Open Universities in the Time of MOOCs: Reaching the Unreached?

19th Prof. G. Ram Reddy Memorial Lecture

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Commonwealth of Learning

It is an honour to speak to such a distinguished audience and I am very grateful to the Vice Chancellor Prof Aslam for the invitation. The G Ram Reddy Memorial Lecture is an important event in the life of the Indira Gandhi National Open University and it is a pleasure to be here among friends and colleagues with whom I share fond memories of working together in the early days when Prof Ram Reddy was our Vice Chancellor.

When Prof Reddy interviewed me for a position in the School of Humanities 25 years ago, I could hardly have imagined that I would be standing here one day, in this impressive convention centre, giving a lecture in memory of a great academic leader!
Prof Ram Reddy was a visionary who spoke of equity and social justice long before he inaugurated the notion of open education in our country. As he reminded us and I quote, 'Since Independence, India has made tremendous progress in various fields. While its development has contributed to greater production, there has not been corresponding improvement in distributive justice'. Opening up access to education was his way of addressing the issue of distributive justice and of reaching the unreached.

Not just in India but around the entire Commonwealth. After serving as the founding Vice Chancellor of IGNOU, Prof Reddy joined the Commonwealth of Learning as its first Vice President.

As you know, the Commonwealth of Learning, is an intergovernmental organisation established by the Commonwealth Heads of Government, when they met in Vancouver over twenty five years ago. We are funded by voluntary contributions from Commonwealth Member States. And you will be pleased to know that India has been a regular and consistent provider of both financial and intellectual support.

What does COL do? We help Commonwealth Member States and institutions to harness the potential of educational technologies for expanding access to education and training. Our slogan is 'learning for development'.

COL and IGNOU have always shared a special relationship. I remember when IGNOU was designated the Centre of Excellence in Distance Education by the then President of COL, Prof James Maraj at a glittering function held in Ashoka hotel. It was a moment that marked the maturation of IGNOU as a distance education provider and as a leader in the Commonwealth. Our regional office the Commonwealth Educational Media Centre for Asia was established through an agreement with the Government of India in 1994 and generously hosted by IGNOU. COL has since had a close collaboration with IGNOU through various joint programmes and projects, one of which was the Rajiv Gandhi Fellowship scheme which brought IGNOU's Diploma and Masters in Distance Education programme to many administrators and practitioners around the Commonwealth. In Zimbabwe, the ten persons trained under this project are considered ODL experts in the region.

Some of you will recognise yourselves in this photo from the first Pan Commonwealth Forum held in Brunei.

At that same PCF, Prof Ram Reddy was posthumously honoured as a COL Fellow in recognition of his outstanding contributions to the cause of open learning on the sub-continent.

That was when IGNOU received the COL Award of Excellence in Distance Education Materials and you can see the then COL President Prof Raj Dhanarajan handing the award to our VC, Prof Abdul Khan

What was the award for? Many of you will recall the excellent Panchayati Raj materials that IGNOU had developed under the leadership of your present VC, Prof M Aslam who is a thought-leader in this field.

A more recent collaboration between COL and IGNOU was PCF 6, where many of you were present. As we look back, we can trace the seeds of the relationship between COL and IGNOU to the firm foundations laid by Prof Reddy.

My topic today is 'Open Universities in the time of MOOCs: reaching the unreached?' I will first look at the context and the challenges that open universities need to address in trying to reach the marginalised. I will then look at two emerging developments, the Open Education Resources or OER movement and the Massive Open Online Courses or MOOCs and the implications for open universities. This will be followed by a brief review of how some open universities are already responding to these developments. In conclusion, I will raise questions relating to whether OER and MOOCs can by themselves address the issues of inequality and help us to reach the last person in the queue.

But first the context.

Since I represent the Commonwealth, let me begin with this map where you see 53 Member states covering all regions of the globe from the Caribbean to the Pacific.

60% of the population in the Commonwealth is young and under the age of 30, just as it here in India. One third of the world's poor live in Commonwealth countries and the majority of the poor are women. In spite of all our collective efforts 23 million children are still out of school and there are over 462 million adult illiterates. This is an unfinished agenda that needs serious attention as we approach 2015.

And yet there are positive developments. As you can see tertiary enrolment in India has increased exponentially over the last decade.

And the transition from secondary to tertiary enrolment in India is 23%, which is higher than the South Asian average.

But is this enough? APRs of 23% in India are well below the OECD average of 40-50%, which is what countries must achieve if they are to see sustainable economic development.

As governments and policy makers in the Commonwealth seek to expand the reach of higher education and to cut the costs, they are investing in open universities. Asia alone has over 70 open universities and the numbers continue to grow.[1] The new wave of growth is emerging in Africa.

Why are open universities so popular with policy makers? One reason is lower costs. As you can see an IGNOU degree would cost roughly one third of what it would take to put a graduate through a campus institution if we look at the study from the National Knowledge Commission.

In addition to poverty, many people are disadvantaged due to caste and gender. According to a World Bank study, the rural girls from the scheduled castes have the lowest school attainment rates. This is followed by rural girls from other groups. This is perhaps what Prof Reddy had in mind when he spoke of distributive justice.

Let us look at two developments that have emerged over the previous decade, that is, OER and MOOCs. Do they present us with opportunities to reach the last mile?

With the rise of social media, there has been a global movement towards collaboration in the development and sharing of content and we have seen the rise of OER. The fundamental principle is that any materials developed with public funds should be made available free to others. Several major Asian initiatives have emerged. Some of these are the Indian National Project for Technology Enhanced Learning (NPTEL), OER Asia, the China Open Resources for Education Initiative, Vietnam's Open Courseware and Japan Open Courseware Consortium.

Can OER help cut costs? As we know textbooks are a costly proposition. A study in Brazil found that for 75% of students studying at the University of Sao Paolo, the cost of acquiring textbooks was higher than a family's monthly income. Likewise the government of South Africa has decided to opt for OER textbooks rather than pay millions of Rand to publishers.

As you know NCERT has granulated hundreds of textbooks and made them available online under an open licence. The Tamil Nadu textbook corporation have published digital copies of about 200 school textbooks as OER.

COL maintains an online directory service for OER from the Commonwealth countries. Looking at the data from these countries, we find that universities from developing countries are publishing large quantities of OER. While UK is the top producer, India, Nigeria, South Africa

and Pakistan are significant producers. Open Universities are especially large producers: for example, OU UK and NOUN.

If we review the OER situation in 2014, we find that the number of institutions making their courses available as OER has increased substantially. Developing countries have emerged as major players. India, through its National Mission on Education through ICT have issued open licensing policy guidelines to promote OER. Antigua and Barbuda, a small island state in the Caribbean has recently developed a national OER policy.

What are the implications for open universities? OER have the potential to open up access, improve quality and reduce costs to all levels of education. Some open universities such as Athabasca, Wawasan and Asia eUniversity are offering entire programmes based on OER.

The province of British Columbia, where COL is located, has a Textbook Zero Program—which means that students don't pay for the OER based textbooks. What lessons can we draw from this project? One, that if you wish to implement OER, you would need systemic change within the institution. Two, senior level champions are essential to make this happen. Three, faculty would require some capacity building support and four, the staff must take ownership.

Even though OER as a term was coined only in 2002, Prof Reddy had a similar vision well before that time. He believed that open universities in the country should form a network in which they would use the courses developed by each other rather than duplicate efforts. This sharing and collaboration is the basic philosophy underpinning OER.

The second major development is MOOCs. As we know, '… a MOOC is a type of online course aimed at large scale participation …MOOCs are a recent development in the area of distance education, and a progression of the kind of open education ideals suggested by OER'.

The big three MOOC platforms edX, Coursera and Udacity, all operate from the USA. FutureLearn, launched last year, is designed and operated by the OU UK.

In Asia, notable MOOCs are being offered by China, India and Pakistan. The NPTEL project in India is led by the government to provide job-related skills to young people in the STEM subjects. These are free and students only pay about Rs 2000 if they appear for an exam towards certification. Tsinghua University, which is one of the top research universities in China is offering MOOCs in cultural studies in Mandarin and these courses are free and meant for self-enrichment rather than certification. Here then are two models: one for self-enrichment, the other that leads to certification.

The MOOC effect is unexpected in some sense. 270, 000 people signed up for the Computer Science (CS) course offered by Udacity which is much larger than the total number of learners who aspire to do CS courses in nearly 3000 degree granting institutions in the USA.

What is the profile of the typical MOOC registrant? A recent Harvard study shows that this was likely to be a male with a bachelor's degree and over the age of 26. 35% of those who enrolled never engaged with the content and only 5 % completed the courses.

It is interesting to note that of the learners signing up for the MIT-Harvard MOOCs, 72 % were from outside the US. The University of Pennsylvania MOOC drew 15% from the BRICS—Brazil, Russia, India, China and South Africa. While MOOC's may not yet have caught up in Africa, their viability for emerging economies is becoming clearer. MOOCs are giving universities a global profile and more and more learners from developing countries are enrolling.

An article in *Nature* examined the subject matter of MOOC courses (July 2013) which shows that about 28 percent belong to arts and humanities. Predominance of STEM and Business topics is along the expected lines and the presence of a significant number of arts and humanities courses is worth noting. This shows that there are no subject-related barriers to MOOC offerings.

Why do universities offer MOOCs? Recent research shows that extending their reach is one driver, while building the brand is another. It is significant that universities are investing in MOOCs to lead innovations in teaching and learning.This is an important and welcome development as the focus is on good teaching rather than only on research. What are the implications of these developments for universities? Let us look at the impact on three areas: pedagogy, services and credentialing.

The use of Learning Analytics, a component of the MOOC platform, can help us to collect and analyse data about how learning is taking place. Because of this, predictive systems can be developed to identify potential dropouts and provide the necessary support to help them overcome their difficulties. It can also highlight those areas where many students struggle so that the tutors get the feedback to take remedial measures.

Another significant development contributing to teaching is the availability of huge masses of learner data that can be analysed for continuous improvement and better outcomes.

Service provision is an integral part of MOOC management. MOOC developments provide new ways to solve older concerns. One of them is to be able to assign a unique ID to a learner, who can be identified across courses- something paper-based procedures are not good at yet. MOOCs also offer tested and affordable techniques to manage learner and mentor records which can be moved across platforms when necessary.

MOOC platforms today provide for excellent online networking opportunities among the learners and between the learner and the tutor. In addition, good quality OER can enhance the learner-content interaction by providing access to a library of supplementary learning materials.

Open Universities are well placed to engage with both OER and MOOCs. They have been strong in both contemporary pedagogy and services management. Their experience in content design and development can easily lead to effective adoption and adaptation of OER. Student support services can be strengthened by adapting MOOC technologies.

Credentialling was not a consideration when MOOCs where launched. However, it is a serious consideration now. A number of approaches are being deployed. The practice of "badges" which allows a learner or mentor to accumulate credit and reputation is gaining currency. Invigilated exams and certificates derived from them are also becoming more current because widespread

recognition of Badges does not yet exist. This is clearly an important area where rapid changes are taking place and universities will need to find flexible and open ways in which this can be done.

Universities can 'unbundle' their services and offer smaller more needs-based options. We can see a delinking of the institutions which teach and the institutions which credential. It will be possible for learners to construct their own courses based entirely on OER and carry their credits from one institution to another.

Long before we witnessed the MOOC phenomenon, Prof Reddy had the vision of a a student who had joined one open university as free to take courses from other open universities.

How have universities responded to OER and MOOCs?

The FutureLearn, a private company of the OU UK is a consortium of 38 institutions and provides a model of what other open universities could initiate. FutureLearn offers 29 courses which have attracted over 750,000 students.

The Open University of the Netherlands offers a MOOC in elearning.

Beijing Open University offers seven courses in skills development.

The Virtual University of Pakistan is making the MIT Open Courseware available through their web portal for their students.

The UPOU is offering MOOCs to provide training in skills related to call centre services and basic nursing

NPTEL is the only project which among all these, is offering the option of proctored exams.

COL in partnership with IIT-Kanpur offered a MOOC on mobiles-for-development. This interdisciplinary open course attracted over 2200 registrants from 116 countries, 62% of whom were active participants. The six-week course was completed by over 400 participants.

What did we learn? It is important to provide high quality materials combined with good teaching. Keeping the learners engaged is essential and the IT platform must be reliable and robust. This can be achieved without branded platforms and quality can be delivered at lower costs.

These are exciting possibilities. But do they help us to give shape to the vision of Prof Ram Reddy?

We have seen an unprecedented growth in technology in the last ten years. Yet there is a digital divide between the different regions of the Commonwealth. Compare the internet access of over 80 % in Europe and North America with the less than 10% in Asia.

If you look at the Indian situation, access to fixed broadband is minimal if you look at the last line in this graph. There are only 13% internet users while mobile subscriptions are well over 70%. Mobile devices are proving to be a game-changer. The unanticipated and rapid rise of cell telephony and affordable tablets, are making a contribution towards turning the digital divide into a dividend.

Clearly, OER and MOOCs cannot in themselves help us to address inequality in education.

As Justin Reich of Harvard argues that OER by themselves will not address equity issues. Institutions and groups with better access to resources and infrastructure will make more use of the educational technology innovations such as free and open resources rather than marginalized groups.

For example, teachers in low-resource contexts cannot participate in these movements to the extent that their more privileged counterparts can.

Similarly, are we really reaching the unreached with MOOCs? According to Sreenivasan of Columbia University, at the moment MOOC weren't reaching the unreached in Africa but those on Wall Street through a course on Financial Engineering and Risk Management.

Another researcher Vignare concludes that so far MOOCs have only reached those with degrees. How can we reach the millions who aspire to enter higher education and earn degrees?

For OER and MOOCs to contribute to social inclusion, we would need to focus on appropriate technologies as well social and economic issues.

Open universities have the opportunity to create new models of OER use and MOOCs. Elements would include a participatory approach in which stakeholders have a voice and a say. Decentralised and flexible organizational structures will help us to respond to such developments in a timely manner. We can further sharpen our focus on learner-centricity. The unreached will not be reached as a matter of chance. We must have mechanisms in place to target specific marginalized communities.

What strategies can we adopt? One, by placing an emphasis on the people rather than the technology alone; two, by viewing knowledge as a social product in which people have a voice and three, by seeing learning as a process which leads to development.

The unprecendented growth in technologies, the changing needs of the labour market and the increasing demand for relevant skills from our young people all place a special responsibility on our institutions. As Prof Reddy cautioned, '*Indian higher education is going to be tested for its resilience and vitality. The institutions of higher education and the academic community will have to live up to this challenge. Else, they will be rendered vestiges mutely and helplessly witnessing changes around, which they are not able to comprehend or catch up with.*'

OER and MOOCs present us with new challenges and opportunities. Let us harness the potential of these emergent developments to use them as appropriate tools of Indian higher education to

address the issues of equity and inclusion that Prof Reddy spoke of. That will be the best way to honour his memory.

Thank you for your kind attention.

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[1] C Latchem & Insung Jung: Distance and Blended Learning in Asia, NY London: Routledge, 2009, p.xiii