierarchy. Fortunately for distance education in India, and for Indira Gandhi National Open University (IGNOU), we have the National Centre for Innovations in Distance Education (NCIDE), which has various schemes for recognising innovations within the institution and the country's education system.

For distance education, innovation is an imperative. It is not something we may do; it is something we must do. For example, cost-effectiveness is one of the strong pillars of distance education. If we do not constantly think and innovate, how can we maintain cost-effectiveness? One programme may not be cost-effective, but the system should be cost-effective to justify its existence as an alternative mode for providing quality educational access to large numbers of people. So we need to innovate new programmes that cater to the needs of the market. We need to use new instructional and learning design principles to develop programmes that are suitable for learners' requirements. We need to use appropriate technology to make programmes more interactive and useful to learners. In all activities, we need to think about the philosophy of open learning and innovate appropriate distance education programmes that provide access to more people at less cost. Innovations in distance education therefore should follow a system-wide perspective, and as IGNOU is a pioneer in distance education, it is the responsibility of teachers and administrators to think about the system. In particular, as a national university, we are accountable to the nation to demonstrate that the system is fit for purpose, and therefore, we should constantly innovate in curriculum design, instructional design, learning material preparation, ICT-enabled programme delivery, new programmes, and new technologies in education.

Source: Mishra, S. (21 May 2010). *Innovations in distance education*. Originally published in *ennovate*, the newsletter of the National Centre for Innovation in Distance Education. Available at http://teachknowlogist.blogspot.ca/2010/05/innovations-in-distance-education.html

3

Role of Teachers in Distance Education[13]

As a teacher of distance education as a discipline, I have always believed that teaching is teaching, irrespective of the mode, and have urged the teaching community of Indira Gandhi National Open University not to consider themselves different, as there have always been attempts to marginalise its teachers as 'academic managers'. The tasks of teachers, irrespective of the mode of teaching, include curriculum design and development, content presentation, assessment of learner performance (continuous and term-end), learner support, research and publication (disciplinary and on learning technology), and extension services and consultancy. So the method in distance education differs only in content presentation, as it uses media (print, audio, video, multimedia, web-based courses) to deliver teaching. These materials are designed with special care to facilitate learning and are said to have the qualities of a teacher. In face-to-face teaching, the teacher only delivers lectures and engages the class in various interactive methods. The other roles being the same, there is no reason to compare distance education to the face-to-face education system. We do not compare oranges and apples!

The most important activity as such is the preparation of learning materials. Interestingly, to quickly develop learning materials, the university in the beginning adopted a mode of taking help from teachers in face-to-face colleges and universities to develop materials. Thus, without using the term 'outsource', it practiced the outsourcing of the unit-writing tasks. A teacher in the university writes only some units of a course that he/she teaches, and thus is labelled a 'course coordinator'. This is a serious issue. Teachers in the

university need to assert themselves in their role as teachers and develop courses without depending on external course writers.

Yet in addition to outsourcing unit writing, the university has taken it a little further by outsourcing the development of programmes to external agencies through MoUs and partnerships! This is marginalisation of the teaching function, as there is a growing belief that courses and programmes can be developed elsewhere and can be delivered by an institute/university without having faculty on its payroll. In this connection, the role of the Distance Education Council[14] (DEC) needs to be re-examined. Interestingly the DEC is supposed to maintain quality and standards in the country's distance education system; but it has failed to develop a credible system, and it is teachers from IGNOU who go in accreditation teams to different institutions in the country and approve them, without questioning the process adopted by the DEC.

There has been a serious degradation in the professional ethics of teachers at IGNOU, as all the programmes and courses are approved by statutory bodies like the School Board and Academic Council, which have sufficient teacher representation. There is rarely any dissent about any item in any of these statutory bodies. Thus, all the recent developments have been proposed and approved by the teachers in the university. Once these items are approved, people talk about these issues outside in private, non-relevant platforms. It thus also seems that there is a serious lack of integrity amongst teachers!

Many times, colleagues at IGNOU boast of their quality materials. It is time to engage in self-reflection. Who certified that our material is good? Even if it is good, what is the 'goodness of the good'? Do we know the answers to these questions? IGNOU is just one kind of distance education system, and it can't be a benchmark for others to follow. Most of the time, decisions are taken that are not in tune with distance education practices worldwide, making our system vulnerable to criticism and causing others to regard us as undesirables. If the recent developments in the university are not addressed seriously, there is every danger that the students within the country's distance education system will be at a disadvantage!

Source: Mishra, S. (30 August 2009). *Role of teachers in distance education*. http://teachknowlogist.blogspot.ca/2009/08/role-of-teachers-in-distance-education.html

4

Open, Distance, and Online Learning Curriculum at the Master's Level[15]

The idea to conduct a Delphi study on designing a curriculum for distance and online learning at the master's level came from the fact that there are considerable variations in the programmes on distance education offered by various universities around the world. The curriculum for IGNOU's master's programme on distance education is very different from those of the Open University (United Kingdom), Deakin University (Australia), and Athabasca University (Canada). If distance education is a discipline worthy of systematic study and research, the contents of such programmes should be more or less similar, with minor variations to accommodate contextual and cultural requirements. In phase one of the study, I requested a large group (above 500 persons) of experts to list at least ten topics of their choice to be included in an international master's in open, distance, and online learning. The list of topics generated (with multiple responses) was as follows:

- E-learning (13.84%): Includes virtual learning environments; learning management systems; learning objects; computer-mediated communication; open educational resources; e-learning standards; online facilitation; online assessment; designing online learning; online communities; computer-supported collaborative learning; online tutoring; web authoring; web accessibility; digital divide; Web 2.0; mobile learning.

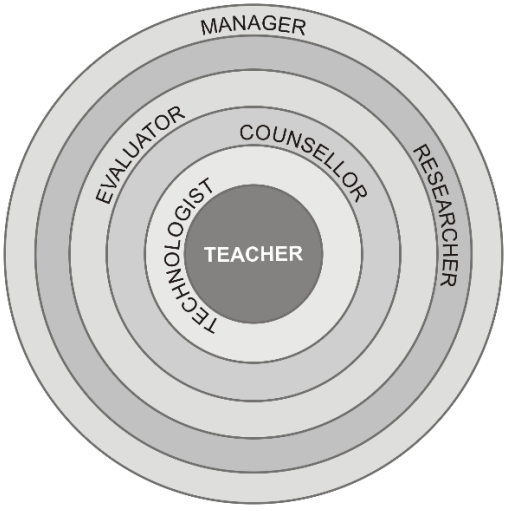
- Material Development and Production (13.29%): Includes writing aims and objectives; preparing activities; converting materials to online formats; editing; printing.
- Instructional Design (10.1%): Includes theories of learning; pedagogy vs. andragogy; self-directed learning; autonomous learning; learning styles; models of instructional design.
- Learner Support (9.67%): Includes understanding distance learners; academic advising; retention; mentoring; building relationships; types of learner support.
- Foundations of Distance Education (9.2%): Includes theories of distance education; philosophical, psychological, and sociological foundations; history, growth, and developments; distance education and national developments; distance education in the developing world; models of distance education; globalisation and distance education; distance education for special needs.
- Educational Communication Technologies (7.69%): Includes technology integration; synchronous and asynchronous technologies; emerging technologies; satellite communication; interactive technologies; radio and TV.
- Research Methodology (7.47%): Includes research in distance education; research as reflective practice.
- Management of Distance Education (6.81%): Includes change management; policy development; leadership; marketing; resource sharing; project management.
- Assessment of Learner Performance (5.93%): Includes feedback for learners.
- Quality Assurance and Program Evaluation (4.83%): Includes quality standards; benchmarks and performance indicators; national and international scenarios; quality assurance agencies; tools of quality assurance; evaluation of programmes.
- Curriculum Design and Development (4.39%): Includes course design.
- Staff Training and Development (2.85%): Includes competencies of distance educators and online teachers; supporting tutors; training techniques and approaches.
- Cost and Economics of Distance and Online Learning (2.63%): Includes budgeting and economies of scale.

- Educational Multimedia (2.19%): Includes audio and video preparation; interactive multimedia development.
- Project Work (2.4%): A research report/dissertation on a topic/problem.
- Copyright and Ethical Issues (1.97%): Includes copyright laws; digital rights management; ethics in distance education; open source and open content issues.
- Case Studies (1.53%): Includes application of distance education at various levels, such as open schooling, open basic education, technical and vocational education and training, tertiary education, non-formal education, and corporate education.

Source: Mishra, S. (7 November 2007). *Open, distance and online learning curriculum at master's level*. http://teachknowlogist.blogspot.com/2007/11/open-distance-and-online-learning.html

5

Six Gowns of Distance Educators



Teachers in distance education systems perform various roles and tasks. Despite their complex responsibilities, teachers in distance education are accorded low esteem and respect. This is partly due to the implementation of the teaching–learning system in the many so-called distance teaching institutions that care little for the quality and philosophy of distance education. Most of the time, distance educators face problems of parity and recognition of their work as teaching. At some places, the non-teaching staff also question the status of teachers in distance education. Having been involved in the distance education system for the last 14 years, I have tried to analyse the roles performed by its teachers. I realised that a teacher in the

distance education system puts on six 'gowns', depending on the time and context: the gown of a teacher, a technologist, a counsellor, an evaluator, a researcher, and overall, a manager. It is the last gown that is more problematic for teaching professionals, as teaching is only considered to be something done in the four walls of a classroom, with all other managerial activities being performed by other staff. In distance education, teachers put on the managerial gown most of the time, leading to the idea that distance educators are not teachers in the true sense of the term. In reality, the meaning of 'teacher' is changing, and therefore, we need to look further into these six gowns that a teacher in distance education puts on from time to time. In fact, a true teacher in distance education is one who switches gowns with ease and performs multiple roles with care and passion. Let's look at these gowns:

- **Teacher**: This is the core of a distance educator and is the primary gown. A teacher's tasks involve curriculum planning and design, and the development/writing of lessons in multiple media formats. Thinking about instruction and instructional design is part of the activities of a teacher in distance education. What subject can be taught through which media, and what supports learners require are decisions a teacher needs to make. How best to present materials so that a learner can study the content and achieve the intended objectives is also a matter of concern for a teacher in distance education. Teaching is performed through a variety of media — print, audio, video, computers, the Internet, assignments, tutoring, and others.

- **Technologist**: Every distance educator needs to be a technologist. Distance education by definition is a system of teaching and learning facilitated predominantly by the use of technology. In order to be effective, a teacher needs to put on the gown of a technologist from time to time while developing materials in print as well as other digital media, such as audio, video, and computers. Understanding technology to a reasonable extent and being able to work comfortably with technology to teach subject matter are important attributes in distance education. Teaching with the use of a television camera in asynchronous and synchronous manners requires different types of skills, and a good distance teacher needs these special skills. The advent of new technologies has added further responsibilities, and teachers in the distance education system must remain up to date

all the time. This need not be the case for teachers in the classroom-based system.

- **Counsellor**: In a classroom-based system, the role of a teacher is mostly to transact curricular content. In contrast, a teacher in the distance education system needs to be a counsellor with the skills to handle disadvantaged students who have a variety of problems. A good distance teacher is a counsellor who has warmth, acceptance, genuineness, and empathy. Apart from helping students to understand the content, a distance teacher also needs to understand learners' problems and accommodate individuals within the framework of the institution's rules and regulations. Good counselling is key to student success and retention in the distance education system. Most of the poor performance of distance teaching institutions is due to poor counselling and guidance of learners.

- **Evaluator**: All teachers do evaluation, but distance teachers do more than evaluation. They need to have good monitoring skills, especially to monitor the delivery of their courses and programmes. A teacher's role in the distance education system does not end after the development of learning materials; they need to monitor the delivery of the programmes/courses to maintain quality. Teaching through assessment of students' work is unique to distance education, as it increases two-way communication and interaction between the teacher and the learner. Providing teaching-type comments on students' work/assignments is vital to help them learn.

- **Researcher**: All teachers need to be researchers, by both doing research and supervising research. The objectives of research are to generate new knowledge and gain insights into existing problems. Distance educators, apart from doing research in their own disciplines, also need to do research in the systemic aspects of distance education, especially to improve their own understanding and develop themselves as reflective practitioners. This aspect is not taken care of in distance education institutions that try to identify separate cadres for doing systemic research. Instead, distance teachers need sufficient opportunities to conduct research as part of their job. The gown of a researcher is a difficult one, and we seldom put it on.

- **Manager**: The managerial gown is the one seen most of the time. A distance educator performs the role of manager, doing everything from planning, organising, and staffing to directing, coordinating, reporting, and budgeting. This gown is what people see, as the other gowns are put on to limited effect. Planning for meetings, coordinating with course writers, expert committee members, counsellors, and study centre staff, preparing budgets for courses/programmes, organising counselling schedules, identifying counsellors and other related staff, directing various activities involved in course delivery, reporting progress to management, and many other activities fall within the roles of a manager in the distance education system. As teachers, we do all of these!

Whatever may be the perception about distance educators, it is true that they switch gowns from time to time. The managerial gown is probably more visible, so distance educators need to be proactive about putting on their other gowns more frequently.

Source: Mishra, S. (1 March 2008). *Six gowns of distance educators.* http://teachknowlogist.blogspot.com/2008/03/six-gowns-of-distance-educators.html

6

Commensalism in Open and Distance Education

The open and distance education (ODE) system in India and elsewhere is supported by the existing educational infrastructure of the country. The system is cost-effective because ODE institutions invest less in infrastructure development and depend on conventional educational institutions to organise support services. From my experience, I have tried to analyse the current practice of collaboration with various types of institutions at India's Indira Gandhi National Open University (IGNOU).

The Study Centres of IGNOU, by and large, are in conventional face-to-face institutions that provide a few rooms within their premises to run IGNOU activities. The head of the institution receives some remuneration, and all the staff members of the Study Centre are normally drawn from the host institutions and are provided remuneration for part-time services rendered. There are also Programme Study Centres, where specific services are offered to IGNOU students, and the host institutions are reimbursed on a per student basis. The faculty strength of the university is less in comparison to the number of centres and the student strengths. The courses are developed with the support of university and college teachers in other institutions. Mostly, these teachers are experts in their specific areas and are considered national resources. In percentage terms, a significant proportion of the learning materials are written by outside experts, who are compensated for their efforts. Academic tutoring activities are held at the study centres, where approved academic counsellors provide subject-specific guidance and assess student assignments. The tutors are also drawn from the conventional system

and are part-time staff who are separately compensated for counselling and for assessing student assignments.

As a student of biology in my college days, I recall the types of relationships between living organisms and have tried applying the same concepts to 'living' institutions, according to social systems theory. There are three types of relationships among living organisms:

- Symbiotic: A symbiotic relationship is one where organisms of different species mutually benefit from the relationship.

- Commensalism: A commensal relationship is one where two organisms remain together, but only one benefits and the other is neither harmed nor helped.

- Parasitic: A parasitic relationship is one where two unrelated organisms co-exist together, and one benefits from the relationship, while the other is harmed.

Which type is the inter-institutional relationship between IGNOU and the other institutions?

If we look at the IGNOU Study Centres, what benefit does the host organisation receive from IGNOU? Virtually nothing. IGNOU is benefited tremendously through the support of its part-time staff. There is no mutual benefit, but there is also no harm to any party. Thus, we can categorise it as a case of commensalism. If we look at the process of course development at IGNOU, it is a mixed relationship, ranging from symbiotic to parasitic. The course writers are paid for their efforts, and they also get credits. The university gets the course developed in less time and at lower cost, involving only a few course coordinators. To this extent, it is symbiotic. However, if we look into the amount of dependency on the conventional face-to-face system for course writing work, it is clear that the relationship is parasitic. The compensation given to the course writers is neither adequate nor timely. The university gets the bigger share and sometimes runs a course/programme without having sufficient expertise. The university is not able to develop its own expertise and thus remains dependent on outside experts for a long time, making itself a parasite on the other system. That

said, one may argue that there is no loss/harm to the conventional system, and therefore there is no parasitic relationship.

In order to make a collaborative system work more effectively, it is necessary for the inter-institutional relationship to be symbiotic. Both the institutions should benefit from the relationship. If that does not happen, the system is only used to gain individual benefits. So far, we work in an ODE system that behaves commensally.

Source: Mishra, S. (26 September 2007). *Commensalism in open and distance education*. http://teachknowlogist.blogspot.com/2007/09/commensalism-in-open-and-distance.html

7

Ten Mistakes Programme Coordinators Make in Distance Education

Distance education uses various models of course and programme design, development, and delivery. It is also believed to have 'economies of scale', as not many full-time teaching staff are involved. Thus, distance education faculty members coordinate large numbers of courses and programmes. Sometimes, they are also expected to coordinate programmes in which they do not have subject expertise! Such a thing can only happen in distance education.

The role of the internal faculty and instructional designers in distance education is very critical, as the majority of course writers are drawn from the conventional system and have little or no training in preparing self-learning materials. Thus, the programme coordinator and/or the instructional designer must do many tasks that could actually be avoided if care were taken at the right time. The following ten mistakes of programme coordinators are drawn from my experience:

1. Plan for large number of courses and programmes without considering individual workload.
2. Request that experts write lessons for distance learners without specifying the 'learning outcomes'.
3. Request that experts write lessons for distance learners without specifying the 'target group' and their profile.

4. Request that experts write lessons for distance learners without specifying the 'course objectives'.
5. Request that experts write lessons for distance learners without specifying the 'workload' in credit hour terms.
6. Request that experts write lessons for distance learners without specifying the 'instructional strategies', including learner support, assessment, etc.
7. Work under pressure to finalise courses and programmes, compromising quality.
8. Plan and coordinate courses and programmes without having domain expertise and thereby depending on others.
9. Serve as a 'post office' without applying their own knowledge and experience.
10. Follow an unquestioning, non-reflective approach to teaching through distance learning.

If you make any of the above mistakes, the result will be very clear: your courses and programme quality, as well as your reputation as a professional, will suffer to a great extent. Your course writers will not write the lessons you expect of them, you will write and rewrite the materials yourself, you will have to give undue credit to others who have not contributed satisfactorily, you will feel burnt out, and your students will not get their promised materials. At the end of it, your course will be ready, but it won't be much help to the learners. But there is one satisfaction: you may be promoted to the next grade!

Source: Mishra, S. (28 June 2007). *Ten mistakes programme coordinators do in distance education.* http://teachknowlogist.blogspot.com/2007/06/ten-mistakes-programme-coordinators-do.html

8

Quality Assurance in Distance Education[16]

Introduction

Quality in open and distance learning has been a matter of concern from the beginning. This is particularly so because of the need for parity between graduates of two different systems. Moreover, it emanates from the assumption that the face-to-face method of teaching–learning practiced in most institutions is of high quality, and this is the only way to provide quality education. There is also no definite clarity on the meaning and definition of quality, and its assurance. Quality in open and distance learning in India is a matter of the IGNOU Act, and thus, within this framework, the Distance Education Council (DEC) was established in 1991. Ironically, the National Assessment and Accreditation Council (NAAC), which is the agency to assure quality in higher education in India, was established in 1994. The NAAC now has a clear set of guidelines on methods and criteria for assessing the higher education system in India. The mechanism for assessing open and distance learning is still developing. This is probably for two reasons: lack of clarity and lack of consensus. I would like to argue for having these two essential elements — quality and quality assurance — within any mechanism for the open and distance learning system. I propose some areas of concern that need clarity and consensus, for deliberation at this workshop-cum-roundtable.

Recognition vs. Accreditation

There seems to be confusion over the use of these two terms in practice. However, they have distinct meanings and connotations:

- **Recognition:** explicit and formal acknowledgement from a government as a stamp of approval
- **Accreditation:** certification that a school, college, or the like meets all formal official requirements of academic excellence, curriculum, facilities, etc.

With respect to the academic process, recognition is given to an institution by virtue of the 'legal process' applicable in a country. According to the UGC Act, 1956, 22 (1), 'The right of conferring or granting degrees shall be exercised only by a University established or incorporated by or under a Central Act, a Provincial Act or a State Act or an institution deemed to be a University under section 3 or an institution specially empowered by an Act of Parliament to confer or grant degrees.' Thus, all universities are recognised as degree-awarding entities. They need not seek recognition from another agency unless there is a provision to the effect that education and training in specialised subject areas and/or methods be recognised by special agencies.

For open and distance learning, we are concerned with the mode of teaching, and thus, the IGNOU Act says: 'it shall be the duty of the University to take all such steps as it may deem fit for the promotion of the open university and distance education systems and for the determination of standards of teaching, evaluation and research in such systems, and for the purpose of performing this function, the University shall have such powers, including the power to allocate and disburse grants to Colleges, whether admitted to its privileges or not, or to any other university or institution of higher learning, as may be specified by the Statues.' This does not give IGNOU the power to recognise other institutions or programmes. However, the scope of the IGNOU Act for promoting and maintaining standards in the distance education system covers any institution beyond recognised universities. Therefore, the mechanisms of accreditation should follow both 'recognition' and 'accreditation' approaches – 'accreditation' for already recognised institutions of higher learning, and 'recognition' and 'accreditation' for other institutions.

Institution vs. Programme

What should be the unit of assessment? The NAAC follows the institutional assessment practice and also has provision for specific programme assessment. Other national agencies responsible for quality in various areas

and subject disciplines primarily focus on the programme as the unit of assessment. However, the All India Council for Technical Education (AICTE) follows both institutional recognition and programme accreditation. In open and distance learning, this is a critical issue, as within one institution, there may be different programmes of varying quality, particularly because distance learning is a method- and technology-dominated system. Ideally, the practice in open and distance learning should be programme assessment. However, institutional assessment can also be used, particularly for institutions that are not within the UGC parameters.

Process vs. Product

What should be assessed? This is a bigger debate. What constitutes a 'product' in higher education is not clear. To many of us, this approach itself is not acceptable, as the term connotes a market-driven approach to teaching and learning. Nevertheless, in open and distance learning, there are various products in the form of teaching–learning materials in print, audio, video, multimedia, webpage, and other formats. These can be assessed for quality. However, those who support process assessment emphasise that without a good process, we can't have a good product. If we want a good product, then we should have a good process in place. Thus, the process of quality assurance in practice in an institution should be subjected to assessment, as is the case for Australian universities (see AUQA[17]). ISO 9000:2000 also is a model of quality assessment that ensures an ISO-certified institution can meet the needs and demands of its customers in a planned and controlled manner. So, we can consider process quality to be a means of assuring quality.

Voluntary vs. Mandatory Assessment

What should be the nature of a quality assurance mechanism? Should it be voluntary or mandatory? The NAAC model is, so far, a voluntary approach.[18] However, government wants it to be made mandatory. Ideally, the practice of quality assessment should be left to consumers to decide, and a voluntary approach would lead open and distance learning institutions to make efforts towards quality improvement. Quality can't be ensured by forcing institutions or programmes to be subjected to assessment. Quality comes from within.

Grading vs. Yes/No

How should quality be indicated? There are various practices in India. Some follow a grading pattern, and others either accredit or do not accredit within

a given category. A yes/no pattern is rigid in its depiction, so a grading pattern is preferable.[19] However, the grades should also have explicit descriptors to convey qualitative meaning.

Conclusion

It is important that we achieve consensus on all these issues and devise a systematic mechanism that can provide a set of guidelines to undertake external monitoring of open and distance learning institutions in India. However, that does not preclude self-study and a continuous improvement model for quality assurance. I would like to conclude by emphasising that educational institutions (including IGNOU) should be ethically and legally stopped from running courses and programmes in which they do not have core faculty. The use of teachers as 'academic managers' and the hiring of part-time consultants has been helping many to generate resources, but quality is compromised. There should be some minimum deterrence in this respect to ensure quality. Running a programme without core faculty in that domain of knowledge is like letting a 'quack' treat patients.

What I have presented above as 'versus' actually should be treated as 'and'. In India's open and distance learning system, the mechanism of quality assurance should include recognition and accreditation, institutional and programme assessment, process as well as product assessment, voluntary and mandatory approaches, and yes/no accreditation, followed by qualitative grading (within the yes category). The mechanism should be developed through a consensus approach after due deliberations at the national level.[20]

Source: Mishra, S. (19 April 2007). *Quality assurance in distance education*. http://teachknowlogist.blogspot.com/2007/04/quality-assurance-in-distance-education.html

9

Colour in Distance Learning Materials[21]

Colour is one of the things that human beings recognise in their very early stage of life. We find colour everywhere around us. Our capacity to identify colour makes us capable of interpreting the qualities of the objects we perceive. In fact, colour defines the character and shape of objects in everyday life. It is a well-established fact that people prefer information presented in colour. Younger children particularly like coloured texts with pictures. A number of research studies show the effectiveness of colour illustrations and visual displays in instructional materials. Colour also helps in drawing learners' attention to a particular section or part of a graphic in their learning material. In a visual display containing figures of one colour, a figure of a different colour attracts our attention. Also, coloured pictures represent reality more nearly than black-and-white pictures. Colour helps us to recognise objects and relate them to concepts, ideas, and other objects in the world. Research studies also indicate that the use of colour in graphics/pictures facilitates learning if it is directly related to the instructional objectives. Thus, colour is used in distance learning materials for two purposes: to aid in instruction and for aesthetic and motivational reasons (to draw attention).

Printing in any colour should have good contrast to achieve legibility. Black ink on white paper gives excellent contrast and legibility. Therefore, textbooks and self-learning materials are normally printed in black ink. Wherever pedagogically required, graphics/pictures are printed in colour to facilitate learning. Sometimes, a second colour is also used in the learning material, as it is useful to draw learners' attention to a specific part of the

material that has pedagogic utility. Most of the time at IGNOU, self-assessment questions (SAQs) are printed in a separate colour, or a colour screen tint is used. Interestingly, research shows that coloured highlighting is more effective in terms of recall and learning.[22] Thus, a second colour or a screen tint should be used in self-learning materials to highlight SAQ sections and important keywords in the text. It is also advised that colour should be used consistently to help the learner recognise the importance of a particular section. However, the use of a second colour in self-learning materials (except for graphics and pictures) has recently been discontinued at IGNOU.

In order to make a case for the use of a second colour in self-learning materials, a quick research study has been done to calculate its cost and support the decision-making process. Four different hypothetical cases were done for print runs of 1,000 and 5,000 copies. The calculations were based on a block of 80 pages, and in all cases, the paper cost and the cover printing cost remained constant. In the 80 pages of manuscript, it was assumed that there would be four or five units with about 25 SAQ sections spread evenly across the material. Thus, out of the 80 pages, 25 pages might have a second colour.

For the 1,000-copy print run, the difference between lowest and highest was less than four rupees per copy, while the difference was only Rs. 1.19 for a 5,000-copy print run. This indicates the savings for the university will further decrease in courses that have print runs of more than 5,000.

The cost calculations and the instructional value of a second colour call for rethinking the present policy. However, I shall be quick to add that colour should be used carefully, as about 3.7% of Indians have colour vision deficiency. It is estimated that one in 12 men and one in 200 women have some form of colour vision deficiency. The most common colour vision deficiency is the failure to distinguish between red and green.[23] Therefore, in self-learning materials, the use of red and green on covers and in the interior text should be avoided.

Lastly, I would like to emphasise that colour gives a presentable look to study materials, making the efforts of instructional designers and course writers look aesthetically appealing.

Source: Mishra, S. (10 March 2007). *Colour in distance learning materials.* http://teachknowlogist.blogspot.com/2007/03/colour-in-distance-learning-materials.html

Blended Learning and Online Learning

10

Blended Learning is the Way Forward after the Pandemic[24]

Continuity of teaching and learning in universities and colleges is a major issue during COVID-19. The current scenario has highlighted the gaps in an education system that is heavily dependent on the presence of students and teachers in the same place at the same time. The system is based on the concept of 'direct instruction', where contact time between student and teacher plays a significant role in what is recognised as learning.

The University Grants Commission (UGC),[25] which is India's higher education regulatory body, has framed regulations defining minimum standards[26] for quality teaching. Some of these provisions are 180 days of teaching in a year, 30 hours of teaching in a week, 75% attendance in theory and practical classes, and specific credit value for courses that are offered over 15 weeks in a semester, excluding time for admission, examination, and other co-curricular activities. These regulations have certainly been breached during COVID-19. For this reason, the UGC appointed a committee to investigate the issues of examinations and the academic calendar in light of the pandemic. The committee has submitted its report,[27] and the UGC regulations will reportedly be amended to make provision for the unprecedented situation we are facing.[28]

The committee believes that some universities lack the technology infrastructure needed for online teaching and online examinations. Indeed, recommending a one-size-fits-all approach and expecting every teacher to teach online is incongruous if we consider issues of equity and inclusion.

Based on advice from different quarters, many institutions have started using synchronous online tools for teaching and are using the tools intuitively. Despite their lack of training, several teachers have tried using Facebook Live or YouTube videos to teach.

COVID-19 has created an atmosphere for technology-enabled learning in higher education in India. It is time that policy makers and educators took advantage of the current situation to reform Indian higher education and create a resilient system that supports equity, excellence, and expansion.

The UGC committee falls short of thinking beyond the current crisis and recommends that, moving forward, just 25% of the syllabus should be taught online. We have to rethink what kind of higher education we need in India. The Ministry of Human Resource Development is in the process of formulating a national policy on education.[29] It is therefore timely that we discuss the nature of teaching and learning in the 21st century in India.

Digital Resources for Blended Learning

Indian educators are not alone in the current crisis. While there is no need to emulate the practices adopted in high-income countries, there are lessons we can learn and improvise upon.

India is better prepared than most other countries to integrate information and communications technology (ICT) more effectively and adopt blended learning. Already, huge amounts of digital educational resources, such as the Consortium for Educational Communication's undergraduate e-courses,[30] INFLIBNET's e-PGPathshala,[31] SWAYAM MOOCs,[32] and NPTEL[33] courses, are available to be used by teachers and students.

With the UGC focused on integrating ICT in teaching and learning by 2022 as part of its quality mandate, Indian higher education could take the next leap and consider 'blended learning' as a policy to deliver teaching and learning. Blended learning is an approach that systematically mixes face-to-face teaching with online learning, where the online component can be delivered through both synchronous and asynchronous modes, and people can learn in different locations at different times. Blending can also happen at three levels: an institutional level, a programme level, and a course level. Ideally, some courses (those with practical and skills components) can only

be taught face-to-face, while others can be delivered in either a blended or a completely online mode.

In the United States, about 33% of all post-secondary students take at least one online or distance education course while studying in face-to-face institutions. The Online Learning Consortium (formerly Sloan-C) defines a blended learning course as one in which 30–79% of the content is delivered online, while an online course can have anything over 79% of its content offered online.

Credit Equivalency

A blended course experience will not have the 90 hours of contact time expected in a six-credit course over 15 weeks. The overall student experience can be divided into several activities, carried out face-to-face or online.

Assuming that a blended course will have 50% direct contact, the balance of hours can comprise videos (facilitating flipped learning in the classroom), discussion forums (contributing to meaning making and knowledge construction in a social environment), online quizzes, assignments, and online reading resources, as per the course requirements.

Adopting blended learning as a policy in Indian higher education institutions could also help to reduce the unreasonable focus on examinations, paving the way for continuous formative assessment and the use of alternative assessment methods recommended by the UGC committee report.

Interestingly, UGC regulations on minimum standards in teaching and learning also allow universities to adopt term papers, projects, field work, seminars, etc. as methods of assessment, leaving this to universities' boards of studies and academic councils. Wherever possible and suitable, online examinations could also be conducted using proctoring tools.

Recently, the issue of lack of bandwidth for online learning has been a matter of debate. We need to think of ways to improve access to the Internet via the zero rating of data for educational platforms and by providing support to both students and teachers so they have access to computers and the Internet for teaching and learning.

Online activities	Suggested time in learning hours	Approximate time (in 15 weeks)
Synchronous		
Live online interaction with students	Actual hours; 50-minute session every alternate week	12.5 hours
Student participation in group discussions online	Actual hours; 50 minutes every alternate week	6 hours
Asynchronous		
Watching video (without assessment)	Twice the actual hours of video (20 videos of 10 minutes each)	6.5 hours
Watching video (with assessment)	Three times the actual hours of video (20 videos of 10 minutes each)	10 hours
Discussion forum	At least 2 hours of engagement per forum (including critical analysis, reflection, posting, reading and critiquing posts of other learners, and summarisation). 5 discussion forums in a semester.	10 hours
Online reading with comprehension	150 words per minute, calculated by the length of the documents	
Online quiz (practice)	2 minutes per question (approximately 5 questions per week)	2.5 hours
Assignments, portfolio, term paper, etc.	Time allocation based on what the activity demands	

There is a need for a paradigm shift in our thinking about teaching and learning to create an enabling environment for learning with technology. Teacher capacity is key, but we must also change our mindset about teaching and learning as just 'same time, same place' activities.

Source: Mishra, S. (30 May 2020). Blended learning is the way forward after the pandemic. *World University News*.
https://www.universityworldnews.com/post.php?story=20200528134934520

11

Suggestions for a Regulatory Framework for Blended Learning in India[34]

Application:

(1) All universities established or incorporated by or under a Central Act, Provincial Act or State Act as referred to under clause (f) of section 2 of the University Grants Commission Act, 1956, institutions or colleges recognised by or affiliated with such universities, and institutions deemed to be universities under section 3 of the said Act.

(2) The blended learning approach to teaching and learning shall be read as supplementary to UGC regulations or treated as the main approach to the regulation on Minimum Standards of Instruction at First Degree and Master's Degree Level.

Definitions:

(3) *Asynchronous learning*: means the use of technology to enable the sharing of learning resources and the exchange of ideas within a network where the learners and teachers are separated by time and/or space.

(4) *Blended learning*: means a carefully planned combination of online and face-to-face learning experiences, offered to support teaching and learning processes.

(5) *Synchronous learning*: means the use of technology to engage teachers and learners who are online at the same time but in different places to teach and learn.

Operationalisation of Blended Learning:

(6) Higher education institutions (HEIs) shall consult with their competent authority to develop a policy for blended learning.

(7) Blended learning shall accommodate both course-level and programme-level blending of online and face-to-face teaching and learning. Such decisions shall be made by the Board of Studies and approved by the competent authority of the HEI.

(8) As SWAYAM-based online courses have already been accepted for up to 40% of credits, these may be considered programme-level blending, and all other courses may consider using a blended learning approach.

(9) The HEI institution shall declare the offering of courses as 'face-to-face', 'blended learning', and 'completely online' at the beginning of the session to enable learners to exercise their right to choose courses according to the choice-based credit system.

Teaching and Learning in Blended Mode:

(10) For the online delivery of content, adopt a mixed approach of synchronous learning and asynchronous learning activities.

(11) Synchronous learning should include at least one online session of 50 minutes every alternate week with the teacher, and another 50 minutes every alternate week to enable the learners to engage amongst themselves.

(12) Asynchronous learning activities could include reading text, watching videos/animations/presentations, using interactive simulations, listening to podcasts, student participation in discussion forums, and online quizzes and tests, including assignments.

(13) For courses with more than 50 students, one Teaching Assistant may be engaged for every 50 students enrolled in a course, to support the lead teacher in moderating the discussion forums, assessing activities, and mentoring students.

(14) Teachers shall be encouraged to use (adopt and adapt) already available open educational resources when developing blended courses. Some high-quality resources are available from e-PG Pathshala,[35] NPTEL courses,[36] and UGC CEC curriculum-oriented courses.[37]

(15) All courses using blended learning may include between 30% and 79% of content delivered online using synchronous and asynchronous

learning tools. Such blending may start immediately, with up to 40% of content delivered online, and the ratio of online to face-to-face components may progressively increase to as much as 79% by 2022.

(16) The course blueprint in each case should clarify the use of the various synchronous and asynchronous techniques, along with the expected time in hours per credit.

Evaluation in Blended Learning:

(17) Student assessment in blended courses shall be based on both internal continuous assessment and semester end examinations.

(18) The internal continuous assessment will have at least 30% weight and shall be based on participation in discussion forums, quizzes, assignments, sessional examinations, etc.

(19) The semester end examination may be conducted using a combination of a range of techniques/approaches, such as in-person pen and paper tests, timed tests online, portfolios, term papers, online presentations, online viva voce/interview, project work, practicals, etc.

(20) Whenever online examination is used, proctoring is preferred. However, a safe exam browser may also be used to prevent the use of extraneous screens. Student privacy issues in online examinations shall be considered prior to the use of any technology.

Technologies for Blended Learning:

(21) HEIs shall ensure that learners have access to digital tools to participate in blended learning. While learners may be encouraged to bring their own devices, HEIs shall make provisions to provide every student with access to devices and the Internet to access blended learning. Campus-based labs to provide equitable access shall be ensured.

(22) HEIs shall make adequate provision for Internet bandwidth and provide Wi-Fi access to learners in public areas on the campus and in hostels and dormitories, with adequate safe-guarding protocols in place.

(23) HEIs shall adopt controlled digital practices to ensure student data are maintained securely. Guidelines for the ethical use of data for learning analytics shall be issued by HEIs.

Training and Capacity Building:

(24) HEIs shall encourage teachers to participate in blended learning training and research.

(25) HEIs shall also organise training on blended learning technologies and pedagogies regularly to support teachers in developing competencies to use a range of tools effectively for teaching and enhancing student learning.

12

Experiences of Online Learning[38]

I have been involved in some form of online learning for quite some time as a learner, trainer, designer, and coordinator. I am currently teaching/facilitating/coordinating the Post Graduate Diploma in E-Learning[39] (PGDEL) offered by Indira Gandhi National Open University (IGNOU). In the Refresher Programme in Distance Education organised by STRIDE in March–April 2010, I made a short presentation in a panel discussion to share my own experiences as lessons learned over the years. Some points are as follows:

- Learners join online programmes with different expectations and abilities. Some do not even have ICT skills, while others expect the e-learning programme to be like a classroom, where a teacher teaches/instructs. To make online learning successful, pre-admission counselling and appropriate screening of learners are essential.
- There is no single 'model of e-learning'. Different programmes have different needs due to the nature of the learners and the discipline to be taught. So the technologies used should be different, depending on the nature of the programme and its requirements.
- It is possible to use 'open source' technologies and 'open content' learning materials to offer online programmes. The focus should be primarily on teaching and learning, including giving learners more interaction opportunities, rather than just on materials development.

- Faculty training and understanding about e-learning is crucial. In this context, teachers should be trained on technology, pedagogy, and the use of both for specific content areas.
- The faculty workload should be appropriately assessed. Online tutors should be engaged to provide more interaction.
- Assessment in online learning should be considered through innovative lenses. It should be beyond the pen-and-paper test. So the use of objective type tests, e-portfolios, term papers, etc. should be considered. Presentations in virtual conferences are useful to authenticate learners.
- At the design stage, issues related to assessment should be addressed to provide clarity from the beginning of the programme. Learners must know about the assessment criteria, including rubrics for each assessment task.
- The more synchronous and tutor-assessed components there are in an online programme, the less it is possible to scale up. However, it is possible to have more interactivity by involving learners in collaborative and peer-assessment activities through asynchronous learning methods.
- Student cheating in online programmes is a problem. In particular, unintentional plagiarism is a major concern, so learners should be oriented about plagiarism and referencing styles.
- Online library support is crucial for learner development. Leaving students to depend on Google searches alone is not useful. Institutions should provide access to online databases and digital libraries of their own through individual user IDs and passwords.

Source: Mishra, S. (16 April 2010). *Experiences of online learning.* http://teachknowlogist.blogspot.ccom/2010/04/experiences-of-online-learning.html

13

Virtual Open University of Orissa[40]

Bhubaneswar is a city of temples that houses numerous monuments from the era of King Ashoka. The Khandagiri and Udayagiri caves, the Sun temple of Konark, the Sri Jagannath temple of Puri, and Chilka Lake are some of the important places adjoining the capital city of Orissa,[41] which is also one of the modern planned cities of independent India. The host of this conference, Utkal University, is one of the oldest universities in the country and was the first university in Orissa, established in 1943. With a sprawling campus of more than 400 acres of land, and 28 postgraduate teaching departments, the National Assessment and Accreditation Council, Bangalore gave the university a B++ grade in 2004.[42] The University Evening College, established in 1962, was converted into the Directorate of Correspondence Courses in 1975, which in 1996 changed to the Directorate of Distance and Continuing Education (DDCE). It offers a wide range of programmes at graduate and postgraduate levels in both liberal and professional areas. On the first day of the conference, there was a session on 'Open and Distance Learning in Orissa and Orissa State Open University'. I served as a discussant and panellist to comment and reflect on the thematic presentation.

Odisha State Open University[43] (OSOU), if it comes into existence, can claim the distinction of having the longest time in the making of any university! In fact, on the invitation of the Government of Orissa, a team led by Professor Ram Takwale, the then Vice Chancellor of IGNOU, prepared the blueprint in 1997. More than ten years on, the university is still being discussed! That blueprint may not work for Orissa now, but what is important is providing better access to educational opportunities for the people of Orissa.

The biggest problem in the state is the high dropout rate in schools and colleges. The unsuccessful could be given a second chance through appropriate open educational opportunities. In fact, open universities, as the name suggests, should have programmes that offer open learning opportunities. Interestingly, open universities in this country are actually closed, with so many of the rigidities found in face-to-face teaching universities. Any new open university in Orissa should have more open learning opportunities to provide access to the disadvantaged, the economically poor, marginalised groups, and school dropouts, and should improve the quality of education through the right use of educational technologies. Therefore, in a new and ever-changing societal environment, it is important to rethink the open university in Orissa. A conventional open university may not be sustainable in the state without closing down other so-called distance education provisions. This is a difficult notion, as other universities may not like to forgo their revenue-generating units. With Orissa being a leader in technology use, it is appropriate to advocate for an open university that is virtual in nature and operates heavily on technology and through collaborations with existing institutions.

The Virtual Open University of Orissa (VOUO) would be successful if it were more open and offered programmes across boundaries through the e-learning mode. The university should be a facilitating agency to provide e-learning opportunities to existing institutions and collaborate with them to offer its programmes, and to plan for more open learning, vocational courses, and programmes for the needy and poor. In order to develop a learning society, we require educational institutions that promote and foster open learning, and it is in this direction that all concerned must think of an Orissa open university as a platform to provide open education. However, there is always the question of government funding and whether the state government can start another university with low funding. The VOUO could be started as a new public private partnership model. Given that it would be technology driven, many private agencies would be interested in joining hands with the government to start a new enterprise that could change the educational landscape of Orissa, and maybe the whole of the nation.

Source: Mishra, S. (5 December 2007). *Virtual Open University of Orissa.* http://teachknowlogist.blogspot.com/2007/12/virtual-open-university-of-orissa.html

Open Education and Open Access

14

Why Using Impact Factor for Measuring Research is Snake Oil

'Publish or perish' is a common mandate in the world of scholarly communication. For researchers and teachers in higher education institutions, publication counts toward appointments, promotions, and grants for fellowships and research funding. Measuring the quality of research through publications forms the primary basis of such recognition. The metric used in such measurement is usually the impact factor (IF) of the journals in which the publications appear. Naturally, this encourages scholars to publish in reputed journals with high IF values. IF was invented by Eugene Garfield and Irving H. Sher 60 years ago, primarily to help librarians select journals. Interestingly, this tool is now being heavily used for measuring scholarly works. Garfield never imagined that IF would one day become the *sine qua non* of assessing the impact of authors. According to him, 'It is one thing to use impact factors to compare journals and quite another to use them to compare authors.'

The impact factor is the average citations received in a given year by papers published in a journal over the two previous years. It therefore measures the journal as a whole and does not necessarily reflect the quality of a particular article published in the journal. However, publishers and editors of scholarly publications use IF as a 'signal' of their quality assurance efforts, and institutions and standard-setting bodies in many countries broadly accept including IF in their research assessment metrics. The inherent assumption is that a paper published in a high-impact journal must be of acceptable quality due to the rigor applied during the journal's peer-review and editorial

processes. While this is a plausible proposition and an attractive argument, the problems are much greater than the advantages.

There are several criticisms of IF as an unreliable measure. The data used to calculate IF lacks transparency (particularly the use of citable items). The two-year duration of the data set is insufficient for many disciplines with high citation half-lives. Review articles and a few highly cited articles influence the IF of a journal. There is the possibility of gaming the system by using dubious editorial practices. Research shows that typically, about 65–75% of items in high-impact journals have a smaller number of citations than the IF indicates. Moreover, research is supposed to be new and unique, even if all research depends on previous work. Therefore, comparing one researcher against another is like comparing oranges and apples. These issues are receiving increasing recognition from the scientific community. The San Francisco Declaration on Research Assessment (DORA) recommends, 'Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions.'

Broadly, IF fails the test of validity and reliability as a suitable metric for research measurement, so why is it widely used? The simple answer is that IF provides an easy and statistical measure. For administrators, it is a handy tool to compare individuals when opportunities are limited and comparative reviews could be subjective. Should it be this way? Can we look at other possible ways to make changes to the current practice? The overemphasis on IF has resulted in additional bogus metrics and IF look-alikes.

In many countries, access to research information is a significant problem — and the cost of access to journals and databases influences citation behaviour. A metrics dependent on the citation is not a good measure, especially when we are concerned about quality. Neglecting the poor validity and reliability of IF is an ostrich-like approach to a problem at hand. Alternatively, using article-level metrics is a way forward. But a change in mindset is a must for senior professors, researchers, and administrators. The culture of IF forces young researchers to fall in line and continue the vicious cycle of adhering to a measure that is no more than 'snake oil'.

Source: Mishra, S. (5 October 2020). *Why using Impact Factor for measuring research is snake oil?* https://opencommentaries.in/why-using-impact-factor-for-measuring-research-is-snake-oil/

15

Understanding Open Education[44]

In an article published in *Distance Education* in 2017, I argued against conflating open educational resources (OER) with open education.[45] In fact, since then there has been a growing tendency to use the term 'open education' while discussing OER. This practice undermines the depth of knowledge that we have accumulated in the field of open education, and we miss the opportunity to utilise the affordances of OER in all modes of education (face-to-face, distance, online) to increase access and improve quality. Considering the significance of the topic for Open Education Week 2020, I am expanding the definition of openness that I offered during Open Education Week 2016.[46]

Before that, let me share some facts. In their book *Distance and Blended Learning in Asia*, Colin Latchem and Insung Jung linked the origin of the idea of open education to Nobel Laureate and social reformer Rabindranath Tagore, who in the early 20th century envisioned the need for home study. His idea was taken to the UK by Leonard Elmhirst, who co-founded Dartington Hall as a progressive school to regenerate the rural economy. One of its pupils was Michael Young, who proposed the idea of UK's Open University (subsequently established in 1969) and piloted it with the establishment of the National Extension College. Another key person to make significant contributions to the world of open education was Charles Wedemeyer, who in 1973 articulated the 'concept of open education' as a mix of multiple features, not all of which may necessarily be present in one system: opening education to more people, open admissions, using multiple channels of communication, open curriculum, open access to learning from anywhere, encouraging open participation, open accreditation, and open sharing.[47] So open education has been around for over 50 years!

In recent times, open education/learning has, as David Kember puts it, been more about 'removing barriers to participation' in learning. So open education is about having open entry, studying anywhere and anytime, and having the flexibility to choose courses. Thus, any education system can demonstrate the attributes of openness as identified by Wedemeyer, and the open learning resource is just one of these attributes. I have further expanded the concept of open education in a recent keynote address to propose a framework that includes a range of issues, moving from:

- 'exclusive' entry to 'anyone's' entry
- studying from one location to learning anywhere
- a fixed schedule to learning anytime
- a 'fixed course basket' to the provision of an 'à la carte' approach to course selection
- 'sage-on-a-stage' teaching to a highly collaborative learning environment
- using proprietary tools and technology to using more open technologies
- using copyrighted learning resources to open educational resources
- a fixed assessment approach to recognition of prior learning and new forms of authentic assessments
- locally recognised credentials to globally recognised credentials, and last but not least
- high cost to affordable education[48]

That's a bit complex, and the framework gives us a score that could help assess institutions aspiring to become more open. However, let me come back to my idea of open education in terms of fairness, flexibility, and freedom.

Fairness relates to equity and social justice. The cost of education is a barrier to increasing access to education for all. The *Yidan Prize Forecast: Education to 2030* reports that in many developing countries, the cost of a four-year degree is between 200% and 500% of average incomes.[49] A recent report[50] published by the Commonwealth of Learning indicates that learners spend an average of USD165 on learning resources per year. Previous studies in Bangladesh[51] and Malaysia[52] also point towards challenges in accessing education, due to high costs. So it is appropriate for OER practitioners to advocate for open

licensing of educational resources that are developed with public funds. This has now become part of the UNESCO OER Recommendation, approved by the UNESCO General Conference in November 2019. Two works of interest about promoting equity and social justice are Sarah Lambert's 'Changing Our (Dis)Course: A Distinctive Social Justice Aligned Definition of Open Education'[53] and Cheryl Hodgkinson-Williams' and Henry Trotter's 'A Social Justice Framework for Understanding Open Educational Resources and Practices in the Global South',[54] both published in the *Journal of Learning for Development*.

Flexibility refers to the range of options available to learners. This can range from recognition of prior learning[55] to the use of massive open online courses[56] within a lifelong learning framework. Flexibility to choose from a range of courses in order to graduate has become a norm in many high-income countries. However, in many other countries and institutions, there is no flexibility due to local restrictive regulations regarding what can be taught through what mode, and what constitutes quality. While there is a limit to flexibility in many first-degree contexts, open education is about creating opportunities for learner autonomy.[57] A flexible learning system allows a range of affordances to learners, helping them learn in their own space and at their own pace.

Freedom can also be treated as a dimension of flexibility. However, I use the word as in 'free speech'. This dimension of open education is from the perspective of OER, where the learning resources used in teaching and learning are available not only at zero cost,[58] but also in accessible formats[59] with open licences[60] to reuse, revise, remix, and redistribute. This is work in progress for all of us, and to paraphrase Robert Frost, we have miles to go before we sleep. Creating teaching and learning resources with an open licence and making them available requires not only a shift in the proprietary mindset but also an attitude of giving, instead of a greedy desire to profit out of public good. This also requires openness from the creator to believe that an open resource could potentially remain up to date with the help of community, and as such could promote the longevity of their work. Changing mindsets is a slow process, and thus government intervention to proclaim policy/law through legislative or executive processes that will make all publicly funded resources available under an open licence is key to further progress. The availability of teaching and learning materials that give users the freedom to repurpose and contextualise them provides new avenues for

teachers and learners to rethink their pedagogical practices and improve student learning.

Open education practitioners and OER experts may do well to remember the history of open education!

Source: Mishra, S. (27 February 2020). *Understanding open education*. Commonwealth of Learning. https://www.col.org/news/understanding-open-education/

16

Is 'Service' the New Secret of OER Sustainability?

Twenty-seventeen is being celebrated as the Year of Open.[61] Fifteen years ago, the term open educational resources (OER) was coined, and the Budapest Open Access Initiative[62] was launched. Five years later, the Cape Town Open Education Declaration[63] came out. And in 2012, the first World OER Congress resulted in the OER Paris Declaration.[64]

It is likely that 2017 will prove to be another significant year in the history of open education: the Commonwealth of Learning (COL) is engaged in several regional consultations[65] on OER, which will feed into the 2nd World OER Congress,[66] to be held in Slovenia from 18 to 20 September 2017. But it is important to remind ourselves that open education neither started in the year 2002 nor is the same as making OER available to all. Open education is beyond OER and open access. It is a philosophy and a practice to make education accessible to the underprivileged and the unreached. A true open education system provides open entry (without the rigidities of eligibility and limited enrolment numbers), flexible learning places (learning from anywhere), flexible learning time (no need for synchronous availability with the teacher in a classroom to learn), and most importantly, the freedom to choose courses and design a personalised curriculum. Hardly any education system can claim to be open if we consider all these conditions. Therefore, openness is a continuum from completely closed institutions/provisions to less closed institutions/provisions. In the current understanding of open, we add a new dimension of openness: the legal way to adopt/adapt the outputs (teaching, learning, and research materials) of an educational system without

seeking permission from the copyright holder, thereby creating an ecosystem of knowledge sharing.

Today, the major challenge faced by governments in the developing world is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030 (per United Nations Sustainable Development Goal 4).[67] In order to achieve this goal or reach the expected targets, we need to think out of the box and take the right decisions to provide equity, improve quality learning outcomes, empower youths with relevant skills for gainful employment, and increase access to educational opportunities at all levels by creating an environment for lifelong learning.

This can only be done through active collaboration. Governments, civil society, private agencies, and philanthropic institutions need to come together to fund appropriate policy implementation in order to make visible change on the ground. It is time to increase education budgets to help achieve SDG4, an important goal that underpins the success of the 16 other SDGs. A major cost associated with education at all levels is textbooks. Many governments are subsidising the production of textbooks and distributing them free to learners. However, in some countries, access to textbooks is very poor. Even in developed countries, students are sometimes unable to buy textbooks due to their prohibitive costs.

Lack of access to textbooks is a double-edged problem: lack of quality textbooks affects student learning, and low education budgets do not permit governments to subsidise textbooks for all learners. According to a Global Monitoring Report policy brief,[68] Cameroon had only one reading textbook for 12 students and only one mathematics textbook for 14 students in Grade 2 in 2012. However, there is a solution to this problem. Using open textbooks would substantially help in the provision of textbooks for every student. With an open licence, open textbooks permit reuse, revision, remixing, and redistribution without the permission of the copyright holder. In an ideal world, most learning materials can be developed once, and if they are under an open licence, anyone can adapt or translate them for their own context. It must be noted that education is all about context, and the development of any universal resource is utopian, but OER can make the process efficient and cost-effective.

So far, government and philanthropic funding have been major sources of support for OER. While government support for OER and open textbooks is a must, many business models of OER distribution are currently available. The availability of credible business models for OER is important, as publishers are mostly concerned about the declining market for textbooks. The emergence of open business models helps private publishers to understand the changing scenario of the digital world and innovate to remain relevant. The advent of big technology companies like Microsoft (OpenEd) and Amazon (Inspire) in the field of OER is also making this space interesting. Some of the more noteworthy business models for OER include:

Consortia model: In the consortia model, member institutions benefit from each other's contributions and create courses and textbooks that can easily be adapted. Two successful examples of the consortia model are OERu[69] and the Open Textbook Network.[70] Knowledge Unlatched[71] is another initiative that is a consortium of libraries working to get books released as open through contributions from its member libraries. COL's Virtual University for Small States of the Commonwealth[72] is also a collaborative platform where small states of the Commonwealth join together to develop content and share for the benefit of all partners.

Service model: In this model, the textbooks are freely distributed with an open licence, but the publishers offer additional services at a cost, on a subscription basis. This is primarily offered for assessment tests, workbooks, and learning analytics. Some examples of such provisions are Lumen[73] and Cengage.[74] While Lumen's courses are available to all, Cengage's content is yet to be seen in the open! OpenStax[75] uses a supplementary service model: certain services are provided through third parties to institutions adopting open textbooks, and OpenStax generates some revenue from the partnership. Top Hat is another start-up that has integrated OER into its interactive textbooks and business model.[76] Currently, it uses textbooks from OpenStax.

Freemium model: In this model,[77] a digital copy is made available free to all, while a printed copy can be purchased on demand. Some examples in this category are Open Humanities Press,[78] Bloomsbury,[79] and Open Book Publishers.[80]

With the growth of learning analytics, the future of OER is based on creating a model that provides personalised services to learners. As such, the content would be freely available, but services around the content, such as tutoring, assessment, and certification, would be priced to generate revenue and sustain OER development and distribution. Nevertheless, OER will always be significant for teachers, as it allows them to design their own classroom resources without seeking reuse permissions or paying royalties. Students can also incur significant savings due to the availability of OER, while also improving their learning outcomes.

Source: Mishra, S. (27 February 2017). *Is 'service' the new secret of OER sustainability?* https://www.col.org/news/is-service-the-new-secret-of-oer-sustainability/

17

Rethinking Courses, Credits, and Credentials

One of the major reasons that institutions and accreditation agencies are reluctant to accept massive open online courses (MOOCs) as equivalent to more formal university courses is the prevailing system of courses and credits being applied toward credentials. We are often asked about how to provide credits for courses taken online through MOOC providers, and replying to such questions is difficult, as there is no one way of looking at the issues around what constitutes a course or what is the uniform/acceptable definition of a credit, and how many courses or credits are sufficient for learners to earn credentials.

What is a course? A course in education is normally a unit of study that is offered by an institution and formally taught by one or more teachers over a period of time, with an end-of-course assessment to provide a grade and/or certification. In some countries, a course is also referred to as a module (especially when a course is treated as a stand-alone programme leading to a certificate). So a course is typically part of a programme (say a degree or diploma) but is also sometimes offered on its own. In the conventional system of education, courses can have different weightages, based on credit value. A course can consist of lectures, a practicum, seminars, tutorials, projects, independent study, etc.; however, from the course delivery point of view, a course can be delivered face-to-face or at a distance. For distance delivery, the course can be print based, online (offered via a learning management system), CD based, or a MOOC. When we speak of developing courses, we have an array of options before us in terms of delivery, but we are still not sure what a course is. The credit-based system helps us to quantify

a course and to indicate the amount of effort required from a student or teacher.

What is a credit? The definitions differ from country to country. In the United States, one credit is equivalent to 15–16 contact/teaching hours per semester. This means about one hour of teaching time per week in a semester consisting of 15–16 weeks. Normally, for each one hour of contact session, students have to spend three to four hours reading, having discussions, and completing assignments. In the European Credit Transfer System (ECTS), a credit is decided on the basis of student workload, rather than teacher contact time as in the US. A year of full-time study counts for 60 credits in the ECTS system, and the total workload is within the range of 1,500–1,800 hours, which means one credit is about 25–30 student study hours. Based on four hours of study time (including one hour of lecture) for a 15-week semester, a student in the US has about 60 hours of workload for one credit. Therefore, we can assume that one credit in the US is equivalent to two credits in Europe. In many other countries, the credit system is not very clear, and accreditation agencies locally decide on equivalence. In India, one credit in the conventional system is one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week. However, in the open and distance learning system, one credit is equivalent to 30 student study hours, which includes working on text, audio, video, assignments, face-to-face contact, and so on.

Having a uniform standard for providing credentials for MOOCs is a challenge, but it can be addressed, and a framework to calculate the credit value of MOOCs can easily be developed, provided there is acceptance of such credentials. Typically, the duration of a MOOC is about four to five weeks, and about two hours of work is expected per week from the participants, making the course load about ten hours, which is about one-sixth of a traditional one-credit course. The idea of receiving badges to earn micro-credits may be useful in this context. Institutions also need to look at developing systems for recognising prior learning to provide exemption from courses, where a student has completed a series of MOOCs on a subject. However, the issue of credentials for MOOCs remains a challenge, despite the development of technology such as Signature Tracking, by Coursera,[81] a programme to authenticate students. Many online education providers have been using a proctorial system to ensure that credentials are only given to those who have earned them.

While MOOCs have advanced the possibilities for enhancing the quality of open and distance learning, it is important to revamp the existing systems to design courses that are suitable for the present, constantly evolving world. So we are back to the question: what is a course? In the context of MOOCs, a course may be considered a short micro-unit of learning that can be completed within 10–15 study hours. However, in other contexts, using a credit value system to plan, design, and cost courses is important for managing the process of course design, development, and delivery. Micro-credit-based courses could disrupt the education system in the 21st century by providing just-in-time training opportunities and promoting workplace-based learning. At COL, we are working to develop a framework and guidelines for quality assurance and accreditation of MOOCs. The objective is to gain an in-depth understanding of the emerging challenges so as to assist quality assurance agencies and institutions in being more open to new developments that will support the lifelong learning paradigm.[82]

Source: Mishra, S. (21 February 2016). *Rethinking courses, credits and credentials*. Commonwealth of Learning. https://www.col.org/news/rethinking-courses-credits-and-credentials/

18

Policy for Open Educational Resources

Is the cost of your textbooks prohibitive? Are you dependent on your local college library to access scarce copies of the recommended textbooks? If you are thinking that the answer to these questions is *yes* in any developing country, you need a refresher on what is happening to students in the developed world. Some students have to take out loans to buy basic textbooks for their graduate studies. The cost of textbooks is a real problem. It is estimated that students in the United States spend between $650 and $1,000 per year to buy textbooks. The cost of educational books and supplies in the US has increased over 812% since 1978.[83] Interestingly, this is more than the increase in the cost of medical services and the average Consumer Price Index increase.

In the developing world — for example, in India — at the school level, the state takes responsibility for producing and distributing textbooks to learners. While this has been a good practice, there are problems in the supply chain, and textbooks do not reach learners on time. Also, state-funded printed textbooks are supplied at subsidised costs. Students in some elite schools can afford to pay the actual cost of the book, while for others, it is difficult to manage even the subsidised cost. The education marketplace contains many other textbooks and digital learning resources, which parents buy for their children to provide them with additional learning resources. So the school textbook ecosystem in India has multiple options for learners. While publicly funded textbooks are yet to be available under open licences, the National Repository of Open Educational Resources (NROER), launched in 2013 for

the school sector, has agreed to release all its contents under the CC-BY-SA licence.[84]

Realising the problem of textbook cost, many universities have now started to join the open educational resources (OER) movement and promote the development and use of open textbooks (e.g., Open Michigan[85] and BC OpenEd[86]). In India, the call to use OER was issued in 2007 by the National Knowledge Commission (NKC) in its recommendation to the Government of India. With the success of the National Programme on Technology Enhanced Learning[87] (NPTEL) for engineering and basic science courses, in 2009, the Government of India started the National Mission on Education through Information and Communication Technology[88] (NMEICT) to develop the country as a knowledge superpower. Since its inception, the mission has been active in the development of digital learning resources through a variety of projects for both graduate and postgraduate levels in a number of disciplines (see, for example, epg pathshala[89]). NMEICT has now approved an open licence policy[90] to make all the content developed under the project as OER under the CC-BY-SA licence. This is a major boost for the OER movement and shows the commitment of the Government of India to share knowledge resources in the commons, and propel further reuse, remixing, and growth of knowledge. It is expected that the content developed will be available in such a way as to facilitate localisation and adaptation to local requirements all over the country and elsewhere. This policy announcement is also in line with the COL–UNESCO OER Paris Declaration, which calls upon all governments to release educational and research materials developed with public funds as OER. We congratulate the Government of India for making its resources available as OER and call upon other governments to join this growing trend for the good of all.

Source: Mishra, S. (8 June 2014). *Policy for open educational resources*. Commonwealth of Learning. https://www.col.org/news/policy-for-open-educational-resources/

19

Open Access and Open Educational Resources[91]

On 20–21 August 2009, I attended a symposium organised by my university (Indira Gandhi National Open University) on open educational resources (OER) for network-enabled education. The meeting was attended by many educational leaders and technology experts who are engaged in developing educational materials using technology in Indian universities, Indian Institutes of Technology, and other civil society organisations. The meeting was facilitated by Dr Vijay Kumar of MIT, USA and supported by The William and Flora Hewlett Foundation. The objective of the meeting was to take follow-up action on the recommendations of the National Knowledge Commission[92] (NKC) on OER and distance education and prioritise action areas for India in OER. On both days, the experts in the meeting deliberated on various issues surrounding OER, through group work, plenary sessions, listing ideas, and voting on priorities. While several issues and solutions were highlighted, the group agreed on the following:

- There is a need to have a national-level research and resource centre for open-source software in education.
- Educational content created through public funds should be available freely for adoption and adaptation.
- Metadata standards for OER are needed urgently.
- Certification policies for OER use are needed.
- International movements supporting OER should be joined.

That in a meeting on OER, the issue of certification became a major issue highlights the importance we place upon degrees. While there are people who would like to de-link degrees from jobs, others think that a framework should be in place to help institutions provide certification to individuals who use OER and learn on their own. Although it would be a good idea to have a national certifying body for various levels and disciplines of education, based on a national qualifications framework, OER are created for anyone to learn, and they promote self-learning and lifelong learning. Thus, it should be left to educational institutions to decide how they will certify individuals who learn on their own.

Moreover, the use of OER should not be tagged with qualifications, as we want OER to promote education, which is becoming more expensive every day due to the rising costs of textbooks and other resources. Alongside this is a prevalent misconception that OER means 'open access' (OA). While OA is a necessary pre-condition for OER, it is not a sufficient condition. UNESCO in 2002 defined OER as 'the provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes.'[93] Thus, apart from free access, the material should be released in such a way as to facilitate its adaptation by others in the community. This is also emphasised by the NKC when it says that a knowledge economy progresses through effective use of 'quality Open Access (OA) materials and Open Educational Resources (OER) through broadband Internet connectivity.' However, many do not recognise this distinction and think, for example, that a video-based course available via NPTEL is an OER.[94] It is possible for any institution to adopt NPTEL courses for its academic programmes, but it is not possible to edit these videos and create something new out of the existing materials.[95]

The quality of OER was also questioned in the meeting. OER are created by the community and maintained by the community, for the community. So quality is a concern of the community. Subject-matter experts want to assure or accredit the quality of OER, but this is not in the interest of OER development. A quality matrix should be developed by the community and left to individual users (learners/institutions), so they can define their own quality in the context of the community matrix and use it for their specified purposes. After all, quality is fitness for purpose. If we want to define quality up front in a language developed by an agency or individual, then we are not

going to support the development of the OER community. On WikiEducator,[96] we make efforts to take decisions based on community consensus.

The technology platform for OER should accommodate the quality matrix in its metadata scheme, and thus make the OER available, accessible, and usable as per the user's choice. With Web 2.0 technologies, it is now possible to make OER available in a variety of formats using an appropriate Creative Commons licence. However, there is a need to incentivise people engaged in OER creation and development. Those who have made substantial contributions to creating/authoring/editing OER can be credited for their work and receive due recognition in terms of credit points toward promotion, and other forms of awards. This way, we can tap the large number of teachers in the Indian education system. However, I will again emphasise the need to provide sustained teacher training on OER (both conceptual and technological aspects) to make the OER movement a reality. Let the OER movement grow in India, and national-level institutions like Indira Gandhi National Open University, the National Council for Educational Research and Training, and the National Institute of Open Schooling come out of the copyright regime.[97]

Source: Mishra, S. (22 August 2009). *Open access and open educational resources.* http://teachknowlogist.blogspot.com/2009/08/open-access-and-open-educational.html

Educational Technology

20

Importance of TikTok Type Videos for Learning

Have you heard of TikTok? If not, let me introduce you to this new kid on the social media block that uses 15-second videos. It is currently one of the fastest-growing apps, with over one billion users and 800 million active monthly users.[98] It was amongst the top five downloads in 2019 for Google Play and the App Store. Average users spend about 52 minutes per day on TikTok.[99] The majority of them are in the 14–30 age group, making the app a potential tool for education.

It may come as a surprise to many readers that some schools in the USA already have TikTok clubs, and teachers are using TikTok for student engagement. One of the reasons they stress is that learners already have an account on the platform, and it is better to leverage the affordances of this technology to engage students in creative learning using video. While TikTok videos are largely funny and therefore go viral quickly, it is not easy to prepare a message in a 15-second video. It requires lots of creativity and effort to create meaningful messages that will be liked by a large number of users.

The platform also offers everyone the freedom to express themselves and be noticed. However, many teachers are concerned about privacy issues,[100] as there is usually a lack of clarity about using data from social media platforms. As a very popular social media platform in India,[101] TikTok has launched a new programme called EduTok. At the time of writing this blog, the EduTok hashtag had received over 66 billion views. Though many of these views are driven by marketing, there have also been innovative uses — for example, to teach mathematics and English.

Video has changed the way we learn. Platforms like YouTube[102] and TeacherTube[103] in particular have enhanced the consumption of video for educational purposes. About 500 hours of videos[104] are uploaded to YouTube every minute. Over 70% of searches[105] on YouTube are for 'how-to' videos, signifying that video has become a popular way of learning. Learning platforms like Khan Academy[106] and TED Talks[107] have further propelled the use of video for on-the-go and just-in-time learning. The growth of massive open online courses (MOOCs) is yet another development that has increased the use of video for teaching and learning. Most MOOCs are largely dependent on teaching through videos. According to a prediction by Cisco, 82% of traffic on the Internet will be video by 2022.[108] Kaltura's 2019 *State of Video in Education* report shows that 98% of learners see video skills as necessary in today's workplace, and 86% think that today's educators must include video in their teaching.

Video provides several pedagogical affordances,[109] including the provision of realistic experiences, motivational influence, the ability to control and review, and engagement of students as creators. Creating a good educational video requires not only knowledge and skills in camera operation and video editing/production, but also an understanding of multimedia learning, especially the theory of cognitive load,[110] which says for a quality video learning experience, the designer should consider the *intrinsic load* of the topic, reduce the *extraneous load*, and optimise the *germane load* to help viewers mentally organise the information being presented. Richard Mayer's Multimedia Principles say that an effective video should focus on: (i) the coherence principle — learning is better when extraneous materials are excluded and only strictly necessary content is covered; (ii) the segmenting principle — learning is better when content is presented in small chunks; recent research on engagement with video shows that learners mostly use videos of six minutes or less[111] that focus on one concept; (iii) the contiguity principle — learning is better when corresponding words and pictures are presented close by; and (iv) the signalling principle — learning is better when cues are used to direct learners' attention to key concepts. These principles and guidelines are also useful for longer videos.

A TikTok video is no more than 15 seconds, and therefore, by default, it forces the user to focus on only one key idea, and the multimedia principles are easily taken care of. The platform looks like it was designed for learning. A key lesson we can draw from TikTok is to use 15-second videos in our

pedagogical practices, whether we use that platform or not. All you need is a mobile camera and some shooting and editing skills. This kind of educational video can be sharply focused to help with memorisation and understanding on any topic. It has the potential to be a very creative way of keeping learners engaged. It can develop learners' video skills and communication skills, which are critical in the workplace. Some ways to employ 15-second videos include: using talking heads to pass on information or ask a question; demonstrating a step for skills development; showing how to do something 'in the field'; presenting a two-person interaction to share different perspectives; comparing situations to emphasise a key learning point, etc.

Beyond the use of 15-second videos for teaching and learning, TikTok-type videos can help educate everyone about the challenges of achieving sustainable development. They can therefore play a huge role in communication about behavioural change. TikTok campaigns related to environmental pollution, climate change, violence against women, substance abuse, child labour, early and forced marriage, gender equality, etc. can help raise awareness and change mindsets.

Are you game for EduTok?

Source: Mishra, S. (24 January 2020). *Importance of TikTok type videos for learning.* Commonwealth of Learning. https://www.col.org/news/importance-of-tiktok-type-videos-for-learning/

21

Key Trends in Technology-Enabled Learning in 2018[112]

Several key trends in technology-enabled learning have emerged recently. A significant report from The Open University UK is *Innovating Pedagogy 2017*,[113] which highlights ten key trends, including open textbooks, immersive learning, learning analytics, and big data. E-learning trends[114] from industry predict the increased use of augmented reality/virtual reality, gamification, microlearning, content curation, and interactive video-based learning. Yet another report[115] indicates an increase in user-generated content, interactive video, gamification, and blended learning. In this space, I present five key trends in technology-enabled learning that are integrated in some of the activities of the Commonwealth of Learning (COL).

1. **Open educational resources (OER):** The rising cost of textbooks is a major problem for students, not only in developing countries but also in developed countries such as Canada and the USA. According to a recent study[116] in Canada, due to the high cost of textbooks, 54% of students in the province of British Columbia (BC) study without at least one of their required textbooks, while 27% take fewer courses and 17% drop courses. Thanks to the OER movement, BC has a project sponsored by the Ministry of Advanced Education, Skills and Training, which has developed over 230 open textbooks and saved students about $5.5 million in the last five years.

   At COL, OER is mainstreamed in everything we do. In 2011, COL became the first intergovernmental organisation to adopt an OER policy. We engage with governments and educational institutions to develop their

own OER policies, provide online skills training on OER,[117] and offer all courses developed with COL support as OER through our institutional repository.[118] In 2017, COL organised six regional consultations on OER[119] and prepared the *OER Global Report 2017*,[120] which indicates that more countries are beginning to commit to and adopt OER.

2. **Massive open online courses (MOOCs):** What started in 2008 as an experiment at the University of Manitoba, Canada had become popular by 2012.[121] According to Class Central, by the end of 2017, there were about 9,400 MOOCs offered by over 800 universities.[122] Twenty million new learners signed up for MOOCs in 2017, taking the number of students to 78 million. At COL, MOOCs are part of the strategy to provide lifelong learning at scale for sustainable development.[123] We have offered 20 MOOCs in the last 36 months, reaching over 34,000 learners using an affordable and scalable platform. One of the courses offered twice in 2017 in collaboration with the Centre for Distance Education[124] at Athabasca University, Canada was 'Introduction to Technology-Enabled Learning.' The success of COL's MOOCs encourages us to see this as an important vehicle to reach our goals of learning for sustainable development. The current trends in MOOCs are towards offering micro-credentials (such as Nanodegrees[125] and MicroMasters[126]), using artificial intelligence for learning analytics, and employing messaging apps within courses.

3. **Blended learning:** While the blended learning approach has existed for some time, it remains a significant tool to improve the quality of teaching and learning by integrating technology in the classroom. As part of its technology-enabled learning implementation[127] activities in partner institutions, COL is working to build the capacity of teachers to design and develop blended learning courses, develop policies to support the use of blended learning, and introduce new interactive tools such as interactive video[128] within the Moodle[129] learning management system.

4. **Microlearning:** A strong trend in the industry is the use of microlearning techniques to improve performance and productivity. Microlearning is a mode of teaching and delivering content to learners in short, bite-sized modules. COL's Teacher Futures project[130] is working to use microlearning techniques to improve the quality of teacher education by adopting a school-based in-service training model. The microlearning

nuggets will be available in various formats as OER to be used in many different contexts for adaptation.

5. **Advanced ICT skills:** As technology advances in the age of the fourth industrial revolution, two things become obvious: (i) more and more people will require reskilling, and (ii) education will become increasingly digital. While digital literacy is a survival skill, digital education skills are necessary to become a lifelong learner. Recognising this, COL is developing a platform to train students, teachers, and education practitioners on digital education leadership skills.[131] The 2018 World Economic Forum saw the emergence of a new platform called SkillSET[132] to prepare 'workers for the digital jobs of the future.' At COL, we are working with partner institutions in the Commonwealth to develop advanced ICT skills courses that will help youths and the working population make the transition to the new world of work.

While more efforts are needed to augment COL's work in order to have a scaling effect across the Commonwealth, we encourage everyone associated with the business of teaching and learning to adopt technologies that are appropriate (such as the five trends above) and help learners achieve skills for life.

Source: Mishra, S. (6 February 2018). *Key trends in technology-enabled learning in 2018*. Commonwealth of Learning. https://www.col.org/news/key-trends-in-technology-enabled-learning-in-2018/

22

Celebrating World Radio Day 2014[133]

Radio is popular amongst the public as a low-cost technology for information, education, and entertainment. It is ideal for areas with low literacy or for serving small, specialised audiences, such as linguistic or cultural minorities. The Commonwealth Educational Media Centre for Asia (CEMCA) is at the forefront of promoting the use of community radio (CR) as a medium by the people, for the people, and of the people. CR has played a significant role in enabling the participation of communities in local governance and decision making, preserving local languages and cultures, and increasing access to better learning opportunities for the oppressed. The right to express one's thoughts and to communicate freely with others affirms the dignity and worth of every member of a society and allows everyone to realise their full human potential. Recently, I attended a Community Radio Awareness workshop organised by One World South Asia, on behalf of the Ministry of Information and Broadcasting, Government of India, which has been supporting, promoting, and regulating the CR sector in India. To prepare for my interventions in the workshop, I started to look at why people are interested in media initiatives, and I found that motives for involvement in media initiatives cover six Ps: profit, propaganda, power, politics, privileges, and prestige. In contrast, the motives for starting a CR station should be different, as indicated below:

Traditional Media Initiatives	**Community Radio Initiatives**
Profit oriented	Not for profit
Used for propaganda	Used for developmental activities

Perpetuates power	Facilitates empowerment
Driven by politics	Driven by service to people
Privileges for a few	Privileges for all
Prestige for the owner	Self-esteem for the community

I consider the essence of community radio to be people, participation, plurality/diversity, and process. Indeed, it is about the people, their aspirations, their involvement, and their development. It is about their participation in all the activities of radio; and it is certainly a process, not an end. No developmental activity can be seen as an end in itself, and CR activities are part of the processes of broader developmental goals. CR is also about plurality of purpose. CR stations need to consider the diversity within their communities: diversity of needs, diversity of stakeholders — including women, children, people with disabilities, and people requiring special attention. CR stations need to connect with the community for all their activities to remain purposeful.

Certainly, the awareness workshops supported by the Government of India are useful in creating an understanding about the role and purpose of CR. To engage Indian youths in CR and promote understanding about the importance of CR as an alternative media for community self-expression, learning, and development, CEMCA and UNESCO's New Delhi office have jointly initiated a three-minute video competition on the theme 'Why Community Radio Matters'.

Several entries have been received for the competition, and the awards shall be announced on 13 February 2014 in an event being organised to celebrate World Radio Day. These videos reflect the thinking and aspirations of Indian youths about taking the CR movement forward. UNESCO, in its 36th General Conference in 2011, proclaimed that 13 February be celebrated as World Radio Day in recognition of 'the day the United Nations established the concept of United Nations Radio'[134] (Resolution 63).

The Ministry of Information in the People's Republic of Bangladesh has set up a World Radio Day Observation National Committee to celebrate World Radio Day 2014 in a big way. The committee in its meeting held on 12 January decided to have a range of activities on 13 February. Bangladesh

currently has 14 CR stations, and 16 new CR stations are in different stages of establishment after receiving clearance from the Government of Bangladesh. I request that all 161 operational community radio stations in India make special plans to celebrate World Radio Day and make it a big success.

Source: Mishra, S. (20 January 2014). *Celebrating World Radio Day 2014*. Commonwealth of Learning. https://www.col.org/news/celebrating-world-radio-day-2014/

23

Radio for Learning and Development[135]

Radio has been referred to as 'little media', but its power to reach people because of its affordability and simplicity is proving that it can be considered 'mother' of all. Participants of a community radio workshop that I attended in Agra, India on 10 January 2013 said radio can (i) promote local livelihoods, (ii) promote national integration and communal harmony, (iii) preserve local culture, languages, and dialects, (iv) preserve indigenous knowledge, (v) overcome illiteracy to provide education, (vi) play a significant role during natural disasters, and (vii) assist in citizen empowerment and good governance. Considering the 'oral tradition' in this part of the world, and the response of communities to strengthening the power of community-owned radio, the Ministry of Information and Broadcasting (MIB), Government of India has been organising community radio awareness workshops since 2007. The Commonwealth Educational Media Centre for Asia (CEMCA) has organised over 35 of these workshops in the past. For the 2012–13 year, MIB has asked CEMCA to organise three such workshops, at Orcha, Madhya Pradesh, Agra, Uttar Pradesh, and Dharamsala, Himachal Pradesh.

The community radio (CR) movement has a long history worldwide, and CR is accepted as a tool for strengthening cultural and linguistic diversity through local community participation. Several countries, including Australia, Canada, France, Argentina, Columbia, the Philippines, Ghana, and South Africa, have recognised the potential of CR and have made special provisions for such stations. In India, the impetus for CR came from a Supreme Court ruling in 1995 stating, 'Airwaves constitute public property and must be utilised for advancing public good.'[136] In 2000, the Government of India

allowed educational institutions to set up CR stations. In 2004, the Telecommunications Regulatory Authority of India (TRAI) released a set of recommendations on CR that said any legal entity, including an individual, should be eligible for a CR licence.[137] While it recommended that advertisements be allowed in CR, it did not recommend government funding/grants for CR stations. In 2006, the Government of India released new guidelines for CR that allowed community-based organisations (CBOs) to have a CR licence.[138] As of now, there are over 140 CR stations in India, and over 180 have signed a Grant of Permission Agreement (GOPA).[139] Many applications are in process, but the overall licensing process is a complicated one. At CEMCA, we have a facilitation centre supported by the Ford Foundation to assist potential CR licence seekers and help the MIB process applications through an online system.[140]

CR stations are usually faced with two challenges: sustainability and technical breakdown. CEMCA during its current Three-Year Plan (2012–15) has been engaged in developing a course for CR technicians that will be made available as an open educational resource (OER) and in forming sustainability models through engagement with specific stations.[141] CR radio can play a significant role if it serves the needs of the communities around it. Therefore, quality in terms of meeting the needs of stakeholders and community engagement is important.[142]

Considering the popularity and success of radio due to its unique qualities — a low-cost technology that is ideal in areas of low literacy or for serving small, specialised audiences, such as linguistic or cultural minorities — the United Nations Educational, Scientific and Cultural Organization (UNESCO) in its 36th General Conference, in 2011, proclaimed that 13 February be celebrated as World Radio Day in recognition of 'the day the United Nations established the concept of United Nations Radio'[143] (Resolution 63). We at CEMCA would encourage all the CR stations in the region in general, and India and Bangladesh in particular, to celebrate the second World Radio Day — 13 February 2013 — by organising special activities to create greater awareness and appreciation of the positive role that radio can play in national development. Such activities can take the form of invited lectures and interactions with radio experts, civil society representatives, and government officials in the locality; a series of announcements on the day, and bites from history; programmes created to promote the use of radio, etc. It is also important to promote the day in social media, and to use the emergence of

streaming audio, referred to as Web Radio,[144] to promote the importance of 'little media' in informing, educating, and entertaining citizens for national development. I am sure our collective advocacy efforts will result in increased sensitisation of policymakers, encouraging them to consider radio a tool for lifelong learning and to help create an enabling environment for more CR stations.

Source: Mishra, S. (14 January 2013). *Radio for learning and development*. CEMCA. https://www.cemca.org/blog/radio-learning-and-development

24

Bloggers in Education: Their Beliefs, Motivation, and Perceived Impact[145]

The phenomenal growth of blogs and blogging has also affected the world of education and educators. Though probably nobody keeps track of the number of blogs that exist now, previous statistics reveal that there are over 133 million blogs, with over 175,000 new blogs created every day. The number of blogposts every day is over 1.4 million. Technorati[146] also conducts a regular survey of bloggers to learn about the what, why, and how of blogging. In line with this thinking, an exploratory study has been conducted to understand the world of bloggers in education using the International Edubloggers Directory,[147] which has 1,125 members from 64 countries, comprising 54% male and 46% female bloggers.

Educators have been attracted towards the instant publishing and interactive features of the blog. Blogs are used for a variety of reasons: as a conversational tool, as a tool to create knowledge, for developing a community of practice, and for knowledge management. A review of the literature, conducted by Luehmann (2008), reports that blogs allow self-direction, provide opportunities for reflection, invite perspective making, allow knowledge brokering, and support identity development. In classroom and distance education settings, blogs are used as a tool in a constructivist approach to learning and foster collaboration and meaning making in a social environment. The professional development of educators as reflective practitioners is an important aspect of the numerous affordances the blog offers. Blogs can also be analysed from the use and gratification perspective,

which says that people use media strategically and choose a particular medium based on how it meets their specific needs or goals (Katz et al., 1973).

Some time ago, I conducted a survey to find out more about bloggers in education. What motivates educators to use a blog? What are their beliefs about the medium, and what are their perceptions of the impact of their blogging? The survey received a modest 77 responses, which I have analysed and present here for the information of all.

Profile of the respondents

- Male 61%, female 36%, no response 3%.
- Respondents aged 46–50 comprised about 17%, as did those aged 51–55 years, followed by 15.5% in the 36–40 age group, and 14% in the 41–45 age group.
- Forty-nine percent had a postgraduate degree, while 22% had a PhD, followed by 19% with undergraduate degrees. Six percent of bloggers were undergraduate students.
- Forty-two percent worked in schools and 29% in universities and colleges, 14% worked as independent consultants, and 10% were in a variety of other sectors, including government.
- Forty percent of the respondents were in mid-career positions, while 39% were in senior-level positions as per their professional work. Twelve percent indicated they were in the top position in their organisation.
- As the bloggers surveyed were in education, the discipline indicated by 57% of the respondents was education/learning science, while 15% indicated their discipline as humanities, 9% as sciences, and 5% as social sciences. There were also bloggers who indicated their discipline to be medicine, engineering, business studies, or computer sciences.
- The majority (about 82%) of blogs are in English. Dutch bloggers comprised about 7% of the respondents, while Spanish bloggers were about 5%. Other languages were German, Romanian, Bhasa Indonesian, Chinese, and Italian.
- About 25% of the respondents were from the United States, followed by 16% from the United Kingdom, 9% from Ireland, and 5% from Spain.

Some major highlights

- The earliest blog reported in this study started in 1995, while the largest portion (27%) started in 2007, followed by 26% in 2008.
- Ninety-six percent of bloggers did not like anonymous blogging, and 99% provided a comment facility in their blog. In 66% of cases, these comments were moderated.
- Blog writing was done individually in 84% of cases, while two-author blogs accounted for 4% and a group blog accounted for 5%.
- Time spent blogging: More than 50% of the respondents indicated no set time for blogging. Only 10% percent blogged as part of work.
- Blogging software: Blogger was the most preferred software used, followed by WordPress.
- There was wide variation in blogging frequency. Daily bloggers comprised about 20%, with 44% writing once a week, if we consider some of the figures in combination.
- It is interesting to note that about 47% of the bloggers said their institution was indifferent to their blogging activity, while only 17% were encouraged to do so.
- The majority (87%) of respondents' institutions did not have a blogging policy for their employees.
- About 35% of the blogs were targeted toward the general public, while another 35% were aimed at teachers.
- A wide range of services and social software tools were used by these edubloggers, including weblinks, RSS feeds, videos, blogrolls, and others.
- Only 13% allowed advertisement in their blog. While about 10% were paying for blogging, 8% received payments for blogging. The remaining neither received payments nor paid for blogging.
- What blogs did they like? I asked them to list three. The compiled list had 169 unique URLs.[148] However, the most liked ones were: Free Technology for Teachers[149] (9); Weblogg-ed (4); Half an hour[150] (3); Integrating ICT into the MFL classroom[151] (3); and ZaidLearn[152] (3).
- Blogging success: Most bloggers in education considered personal satisfaction (60%) to be their measure of success. Over 53% also

considered the number of unique visitors to the blog an indicator of success.

- Most of these edubloggers used blogging to share information (77%). They also believed it enhanced their professional development (73%). Other reasons for using blogging included to share experiences (55%), develop their self-identity (53%), and talk to the community (52%). About 50% also used blogging to store/record information for future use.
- Bloggers indicated about 206 key descriptors to depict their blogs. About 10% of the respondents listed 'education' as one of the descriptors, followed by about 5% listing 'educational technology'. Education was also the major tag found in the blogs.
- Attitude towards blogging: Overall, the respondents' attitude towards blogging was very positive. They considered it an activity that fosters reflection and critical thinking and that promotes the professional development of individuals. They do not feel that blogging has reduced their publishing in professional journals.

References

Katz, E., Gurevitch, M., & Haas, H. (1973). On the use of the media for important things. *American Sociological Review, 38*, 164–181.

Luehmann, A. P. (2008). Using blogging in support of teacher professional identity development: A case study. *Journal of Learning Sciences, 17*, 287–337.

Source: Mishra, S. (13 October 2010). *Bloggers in education: Their beliefs, motivation, and perceived impact*. http://teachknowlogist.blogspot.com/2010/10/bloggers-in-education-their-beliefs.html

25

Two Mental Models for EdTech Interventions

In hindsight, we are all wise! 'Reflection in action' is considered better than 'reflection on action', as the former gives opportunity for course-correction during implementation. The latter helps us to feel wiser and provides input for taking appropriate action in future projects.

My experiences of EdTech interventions are largely in Commonwealth countries, and therefore, the lessons and reflections here have been formulated in the context of collaborative partnerships, stable leadership in the partner institutions, and funding availability. How stakeholders visualise EdTech's disruptive role in fostering innovations plays a significant role in the success of the intervention. We know that success in an intervention is closely associated with having a clearly communicated logic model. Change in an educational system is incremental, so interventions must be carried out over a period of two to three years in a sustained manner to see any transformation.

Activities to deploy interventions face roadblocks when there is a lack of understanding of the logic model or a lack of alignment of the outcomes expected and the activities in the logic model. Educating partner institutions on results-based management in a limited way helps improve the development of measurable project outcomes and relevant interventions. Having senior management support for and oversight of implementations, with a local champion in charge of the project, are crucial. A local champion with high 'social capital' can create a huge difference in implementing change.

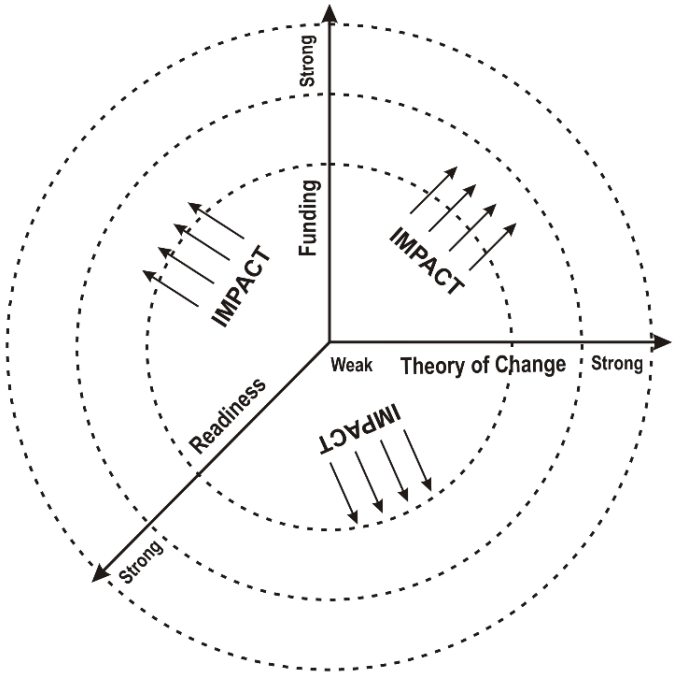


Fig.1: Three-dimensional impact model

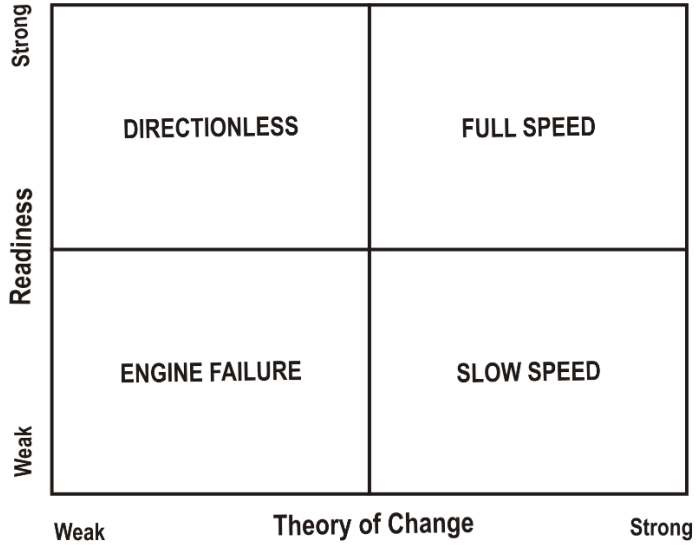


Fig.2: Two-dimensional impact model

We must remember that having the technology and know-how to implement a plan is important, but it is also important to rally people around the idea of change, which is a social process. Creating the social space to influence should be part of interventions. Most of the time, evaluators of EdTech interventions miss the efforts that have gone into creating the necessary environment for change. From several projects, I have observed that the impact of any intervention is a product of (i) the theory of change (ToC), (ii) the readiness of the partners, and (iii) the availability of funding (Fig. 1). Even if we assume that funding will always be available for a good cause, the other two factors are important for whether the impact of the intervention turns out as expected.

Using the example of a transport lorry, the impact can be categorised into four groups (Fig. 2). When you have a weak ToC and weak partner readiness, the project never starts (engine failure). When there is greater readiness but we are not able to make an impact, there is a problem with the ToC (directionless). When we have a strong ToC but weak partner readiness, the implementation is delayed and slow (low speed); in this case, we need to create an enabling environment, market the products and services, etc. However, the most successful impact scenario is when there is strong readiness and a strong ToC, ensuring the project moves at full speed.

When implementing EdTech interventions from outside, it is important to have strong partner commitment, without which a strong ToC will have no impact. Similarly, from within the partner institution, it is important to create a social environment for change while also focusing on strategic aspects, such as policy–capacity–technology.

Source: Mishra, S. (19 March 2021). *Two mental models for EdTech interventions*. LinkedIn. https://www.linkedin.com/pulse/two-mental-models-edtech-interventions-sanjaya-mishra/

26

Using ICT Skills Development to Address the Skills Shortage

The unprecedented impact of information and communication technology and a coinciding demographic shift in many countries has created a need for skills development around the world. It is estimated that 65% of children currently in primary school will end up in new job types that currently don't exist.[153] Developments in the fields of artificial intelligence, machine learning, robotics, nanotechnology, 3D printing, genetics, and biotechnology have created new opportunities that demand new skills. Further, over 60% of the 2.2 billion people living in the 53 Commonwealth countries are under the age of 29.[154] This is both a demographic dividend for Commonwealth nations and a challenge to address. For example, the highest unemployment rate amongst Commonwealth countries is in South Africa, which is at 25.5%.[155] But the unemployment rate of South Africa's youths (under 30 years) is alarming, at 63.1%.[156] In India, it is estimated that to remain within a 7–9% GDP growth rate, there will need to be 500 million skilled workers by 2022.[157] This presents a huge challenge for policy makers to rethink education and training systems and gear them towards skills development. According to the 2015 Talent Shortage Survey,[158] the skills shortages in Japan and India are 83% and 57%, respectively. The situation is further compounded by a gender gap in the workforce, with an especially low number of women in the fast-growing areas of science, technology, engineering, and mathematics (STEM).[159] Policy makers must now rethink education and training systems with an eye towards skills development.

Recognising the importance of skills development, the Commonwealth of Learning (COL) has placed a focus on skills in its current strategic plan.[160]

COL is taking a holistic approach that includes the development of capacities, polices, and learning materials in key skills areas through partnerships with industry and skills-training institutions. COL, with its expertise in the field of technology-mediated open and distance learning, has been promoting a flexible and blended learning approach to skills development to meet the challenge of numbers; the brick-and-mortar system of skills training is simply not a sustainable model for the current demand for a skilled workforce. The flexible and blended learning approach involves a range of face-to-face and online modes to deliver training that is flexible, allowing learners to access it at their own time and pace. COL works with training providers to build their capacities to offer courses that are engaging and immersive, and which develop skills that improve the livelihoods of the participants. COL also releases learning resources, developed through partnerships, under an open licence as open educational resources (OER).

Realising the potential in skilling youths in advanced ICT skills, COL has partnered with several educational institutions to develop courses that address the demand for specialist ICT professionals. One such collaborative partnership is with six open universities in Africa and Asia: National Open University of Nigeria, Open University of Tanzania, Allama Iqbal Open University, Indira Gandhi National Open University, Open University Malaysia, and Open University of Sri Lanka. Together, COL and the universities are developing 12 courses that will lead to two programmes, on mobile application development and on web application development. We expect that these courses, once developed, will be taken up by other institutions, allowing them to scale up skills development in other Commonwealth countries.[161]

Web, mobile, multimedia, networking, cyber security, data science, business analytics, and health informatics are some of the areas currently in demand. Over the next three years, COL will engage with partner institutions to assist in the development of courses that follow national occupational standards, with the goal of improving employability, while also engaging in the monitoring of course graduates to evaluate impact. COL's approach to ICT skills is to use a mix of video and print materials, along with local skills training at partner institutions. The pedagogical approach is to use the PESOS (Prepare–Explain–Show–Observe–Support) steps to focus on the key performance attributes of the skills needed to foster knowledge, skills, and attitudes for training. While we engage in the process of developing

quality learning materials, we also help our partner institutions build their capacities to offer high-quality learner support and focus on gender equity. Join us in our endeavour to skill our youths at speed and scale.[162]

Source: Mishra, S. (26 August 2016). *Using ICT skills development to address the skills shortage.* Commonwealth of Learning. https://www.col.org/news/using-ict-skills-development-to-address-the-skills-shortage/

27

IMPACT Framework for Media and Technology Choice[163]

The choice of media and technology for distance education delivery has always been a matter of great interest and concern for policy makers and scholars of distance education. This is so from two angles: one purely from the viewpoint of learning effectiveness through specific media use, and the other from the pragmatic viewpoint of managing learning environments. Though there are enough studies showing 'no significant difference',[164] this is a debatable issue on account of the methods utilised and the data on which the conclusions are based. Some recent works in this field also demonstrate a 'significant difference' in learning from different technologies and media. In distance education, the use of 'technical media' is a basic component of the whole delivery system. Because of this, decision makers often jump to using technology without thinking about the contexts of its use. In such situations, technology use policies are *ad hoc*, and any generic policy that does not take context into account only adds to poor implementation and a high level of dissatisfaction and criticism.

For some time now, the Bates criteria for decision making on the use of media and technology have been used in many institutions. The A(ccess), C(ost), T(eaching function), I(nteractivity), O(rganisational issues), N(ovelty), S(peed) framework (called ACTIONS) is highly useful.[165] I propose a similar media and technology choice framework (called IMPACT) for institutions to take course-wise/programme-wise decisions on the deployment of technology.

- Interaction: Does the technology/medium provide interactions of different kinds (asynchronous/synchronous; learner–learner/learner–content/learner–teacher, etc.)?
- Motivation: How does the technology/medium motivate the users (students, teachers, administrators)?
- Pedagogy: How is the technology/medium amenable to different pedagogical designs (case study, collaboration, learning by doing, self-study and discovery learning, etc.)?
- Access: Is the technology/medium accessible to the target group of learners?
- Cost: How cost-effective is the technology/medium? Is it affordable for the learners?
- Training: How much training does the technology/medium require for the students and teachers to use it effectively? How steep is the 'learning curve'?

Analysis with the IMPACT model will help us to identify the strengths and weaknesses of a technology/medium, based on which we can take appropriate decisions. In each category of the IMPACT model, we can add additional questions to make it more robust. This model is just an idea and definitely needs research to prove its utility.

Source: Mishra, S. (30 September 2007). *IMPACT framework for media and technology choice.* http://teachknowlogist.blogspot.com/2007/09/impact-framework-for-media-and.html

28

SMS in Teleconference Sessions of IGNOU[166]

At Indira Gandhi National Open University (IGNOU) one-way video and two-way audio teleconferencing has been used for more than a decade now. Beginning as a modest experiment in 1993, this system has been a regular activity in the teaching–learning process of IGNOU since 1995, with various schools and divisions using the facility available at the Electronic Media Production Centre (EMPC) to varying degrees. Realising the power of satellite technology, the university in 2004 introduced and deployed EDUSAT in the teaching–learning system, with the support of the Government of India. This added another dimension to technology-enabled teaching and learning in the university. Besides other pedagogic attributes of TV and video, the unique attribute of the teleconference system is the ability to provide 'real-time' interaction between students and teachers and amongst students. The effective utilisation of the system can be assessed from the level of interactivity; if there is no interaction, it can be safely said that the system is not working as envisaged. While teleconference session design, prior notice for students in the programme guide, annual planning of lectures, and integrating teleconferencing in the instructional design and curricula are important issues to make the system more effective, some basic reality checks are essential to use the system more effectively.[167]

Experiences show that most of the teleconference sessions are not attended by students, for various reasons. One significant reason cited by many teachers and students is the timing of the sessions. Though timing will always be a problem, as teleconferencing is a synchronous system, we can still make this system more relevant and useful through some systematic planning and

innovation. Here, I would like to suggest the use of SMS technology[168] with mobile phones. All the regional centres and teleconference reception centres should be given a mobile phone to SMS to a four- or five-digit number or a regular ten-digit number at the beginning of each session. Thus, within five minutes of a teleconference session, the resource person(s) is/are in a position to know the presence of students in the session in various regional centres/reception centres. If no students are present, the session can safely be stopped without wasting resources, as the purpose of a teleconference is to provide interaction, not to record video programmes. Talking to the camera without any students is done just to satisfy our own self and justify that we are doing something of value. But in reality, this does not help at all to improve the quality of teaching and learning. The use of SMS within five minutes of each session will also ensure effective monitoring of the receiving ends. Instant data can be gathered on the use of teleconferencing at the receiving ends. These collected data can be used for decision making at the highest level to oversee and plan for effective utilisation of teleconferencing.[169]

Source: Mishra, S. (30 April 2008). *SMS in teleconference sessions of IGNOU*. http://teachknowlogist.blogspot.com/2008/04/sms-in-teleconference-sessions-of-ignou.html

29

EDUSAT: A Satellite Dedicated to Education in India

A satellite completely dedicated to education was launched on 20 September 2004 by the Indian Space Research Organisation (ISRO), and Indira Gandhi National Open University (IGNOU) has been identified as the nodal institution.[170] The satellite has already completed two years in space, orbiting along its geo-synchronous path. It is now time for the nation to know what is happening with this educational adventure initiated by the Government of India.

The satellite is capable of providing high-bandwidth, two-way interaction by creating a private network of satellite interactive terminals (SITs) and receive-only terminals (ROTs) installed all over the country. The interaction mode is based on the popular Hypertext Transfer Protocol (HTTP) used on the Internet and in web applications. Thus, the satellite enables us to create a network through which we can share existing resources (often called digital repositories) in text, graphic, audio, and video formats and create real-time interactive virtual classrooms (often called synchronous e-learning) across the country. With both these possibilities, the potential is enormous for the educational development of this country. The satellite has six Ku-band and six extended C-band transponders, and it covers the entire country through national and regional beams.

But one may ask why Indian planners and decision makers launched a satellite for sharing educational resources and providing interactive learning opportunities when these tasks can be done through the existing Internet technology. The cost of using the Internet would have been significantly less

than the cost of launching a satellite, which has a life span of five to seven years[171] (or possibly 10–12 years); and thus, the resources could have been utilised elsewhere. However, the Internet penetration in the country is limited at present, so developing a system like what is being offered by EDUSAT through the existing Internet infrastructure would have created a digital divide, with people in rural, hilly, and remote areas of the country lacking Internet being unable to access the system. With EDUSAT, this barrier has been broken, albeit at a very high cost.[172]

It has been highlighted that 'EDUSAT is primarily meant to provide connectivity to school, college, and higher level[s] of education'. At the end of 2006, about 443 SITs and ROTs have been installed all over the country with the cooperation of various agencies like the All India Council for Technical Education, the National Council of Educational Research and Training, the University Grants Commission, and IGNOU. Ideally, these terminals should have been set up predominantly in the rural, hilly, and remote areas of the country. If we consider the issues related to pedagogy (teaching and learning) using EDUSAT, it is more critical and complex. There has been little so far done in this respect, as is evident from the fact that to date, no learning management system has been chosen to manage the synchronous sessions. Similarly, the online repository is also at a rudimentary stage.[173]

At the ground level, at IGNOU, video lessons are being recorded by teachers in the name of EDUSAT regularly without questioning its value and purpose. These lessons are supposed to be two-way interactive sessions. In reality, there is hardly any interaction, as the systems are either not functional or not in place. Thus, the recordings being done are only 'talking heads', which educational technologists and media educators have avoided for years. There is also another serious pedagogic issue. This is related to distance education, which is essentially asynchronous learning, where teaching and learning take place at different times. Of course, there is also scope for occasional face-to-face interaction (synchronous). But with EDUSAT, are we unconsciously moving towards making distance education synchronous? Are we predominantly thinking that distance education should have synchronous interactions? If so, how is this being planned for in the educational design? How are we preparing for students to use the system? How can we bring them to these so-called interactive EDUSAT sessions that can only be accessed at a place with a SIT or ROT? Not being workplace-based or home-

based is a serious impediment in the present system of planning, thinking, and technology.

At the current pace, we may not be able to see the real fruit of educational development in terms of increasing access with quality. We can spend huge amounts of money in purchasing hardware and technology, but without any pedagogic thought or planning, all these investments are a waste. Is it possible for us to integrate EDUSAT into our existing educational infrastructure? The current development is like part of the country's distance education scene, whereas the satellite can effectively cater to all education sectors. Also, conventional schools, colleges, and universities can use EDUSAT to deliver online education as a support to their classroom teaching. The system allows us to think beyond audio and video, and we should develop learning resources in multimedia, animation, and simulation formats.[174]

The technology also needs improvement to allow access from anywhere (not necessarily through SIT or ROT), especially as the technology is based on HTTP. If this can be done, the Government of India can focus on setting up ROTs only in the rural, hilly, and remote areas presently without Internet access. (Of course, we have to think of electric power supply, for which solar energy could be tapped.) This will also bridge the digital divide and improve the Internet penetration in the country.

The next important issue is developing digital content as a national resource for all levels of education. As we all realise that interaction is important for learning, EDUSAT can be used for supporting this interaction on the basis of the need of the learner or the need of the subject/discipline. Teachers need to be trained on the new technology, especially how they can best make use of EDUSAT for helping their students to learn better. There is a long way to go beyond lecturing to the television camera. If we continue doing this, there is every danger of again going back to the face-to-face teaching implemented through distance education technology. We need to remember that distance education follows the rigor of developing learning materials (in print, audio, video, and now multimedia) in a team mode, drawing upon help from the best experts in content, media, and learning design.

There are always more questions than possible answers. It is time to start thinking about the effective use of EDUSAT, before many other innovations

— such as SAKSHAT or One-Stop Educational Portal[175] — and e-content development take over and we forget about the potentialities of EDUSAT.

Source: Mishra, S. (16 February 2007). *EDUSAT: A satellite dedicated to education in India.* http://teachknowlogist.blogspot.com/2007/02/edusat-satellite-dedicated-to-education.html

Open University and Open Learning

30

IGNOU Started Community Colleges[176]

The community college as an alternative and flexible system of higher education and vocational training established itself in the early 20th century in the United States. William Rainey Harper, who became the President of the University of Chicago at the age of 35, contributed immensely to the spread of 'junior colleges', which later became popular as community colleges. These colleges normally offered a two-year 'associate degree', which allowed students to transfer to four-year degree colleges or universities in the United States to study for another two to three years to complete a bachelor's degree. These colleges were and are characterised by open admission, flexible scheduling and curriculum, a vocational orientation, collaboration with industry and local organisations, and cost-effectiveness. In 2006–7, there were 1,045 community colleges in the United States, enrolling 6.2 million students (or 35% of all post-secondary students enrolled that year).

According to a report submitted to the Planning Commission, Government of India, the first community college in India was established in 1995, and by 2003, there were 95 community colleges, with objectives similar to those of their American counterparts. However, not all are recognised by universities. By starting to recognise the community colleges, Indira Gandhi National Open University (IGNOU) has started a 'revolution' in the Indian vocational and higher education sector, as the intent and objectives of these colleges align with the open learning philosophy of IGNOU. This initiative of IGNOU will lead to more enrolment in bachelor's degree programmes (BDPs) in the coming years, as students pass onward from the associate degree schemes in these community colleges.

A further good would be for IGNOU to take one step more to introduce these community colleges to the concept of distance education and urge them to start distance learning programmes. Since the objectives of IGNOU are to promote distance education and democratise higher education, it should always look for opportunities to promote these aims, and through distance learning programmes at community colleges, it is possible to reach more students and increase access to higher education. In the United States, community colleges offer a significant number of courses through the distance mode. In 2006–7, 97% of the public two-year degree colleges offered some form of distance learning. So in India, too, the concept has the strong potential to 'reach the unreached' with quality education.

While the objective of increasing access to higher education through community colleges is welcome and appreciated, it is important that the scheme be implemented and monitored systematically. After the first batch of associate degree holders are out, the system should be able to inform us of their success rate, the trade-wise vocational education imparted, state-wise vocational statistics, the percentage of students seeking the BDP at IGNOU, student placements, etc. It is also necessary to ensure the quality of operations and academic offerings in the community colleges, and therefore, necessary guidelines, standards, and manuals should be developed. Capacity building for faculty and non-teaching staff to ensure quality is highly important, and regular training programmes should be conducted by IGNOU on various areas, such as needs assessment, curriculum development, teaching methodology, distance learning material development, the use of technology in teaching and learning, the application of technology in office administration, evaluation technology, etc. It is also important to think about credit transfer from the associate degree to regular conventional colleges and universities. To this extent, the University Grants Commission may develop norms and guidelines to be followed by the colleges and universities. If associate degree holders have the opportunity to join the conventional higher education system as well, this will add to the value of the scheme and improve the mobility of learners, giving them more choice.

In short, a good scheme has been initiated, but there are miles to go before its results are visible to larger society. I will be interesting to receive news and

views about the success of the scheme and its implementation and monitoring aspects.

Source: Mishra, S. (8 July 2009). *IGNOU started community colleges*.
http://teachknowlogist.blogspot.com/2009/07/ignou-started-community-colleges.html

31

IGNOU Goes Dual Mode[177]

Distance education systems around the world manifest themselves in primarily two forms: dual-mode institutions (where distance education is one wing of face-to-face/in-person teaching) and single-mode institutions (where distance education/asynchronous teaching and learning is the prime mode of educational transactions, such as in open universities). However, there are also other forms of organisation, such as consortia and network modes (due to the emergence of the Internet and its World Wide Web). While the history of distance education is over 150 years old, the first single-mode distance education university was established in 1969 (i.e., The Open University, United Kingdom).[178]

It has always been argued that dual-mode distance education institutes face enormous problems of autonomy in seeking to exploit the potentials of distance education within the boundaries of the traditional face-to-face teaching–learning system. In some dual-mode institutions, it has also been argued that the quality of distance teaching improved when the same faculty that taught in the conventional classroom developed learning materials and provided learner support at a distance. But the number of single-mode distance education institutions has grown to provide autonomy for innovative practices and reach the unreached by deploying a variety of media and technologies in a quasi-industrial model. While increasing access has been the primary motive of open universities, the conventional universities have adopted distance education to become dual mode and improve their financial position.

When Indira Gandhi National Open University (IGNOU) was established in 1985, the foremost objective of the legislature was to democratise higher

education and provide educational opportunities to those who for various reasons could not attend conventional face-to-face institutions. IGNOU was also mandated to promote distance education and maintain the quality of distance education in India. The IGNOU Act emphasises that IGNOU will use innovative educational technologies to deliver its degrees.

Open universities are popular in part because of their cost-efficiency and cost-effectiveness due to economies of scale. It is not possible for the public sector to establish large numbers of face-to-face institutions to meet citizens' growing demands, so various stakeholders have promoted the establishment of single-mode distance education universities. So far, India has one national open university and 14 state open universities.[179] Today, the distance education system caters to over 25% of students in higher education.[180] In order to accommodate the same number of students in face-to-face institutions, we would need to create over 1,000 universities. This emphasises that the distance education system has both a political and an economic place in our society. Yet while distance education has existed for over 45 years and IGNOU for nearly 25 years, the quality of education in the distance education system is questioned. Sometimes, this is due to lack of awareness about the robustness of the educational practices in the open universities, and sometimes, it is due to overzealous educational administrators who, without caring about quality, offer educational programmes through distance education. The distance education system needs to be strengthened at a time when there is a growing perception that without face-to-face interaction, the quality of education suffers. Further adoption of new technology, as envisaged in the IGNOU Act, is the need of the hour.

While technology augmentation is underway, IGNOU has suddenly decided to start face-to-face programmes on the campus from July 2009. (It should be noted that some highly technical programmes (such as Hotel Management and Nautical Sciences) are already offered through the face-to-face mode in collaboration with other government agencies. Interestingly, these programmes were offered in collaboration with institutes that had no authority to grant degrees, and thus, they wanted IGNOU's collaboration, but IGNOU had very little involvement in their design, development, and delivery.) IGNOU has not offered any sound reasons for starting face-to-face teaching, except that it says some forms of face-to-face programmes are already in operation, and other open universities, like Hong Kong Open University,[181] Athabasca University, Canada, and The Open University, UK

are also offering face-to-face programmes! Given the absence of a sound academic rationale for starting face-to-face programmes at IGNOU, the Government of India needs to explain to the nation its policies and priorities vis-à-vis distance education.

Without going into the contexts in which other open universities offer face-to-face programmes, it is important for IGNOU to think of its role and actions.

- If IGNOU's role is to promote distance education, is it right to start face-to-face teaching and create two categories of students? Does starting face-to-face programmes promote distance education?
- Has IGNOU conducted any cost analysis before starting face-to-face teaching? What has happened to the concept of 'economies of scale' and 'cost-effectiveness'?
- Is the present staff strength in each faculty sufficient to conduct quality face-to-face teaching?
- Is there sufficient infrastructure in the university to conduct face-to-face programmes, such as hostels, laboratories, etc?
- How does IGNOU plan to reach the unreached through face-to-face programmes?

Distance education is not averse to face-to-face teaching as long as it is used as one medium of teaching and learning but not the 'sole' mode. Face-to-face interaction is used in distance education as a support to enrich the learning experience, depending on what the subject requires and/or the learner needs in the way of extra support. So having research degree programmes in the face-to-face mode in open universities (which is happening elsewhere) is natural, as such programmes offer specialised training and are not expected to include a great number of students. But to start master's degree programmes in the face-to-face mode for only 20 students on campus is an outcome of elitist thinking that does not believe in the democratisation of higher education.

As a distance education professional engaged in research and training on distance education, I have been talking of the advantages of distance education for the last 15 years, and suddenly, my own university starts face-to-face teaching. This not only leaves me thinking about and searching for

the justifications but also gives me a sinking feeling. I ask myself, is distance education dead? Is it not contemporary? I asked one of my colleagues for their opinion on this issue. The reply was that at a time of convergence due to technology, there is a need to rethink distance education. Yes, there is a need to rethink. But in which direction? The conventional universities are adopting technology to use e-learning (which provides flexible open and distance learning opportunities). This is progressive thinking, as the emergence of technology has made it possible for the 'distance' to be next door, and interactions to go beyond the classroom! We have always viewed face-to-face teaching as rigid and inflexible, yet the university has decided to go dual mode. I wonder what kinds of technologies the university will use in its face-to-face classrooms to be innovative and reach more than 20 students. As a distance education teacher, I am looking for a rationale for going dual mode. I welcome you to help me in this endeavour.

Source: Mishra, S. (5 July 2009). *IGNOU goes dual-mode*.
http://teachknowlogist.blogspot.com/2009/07/ignou-goes-dual-mode.html

32

Open University Degree

With the recent judgment of the Supreme Court of India in Civil Appeal No. 4173 of 2008, the student community and academia are confused because of the poor standard of reporting in mainstream newspapers. The court order will not have an adverse effect on the quality of education through the open universities. It only reminds us of the supremacy of the UGC Act over the IGNOU Act.

Though IGNOU was established by an Act of Parliament that granted special powers to maintain the standards of distance education systems, the university's purpose is to democratise higher education by providing an alternative system for those who can't attend in the conventional face-to-face system for various reasons. In no case can the IGNOU Act be above the UGC Act, as the object of the latter is to maintain the standards of higher education in all Indian universities, including IGNOU. The open university system must follow the directives of UGC to maintain parity of the degrees issued, and the Distance Education Council[182] (DEC) at IGNOU needs to frame ordinances and regulations within the ambit of the UGC framework. Though the system of distance education is different and uses a number of innovative practices (including a student study time-based credit system), it should not violate the basic guidelines on the nomenclature, duration, and specification of degrees (i.e., seeking permission from UGC if a degree is not listed).

The problem is that universities in India are autonomous without oversight, and they sometimes disregard the guidelines/regulations set by statutory bodies in order to increase revenues. Such practices continue due to a lack of respect for the relevant acts, statutes, and ordinances, which senior officials

should uphold and execute. Some time ago, there was a proposal for a quasi-judicial tribunal for educational institutions in the country to consider cases of malpractice and disputes in educational institutions, the fate of which is unknown. A tribunal should be there to deal with educational cases speedily and serve as a check to the unlawful acts of senior officers in autonomous educational institutions, making them accountable for their actions.

Students in open universities and the distance education system should be more careful before joining a programme or institution. The degrees offered by state universities, central universities, deemed universities, and institutions of national importance are recognised, provided the universities follow the directives of statutory bodies like the University Grants Commission, the All India Council for Technical Education, the Medical Council of India, etc. Thus, before spending your hard-earned money on a distance education programme, do exercise your right to ask for proof of its approval by the relevant statutory bodies. It is important to scrutinise the academic rigour of the programme, such as how counselling sessions are organised, the number of assignments and their assessment, examination procedures, the quality of learning materials, and so forth before joining a programme. Unfortunately, many distance learners want quick degrees without making adequate efforts to learn. When you go for a quick and easy degree, you fall into the trap and pay the price.

Many a time, open university degrees are not being recognised when people apply for admission to higher degree programmes in conventional face-to-face universities. Universities are autonomous in deciding whom to admit into a programme/course based on equivalence between the applicant's qualifications and similar qualifications issued by the receiving institution. Universities have their own equivalence committees for this purpose, the Association of Indian Universities (AIU) also deals with such cases, and all conventional universities by and large follow this process. For distance education students, this is where the problem lies, as some universities refuse to grant equivalence to open university degrees. The DEC may take steps on this front, in collaboration with the UGC and AIU, to create an "equivalence framework" so that distance education students are not at a disadvantage. For employment, the distance education degrees offered by universities, in accordance with their acts, statutes, and ordinances and duly offered in compliance with the guidelines and approval of the relevant statutory bodies,

should be recognised by all employers. To do otherwise constitutes discrimination.

Students in the distance education system should not have to worry about the validity of their degrees; they should focus on their studies and learning per se. If you work hard, study, and demand more from the institutions and teachers, you will get more. It is your performance that will speak for the system and bring it more legitimacy and respect.

Source: Mishra, S. (2 March 2009). *Open university degree.*
https://teachknowlogist.blogspot.com/2009/03/open-university-degree.html

33

Chaos in Open Learning[183]

Indira Gandhi National Open University (IGNOU) was established in 1985 by an Act of Parliament, with the dual mandate to maintain the standard of distance education in the country and to offer courses and programmes at various levels. Today, India's distance education scene comprises one national open university, 14 state open universities, and more than 150 distance education institutes in other universities.[184] The establishment of a private open university by the Symbiosis group is also in process.[185] There is also a distance education bill awaiting the approval of Parliament to separate the Distance Education Council (DEC) from IGNOU.[186]

The 10th Plan of the Government of India envisaged 40% of higher education enrolment being in the distance open system but grossly failed to achieve this goal. The target has been kept at the same level in the 11th Plan period, and IGNOU has started taking some concrete steps to achieve it. One such step is the Convergence Scheme, which intends to tap existing colleges and universities to join the distance education bandwagon through various schemes. Notwithstanding the popularity of distance education in India, the growth is chaotic and directionless, as the intention of starting distance education programmes and courses has changed from providing access to and democratising higher education to generating more resources. Thus, the issues of quality and accreditation still fall short of national expectations.

Though the DEC of IGNOU was established long before the National Assessment and Accreditation Council (NAAC), it has yet to develop a credible process of quality assurance in distance education. Courses and programmes are being offered by various institutions without having core faculty. Anyone can develop any course/programme in any discipline and

offer it to generate additional resources in the guise of increasing access and innovation. The feasibility and sustainability of programmes are rarely investigated, thereby compromising the quality of services provided to the student community. Since the learners are dispersed, they cannot form groups or associations to protest about these problems.

Distance education is also being used to provide a backdoor route to institutions that can't offer 'degrees'. So face-to-face education is being certified as distance education through 'collaborative models'. Without considering the mandate of democratising education, small pockets of elitist education centres are being promoted that generate more resources in monetary terms. Interestingly, as per the UGC Act, sub-section 3 of Section 22, the nomenclature of the programmes offered should be as per the approved specifications indicated in the *Gazette of India*. A quick comparison of the list of programmes offered through distance education and the UGC list would reveal many anomalies.

Distance education is primarily a technology-mediated system of teaching and learning, and IGNOU is a world leader in the use of TV, radio, and satellite to deliver instruction. The EDUSAT was launched in September 2004 to provide interactive education. But even halfway through its operational life, its full potential is yet to be unleashed. What goes on regularly is routine 'talking heads' without viewers. No interaction of any worth whatsoever takes place in these EDUSAT sessions. No learning management system is in place to provide additional data services other than televised lessons.[187]

Recently, teachers in India's open universities, and particularly at IGNOU, are more concerned about the administrative confusion around who is a teacher. This is a simple question as far as a large number of colleges and universities are concerned, where teachers are engaged in 'direct teaching' to students in classrooms. The Ministry of Human Resource Development recently decided to provide 27% of reservations to OBC (Other Backward Class) students in educational institutions, and as per the recommendations of the Oversight Committee, the retirement age of teachers was recently increased to 65 from 62 in the centrally funded educational institutions, including IGNOU. The intention of such a move was to accommodate more students on the campus and retain teaching talent. According to the strict

wording of the MHRD and UGC, the recommendation is only applicable to institutions offering face-to-face education.

At IGNOU, the teaching roles are different, with different designations (including lecturer, reader, professor, regional director, deputy director, assistant director, assistant regional director, research officer, analyst, etc.). Within the technology-mediated teaching–learning system followed in distance education, the role of a teacher is to organise the curricular transactions through course development, lesson writing, media production, script writing, synchronous interaction in broadcast sessions, counselling and guidance, learner performance assessment, programme evaluation, and research, and to perform all other activities that are necessary and conducive to student learning.[188] Not necessarily every teacher does all the tasks all the time. Depending on the demand of the workplace, different tasks are performed by the teachers at different points in time. None, however, do face-to-face teaching to a large extent, except for a small number of trainers. Now, those not having the designation of lecturer, reader, or professor not only are being denied the increase in the retirement age but also are not given promotion from reader level to professor level. The confusion and disagreement continue on who is a teacher, and the issue probably needs a national-level debate on the roles and functions of teachers at large.

The situation prevailing in open learning in India is really chaotic, if we look beyond the superficial numbers. The number of students suffering from poor service is a matter of concern to national development. The National Knowledge Commission recently recommended that distance education be recognised as a discipline in its own right, not just a mode. While this is a laudable recommendation, a Distance Education Commission[189] should be established as soon as possible to revamp open learning in the country and to create a system that will enable sustainable and qualitative developments in a planned and systematic manner.

Source: Mishra, S. (10 June 2008). *Chaos in open learning.*
http://teachknowlogist.blogspot.com/2008/06/chaos-in-open-learning.html

34

Assignments in Distance Learning

Assignments play a very significant role in student learning. They are part of the formative assessment process and provide feedback to learners on how they are progressing in their studies. Ideally, assignments act as both remedial measures and motivators. For assignments to play their espoused role, the turnaround time for marking assignments (whether by tutor or computer) is vital. At IGNOU, the recommended turnaround time for tutor-marked assignments (TMAs) is four to six weeks. Of course, there is no policy for computer-marked assignments (CMAs). In practice, the turnaround time for TMAs is highly unsatisfactory. Grading is sometimes done so late that the evaluated assignments reach the learners after term-end examinations. Ideally, an evaluated TMA should reach the learner before submission of the next TMA, to take advantage of the feedback and improve the next. But the number of assignments in a course, and their sequence and deadlines, are not rationally placed to enable this to happen. Growing student numbers add to the problem of handling assignments. The overall result is no result for many students, even after they have submitted their assignments on time. The situation needs to be improved as a matter of priority.

Some concerned professionals go to the extent of suggesting that assignments should either be withdrawn or not contribute towards the final grade. This is an extreme step and would go against the purpose of assignments in distance learning. Therefore, to provide a pedagogically acceptable solution, it is essential to see where the problem lies. Let us assume there are 100 students in a course (say MS-1) attached to a study centre. On a particular assignment due date, if all the enrolled students submit their response, the study centre will receive 100 assignments. Consider that we intend to return the evaluated assignments before the due

date of the next assignment, which is normally fifteen days after the first one. In such a situation, we would like to complete evaluation of the 100 assignments in seven days, which is impossible for one counsellor in the course to do. Normally, a counsellor/evaluator can assess three assignments perfectly, without any bias, in a day after doing everything else they are also expected to do in their life. Therefore, in seven days, one counsellor can evaluate about 20–25 assignments. So to complete the evaluation of 100 assignments on time, we need four to five counsellors. The problem starts here. We don't have enough counsellors for each course to do evaluation, so assignments remain piled up, unevaluated, at the study centre. As and when they are evaluated, the coordinator of the study centre sends them to the Student Registration and Evaluation Division. By that time, it is too late. There are, of course, other problems too, such as with communicating grades and having items go missing in the post. And there are issues of finance and accounts, as grade lists are sent to the headquarters, and the recoupment of assignment bills is done at the Regional Centre.

In totality, the problem can be solved through two basic approaches: academic and administrative. An academic reform would be to appoint part-time counsellors based on the number of students enrolled in the course. For every 25 students, there should be one part-time counsellor for the specific course. This might be asking too much of a system that is based on a cost-effective model, as the appointment of more counsellors will add to expenditure. It might also be difficult to hire enough qualified and experienced counsellors. Alternative strategies can be considered in this regard, but the appointment of more counsellors is a must. Two administrative reforms in the handling of assignments would be to send the grade list along with the recoupment bills to the Regional Centre. Grade lists would then be keyed in at the Regional Centre through a networked system for easy collation at the headquarters. These two simple but difficult measures would improve the assignment handling practices at IGNOU. I am sure we can do better, and our students deserve the best.

Source: Mishra, S. (2000). Assignments in distance learning. *Open Channel, 4*(23), 12.

35

Continuous Evaluation at IGNOU: Some Suggestions[190]

As per the ordinance on the Conduct of Examinations and Evaluation of Student Performance (under Section 26 (1) (b) of the IGNOU Act), approved by the Board of Management in its 29th meeting (*vide* resolution no. BM 29.8.2 dated 19 August 1992), assignments form one of the methods of evaluation of student performance on a continuous basis. Assignments are used in distance education as a means of two-way communication and interaction between learner and tutor/counsellor. They are considered a teaching tool through which the tutor/counsellor provides constructive, positive, and teaching-type comments that are useful to learners for understanding how they are progressing, and for taking remedial measures in their studies. Learners treat assignments as a guide to schedule their studies and prepare for term-end examinations (TEE). The significance of assignments in distance learning is indisputable. Notwithstanding the pedagogic values of assignments, there are operational issues that have been major concern of the University in the recent past. As such, the University has done away with continuous evaluation in certificate programmes with effect from January 2003! On 22 April 2004, the University organised a brainstorming session on 'assignments', involving teachers and academics of the University. This short write-up is based on the deliberations of the brainstorming session, as well as the author's experience in the field and as a teacher practitioner in distance education who in the past has continuously raised the issue of improving the assessment of student performance.

What Are the University's Policies and Practices?

While recognising the importance of assignments as a teaching tool and as

a means of continuous evaluation of student performance, the University has laid down the following policies/practices:

- Decisions related to assignments are undertaken by the Academic Council as per the recommendation of the School Board.
- Assignments are of two types: computer-marked assignments (CMAs) and tutor-marked assignments (TMAs).
- One assignment per course of two credits, with a maximum of three assignments for an eight-credit course.
- Assignments are spread over the course and duration of the programme.
- Feedback to the learner is a must, including teaching-type comments.
- Learners must submit assignments before they appear for the TEE.
- A weightage of 25–30% is given to assignments so learners take them seriously.
- The one or two best assignment(s) out of two or three is/are used for final grading.
- Learners must do a replacement assignment in the next year if they receive an unsuccessful grade or do not submit an assignment on time.
- Faculty monitors 2% of assignments evaluated by each counsellor and provides feedback to them.

Reality Pulse Check: The Problems

From time to time, a large number of problems have been identified in the area of assignment practices in the University. However, the brainstorming session identified that these problems can be organised into five categories: administrative, academic, technical, financial, and personnel.

Administrative/Procedural

- delay in receipt of assignment grades at HQs
- delay in result declaration
- submission of assignments before TEE is not ensured
- assignments not available at Regional Centre (RC) and Study Centre (SC)
- students do not follow the assignment submission schedule

- no monitoring of evaluated assignments done in practice
- use of two out of three or one out of two assignments for grading (a waste of effort)

Academic

- teaching-type comments mostly missing
- students copying from each other and from the material supplied is common
- copying in CMAs is high
- no feedback of any sort is given in CMAs
- assignment questions are 'run of the mill' and show no innovation

Technical

- problems in the computer programme used by the Student Registration and Evaluation Division (SRED) mean students qualify without completing the required number of assignments

Financial

- huge amount of money spent in the practice
- money spent on evaluating assignments that don't count towards a final grade is a waste
- photocopying of assignments at RC and SC
- payment for data entry of assignment grades is less, so errors occur

Personnel

- programme coordinator must chase faculty for assignments
- SC staff are very stressed due to work overload
- too few staff at SRED to handle huge student enrolment
- more faculty members required to undertake monitoring work

What Are the Solutions?

The brainstorming session resulted in a large number of suggestions to consider, which can be categorised into assignment policy, assignment preparation, assignment handling, study centre related, training, and the use of information and communication technologies (ICT).

Assignment Policy

- decide about assignments on a programme basis; no generic view should be taken
- withdraw CMAs
- reduce to one assignment in each course
- use assignment only as teaching tool, not for grading

Assignment Preparation

- use innovative, application-oriented and reflective, experience-based assignment questions in TMAs
- discuss assignment questions as well as the key in the faculty before printing

Assignment Handling

- have strict due dates (conversely, some suggested not having due dates)
- submit assignments at HQ (for low-enrolment courses), RC/SC
- accept only handwritten assignments (some suggested accepting soft copies)
- provide comments on assignments in face-to-face meetings

Study Centre Related

- establish permanent study centre
- appoint more staff at SC
- appoint permanent staff at SC

Training

- provide regular training to counsellors, coordinators, and other staff of SC

Use of ICT

- consider e-counselling
- use soft copy of assignments to check for plagiarism/copying
- create question bank in all courses
- improve CMA practice through feedback mechanism
- track students' progress

Discussion and Points to Consider

We will fail in our responsibility if we do not go deep inside the cause of the problems identified. Unless we reach a proper diagnosis, it will be futile to administer any solution. Therefore, let us discuss the problems and the suggested solutions in depth.

Assignment Policy

While considering the policy with regard to assignments, it is important to have our basic premises clear: that the pedagogic function of assignments as a tool for continuous rigor in learning can't be thrown away, and thus either an outright reduction in the number of assignments or cancellation of CMAs (without an alternative) will be detrimental to student learning. In a flexible system like open and distance learning, we can consider alternative ways of assessment, with learners given the option to choose how they desire to be assessed. In such a situation, we may like to use assignments as a teaching tool only, without them having an overall impact on grading. There are many such possibilities:

- no evaluation at all (students who opt for this scheme should get a course completion certificate but no credits)
- no assignments (with the TEE worth 100% of the grade)
- assignments (25–30% of the grade) and TEE (75–70%), as is the current practice
- TMAs worth 25–30% and TEE worth 75–70% through a 'Computer-Aided Paperless Examination System', which could act as an on-demand system as well

POINT TO CONSIDER: A decision is needed on alternative evaluation strategies. Pilot projects can be initiated in some programmes to start with.

Quality of Assignments

As assignments are tools for continuous evaluation, it is important to prepare the questions (items) in a way that enables the learner to show their creative and analytic abilities through TMAs. Assignment questions that require the application of lessons learned, reflection, and experiences are best suited for TMAs. However, these are difficult and time-consuming tasks. It would therefore be better to adopt the question bank (QB) approach for preparing assignments. The design of a QB should be based on a 'blueprint' of the course and cover all areas with varied difficulty levels

and types of questions. The development of a QB should be a consultative and continuous process. The use of ICT will be highly relevant in the design and development of question banks.

POINT TO CONSIDER: The question bank approach should be considered for all courses.

Plagiarism/Copying

IGNOU works within a societal context, and it is well known that most of our learners are degree oriented rather than learning oriented per se. It is our aim and responsibility to turn our learners into capable lifelong learners, and assignments are tools in that direction. But copying and plagiarism are major problems. To some extent, the nature of assignment questions will prevent copying, but not entirely. The introduction of technology can help. In the case of CMAs, the use of web-based technology will be highly useful to check for copying. Otherwise, it is very important to use objective-type question booklets for students' home practice. The use of ICT will enable the provision of appropriate feedback on TMAs as well.

POINT TO CONSIDER: Use web-enabled delivery of CMAs, for which the University should acquire the appropriate web tools and software.

POINT TO CONSIDER: Otherwise, use objective-type question–answer booklets for home practice as alternatives in all courses that presently have CMAs.

POINT TO CONSIDER: Provide training to faculty on designing innovative assignment questions on a regular basis.

Counsellors

Counsellors are the backbone of the assignment evaluation system. It is they who should play the role of surrogate teacher and be expected to provide teaching-type comments in the evaluated assignments, which act as a form of two-way communication. However, counselling and providing effective tutor comments are skills not normally available from the conventional teachers hired to perform the role of evaluator/counsellor. It is therefore essential to provide training to every counsellor before they are entrusted with the task of evaluating assignments. The approach to training can vary, from supplying printed handbooks to computer-based multimedia to face-

to-face workshops, depending on the requirements and context.

POINT TO CONSIDER: Use the services of trained counsellors in counselling and evaluation activities.

As far as counsellors are concerned, we can train them, but most of the time, they are also overloaded with large numbers of assignments, and thus the quality of tutoring through teaching comments suffers. In order to maintain quality, it is essential that more counsellors be appointed in each course. To appoint more counsellors in a course, the University could consider using the services of qualified unemployed youths for this task and provide them with the necessary training.

POINT TO CONSIDER: Appoint one counsellor for every 25 students enrolled in a course in a Study Centre.

Assignment Handling

At present, TMAs are submitted at the SCs. They are evaluated, and the grade lists are sent to HQ, whereas the bills are processed at RC for recoupment. At some places, the grade lists are entered in the RC and sent to HQ for merging in the database. Problems mostly remain in the handling of assignments, as the due dates for assignment submission are not followed, evaluation gets delayed, and thus so does the transmission of grades to HQ. As a result, the learners do not receive feedback on their assignments in time to actually gain any advantage from this exercise. Since assignment submission is compulsory to sit the TEE, some students just submit assignments without actually working on them, as they can resubmit later without any penalty if they receive a failing grade the first time.

POINT TO CONSIDER: Assignment submission should not be compulsory for taking the TEE. But an alternative approach to ensure assignments are taken seriously should be considered.

There is also a problem with the actual processing of the assignments, due to the lack of adequate support staff at the SCs. Most of the time, the SCs work with a staff strength to support 1.250 students, whereas in actual practice, the student strengths are more in many SCs. Therefore, it is essential to modify the existing staff structure at SCs to accommodate more staff, based on student strength. In each course, there should be a part-time

master counsellor attached to the Regional Centre to evaluate assignments as and when required. Such a person could also play the role of a moderator and undertake the monitoring of assignments.

POINT TO CONSIDER: Appointment of part-time staff at SCs should be linked to the enrolment strengths.

POINT TO CONSIDER: A part-time master counsellor may be appointed for each course at the Regional Centres.

Flexibility in accepting assignments after the due date is also responsible for many of the delays. It is important to adhere to the due dates strictly. This practice will also ensure learners are sincere about their courses.

POINT TO CONSIDER: Due dates should be clearly mentioned in each assignment and adhered to strictly.

There is also a need to review the existing practice of submitting assignments anytime during the valid registration period. This kind of laissez-faire approach leads to a lack of seriousness about studies and learning, and it has implications for the budgeting and payments related to evaluation. We therefore need to review this practice. It is suggested here that while the present flexibility to complete a one-year programme in four years is all right, it is important for the University to know which students are actually seriously pursuing their studies in a particular year/semester. Therefore, we should implement a practice through which, if a student does not complete the required assignment in a course, they must pay a special fee to submit the assignment in the next year. This would be something like the fee paid to join in practical sessions. Such fees should only be accepted during a specified time; it thus will be easier to determine how many students might actually submit assignments in a year/semester at a Study Centre.

POINT TO CONSIDER: Revise the current flexibility that allows assignments to be delivered anytime during the valid period of registration.

Once assignment handling is streamlined with adequate staff at SC and an adequate number of counsellors, and there is strict adherence to due dates, it will be easier to transmit grade lists to the Regional Centre on time. It will

be better if the grade lists are directly fed into a web-based system from the Regional Centre to reduce the workload at HQ. It is reported that on average, about 2,000,000 assignments are handled at HQ. It would be highly advisable to decentralise the task to all the RCs, with adequate security measures to ensure the confidentiality of the evaluation process.

POINT TO CONSIDER: Enter grade lists into a web-based system at the Regional Centres.

Concluding Remarks

Most faculty members agree that assignments are necessary in distance learning, and they should not be removed. At the same time, all of us are concerned about the deteriorating standard of the assignment practices in the University. It is time to take hard decisions and streamline the process. Our students need better and improved service. However, it should also be noted that the role of the assignment as a continuous evaluation and teaching–learning tool can be ensured only with the cooperation of learners. We must create a systemic environment for learning to happen and take a pulse check from time to time to keep the system alive!

36

Public Libraries and Open Learning

With the fast-paced developments in the world of computer and communication technologies, and their use in libraries and the information processing sector, the worst affected and neglected are public libraries. The role of public libraries in promoting awareness, literacy, and educational standards has taken a backseat. Everyone seems overcome by the euphoria of information technology. Yet the social impact that a well-equipped public library can have in developing better-informed and knowledgeable citizens is enormous. In fact, public libraries are places that really enable every citizen to use their leisure time for self-development and enlightenment. Public libraries are for all, irrespective of their age, gender, caste, religion, educational qualification, etc., in the true tradition of a democratic institution. Public libraries are thus places of learning — to be precise, self-learning, without any barriers. Learning without barriers is also referred to as 'open learning', where the conventional restrictions of age, time, place, qualifications, etc. do not exist. Thus, open learning is a philosophy of liberal education that has been practised for years in public libraries. The commonality between public libraries and open learning is that both allow learning for self-development and social betterment as a whole. However, the former is a 'place' that practices the latter philosophy. Now you must be thinking, if time and place restrictions do not exist in open learning, how can public libraries practice it? Your question is valid. Read on.

Public libraries, especially in India, need to change fast, in tune with other social developments. In countries like Thailand, Malaysia, and the United Kingdom, public libraries have 'open learning corners', where they keep 'open learning packages' from distance education universities or open universities. With the growth of open universities in India (currently, there

are eight[191]), this kind of service would be very useful for the burgeoning population of open learners. Also, students in the conventional system could use the quality learning materials developed by these universities rather than reading cheap guides and notes.

In earlier days, opening public libraries was common, as they were considered the only source of information. But now, the opening of information kiosks and cyber cafés is common, where you can access the Internet, and a whole world of information is before you at a few clicks of the mouse.[192] These information kiosks allow users to log into a computer and access whatever information they need — learning the open way. Here, let me come to the crux of the matter: public libraries need to take up this role of providing Internet access for their patrons. Once this is possible, users with their own computers and modems can connect to their libraries and access the Internet for their learning. You may think: if someone has a computer, modem, etc., why can they not connect to VSNL (the ISP) directly? Well, maybe they do. But not everyone with a telephone has an STD connection, and thus they must connect to a public telephone booth for an STD call. Maybe for similar reasons, public libraries will become another exciting place for open learning without time and space barriers![193]

The bottom line is: public libraries are the best channels of open learning!

Source: Mishra, S. (1998). Public libraries and open learning. *In House Magazine, 2*(11–12), 10.

37

Improving Material Distribution

One of the major problems we face in delivering educational programmes through distance education today is the inordinate delay in the dispatch of study materials. As such, most of the queries and letters received from students at Regional Centres (RCs) and headquarters pertain to the non-receipt of study materials.[194] There has been a concerted effort in this direction by the University to improve the material distribution system. This note is on how we can improve the system further.

Before discussing any solution, let us identify the critical issues. The material distribution process starts when the admission process ends. The address labels for dispatching materials come from the Student Registration and Evaluation Division. Since flexibility in choice of courses is the hallmark of the open university, programmes must be rationalised to dispatch common materials. This is normally a difficult task in view of the philosophy of the system.

Our study materials are in blocks. A few blocks taken together constitute one course. All the blocks of a course need to be kept in a packet for dispatch through the postal system. There has been a heavy dependence on the IGNOU post office for this purpose. Moreover, as the number of students is growing and multiple packets of materials are dispatched to every student, the post office is naturally become slower and less efficient. At present, the distribution system has been decentralised, so the study materials of certain programmes are sent in bulk to the RCs, which take care of their distribution through the Study Centres or by post. .

The major issues involved in this operation are:

- blocks, though colour coded, take time to put together
- there is heavy dependency on one post office; even with the decentralised system, the student must come to a Study Centre to receive the materials, otherwise, they receive them late
- growing number of students
- admission finalisation delay
- rationalisation of courses offered in the open system

In addition to these, there are other issues related to delays in course development, printing, and storage.

For a holistic improvement of the system, let us reflect on possible solutions. Naturally, we can't reduce the number of students, as there is a social demand for courses, and we are all for the democratisation of education. We can reduce the delay in finalising admission data. The recently introduced OCR form for admission will perhaps help in this direction.[195] If carefully implemented, this will also help reduce data entry errors in students' addresses. Regarding the time required to prepare packets, a forecasting approach could be taken, and sets of blocks in various courses could be prepared based on the enrolment figures of the previous year, so that as soon as the admission list is finalised, the materials can be sent to the students. Another solution could be to put all blocks into a folder, with the flexibility to separate the blocks. This would require printing all the blocks of a course together on one printing press, and since we can go to print only when all the blocks are ready, course development may be delayed. The dependency on one post office can be minimised if we start dispatching materials from all our Regional Centre cities. This will require additional storage space at all RCs. In this context, we can follow the 'just-in-time' approach through a decentralised printing and distribution system (not just a decentralised distribution system). What would this system be?[196]

This system envisages that each RC (at least the RCs on the mainland of the country) shall have a printing and distribution unit with appropriate skilled and semi-skilled staff. These units shall print and distribute materials related to specified schools/programmes. The faculty at HQ will prepare the camera-ready copy and send it to the concerned RC for printing. The final

student list of that school's programmes will be sent to the concerned RC for dispatch. Once the list is ready, the printing order shall be given, and the printer will be asked to supply materials just in time for dispatch. Thus, materials for all the programmes can be dispatched simultaneously from different Regional Centres and be completed in a short time. This will not require additional storage space at RCs, except for a few surplus materials to meet exigencies. All the non-receipt queries for that particular course/programme will then be addressed to the concerned RC for necessary action. In this way, the distribution of materials could be improved.[197]

Source: Mishra, S. (1997). Improving material delivery system. *In House Magazine, 2*(8), 9.

38

Evaluation by Choice[198]

By and large, we at IGNOU operate under the umbrella of the open learning philosophy. This envisages a flexible and open approach, without the rigidity of the conventional system. We are also highly innovative as far as the education system in general is concerned and experiment with new ideas that could benefit our learners to achieve their objectives of upgrading and updating their knowledge and skills. We follow an evaluation system that is innovative because of its three-phase process and the magnitude of its operations. But is our evaluation system really open/flexible enough to match the open learning philosophy? Certainly, there are many options across the spectrum of 'closed' and 'open' in the distance education system, and it is difficult to achieve complete 'openness'. However, since IGNOU is a dynamic organisation, we must continue to think on this issue and consider how to make the university more flexible/open. This brief note is the outcome of such reflective thinking.

Our three-phase evaluation system operates as follows: first, through self-check exercises in the study materials, which the learners do to gauge their progress in the course; second, through computer-marked and tutor-marked assignments, which the learners do at home and submit to the university for assessment. The assignments are given 25–30% weight in the learner's overall score and are compulsory; third, a term-end examination is held in December and June, which normally takes the shape of a three-hour descriptive test. Some programmes have no examination in June, making them less flexible. Thus, by and large, there is no flexibility in our evaluation system, except for the self-assessment questions, which are very often called 'set aside questions'. So how can flexibility be achieved?

It is said that the purpose of evaluation is 'to improve' and not 'to prove'. But in practice, evaluation is the process of assigning a value to an individual regarding their academic achievement, based on a set of questions. When we are evaluating learners, it is proper to let them know the evaluation criteria and allow them to decide how they want to be evaluated. This is what I mean by flexibility/openness in an evaluation system. Many learners would like to do a course but do not wish to be evaluated. They don't want a degree/diploma. They just want to upgrade their skills and knowledge. Can't we just give them a 'course completion' certificate without evaluation or grading?[199] Such students are numerous in technical and professional fields, such as management, engineering, computer science, etc.

The assignments are in fact a stumbling block for many learners, who would like to complete a course but are unable because they do not submit assignments. Ideally, assignments help students to learn better. But given there are learners who feel uncomfortable writing assignments, is it not possible to give 100% weight to the term-end examination for these individuals?

Now, let me come to the term-end examination itself. Normally, in one three-hour sitting, an adult learner is expected to write about 3,600 words, i.e., at a speed of 20 wpm. For an adult learner, who might have resumed studies after a gap of 10–15 years, this may be a difficult task. Also, more analytical learners may have a slower writing speed than rote learners. Can we have a system of objective-type questions in place of subjective/descriptive ones? The purpose of essay-type questions is to test for critical reasoning, analysis, synthesis, and clarity of expression in relation to a given question. But this could be done through assignments, not just through a descriptive term-end examination. The National Informatics Centre has developed a Computer Aided Paperless Examination System (CAPES) for objective-type tests, which can help to prevent cheating. This system also has the potential to make on-demand examination possible, with instant grading.[200]

Thus, learners in the open university system can be given an array of options for how they would like to be evaluated:

- No evaluation at all, leading only to course completion. In this case, the learner receives no credits, so the course cannot be used toward earning a degree/diploma.

- No assignments, with 100% weight given to the term-end examination.
- Assignments as well as a term-end examination, contributing 25–30% and 75–70%, respectively, toward the final grade (i.e., the current practice at IGNOU).
- Tutor-marked assignments only and a term-end examination through a system like CAPES. In this case, the learner could take the term-end examination any time during the year, provided they had submitted the assignments. The assignments and term-end examination would contribute 25–30% and 75–70%, respectively, toward the final grade.

It would be difficult to administer such an evaluation system, due to the large number of students at IGNOU. However, it would not be impossible. Learners would be given a choice at the time of admission, from which we would know the number of students selecting the various options. The term-end examination questions and assignment questions for different patterns of evaluation would need to be carefully designed in accordance with the nature of the test and the performance expected from the learners. It could be a serious challenge for educationists to implement such a flexible approach to evaluation. However, if implemented, this system would be a step towards meeting individual needs in distance education, which is basically a generic system that caters to the needs of the masses.

Source: Mishra, S. (1997). Evaluation by choice. *In House Magazine, 2*(7), 9–10.

39

What Ails the Student Support Service?[201]

Without going into the necessity, usefulness, and importance of a strong student support system, let me pose a question that we are all concerned about: How good is our student support service? Certainly, the answers will vary from individual to individual, and there will not be unanimous agreement. If I were asked, I probably would say it's fair (with respect to the volume of operations and its reach all over the country) but far from satisfactory, as far as expectations go for a mega-university like ours. Here, I would like to describe what is probably wrong with our approach to student support, and how we can bring visible qualitative changes, based on my experiences at a Regional Centre.

The essential purpose of a student support service in an open university is to make learners comfortable and help them successfully complete the courses they undertake. Therefore, the learner is central to any student support system. The learner at IGNOU has three possible interfaces with the university: a Study Centre (SC), a Regional Centre (RC), and Headquarters (HQ). As in the case of computer systems (where user-friendliness is determined by the ease of the screen interfaces), the quality of a student support service depends on learners' ease of interaction with the above interfaces. In a three-tier system like IGNOU's, the nearest possible interface for a learner is the SC, which undertakes the bulk of activities related to learners (except admission, counselling, and assignment evaluation). Because of the proximity of the SCs and RCs to learners' residences, it is natural that they would first like to contact them to solve their problems. But in most cases, the issues are beyond the scope, power, and activities of the people at

the SCs and RCs. Some of the most common types of learner queries (problems) are as follows:

> 'It is February; when am I going to receive my study materials?'
>
> 'In spite of having written two letters to HQ, I have not yet received my study materials. Please do something.'
>
> 'I need fresh assignment questions for this year; please give a copy to me.'
>
> 'My assignment grade is not reflected on the grade card. I have written to HQ, but in vain. Can you help?'
>
> 'When will the results of the June TEE be published?'
>
> 'I have not yet received my result for the December TEE, though many students have received theirs. Can I see my result?'
>
> 'I have asked for a change of address/course/study centre, but to date, nothing has happened. Please do something immediately.'

In most cases, the SC and RC interfaces fail to answer a query satisfactorily, because the right questions are asked at the wrong places (which have no information whatsoever). What does this imply? The answer is a lack of communication and coordination. Very often, the postal system is blamed. But with enrolment numbers growing, a five-percent error rate translates into a huge number of problems, embarrassing for all of us. We can't sweep these problems under the carpet at the cost of our esteemed learners. The number of letters received from students at HQ, RCs, and SCs is one indicator of the state of student support services. It would be a worthwhile undertaking to maintain a record of the number of letters received daily and to classify the nature of the problems, so we can develop strategies and long-term solutions. As far as my experience goes, the largest portion of the letters are for non-receipt of study materials, followed by problems with grade cards, and then various changes like SC, RC, address, course, etc. Is it too late to improve the situation? Certainly not. Ten years is too small a time for any university, but we do need to change our policies and strategies fast. I present below a few suggestions for wider consideration.

- Computerisation and networking (via local area networks and wide-area networks) are the solution to avoid communication problems. Efforts are already being made in this regard, and hopefully such approaches will be implemented soon. However, what is needed to start with is a centralised database of student records and details, like admission data, fees paid, examinations taken, scores, despatch of study materials, etc., which can be accessed from any of the RCs. Once such a system is available, we can answer all learners' queries instantaneously, thereby increasing learner satisfaction and motivation.
- Apart from computerisation, what is basically needed is a Learner Support Initiative (LSI). We have to ensure that systemic bottlenecks are reduced to nil, that we reach learners frequently through personal letters, and of course, that all their personal queries are attended to individually and replied to promptly. The philosophical basis of an LSI is learner centredness in our day-to-day activities. Taking its cue from the 'service quality' paradigm, an LSI would advocate the following:
- making responsible officers and academics accessible to learners for redressal of their problems, personally as well as through toll-free telephone, email, etc.
- removing communication barriers between the various divisions of the university as well as between learners and the university
- having competent and informed individuals with guidance and counselling skills running the various interfaces
- being polite while talking to learners, with a 'May I help you' attitude.
- using a single-window approach to learners' problem rather than delegating to various places
- becoming proactive rather than reactive by maintaining individual student files (case histories) to help diagnose critical problems
- Open more study centres in places with high enrolment. For effective student support services delivery, no study centre should have more than 1,500 students. This is essential because it is not possible to provide good service to 3,000 students with a part-time staff strength approved for 1,250 students.

The large numbers of 'non-starters', 'dropouts', and 'failures' in distance education systems are primarily due to poor student support services.

Therefore, a systematic LSI strategy would strengthen the student support services at IGNOU and ultimately increase the successful course completion rate. Finally, I humbly submit that this piece of writing is not meant to hurt anyone, and issues identified here are only indicative of the nature of problems. I offer them for readers' introspection and reflection.

Source: Mishra, S. (1996). What ails student support services? *In House Magazine, 1*(5), 13–14.

40

A New Model of Regional Centre[202]

This write-up discusses the role of regional centres (RCs) in fulfilling the objectives of Indira Gandhi National Open University (IGNOU). The RCs have both academic and administrative duties and responsibilities to take education to the doorsteps of those who need it. It would be a grave mistake to consider RCs as only administrative units. These are, in a way, mini-universities, and as such should represent the ethos and spirit of the central headquarters.

To me, an ideal RC has the following activities:

- publicising and disseminating information about the university and the system
- admitting learners and maintaining learner profiles
- providing support facilities to learners through the study centres
- conducting examinations
- providing library facilities for distance learners
- monitoring the overall academic and administrative activities of the region
- conducting research related to the overall functioning of the system in the region
- providing feedback to headquarters on various activities
- offering staff development activities in the region

With this background, let me come to the issue of academic activities and how the RCs can be given an academic orientation. I am proposing below a new model for RCs.

- The academic positions in the RCs should be professor(s), reader(s), and lecturer(s). The most senior academic should be designated as the Regional Centre Head or Regional Director, and a principle of headship rotation should be strictly implemented. RCs should be considered equivalent to Schools of Studies at the headquarters.
- There should be at least one academic staff from each School of Study in each RC, who will act as the contact person for the courses and programmes of that school. Their main role should be to monitor the school's programmes/courses; conduct research in related areas as well as in their own discipline; take counselling sessions; conduct staff development activities related to the school; and be the local resource persons for coordinating teleconferencing sessions in their own discipline.
- The academic staff in each RC should form the core decision-making body to advise the Regional Director (most senior academic) on the RC's various activities in the region. For this, there should be something like a Regional Centre Council (RCC), different from the already proposed Regional Council, to uphold democratic traditions in academic management.
- Once the academic staff at RCs are considered part of their respective schools, there will be better communication, and this will facilitate their greater involvement in academic activities at the headquarters. For example, they could be given the responsibilities of preparing assignments and maintaining certain courses related to their disciplines. During course revisions and new programme launches, they would contribute significantly on the basis of their expertise in the subject concerned and in the relevant the field. In this age of fast communication technologies, those who think such an arrangement would not work need to adjust their attitude and mindset.
- Another area of academic activity at the RCs is the library, which needs to be looked into carefully. There is absolute agreement on the usefulness of a library in educational establishments. But at present, libraries at the RCs are not given any importance at all. The RCs should have at least one person at the level of assistant librarian to manage the library, which should be considered part of the Central Library at the headquarters. Having a responsible and qualified person overseeing the library will serve multiple purposes. With their

knowledge and experience, they can very easily provide information, counselling, and guidance to learners at all stages, because librarians are usually trained in these aspects too. The libraries could also be organised to better facilitate student use and be upgraded into Multimedia Learning Resource Centres. There should also be part-time librarians in the study centres to provide library services. Regional centre libraries should remain closed only on national holidays, so that learners can make maximum use of them, especially during the weekends.

- Administrative activities in the RCs should be taken care of by the Assistant Registrar(s) and the Regional Director. These administrative activities include admission, human resources, accounts, and finance.
- With the implementation of all these, what would then be required is coordination between academic staff and administrative staff, which the Regional Director would provide through leadership, vision, and charisma.

The objective of the RCs should always be to help learners in achieving their goals. Perhaps we should have service orientations for all our activities. We also need to plan our RCs well, so that a professionally motivated team of academics with the active support of administrative staff will always be ready to serve our learners. In this way, our responsiveness will increase tremendously. I sincerely believe and hope that this model, if sincerely implemented, will help us to achieve the objectives of the university.

Source: Mishra, S. (1996). A new model for regional centres. *In House Magazine, 1*(3), 13–14.

41

LESS for More[203]

Overview of LESS

The proposed one-stop educational portal being developed intends to provide a single platform to support student learning at different levels. In view of this, it will have testing services that any student can use after logging in to the system; it will also offer remedial learning support. The system will be able to provide guidance based on the student's earlier performance and the expected level of performance. Thus, it will monitor the progress of registered users. The system will have unique student identification and be linked to students' institutional performance, scholarships, banks, etc. The system is expected to handle most of the students' interactions, with minimal human support through email contact with experts and through discussion boards. Thus, what is envisaged is a national system to support students at large. It is good that IGNOU is a part of this bigger plan, as it has a huge knowledge base in terms of courses and programmes and also has a huge network of teachers who can facilitate this kind of activity with little training and support. The system is not envisaged to replace existing educational systems, so in this discussion paper, I call it a 'Learning Enhancement Support System' (LESS). As the name indicates, the system will enhance and support student learning through its various features.

One of the features of the LESS would be the provision of content-related support to students in various disciplines. For this, we need to develop digital materials that can be used online to enhance student learning. Thus, the materials need to be different in form and design from IGNOU's existing materials.

The Concept of Learning Objects

A learning object (LO) strategy has been under discussion within the university. It has been argued that the process of material development is similar to the LO concept, and with minor adjustments, we can meet the requirements of the technology. Thus, an overview of LO concepts and practices is given here, without becoming too technical.

A 'learning object' is defined as a digital resource that can be used to support learning. LOs enable a range of '-bilities'[204]: accessibility (digital LOs can be accessed and delivered anywhere), interoperability (platform independent), adaptability (usable in different conditions, online as well as offline), reusability (one LO can be used in many situations), affordability (cost and time affordances increase), assessability (pedagogical effectiveness can be assessed), manageability (digital LOs are easier to change, update, replace, track), and retrievability (LOs with built-in metadata can be searched for and located).

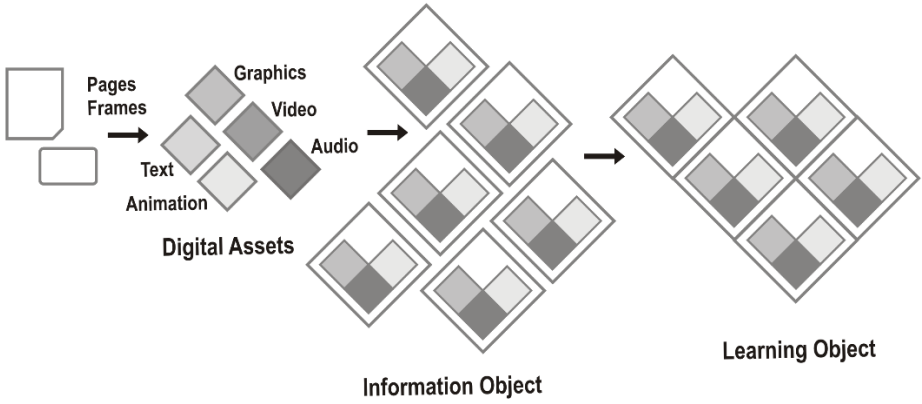


Figure 1. Anatomy of a learning object.

The anatomy of a learning object can be viewed as follows: The basic unit of a LO is a page or a frame in the content of a digital asset (text, audio, video, graphics, picture, animation, simulation, etc). Combining a few digital assets forms an 'information object'. Figure 1 depicts the anatomy of a LO.

Information objects can be content items, assessment items (practice as well as test), and generic items (overview/introduction, learning outcomes, summary, keywords, references).

An ideal LO consists of the following:

- overview
- learning outcomes
- content items
- assessment items (practice)
- assessment items (test; this can be of the pre-test/post-test type as well)
- summary

The LOs can have different types[205] of content objects: concept-based, fact-based, procedure-based, process-based, and principle-based. However, these categories are inadequate and need to be discussed and debated based on the subject domain and use.

While the details of the different information objects in a LO can be identified later, in order to establish the complexity of the task, it is appropriate here to list the indicative contents of a LO:

- Overview: introduction to the LO, importance, prerequisites, content outline, relationships to other contents/LOs.
- Learning outcomes: only one for each content information object.
- Content items: introduction, definition, facts, examples, counter examples, instructor notes, practice items, assessment items.
- Summary: review of content, additional resources, web links, etc.

Along with this information, the LO needs to have appropriate metadata (data about data) to identify and retrieve the content in a digital/online environment. Thus, we need to identify a set of educational metadata elements that are appropriate for our use and are used as standards at other places. Only by following accepted standards can we contribute to collaborative works outside the university and ensure our materials can be reused by other educational institutions on a payment basis.[206]

The metadata elements to cover include reuse information (where the LO can be used), retrieval information (basic search elements such as author, title, keyword, version), and tracking information (status for use).

Many international metadata standards[207] are available, which should be reviewed by a team of experts to recommend a short but usable list of metadata elements.

Thus, learning objects should have the following features:[208]

- They should be objective based.
- They should be context free (this introduces limitations in some disciplines, but these can be managed).
- They should be interactive.
- They should be self-descriptive.
- They should be self-contained.
- They should be format free (meaning they can be delivered in multiple formats: CDs, web, print, audio, video).

The implementation of a LO strategy also requires appropriate scaling up of the available technology infrastructure, particularly hardware, software, and skilled human resources to do animation, multimedia, and web-based Java programming and XML.

The university also needs to deploy an appropriate learning content management system and/or establish specific templates to help teachers develop and repackage their own content and publish these in a LO repository.

These activities are depicted in Figure 2.

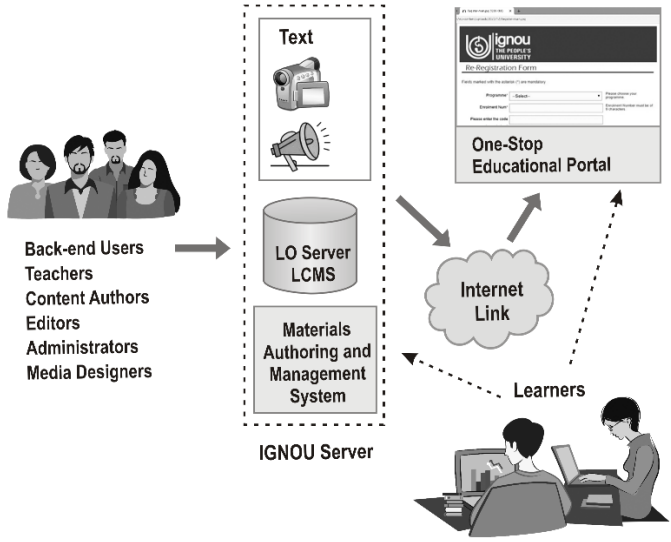


Figure 2. LO preparation and storage.

We can see that the concept of LO is more akin to what we at IGNOU do for course and programme development. But we need to go beyond the 'unit level' of working on content. At the same time, preparing LOs demands new skills. Thus, teachers and academics at the university need appropriate training in this area (both conceptual and technological). It also takes time to redesign and repackage existing learning materials into the LO form.

Question Bank Development

The university may also like to follow a question bank development approach to material development for the LESS. In this case also, as will be depicted below, we need to prepare materials according to the requirements of the online system. Thus, our earlier methods of preparing a question bank will not entirely work. Rather, what we have been doing so far needs some tweaking. Without going into the details, it is important to note here that preparing a table of specifications, an item analysis, a discrimination index, etc. will always be required. The focus here is on what else is required in terms of academic input to prepare questions/items for the LESS.

For online systems, it is obvious that objective-type tests are more suitable. However, these days, short answer questions are used too. The use of discussion forums also allows students to develop their critical thinking, reflection, and ability to communicate and work in teams. Here, we are

concerned with tasks that can be performed without human interaction, so discussion forums are not relevant. From the point of view of assessment, there is a need to develop standardised tests for all disciplines, but what we can develop at present are practice tests (like self-assessment questions).

The types of questions that can be accommodated include short answer (SA), multiple choice (MC), fill in the blanks (FB), column matching (CM), true/false (TF), and sequencing (SE).

For all these types of questions, we need to follow a systematic approach. In each case, there will be an item with certain characteristics; students will do an activity using that item; the system will return feedback; and then the system will record the results for future use. Thus, some data are generic and others are specific to tests. These data and the related metadata (which are data about data) can be organised as test data, interaction data, feedback data, tracking data, and other metadata. Some of these can be generated automatically by a computer system; others need to be prepared in advance by an academic (subject-matter expert). Some of the data that an academic is supposed to prepare while generating items for the LESS are given here for clarification, with examples for short-answer and multiple-choice items.

Generic data about an item (suggested)

1. Item identification no.:
2. Language:
3. Subject code:
4. Topic reference code:
5. Level:
6. Prerequisites:
7. Table of specification code:
8. Cognitive process code:
9. Item type: SA/MC/FB/CM/TF/SE
10. Performance records (about this item):

Specific data (based on item type)

A. Multiple choice

1. Question/item stem
2. Option 1
3. Option 2

4. Option 3
5. Option 4
6. Option 5
7. Score/weight
8. Feedback on option 1 plus support to the content
9. Feedback on option 2 plus support to the content
10. Feedback on option 3 plus support to the content
11. Feedback on option 4 plus support to the content
12. Feedback on option 5 plus support to the content
13. Identification of the correct answer

Appendix 1 shows an example of the academic inputs for a multiple-choice question.

B. Short Answer

1. Question/item
2. Possible answer with support to the content

Conclusion

When generating the questions/items for the LESS, it is important to prepare the options, feedback on each option, and their supporting URL links. In this regard, the development of LOs assumes significant importance. Without going in for massive digitisation and preparation of interactive learning materials, it is not possible to effectively develop any Learning Enhancement Support System. Thus, the preparation of questions/items is linked to material development if we want to leverage the power of technology to support student learning effectively.

If we develop learning materials using a LO framework, our content will be created in small bites that can be digitised easily for supporting student learning and progress. In an ideal LESS, the student will gain enormous advantages, as we can visualise: A student registers on the LESS website, logs in, and chooses between learning (with support, and thus not time-bound) and testing (has a time limit to complete). Under the 'learning' choice, a list of topics appears. As it is a support system, the student has already studied the topic and thus can start doing the practice tests for a particular topic, based on the profile submitted at the time of registration (of course, the student can revise and update their profile anytime). The system indicates

how many questions there are in this test and what is the expected time to complete it in a 'test' mode, and then offers a series of questions to be answered by the student online. The student interacts with the system and provides answers. Each time a question is answered, the student receives feedback with a link for further support. If the student has answered wrongly, then they may use the link to study the content first before proceeding to the next question. All the student's responses are recorded, and at the end, the student is informed about their performance in comparison to the average score of others who have taken the test in both learning and test mode. Later, when the student takes the same test, a comparison of their performance in previous attempts will be shown. Thus, the system will monitor the learner's progress and can thereby support individualised learning.

There is no need to highlight the advantages of such a system to a community of teachers. But it is important that we understand the academic inputs that the technology demands. It is also important to develop the technical infrastructures according to international standards so that resource sharing can be done across organisations. Interactive LOs also need to be prepared for all content areas. This is not going to happen overnight. It requires adopting a systematic strategy and having the relevant technology and skills in place to facilitate the development of LOs. Also, it is necessary to prioritise the subject areas in which to develop LOs and questions for the LESS. Naturally, since resources are not unlimited, it is important for us initially to direct our efforts toward courses that have more students. It is also important to determine the Internet access of the user group when deciding which programmes will initially use this mode of support. Further, it is important to develop a prototype for demonstration to all teachers at the university. In this respect, it is essential that the MHRD's plans and prototype be discussed and circulated. Otherwise, we may go in different directions.

Appendix 1

Example of Academic Data Preparation Requirements for a Multiple-Choice Question

Sl. No.	Description	Explanation/Example
1.	Item identification no.	Can be generated automatically
2.	Language	English/Hindi/Others
3.	Subject Code	ES-318 (can be in keywords as well)
4.	Topic Code	B4-U1 (can be in keywords as well)
5.	Level	Postgraduate
6.	Prerequisite	ES-318/B3 (can be in keywords as well)
7.	Table of specification code	Link to specific question bank, if any
8.	Cognitive process code	R-U-Ap-An-E-C (in this case, R and Ap)
9.	Item type	Multiple-choice
10.	Item	Which type of microphone is sensitive to sound coming from half the environments to which it is pointing?
11.	Option 1	Ribbon
12.	Option 2	Omnidirectional
13.	Option 3	Cardiod
14.	Option 4	Gun
15.	Feedback on option 1	Sorry, you got it wrong. Ribbon microphones are sensitive to physical shock and are suitable for recording in a controlled environment.
16.	Support resources for option 1	URL of the content LO; this can be internal or external.
17.	Feedback on option 2	No. As the name suggests, omnidirectional microphones are sensitive to sound coming from any direction.
18.	Support resources for option 1	URL of the content LO; this can be internal or external.
19.	Feedback on option 3	Correct. Cardioid mics are unidirectional and thus are sensitive to sound coming from half the environment to which they are pointing.
20.	Support resources for option 1	URL of the content LO; this can be internal or external.
21.	Feedback on option 4	No, this is not correct. Gun mics are used for avoiding environmental noise and are sensitive to only a narrow angle of sound.
22.	Support resources for option 1	URL of the content LO; this can be internal or external.
23.	Correct answer	Cardiod
24.	Weight	1

Management and Staff Development

42

Why is it Difficult to Change?

Change is a continuous and inevitable process. If organisations do not take steps to change according to time and contexts, they become part of history or are usually forced to change. People know this, yet they still resist change, reluctant to move out of their comfort zones. People believe, 'We have successfully done *x* for several years using the *y* approach. Why should we change?' We are not able to see/visualise the disruptions in our ways of doing things, coming from so-called fringe/smaller players. This is where innovative organisations take the lead and disrupt established players.

Do universities face similar situations? Why is the education sector slow to change? Educational technology innovations are not new. But their adoption is relatively slow in comparison to the wider social reception of the numerous information technology applications that have touched all aspects of our lives. Open, distance, and online learning practices were around long before the COVID-19 pandemic, but the majority of educational organisations have discovered their use and relevance only now. With several years of research and development on educational technology, the field has robust theories and principles for effective practice. When will these be adopted by higher education institutions?

The current approach to using video conference tools and webinars shows a 'herd mentality' of adopting something that is being talked about without questioning access for the learner community. Open, distance, and online learning has always been learner-centric, with the use of technology tools decided according to the needs of learners; when they do not have access, appropriate provisions are made. Yet we did not see anything of this sort in

the last few months. Such an approach was explained by many scholars as 'emergency remote teaching'.

Many are hopeful that the 'big moment' for distance and online learning has come, and it will now emerge from the shadow of the face-to-face education system. While such thinking is filled with positivity, it looks at education through the lenses of delivery modes, not learning outcomes. Nevertheless, there is a silver lining if universities can change and adopt blended learning to build better, more resilient systems. We need to wait and watch to see whether the changes adopted are temporary, and we return to business as usual after the pandemic. Elsewhere, I have called it a 'band-aid approach', but I would be happy for the future to prove me wrong.

Having worked in the EdTech space for several years, I think change in the educational systems of developing countries occurs from the top down and therefore takes time to become established or fail. Apart from this single important aspect, the introduction of educational innovations is focused only on capacity building, without taking a holistic approach. My approach to change management is driven by context and evidence. With respect to context, it is important to focus on three important aspects: environment (E), behaviour (B), and motivation (M). To ensure educational innovations are adopted by stakeholders, it is important to focus on the internal and external environments of the institution. In particular, it is important to situate the innovation in a policy context of why, how, and what, with clear responsibilities, institutional commitment, and support. If the innovation is not rooted in the needs of the institution, and if the stakeholders do not appreciate the need, the innovation will not be adopted.

It is also important to have an incentive mechanism in place to motivate uptake by stakeholders. Sometimes, the focus is on removing barriers to adoption, but motivation is not addressed. Removing barriers is necessary but not sufficient for the adoption of an innovation. Creating a structural mechanism to provide incentives and motivate stakeholders is key to adoption. Capacity building, which is often considered in the beginning, should always come last. Most of the time, the performance of people in a particular field is low, but not because they lack knowledge or skills. Most of the time, either they are not motivated, or local conditions prevent them from implementing the knowledge gained from training. We often consider capacity building to be the solution for all performance problems, without

making a detailed analysis of the context. As Maslow said, 'I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail.'

Change management should focus on addressing this challenge. Focusing on the EBM through a consultative process of policy development, fortification of the technology infrastructure, and capacity building helps in the adoption of a resilient system, as we have seen though several efforts documented in a recent book on technology-enabled learning.[209] Unless technological innovations are situated in local contexts and supported by evidence-informed and evidence-based decision-making leadership, it will be difficult to change educational institutions.

So it again comes back to the idea of leadership in our educational institutions. Where are the leaders to drive systemic change systematically? Is there collective leadership in educational institutions to adopt change? How can leaders prepare institution-wide leadership for change? Are we asking the right questions?

Source: Mishra, S. (31 October 2020). *Why is it difficult to change?* LinkedIn. https://www.linkedin.com/pulse/why-difficult-change-sanjaya-mishra/

43

Strategic Planning with Foresight during COVID-19

I have been thinking about the impact of COVID-19 on our work, especially in universities, for future planning. While universities have their own specific contexts, the overall scenario is the same for most — volatile, uncertain, complex, and ambiguous. The world has come to a 'pause', but still leaders must run their organisations, and find solutions and resources to keep the business of teaching and learning going. The situation is no longer 'business as usual', but running a university — or any organisation, for that matter — is never an easy task.

For many universities, travel restrictions and physical distancing requirements have forced them to go online. Many visualise that fewer students will take up online learning, as the international mobility of students is related to job placements and immigration opportunities after completion of their studies. This will result in reduced revenue, so leaders are taking steps to rationalise expenditures and staff positions. Such decisions are affecting numerous sessional and contractual staff. In many other institutions, university leaders are not able to decide how to proceed and are looking towards government and regulatory agencies for direction. In particular, leaders are facing challenging situations where universities do not have the resources to adopt online learning, and their physical capacity cannot accommodate the large number of learners with physical distancing limitations. Some of these leaders are thinking that the situation will improve in January 2021, if not in the fall of 2020. In such a situation, when there is uncertainty about funding/revenue, the spread of COVID-19 is constantly in flux, and teaching and learning environments are complicated by a range

of practical and skills courses and the challenge of deciding between face-to-face, online, and blended learning, how can leaders plan for the future?

Strategic planning is a systematic process used by business leaders to plan, set targets, and create environments to achieve those targets. In normal circumstances in universities, it is a straightforward process to prepare a plan for the next three to five years with actionable and measurable targets. You probably start with a SWOT analysis of your existing situation, identify new or revised goals, collect insights from students and alumni surveys, and consult faculty and staff internally to develop a strategy with mission, vision, values, strategic objectives, key performance indicators, planned actions/interventions, and budget. The situation is for the most part predictable based on previous experiences. Now, strategic planning is not a simple process. After months of arduous labour, you end up with a strategic plan that still needs to be implemented, monitored, and then evaluated to understand its impact and whether goals were achieved. So you may also add assumptions to the strategy, outlining the conditions that would lead to the expected results. In the current situation, we are not sure of anything that is going to happen in the next six months. How can we plan for the next three to five years? Here, we can use strategic foresight for planning.

Strategic foresight is not about forecasting the future. It is more about how we can best understand the future and take steps to mitigate the challenges. Strategic foresight considers a range of possibilities and probable futures to develop several scenarios. The process explores drivers of change and imagines a set of plausible futures to create models that can be used for planning. Most of the time, organisations fail to develop these models, due to what is called 'experiential expertise', which is based on the practice of 'we have done this several times in the past in this way, and there is no need to adopt new ways of thinking.' The experience trap limits organisational thinking at times of uncertainty.

Adopting a strategic foresight approach to planning is an open, critical but non-judgemental process of collaborative planning. At the end of it, you have a plan that is more realistic and achievable. This is because you have considered all the plausible alternatives and taken decisions and actions relevant to make the plan a success. While the leadership team plays a significant role in the process, it is important to involve key actors as well to develop scenarios and identify drivers as well as assumptions about the

plausible futures being considered. At a time like the present one, envisioning possible futures requires multiple thinking heads. Leaders need to listen dispassionately and provide space for creating fictional scenarios. At this stage, strategies evolve for each of the scenarios, and a good leader is able to identify what strategies could be implemented 'now' without waiting for the future. Interestingly, it is this implementation of a process of strategic foresight that is most significant if you want to make your strategic plan realistic. How such an approach is ingrained in your strategic planning process is as important as what you do as leaders to safeguard the future of your organisation.

Standing up to defeat the tyranny of the present with imagination and openness will help tide us over the challenge.

Source: Mishra, S. (1 August 2020). *Strategic planning with foresight during COVID19*. LinkedIn. https://www.linkedin.com/pulse/strategic-planning-foresight-during-covid19-sanjaya-mishra/

44

Learning in a Pandemic and Post-COVID-19 World

The coronavirus pandemic has highlighted the fault lines in education systems around the world. It has shown us how heavily we rely on face-to-face education at different levels and has revealed the false notion that face-to-face education is necessarily better quality than online learning. For policy makers, educational administrators, and educationists around the world, this is a time to reflect on the existing educational ecosystem. What kinds of education systems do we need if we want to achieve Sustainable Development Goal 4? What kinds of preparedness would have helped us get through the current crisis effortlessly? Or in other words, what can we do now to mitigate the current crisis and be prepared for future similar emergencies?

Human civilisations have responded to crises in education before, during natural calamities and in geographical areas suffering the impact of conflicts. But the scale of the current crisis is so great that over 80% of students are impacted by lockdowns to restrict the spread of the virus. Dealing with a crisis of such a magnitude requires rapid response and deep strategic thinking. Rapid response is needed to keep people safe and healthy, and deep thinking is required to deploy appropriate systems and practices that will entail minimum damage and influence the future in a positive way. What we do not need at this time is a quick-fix or band-aid approach to learning. There is a huge call for distance and online learning to be adopted by teachers and educational institutions. While these are effective measures and have proved very successful (contrary to naysayers), they are not easy to set up overnight. Distance learning requires huge preparatory planning to deliver effectively.

The technology and devices to access online learning are not accessible to everyone equally, and therefore online learning may add further challenges for some learners. There is a need to rethink equity issues in times of crisis. The most vulnerable need a social safety net to access education easily. How can we create systems that will address issues of equitable access to quality education for all at a time of crisis? There is no single answer, and there is no one-size-fits-all approach that can be recommended.

It is time for national governments to rethink strategies that will work for now and in the foreseeable future. The deep strategic thinking lens requires us to focus on some key issues that require collective responses to address the current crisis and build a new world order for education in the post-COVID world.

1. **Focus on learning, irrespective of modality:** Rethink the education system and focus on learning. The current year-based education system with examinations does not promote learning. Learning focus is about learners achieving expectations at a specific grade level or in an area or topic. We should not be worried about the time someone takes to learn and achieve the specific learning outcomes. So a learning-focused policy is not just about being teacher centred or learner centred; it is about being learning centred, which is basically learner centred+. In such a situation, the modality of learning does not become a barrier to achievement of the outcomes. Assessment agencies can certify learning outcomes anytime using a variety of means, including accreditation of prior learning. In most disciplines, attending a brick-and-mortar institution need not be a necessary condition in a learning society of the future. There will be a varying degree of need to attend school during a specific day and time, thus blending the learning environment with different modalities.

2. **Focus on strengthening ICT infrastructure and Internet:** We know the significance of ICT in our life. During the current crisis especially, everyone is calling for the use of synchronous learning tools! This necessitates questioning our readiness to ensure access to ICT for teaching and learning. Governments must focus on strengthening the ICT infrastructure at educational institutions. Providing access to personal devices and making access to the Internet for educational purposes free will go a long way toward fostering a learning society. Working with

Internet service providers and using the provisions for universal service obligations, governments can identify specific domains for zero rating in learning contexts. Such measures will address the issue of equity among the learners.

3. **Focus on investing in learning resources rather than brick-and-mortar institutions:** Brick-and-mortar institutions have played their role for a long time. It is time for a rethink. Creating high-quality learning resources that can be accessed by anyone for free will help reduce the focus on building more brick-and-mortar institutions. This is not to say that we do not require them; they will serve different purposes and will address the needs of more learners than what they do currently. Thinking of reusable content as infrastructure is the new way to go forward.

4. **Focus on developing lifelong learning skills:** A crisis like this requires the ability to not only focus on how to keep learning and progressing, but also help many others learn new skills. Everyone is a teacher at home for our kids. Why can't we help others learn? To help others learn in a time of crisis, we need the skills of lifelong learning, including media and information literacy, self-direction, and self-determination. Many of these are not taught in our current education system, which is archaic and not designed for 21st-century learning needs. Developing an ecosystem for lifelong learning will go a long way toward address future crises, including the need for training and retraining due to poor economic growth and increasing unemployment.

5. **Focus on collaboration based on transparency:** Historically, human beings are competitive in nature. They strive to become first and best, and they aspire to high quality. This is what we promote through various games and sports, from schools to the Olympic games. This is also a great motivator for economic growth and development. Success parameters, including quality rankings, are used for economic gain, and competition is the norm. Competition also leads to secrecy and a focus on intellectual property rights to assert superiority. We have been creating a world of secrecy around us though competition. The current crisis has taught us the importance of collaboration and transparency. The education system needs to focus more on collaboration within each country and beyond borders. Working in collaboration can improve the research and development that are so crucial in higher education. A collaborative

approach to education also considers the role of parents as teachers and prepares them to take more responsibility for learning in schools.

The above are some key issues to ponder about learning in the post-COVID world. There could be many more issues that will have to be discussed locally in every country and institution. However, till the current situation improves, we need to keep learning. There are many ways to do that, but any decision we make today will have implications for the future. So consider:

- Equitable learning opportunities while recommending online learning — can we deliver the same learning in other ways?
- Learning as process and not an end — is the mode of learning important?
- Sharing the learning resources that you create yourself or create using public funds — do you want your work to reach more people around the world, particularly those who need it?
- Teaching lifelong learning skills as part of the curriculum — how can we build learners' resilience to the vagaries of the economic slowdown?
- Collaboration to achieve greater impact — what kinds of approaches are needed to foster collaboration?

Let's work towards a more resilient and sustainable learning environment for our future.

Source: Mishra, S. (1 April 2020). *Learning during pandemic and post-COVID19 world.* LinkedIn. https://www.linkedin.com/pulse/learning-during-pandemic-post-covid19-world-sanjaya-mishra/

45

Training 3.0[210]

These days, it has become fashionable to write 2.0 after everything in life, so I decided to write something beyond! But is that so simple? Interestingly, while analysing the training technologies of the past and the present, I noticed that training has traversed three stages, which I outline as follows:

Training 1.0 — Classroom-based training: Here, essentially the trainer and the trainee meet face to face in the training room or the workplace. The trainer uses a variety of tools and technologies to deliver training, including overhead transparencies, slides, PowerPoint, multimedia CDs, and computer-based learning in instructor-led situations. Training is costly and labour intensive, and it is usually difficult to assess its effectiveness.

Training 2.0 — Online training: This is second-generation training, where training is delivered in a networked situation using learning management systems (LMSs), knowledge management systems (KMSs), and employee performance support systems (EPSSs). Essentially, the systems use the Internet or an intranet to deliver text, audio, video, multimedia, and animation, supported by group and individual communication to facilitate learning. This kind of training is normally referred to as e-learning in the training industry and by human resource development professionals. It has brought enormous benefits to the training and development of professionals in terms of cutting costs and saving time, leading to increased returns on investments. However, training effectiveness remains in question, and institutions have started looking at more informal approaches to conduct training for their employees.

Training 3.0 — Informal learning online: Informal learning is sustainable, and it interferes less in the day-to-day work of employees. So Training 3.0 is all about creating an informal learning environment that is motivating as well as informative. It tries to utilise the employee's individual interests and abilities to network amongst peer groups to learn and share. Human beings are social animals who are interested in what others are doing, and they like to learn from talking with each other. Hence, Training 3.0 is also about the use of social media in training.

Social Media Technologies

Various types of social media technologies are available for use in training, including blogs, wikis, and social networks. We will discuss these in the context of training and how these emerging trends in training technologies are influencing the world of training and development professionals.

Blogs

A blog is a website maintained by an individual or a team to share personal reflections and activities. According to Technorati, a blog search engine, there are today over 133 million blogs in all knowledge domains, and about 900,000 blog postings are made every 24 hours. Of these, about 12% are corporate blogs discussing issues related to a company. The blog is a personal space where other users can provide comments and develop a network. Seventy-three percent of bloggers use blogs to share their expertise and experiences. Training and development professionals can use the many free blog services available to create their own spaces, filter related blogs on the Web, and make these available to employees. The use of Really Simple Syndication (RSS) technology in blogs makes it easy for users to be informed about new postings. This becomes a rich learning source and really does not require any special intervention from training and development professional, except with respect to identifying and informing employees about relevant sources of blogs or providing them with orientation on how to find relevant blogs. Some typical blog creation applications are eBlogger, Movable Type, WordPress, LiveJournal, and Apache Roller, among many others.

Wikis

Wiki is a Hawaiian word meaning quick. It is a quick way to create webpages without requiring a knowledge of HTML. But most importantly, it is a collaborative platform to create and share knowledge. The most widely known wiki is Wikipedia, which runs on the Media Wiki software. Besides

this, there are many other wiki platforms, such as PBwiki, Wikispaces, etc. A wiki platform provides an easy-to-use method to edit webpages and link to multimedia resources. Having used the www.wikieducator.org platform supported by the Commonwealth of Learning for providing wiki skills training and development on self-learning materials, this author can personally speak to the utility of this simple technology to create content and make it available to employees for learning at very low cost (almost zero!). The wiki makes it possible to develop a collaborative space for learners/employees to share and engage in discussion. It keeps a record of all activities on the wiki site and thus can be used to record both explicit and tacit knowledge. Installing a company-wide wiki space is easy if some server-side technical help is available, or it can also be done using one of the abundant free sites available.

Social Networks

We all recognise the potentials of social networks in our day-to-day life. It is now possible using technology platforms to engage in all kinds of socialisation activities, from sharing photos and files to providing expert advice and guidance online. The most popular social networking sites are Facebook, MySpace, LinkedIn, and Ning. Interestingly, social networking sites provide an integrated space for blogs, wikis, message boards, and file-sharing facilities, making them really cool places to be in for both socialisation and learning. Using social network technologies, individual employees can create their own networks of professional 'communities of practice'. Organisations can create their own social networks involving employees, customers, and all stakeholders through open-source technologies like Elgg.

What's the Big Idea?

It's 'informal learning'! Training and development (T&D) professionals need to be the change agents and change themselves first to become 'learning professionals'. As Jay Cross states in his blog, learning professionals of the future needs to focus on the following three core processes:

- facilitating collaborative work and learning in their organisations
- sensing patterns to develop new work practices and solutions
- working with management to support and fund new ideas and processes

All these can be done through the adoption of a social media technology-based learning space. Today's organisations need employees who are creative and can think and reflect about their work. Such a workforce can only be developed by transformation at the top level through an understanding of the 'value of the crowd at the bottom'. So the biggest challenge before the T&D professional is creating informal learning spaces for employees in organisations, though technology is not a problem at all. The culture of the organisation needs to change from 'tour and travel' training to 'table-based thinking', using social media technologies. The use of social media technologies will enable T&D professionals to develop a learning space that is open, participatory, and development oriented rather than closed, top-down, and training oriented (just training for the sake of training). In such a scenario, the training contents become resources available online but not instructor led. The learner/trainee/employee takes the initiative to learn and improve, finds experts who can support their learning, develops a learning and development path, and implements it through reading, reflecting, doing, and reviewing. While all these are also done online, the tacit knowledge generated in the process by the individual is also recorded in the online system, making it available to others. The learning path used by one employee for a problem becomes a guide for future employees. In the learning process, the employee may use the blogs of several peers and experts inside and outside the organisation; chat and videoconference with them; post comments to their blogs and receive advice; create their own wiki spaces using learning resources already available via Creative Commons licences; and develop networks of their own in the organisation as well as in the outside world.

Thus, Training 3.0 believes in the following:

- the training we intend to provide to a group already exists in some or all of the group members
- people learn better from each other in an informal setting than from a master trainer in a formal setting
- learning is more sustainable when it is situated, contextual, just in time, and workplace based rather than at a laboratory/training room/tourist resort
- people learn best when they have a genuine need to learn and are motivated and interested to learn

- staff learn best when they take responsibility for their own learning, without being constantly monitored by a supervisor

So a T&D professional who uses Training 3.0 strategies believes in the core principles above and creates an online social network place for stakeholders. What does this look like? Training does not happen in scheduled nine-to-five sessions with coffee/tea and lunch breaks. The T&D professional is now re-designated the chief learning officer (CLO) of the organisation, who with the help of the information technology division sets up a social network site for the organisation that becomes the learning gateway for all its employees. It also enables the customers and stakeholders of the organisation to become registered users of the social network, thereby making it an open system with access control for internal members. Individual employees can create their own blogs and profiles, and set their own goals and learning paths. The T&D professionals create groups that employees join and contribute to according to their interests. Users create their own learning resources and work manuals using wiki spaces. The social networking site becomes a space for interaction with the organisation's stakeholders, leading to quick response times. Individual employees use the system to search for and find resources outside the organisation and create bookmarks and links on the organisational social network, thereby adding more content to the network and making the system content rich. In such a learning space, even if an employee joins another organisation, the content they have generated remains there for others to use, while the employee may move on and still continue to update the social networking site of the earlier organisation as a professional stakeholder from outside. The social networking site can be used for employee performance and review, as we can relate the performance of the individual to their training efforts. This will also solve the problem of training effectiveness, as we can quantify the time and efforts made vis-à-vis the individual and organisational gains. The system can also take care of Training 2.0 scenarios to help T&D professionals organise occasional online training sessions/courses as required by new initiatives and developments in the organisational supra-system.

Conclusions

Training technologies are developing fast. New training technologies are now available almost every day. However, in most organisations, T&D professionals need to adapt to changing scenarios, and the top management need to facilitate change. It is through the appropriate deployment of

technology that we can leverage its power. A technology used inappropriately is worthless. Thus, it is important to think of the strategy first, then the technology. Having a philosophical stance on how top management views the importance of learning and the need to empower employees is of paramount importance to T&D professionals. With the new tools and technologies available to us in Training 3.0, it is possible to take organisations toward their stated objectives. T&D professionals will lead in new-age learning organisations if they use social media technologies!

Source: Mishra, S. (28 July 2009). *Training 3.0*.
http://teachknowlogist.blogspot.com/2009/07/training-30.html

NOTES

[1] This blog was written during the COVID-19 pandemic, when the use of terminologies blurred boundaries due to different levels of understanding by all those who were forced to adopt new ways of teaching due to lockdown.
[2] See Jim Taylor's 'Fifth Generation Distance Education' at https://eprints.usq.edu.au/136/1/Taylor.pdf.
[3] See *Designing Online Learning* at http://hdl.handle.net/11599/47.
[4] See Terry Anderson and John Dron, 'Three Generations of Distance Education Pedagogy' at https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning .
[5] See the community of inquiry model at https://coi.athabascau.ca/coi-model/.
[6] See 'The Difference Between Emergency Remote Teaching and Online Learning' at https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning
[7] SDG4 details can be found at https://www.un.org/sustainabledevelopment/education/.
[8] See *Guide to Blended Learning* at http://hdl.handle.net/11599/3095.
[9] See 'Understanding Open Education' at https://www.col.org/news/understanding-open-education/.
[10] This was written in 2010, when the National Centre for Innovations in Distance Education at Indira Gandhi National Open University asked for a short writeup. It has been updated to provide citations in some places.
[11] See *The Myths of Innovation*, by Scott Berkun (O'Reilly Media, 2010).
[12] For example, Eric Yuan started Zoom, as Cisco could not take forward his ideas for a cloud-based product. See https://www.forbes.com/sites/kmehta/2019/07/11/why-companies-lose-their-best-innovators/?sh=7c5ed65c32e1.
[13] This is based on my presentation at a panel discussion on 'The Role of Teachers in Distance Education: Challenges and Prospects', delivered 26 August 2009 at the Social Science Discussion Forum (SSDF) of the School of Social Science, IGNOU. The context of the panel was the initiation of a face-to-face programme at IGNOU. The Distance Education Council was dissolved

in 2013, and its quality assurance role has been shifted to the University Grants Commission.

[14] The Distance Education Council was dissolved in 2013.

[15] This was written at the end of the first round of a Delphi study to develop a curriculum at the master's degree level on distance education at IGNOU. The curriculum developed in the process was later adopted by the Staff Training and Research Institute of Distance Education at IGNOU in 2009.

[16] This piece was the text of my presentation at the two-day National Workshop-cum-Roundtable on Quality Assurance in Distance Education, organised by IGNOU and held on 16–17 April 2007. I served as a discussant in a session entitled 'Towards Quality Assurance Mechanism' and shared my thoughts. This was written prior to the dissolution of the Distance Education Council in 2013.

[17] The Australian Universities Quality Agency was dissolved in 2011, and its functions were transferred to the Tertiary Education Quality and Standards Agency.

[18] The NAAC assessment has now been made mandatory for universities and colleges in India.

[19] The grading and scoring mechanism also led to different categories of institutions, thereby creating perceptions of disparities in the degrees awarded.

[20] At present, India has robust national regulation of quality assurance in distance and online learning.

[21] This was written as a reasoned response to a decision at IGNOU to avoid the use of a second colour in self-learning materials (except for graphics and pictures).

[22] See Waller, R., Lefrere, P., & Macdonald-Ross, M. (1982). Do you need that second color? *IEEE Transactions on Professional Communication, PC-25*(2), 80–85.

[23] See Wikipedia at https://en.wikipedia.org/wiki/Color_blindness.

[24] This was written at the height of the COVID-19 pandemic, as a clarion call for change in the Indian higher education system.

[25] See https://www.ugc.ac.in/.

[26] See https://www.ugc.ac.in/UGC_Regulations.aspx.

[27] The report was available online in April 2020 at the time of the original writing, but it is not currently available online. However, a guideline based on the report was issued and is available at https://www.ugc.ac.in/pdfnews/4276446_UGC-Guidelines-on-Examinations-and-Academic-Calendar.pdf.

[28] Additional guidelines were issued in July 2021. See https://www.ugc.ac.in/pdfnews/3342282_UGC-Guidelines-on-Examinations-and-Academic-Calendar---July-2021.pdf.
[29] The National Policy on Education was released in 2020. See https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf.
[30] See http://cec.nic.in/cec/.
[31] See https://epgp.inflibnet.ac.in/.
[32] See https://swayam.gov.in/.
[33] See https://nptel.ac.in/.
[34] These suggestions were sent to the University Grants Commission, India in response to UGC Notification No. D.O.1-9/2020/ (CPP-II) 20 May 2021, which requested comments on a blended learning concept paper developed during the COVID-19 pandemic.
[35] See https://epgp.inflibnet.ac.in/.
[36] See https://nptel.ac.in/.
[37] See http://cec.nic.in/cec/curriculum_class.
[38] This was written based on a presentation at the Refresher Programme in Distance Education, organised by STRIDE in March–April 2010.
[39] The Post-Graduate Diploma in E-Learning programme at Indira Gandhi National Open University was designed by me, and after my departure from IGNOU, the programme was maintained by colleagues at the Staff Training and Research Institute of Distance Education. It was offered for four cycles before the university decided to stop online programmes. After the University Grants Commission issued guidelines on online programmes, they were started again in India, and currently there is a better environment for promoting online learning.
[40] This was an idea of the author. There is no such university at present. It was written before the Odisha State Open University was established in 2015. It is based on a presentation proposing a virtual open university of Odisha, delivered at the 13th Annual Conference of the Indian Distance Education Association (IDEA) at Bhubaneswar, Orissa, India from 24 to 26 November 2007.
[41] The Province of Orissa was renamed Odisha in 2011.
[42] Currently, Utkal University receives an A+ grade from the National Assessment and Accreditation Council .
[43] OSOU was established in 2015 at Sambalpur, Odisha by the Government of Odisha through an Act of the Legislative Assembly.
[44] This was written to support and promote Open Education Week 2020.
[45] See https://www.tandfonline.com/doi/full/10.1080/01587919.2017.1369350.
[46] Watch the video at https://www.youtube.com/watch?v=94F6e-Aw6nc.

[47] See https://eric.ed.gov/?q=Wedemeyer%2c+Charles&id=ED099593.
[48] See http://oasis.col.org/handle/11599/3477.
[49] See https://yidanprize.org/yidan-prize-forecast/.
[50] See http://oasis.col.org/handle/11599/3479.
[51] See http://oasis.col.org/handle/11599/2740.
[52] See http://oasis.col.org/handle/11599/2739.
[53] See https://jl4d.org/index.php/ejl4d/article/view/290.
[54] See https://jl4d.org/index.php/ejl4d/article/view/312.
[55] See a discussion on RPL at https://jl4d.org/index.php/ejl4d/article/view/58.
[56] See a full policy brief on using MOOCs at http://hdl.handle.net/11599/825.
[57] Read a publication from 1998 on distance education and learner autonomy at https://files.eric.ed.gov/fulltext/ED436653.pdf.
[58] Zero-cost textbook programmes in the British Columbia, Canada are great examples of reducing the cost of education. See https://bccampus.ca/projects/open-education/zed-cred-z-degrees/.
[59] See an example from the University of British Columbia at https://open.ubc.ca/oer-accessibility-toolkit/.
[60] See https://opencontent.org/definition/.
[61] The international community celebrated 2017 as the Year of Open. See https://www.yearofopen.org/.
[62] See https://www.budapestopenaccessinitiative.org/.
[63] See https://www.capetowndeclaration.org/.
[64] See https://unesdoc.unesco.org/ark:/48223/pf0000246687.
[65] See http://rcoer.col.org/.
[66] See https://www.oercongress.org/.
[67] See the targets and progress at https://sdgs.un.org/goals/goal4.
[68] Find a full analysis of textbook access at https://unesdoc.unesco.org/ark:/48223/pf0000243321.
[69] See https://oeru.org/how-it-works/.
[70] See https://open.umn.edu/oen/.
[71] See https://knowledgeunlatched.org/.
[72] See https://vussc.col.org/.
[73] See https://lumenlearning.com/.
[74] See a new article related to Cengage's work at https://www.highereddive.com/press-release/20170112-cengage-unveils-an-affordable-oer-based-solution-for-higher-education-min/.
[75] See https://openstax.org/subjects.
[76] See https://tophat.com/blog/textbook-solutions-series-c-funding/.

[77] Since the publication of this blog, a number of commercial publishers have started up fee-based open access publication routes. Publishers' practices are changing frequently.
[78] See http://www.openhumanitiespress.org/.
[79] See https://www.bloomsburycollections.com/open-access.
[80] See https://www.openbookpublishers.com/.
[81] Read about Signature Track from Coursera here https://blog.coursera.org/signaturetrack/
[82] This is now published as *Guidelines for Quality Assurance and Accreditation of MOOCs*; see http://hdl.handle.net/11599/2362.
[83] See https://www.aei.org/carpe-diem/the-college-textbook-bubble-and-how-the-open-educational-resources-movement-is-going-up-against-the-textbook-cartel/.
[84] The NROER is no longer available, and I am told that the NROER website was merged with the DIKSHA platform (https://diksha.gov.in/).
[85] See https://open.umich.edu/.
[86] See https://open.bccampus.ca/.
[87] See https://nptel.ac.in/.
[88] See details about NMEICT at https://www.education.gov.in/en/technology-enabled-learning-0.
[89] See https://epgp.inflibnet.ac.in/.
[90] The policy is not available online at present. However, some of the discussions are available here: https://cis-india.org/openness/blog-old/comments-on-open-licensing-policy-guidelines-of-national-mission-on-education-through-information-and-communication-technology.
[91] Since I wrote this, the OER movement in India has travelled a long way. Several institutions in India now have OER policies, and awareness about OER is better than before. However, there is still more to be done in terms of creating an ecosystem for OER.
[92] Read more about the National Knowledge Commission here https://en.wikipedia.org/wiki/National_Knowledge_Commission.
[93] This definition was formulated prior to the World OER Congress in 2012; see the report of the 2002 meeting of UNESCO at https://unesdoc.unesco.org/ark:/48223/pf0000128515.
[94] When this article was written, NPTEL resources were not released under an open licence. After open licensing policy guidelines were adopted by the Project Advisory Board of the National Mission on Education through ICT (NMEICT), NPTEL resources were openly licensed.

[95] At the time of writing, NPTEL materials were not available under an open licence. Much later, in 2014, NPTEL materials adopted the CC BY-NC-SA licence.
[96] At that time, I was actively engaged on the WikiEducator platform to promote OER; see https://wikieducator.org/Main_Page.
[97] The call was to adopt OER, not to relinquish copyright.
[98] This statistic was at the time of writing. In October 2022, *The Guardian* newspaper reported that TikTok has over one billion active users! See https://www.theguardian.com/technology/2022/oct/22/tiktok-history-rise-algorithm-misinformation#:~:text=Today%2C%20TikTok%20boasts%20more%20than,users%2C%20behind%20Facebook%20and%20Instagram.
[99] As of November 2022, this has changed to an average of 95 minutes per day per user. See https://wallaroomedia.com/blog/social-media/tiktok-statistics/.
[100] See https://www.edweek.org/technology/tiktok-powerful-teaching-tool-or-classroom-management-nightmare/2019/11.
[101] Interestingly, on 2 April 2019, a while after I wrote this blog, the TikTok platform was banned in India for security reasons.
[102] See https://www.youtube.com/.
[103] See https://www.teachertube.com/.
[104] This keeps changing regularly upwards. See more information here https://www.oberlo.ca/blog/youtube-statistics.
[105] See https://searchengineland.com/youtube-how-to-searches-up-70-yoy-with-over-100m-hours-of-how-to-videos-watched-in-2015-220773.
[106] See https://www.khanacademy.org/.
[107] See https://www.ted.com/talks.
[108] Information on the page has changed since this blog's publication. See more at https://www.cisco.com/c/en/us/solutions/executive-perspectives/annual-internet-report/index.html#~executive-summaries.
[109] Read the open access article by media expert Jack Koumi at https://www.tandfonline.com/doi/full/10.1080/2331186X.2015.1045218?cookieSet=1.
[110] See https://en.wikipedia.org/wiki/Cognitive_load.
[111] Read the full paper at http://up.csail.mit.edu/other-pubs/las2014-pguo-engagement.pdf.
[112] While this was written in 2018, the trends discussed are reflective of our time.
[113] Read the specific report at https://ou-iet.cdn.prismic.io/ou-iet/c80c19d1-3a86-4bae-96db-e198af6b8784_innovating-pedagogy-2017.pdf; in addition,

read the latest innovating pedagogy report at http://www.open.ac.uk/blogs/innovating/.
[114] Read https://elearningindustry.com/elearning-trends-for-2018-9.
[115] Read https://community.articulate.com/articles/top-5-e-learning-trends-to-watch-in-2018.
[116] Read https://www.irrodl.org/index.php/irrodl/article/view/3012/4214.
[117] See the COL Commons platform at https://colcommons.org/.
[118] The platform is called OAsis; see https://oasis.col.org/home.
[119] See http://rcoer.col.org/.
[120] The full report is available at http://hdl.handle.net/11599/2788.
[121] *The New York Times* called 2012 the year of the MOOC. See https://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html.
[122] See https://www.classcentral.com/report/mooc-stats-2017/; Class Central brings out such reports regularly and publishes them on a section of their website called *The Report*, at https://www.classcentral.com/report/.
[123] See courses at https://www.mooc4dev.org/.
[124] The Centre for Distance Education is now part of the Faculty of Humanities and Social Sciences. COL has been offering several MOOCs in collaboration with Athabasca University.
[125] See more about Udacity Nanodegrees at https://www.udacity.com/nanodegree.
[126] See more about EdX MicroMasters programs at https://www.edx.org/micromasters.
[127] See https://www.col.org/cross-cutting-initiatives/technology-enabled-learning/.
[128] H5P is a type of interactive video; see https://h5p.org/interactive-video.
[129] Moodle is an open-source learning management system; see https://moodle.org/.
[130] More about this is available at https://www.col.org/education/teacher-education/; there is also a course on micro-learning at https://colcommons.org/.
[131] The Commonwealth Digital Education Leadership Training in Action platform provides training on digital education competencies at scale; see https://cdelta.col.org/.
[132] SkillSET was a project of the World Economic Forum at the time of writing. However, not much is known about it at present; see https://www.theskillset.org/.
[133] This was written on the eve of World Radio Day 2014. At that time, I served as the Director of the Commonwealth Educational Media Centre for Asia.

Community radio continues to play a significant role in promoting citizen education and can be harnessed further to support adult literacy programmes.
[134] See http://unesdoc.unesco.org/images/0021/002150/215084e.pdf.
[135] I wrote this as the Director of the Commonwealth Educational Media Centre for Asia to promote and support the use of community radio. CR stations continue to play a significant role in society and can support the achievement of the Sustainable Development Goals, if used strategically.
[136] See details of Supreme Court judgements on radio waves at https://mib.gov.in/document/supreme-court-judgement-airwaves.
[137] See the original TRAI recommendations and latest consultation papers at https://trai.gov.in/broadcasting/radio-broadcaster/community-radio.
[138] The guidelines were revised further in 2017 by the Ministry of Information and Broadcasting, Government of India.
[139] Per current reports available as of July 2022, there are 356 community radio stations in India.
[140] At that time, CEMCA used to support and guide community organisations to apply for the CR licence as a project. This has now been discontinued, though CEMCA continues to support capacity building for community radio stations.
[141] The nine modules of the Certificate Course on Community Radio Technology are available for download here: https://www.cemca.org/resources/certificate-community-radio-technology-ccrt.
[142] CEMCA, in collaboration with the UNESCO Chair on Community Media at the University of Hyderabad, India, developed a Community Radio Continuous Improvement Toolkit that can be accessed at http://hdl.handle.net/11599/764.
[143] See https://unesdoc.unesco.org/ark:/48223/pf0000215084.
[144] CEMCA developed *Web Radio: A Manual for Streaming Audio on the Web*, which can be downloaded at http://hdl.handle.net/11599/560. Given it is a technology solution, many new developments have occurred since its publication, but readers can use the manual to gain conceptual understanding and to adapt its suggestions based on current developments.
[145] This was written during the early days of Web 2.0 in education and training.
[146] Technorati does not appear to be undertaking blogger surveys anymore.
[147] The Edublogger directory is not currently active; see https://edubloggerdir.blogspot.com/.
[148] Many of the blogs have ceased to exist or may have moved to other social media platforms.
[149] See https://www.freetech4teachers.com/.
[150] See https://halfanhour.blogspot.com/.
[151] See https://joedale.typepad.com/integrating_ict_into_the_/.
[152] See http://zaidlearn.blogspot.com/.

[153] Quoted in http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf.
[154] See https://thecommonwealth.org/about/facts. As of February 2023, there are 56 countries in the Commonwealth.
[155] At the time of writing, South Africa's unemployment rate was very high and continues to remain at the top; see https://ilostat.ilo.org/topics/unemployment-and-labour-underutilization/.
[156] See https://www.biznews.com/thought-leaders/2015/07/29/sa-q2-unemployment-eases-to-25-but-63-1-of-youth-remain-jobless.
[157] See https://ficci.in/spdocument/20073/imacs.pdf.
[158] See https://www.manpowergroup.com/wps/wcm/connect/db23c560-08b6-485f-9bf6-f5f38a43c76a/2015_Talent_Shortage_Survey_US-lo_res.pdf.
[159] See http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf.
[160] This was strategic plan 2015–2021; see http://hdl.handle.net/11599/826.
[161] These courses, along with many other ICT skills courses, are now available as open educational resources at http://oasis.col.org/handle/11599/2424.
[162] COL continues to support this approach in its current strategic plan 2021–2027. The courses developed in the previous strategic plan are currently used by many partner institutions and have been downloaded thousands of times.
[163] This write-up was inspired by Tony Bates' ACTIONS Framework.
[164] Thomas Russell's book *The No Significant Difference Phenomenon* was first published in 1999. See the latest database on the topic at https://detaresearch.org/research-support/no-significant-difference/.
[165] The ACTIONS framework was originally proposed in 2005. In recent works, Bates has revised the framework as SECTIONS (Students, Ease of use, Costs, Teaching functions, Interaction, Organisational issues, Networking, and Security and privacy). See Chapter 9 at https://pressbooks.bccampus.ca/teachinginadigitalagev2/.
[166] This was written as a reflection on how to improve interaction, especially in a context where there almost no participation during teleconference sessions.
[167] A study of interactivity in teleconferencing, published by the author in 1999 in the *Indian Journal of Open Learning*, revealed that the quality of teleconference sessions is dependent on how they are designed to facilitate interaction. See Mishra, Sanjaya. (1999). An Empirical Analysis of Interactivity in Teleconference. *Indian Journal of Open Learning, 8*(3), 243–253.
[168] In November 2008, IGNOU started using SMS for student support, but not for improving the teleconference system.
[169] The teleconference sessions are now conducted through the Gyan Darshan and Swayam Prabha DTH channels (https://www.swayamprabha.gov.in/).
[170] At the time the satellite for education was launched, the Chairman of ISRO justified EDUSAT by saying that 'India will require 10,000 new schools each

year and meeting the teaching needs on such a scale will be impossible' by using conventional methods; see https://www.newscientist.com/article/dn6423-india-launches-worlds-first-education-satellite/.

[171] EDUSAT was decommission by ISRO in September 2020 after six years of operation, due to power constraints in the satellite.

[172] Contrary to my optimistic evaluation in the face of apprehension at that time, the audit by the Comptroller and Auditor General of India in 2013 stated that the 'EDUSAT failed to effectively achieve its objectives due to deficiencies in planning for the network connectivity, content generation and failure to have a robust management structure. There were deficiencies in actual implementation of the programme such as delay in establishment of ground network, idling of network connectivity, disparities in the allocation and idling of satellite bandwidth, inadequate content generation and deficiencies in monitoring and evaluation. The replacement strategy for the existing satellite was also deficient resulting in idling of operational networks. Thus, the objectives of implementation of EDUSAT could not be met fully even at the end of its life.' The total expenditure was INR549.09 crore (approximately USD 120 million at 2010 prices); see https://cag.gov.in/uploads/download_audit_report/2013/Union_Compliance_Scientific_Department_Audit_22_2013_chap_3.pdf.

[173] Some of these observations figured in the CAG audit report as well.

[174] Some of these thoughts are seen actively being used in the SWAYAM MOOC platform.

[175] This is yet another platform that never achieved its true potential: https://www.education.gov.in/en/technology-enabled-learning-1.

[176] The Community College Scheme implementation left several questions unanswered, and it was closed in 2012 after reported non-performance of the colleges, followed by court intervention; see http://archive.indianexpress.com/news/ignou-does-away-with-community-college-scheme/1146938/.

[177] While IGNOU started face-to-face programmes in 2009, these were later suspended, and it currently offers distance and online programmes only.

[178] However, the University of South Africa in 1946 pioneered tertiary distance education.

[179] As of now, the number of provincial/state open universities in India has increased to 17.

[180] The distance education system in India contributes about 11% of the gross enrolment ratio in higher education, according to the All India Survey of Higher Education 2019-2020.

[181] This was transformed into a dual-mode university in 2021 and renamed Hong Kong Metropolitan University.
[182] The Distance Education Council as a body of IGNOU was dissolved in 2013, and the powers to regulate distance education were transferred to the University Grants Commission.
[183] This piece was written in 2008, which was indeed a time of chaos and confusion for any distance education practitioner.
[184] The number of distance teaching institutions keeps changing due to a new regulatory system. However, there are currently 17 state open universities, established by provincial legislative assemblies.
[185] There was some news about such an initiative at the time of writing. Later, two private open universities emerged, in Arunachal Pradesh and Nagaland. Both have now converted to face-to-face operation.
[186] This took a different turn of events, and the responsibility for regulating distance education in the country was transferred to the University Grants Commission, based on an administrative order following court orders.
[187] See Chapter 29 on EDUSAT for more about this.
[188] For more on teachers' multiple roles in distance education, see Chapter 5, 'Six Gowns of Distance Educators'.
[189] The idea of a Distance Education Commission was first promoted by the late V.C. Kulandaiswamy in 2000 at the annual conference of the Indian Distance Education Association.
[190] A committee at IGNOU looked into the problem of student assignment handling and asked for suggestions from the staff. This chapter is an edited version of my submission to that committee in 2000. I am not sure at this stage how many of these suggestions have actually been implemented. But I understand that there are now more-robust ICT-based systems in place to facilitate assignment handling.
[191] There are 18 open universities in India as of 2023.
[192] With the increased use of smartphones, learners have access to a world of information in their hands. But public libraries are still places of open learning in many parts of the world.
[193] The argument here is probably not relevant today but should be seen within the context of the time when it was first written. I still borrow books from Burnaby Public Library, in addition to buying books on Amazon.
[194] I am told that receiving study materials continues to be a problem for learners at IGNOU.
[195] The admission system at IGNOU is now completely online.
[196] The system suggested below is the approach taken by Amazon in its print-on-demand service for digital books.

[197] Nowadays, IGNOU course materials are accessible via its digital repository — eGyankosh; see https://egyankosh.ac.in/.
[198] The suggestions in this write-up are still radical, to the best of my knowledge, and it would be worth experimenting with them in open universities.
[199] In a way, today's MOOCs adopt such a practice of allowing anyone to audit a course and receive different types of certificates.
[200] Today, technology has matured to permit online examinations covering both objective as well as descriptive questions.
[201] This was written at a time when the university was witnessing rapid growth and was just about ten years old. Today, IGNOU has a robust system of web-enabled academic support and many other online services to support students.
[202] This was written at a time when teachers were appointed at Regional Centres of IGNOU, and they performed mostly administrative duties as assistant regional directors, classified as an academic job equivalent to teachers. The then vice chancellor had created the concept of a regional council, which never took off. This was the larger context for the suggestions made here, which envision a system influenced by the regional centres of The Open University, UK at that time.
[203] This discussion paper is an edited version of a presentation to IGNOU written in 2006 against the backdrop of a 'one-stop educational portal' initiated by the then Ministry of Human Resource Development; the senior management of IGNOU had convened a committee to advise the ministry on this matter. The main purpose was to explain the complexities of the task, the technical terms, and the concepts, to provide an educational perspective. Later, the idea of a one-stop educational portal was launched as the SAKHAT portal, which differed from the ideas proposed in this concept note. Information about the portal is available at https://www.education.gov.in/en/technology-enabled-learning-1.
[204] McGreal, R. (2004). *Online education using learning objects*. RoutledgeFalmer, pp. 1–2. Notably, the idea of open educational resources had not yet gained traction at that time.
[205] Cisco Systems. (2003). *Reusable learning object authoring guidelines: How to build modules, lessons, and topics*. https://docplayer.net/35120178-Reusable-learning-object-authoring-guidelines-how-to-build-modules-lessons-and-topics.html, p. 18.
[206] At that time too, there was an inherent understanding about the sharing of educational materials at IGNOU, though we were not discussing licensing at that time.

[207] McGreal, R. (2004). *Online education using learning objects*. RoutledgeFalmer, pp. 347–353.
[208] Barritt, C., & Alderman, F. L. (2004). *Creating a reusable learning object strategy*. Wiley, pp. 8–9.
[209] See http://oasis.col.org/handle/11599/3655.
[210] This write-up received a Certificate of Merit from the Indian Society for Training and Development in the Emerging Thinkers Awards category in 2009.

What experts say…

Over a distinguished career, Sanjaya Mishra's work as a reflective practitioner of open and distance learning has taken him from the world's largest open university (IGNOU) to the only international intergovernmental agency (COL) dedicated to this mode of education. Self-Talk is a selection of 45 pithy pieces, taken from blogs or the grey literature, covering nearly 30 years of his writing. A perfect compilation for staff to browse in their common rooms (real or virtual), it gives wise guidance on aspects of ODL from commensalism to colour, points to shortcomings in our practices and warns of snake oil in some proposed remedies.

Sir John Daniel, O.C.
Chairman and Chancellor
Acsenda School of Management, Vancouver

In this near three-decade long reflection, Sanjaya Mishra provides a masterful review of the field of open, online, and distance learning as it evolves across the planet. Those new to the field will immediately benefit from Mishra the historian, whereas distance learning old-timers will find his pondering on our educational futures to be of immense value.

Curtis J. Bonk
Professor of IST and adjunct School of Informatics
Indian University Bloomington

About the author

Dr Sanjaya Mishra has a multi-disciplinary background in education, information science, communication media, and learning and development. As a thinker, practitioner and solutions builder in open, distance, and online learning, Dr Mishra has been contributing to teaching, staff development, research, policy development, innovation, and organisational development with a focus on the use of educational multimedia, eLearning, open educational resources (OER), and open access to scientific information to increase access to quality education and lifelong learning for all. He has received several national and international recognitions, including the ISTD-Vivekanand National Award for Excellence in Human Resource Development and Training in 2007, and the Prof G Ram Reddy Social Scientist Award 2013 for his contribution to distance education and OER.