Open Educational Resources for Higher Education

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Esteemed Prof. V.S. Prasad, Former Director NAAC and Honorary Fellow of Commonwealth of Learning, Dr. K. Lakshminarayana, Director, A.P. Skill Development Corporation, Prof. V. Venkaiah, Vice Chancellor, Krishna University, distinguished teachers, staff, and students of Krishna University and its affiliated colleges, members of the public and media, I am humbled by the invitation to deliver a lecture in the prestigious Public Lecture Series on Higher Education started by the Krishna University. I am thankful to Prof. V. Venkaiah, Vice Chancellor of Krishna University for starting the public lecture series and inviting me to deliver this lecture. I hope this public lecture series will help create the much needed scholarly environment in our higher education institutions. I also think these lectures will not only foster critical discourse within Krishna University, but also provide impetus to discuss and debate issues facing higher education in the country in global contexts. Before, I delve into the main focus of my lecture today I would like to urge you to think about higher education.

Defining 'Higher' in Higher Education

What is 'higher' in higher education? It is just level of the education, synonymous to tertiary education? Therefore, higher education is just a linear progression from primary and secondary education. Is it synonymous to university education? Most of the times, we use higher education to mean university, and conflate an institution to be viewed as a concept (Barnett, 2011). For centuries, the university has been a place for teaching, research, and extension activities in all domains of knowledge. It differs from a single discipline research centre, a college focusing on teaching, and even from an advocacy agency. It should be an independent institution that has the moral and cultural capacity to pursue knowledge in its purest form. In the process, the university performs multiple roles and functions, and therefore, it is a complex organization and also remains in a constant state of change. Universities provide higher education, but they may also

do many other activities, including providing vocational education. However, a higher education provider may not be a university. It can be a college, a research centre, etc. So, providing higher levels of teaching does not necessarily make higher education higher. Higher education "educates the intellect to reason well in all matters, to reach out towards truth, and to grasp it" (Newman, 1873). According to Professor Ronald Barnett (1990):

A genuine higher learning is subversive in the sense of subverting the student's taken-for-granted world, including the world of endeavour, scholarship, calculation or creativity, into which he or she has been initiated. A genuine higher education is unsettling; it is not meant to be a cosy experience. It is disturbing because, ultimately, the student comes to see that things could always be other than they are. A higher education experience is not complete unless the student realizes that, no matter how much effort is put in, or how much library research, there are no final answers.

This implies higher education is something that is amorphous and metaphysical. In other words, we can relate this to 'excellence' or 'quality'. It is not just about providing education at a higher level, but about creativity, critical inquiry, truth, discovery, discussion, development and scholarship. Therefore, higher education is a process that provides the environment for scholarliness. Boyer (1990) refers to four components of scholarliness:

- Discovery – as creation of new knowledge in a specific discipline, often used synonymously with research and closely related to scholarly communication.
- Integration – as making connections across the disciplines by bringing in new insights, giving meaning to isolated facts and interpreting data together in an integrated manner to extend the boundaries of human knowledge.
- Application – as service activities that are tied directly to one's special field of knowledge and flow from the expertise of the scholar. Weller (2011) says this "can also include the time spent peer-reviewing journal articles and grant applications and sitting on various committees".
- Teaching – as a scholarly enterprise beyond the mundane transmission of facts. Teaching is at the highest level of scholarly activity because teachers must be well informed and have expertise in their field to teach. Twelve hours of classroom teaching every week can be heavy workload, if we consider the rigour needed for careful pedagogical planning and preparations needed to deliver each hour of lecture or engagements with the students. Certainly teaching is about 'inquiry into learning' than simple transmission of knowledge.

Therefore, higher education is not about university or college education only; it is about how education is transacted, and how they strive for excellence to promote scholarliness.

Problems of Higher Education in India

What are the problems of higher education, especially in the Indian context? The 12th plan of Govt of India focusses on Excellence, Equity and Expansion as the three pillar of action in higher education. I would like to address the current problems in three broad areas: quality, access, and innovation.

Quality

According to Barnett (1992) quality in higher education is "a high evaluation accorded to an educative process, where it has been demonstrated that, through the process, the students educational development has been enhanced … not only have they achieved the particular objectives set for the course but, in doing so, they have also fulfilled the general educational aims of autonomy of the ability to participate in reasoned discourse, of critical self-evaluation, and of coming to a proper awareness of the ultimate contingency of a thought and action" (p 61).

In fact, quality is an obsession for many of us. Most of the time, we discuss quality in reference to others, and it is something that other should have and we assume that we have it by default. As human being we know intuitively -- what is quality and what is not. This is true for everything around us, including education. This also indicates that while we understand quality, we are not reflective enough to make judgement about ourselves. The National Assessment and Accreditation Council (NAAC) ever since its establishment in 1994, has been making efforts to promote quality in Indian higher education institutions. While it has developed a robust system of quality assessment and accreditation, its appreciation by many leading universities in India was very low until recently. While the norm for quality is voluntary assessment, in India it is now mandatory, and could be tied up with funding as well. Such a practice of quality assurance indicates the existence of huge problem in the system itself. In the recent past there have been lot of discussion on issues related to quality and ranking of Indian institutions. Prof. J.B.G. Tilak in his lecture under this series presented a critique on the current business of ranking of universities, and concluded that "quest for excellence is missing in our higher education policy and practice". The problem of quality, in India however, is how to create a culture of quality in our higher education institutions. While we all know the problems, collectively we do not have answer to even fill up the vacant positions of faculty and administrators in a systematic manner in our higher education institutions. This could be one of the indicators and factor affecting quality in higher education.

Access

According to Ronald Barnett, higher education largely does four roles:

- production of qualified human resources
- training for a research career
- efficient management of teaching provision
- extending life chances

Considering that higher education improves life chances of people, and help them increase their livelihoods, access to higher education is crucial. Currently India has over 38,000 colleges and nearly 726 universities serving over 28 million students. While only 56 countries have more population that the number of students enrolled in Indian higher education, India's Gross Enrolment Ratio in higher education is about 20% as compared to global average of 27%. The National Knowledge Commission (2006) estimated the need for 1500 universities by 2015, while Ernest and Young (2011) estimated the need for 40 million seats in Indian higher education by

2020. Practically providing access to higher education opportunities is a major concern. Coupled with the contrived notion of quality, access issues add to the problems of higher education. It may be possible to increase our investment in higher education many-fold and increase GER. However, practically increasing access will remain a distant dream, unless we have radical and innovative ways to improve access to higher education. One of the ways to increase access is to develop flexible learning opportunities for all. Can face-to-face higher education institutions innovate to increase access?

Innovation

Research and innovation is yet another major problem of Indian Higher education. Currently India ranks 9 in production of research literature as per the SCImago Journal and Country Rank. But, much of the research stem from select universities and research establishments. Indian higher education institutions focus more on teaching; research and innovation are not often priority. Curriculum of Indian higher education institutions are also criticised for creating unemployable graduates, indicating that curriculum updating and innovations are not regular activities. Many a times, regulatory mechanisms dictate the process of innovation with little contribution from the academia of the higher education institutions. Despite several criticisms about research and innovations in Indian universities not reaching industry, India ranks 76 in Global Innovation Index 2014. With research and innovation taking back seat in our higher education institutions, the 'higher' in higher education is challenged.

Open Educational Resources

Now let me turn to the main focus of my presentation that we can categorise as an innovation in higher education. I believe Open Educational Resources (OER) and its counterpart called Open Access can help create a paradigm shift in Indian higher education. Many of you may think that OER is all about educational resources, and how can it assist in reducing the problems of higher education? Here I would argue to convince you the potentials of openness that can help higher education institutions become truly 'higher'.

Let me give you a brief history of OER. As sharing of information on the web became easy, more institutions started depending on what is available on the web. This led to the emergence of open content in 1998 and MIT OpenCourseWare was announced in 2001. The MIT OpenCourseWare released its first set of 50 courses in 2002. During the same year, UNESCO organized a *Forum on the Impact of the Open Courseware for Higher Education in Developing Countries* that created the term Open Educational Resources (OER). Of course, the Commonwealth of Learning (COL) was already developing and sharing learning materials by that time through its STAMP 2000+. The 2002 UNESCO meeting, nevertheless, became a landmark in the history of the OER movement, where Prof. V.S. Prasad represented India, and said "The Open Courseware concept is based on the philosophical view of knowledge as a collective social product and so it is also desirable to make it a social property".

In order to appreciate the possible impact of OER in our educational systems, it is important to understand OER. OER is defined as any teaching, learning and research material that are available in 'public domain' or with an open license, free of cost to reuse, revise, remix, and re-

distribute while retaining the rights. Let me clarify here that 'public domain' has a specific meaning in copyright – either the author of a work has declared the same to be in public domain or the copyright has expired post death of the author (60 years in India). The word open is the key to the manifestation of the term – OER. Here open means not only free availability of the resource, it is also about what you can do with the material. The copyright law provides for licensing of any new knowledge generated, and it is within the same parameters the authors use a specific open license to allow for full or limited use of the original materials created by them. Having an open license attached to a material enables it to remain up-to-date and relevant. Being available online the authors himself/herself make extra efforts to improve quality, and being open, the community takes the responsibility of improving further quality and relevance. It helps avoid duplication of efforts, and enables teachers to focus on more interaction in the classroom leading to a flipped classroom approach to teaching. The open license also enables circulation of knowledge that enables others to remix and re-distribute, and at times help entrepreneurship and local livelihood creation. I often give an imaginary example of a short story by "A", translated by "B", adopted by "C" as a drama viewed and liked by "D", who makes a film and earns huge money and fame, and further leading to its use in a classroom by teacher "E" to promote learning. This is possible only if the original is available as OER.

In June 2012, UNESCO convened the World OER Congress along with the COL and with the financial support of Hewlett Foundation to celebrate the progress of the OER movement and completion of 10 years of the term OER. The congress released OER Paris Declaration which says that OERs promote lifelong learning, contribute to social inclusion, gender equity and education for the special needs, and improve cost-efficiency and quality of teaching and learning. It also recommends that educational institutions:

1. Promote awareness and use of OER
2. Improve media and information literacy
3. Develop institutional policies for OER
4. Educate stakeholders on open licenses and copyright
5. Promote quality assurance and peer review of OER
6. Develop strategic partnerships to avoid duplication of work as well as technologies
7. Encourage and support research on OER
8. Develop tools to facilitate access to OER

OER in India

The National Knowledge Commission (2007) recognised the role of Open Educational Resources (OER) to up-grade the quality of education. NKC recommended creation of a National Educational Foundation to develop a web-based repository of high quality educational resources as OER through a collaborative process. It said, "an enabling legal framework that would allow unrestricted access without compromising intellectual authorship must be devised for this purpose". Since the recommendation, CreativeCommons licensing system has emerged as a legitimate way to share educational materials. The NKC further recommended strengthening faculty development and teacher training in the area of OER to improve quality. The National Programme on Technology Enhanced Learning (NPTEL) emerged as a flagship initiative for Engineering and basic Science courses during the time when OER was being discussed in the

NKC. In 2009, the Govt of India started the National Mission on Education through ICTs (NMEICT), which covered the NPTEL to increase connectivity, content and collaboration in Indian higher education. In September 2012, the NPTEL released its materials in CC BY-NC-SA license. The National Institute of Open Schooling (NIOS) has also started an OER project and released its materials under CC BY-NC-SA. The National Repository of Open Educational Resources (NROER) at National Council for Educational Research and Training (NCERT) has adopted a CC BY-SA license. In February 2014, the NMEICT decided to adopt CC BY-SA as a default license for all projects and materials created under its funding. The policy states "Release of learning resources, software and technology in an appropriate open license regime would foster an environment of openness, collaboration, and a culture of sharing, reuse and adaptation amongst institutions and teachers to enhance the quality of education in the country. Learners will have easy access to digital and non-digital resources available either freely or at a low cost. Teachers in remote areas will have access to quality resources and can contextualise the materials without worrying about prior permissions and copyright issues, if materials developed under NMEICT are available in an openly licensed manner".

Implications for Higher Education

So, how can OER improve quality, access and innovation? By far, I am sure you have seen the potential of OER to improve quality as a product of continuous improvement, and helping teachers to have more time for research and innovation. OER use in classroom can itself foster innovative teaching and learning practices. Certainly, it helps increase access to educational materials, and reduces the cost of higher education by providing low-cost alternatives to text-books. However, the new developments in the field of higher education can further enhance the potential to quality improvement in higher education. One such new development is Massive Open Online Courses (MOOC).

Thanks to the increasing access to the Internet through broadband and mobile, students anywhere can now have access to online courses, providing access to large numbers. The number game on the web has attracted many to MOOC. The similarity of MOOC to OER is only at the level of 'openness'. While many MOOC are open only from the aspect of free of cost, they are not truly open with open license. The possibility of use of OER and delivery of MOOC is not limited. COL has used this approach to deliver MOOC with its partners. As MOOC is an event, once the materials are also available in OER, other teachers can make use of the same. Especially in a resource crunched institutions this could sever as a major intervention to support more students. In a university curriculum team that I served as a member, we recommended that the faculty should offer all the courses they teach as MOOC. We gave a scenario: classroom teaching 20 students in a year; pass out 20 students in a year, after 8 years a total of 160 qualified persons. If all courses are offered as MOOC, over 8 years, and even if a modest 100 students complete such courses in a year, over eight years the university would have taught more than 4 times of the number of students covered in face-to-face classroom teaching. Such a scenario increases access, leads to innovation, and improves quality. If the courses are available in OER many other institutions can make use of these courses, while also improving twinning programmes, resource sharing and cost savings. However, such a scenario also brings in implications for capacity building of teachers, institutional preparedness, and national and institutional policy on sharing of educational materials created with public funds.

Concluding Remarks

My attempt here is to request all teachers and decision-makers to consider use and adoption of OER in their discipline and educational institutions. While understanding about OER and ICT capabilities are current impediments to progress of the OER movement in India, there is also a growing tendency amongst teachers not to share. At present we are undertaking a research to understand what enables some teachers to share their work, while others do not share. As part of the research we have already conducted two on-site events at Hyderabad and Gauhati. My discussion with faculty indicates lack of confidence of quality and poor understanding of OER as barriers to adoption and use of OER. While we are in the process of organising two more on-site events, I am happy to inform you that one of the forthcoming sites would be Krishna University for further promoting OER amongst the faculty here. With research we can develop systems and processes to create an environment of sharing of educational resources in the true spirit of the OER Paris Declaration. If we want to improve the quality of discourse in our higher education practices, we need to create more openness to quality, innovation and access. While OER use and adoption can lead to quality, innovation and improved access, what it will do most is to foster an environment of openness, which is crucial to lead towards excellence that is essential for higher education.

Thank you for your kind attention.

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Disclaimer: This discourse uses extensively some of my previously published works, and does not claim to be original in nature. Considering the context of the occasion, I have taken the liberty to repackage these.