



Report on the
INTERNATIONAL SEMINAR ON
**TEACHING-
LEARNING** AND
NEW TECHNOLOGIES IN
HIGHER EDUCATION

**N.V. Varghese
Sayantan Mandal**

New Delhi, 2016

Jointly organized by

Centre for Policy Research in Higher Education (CPRHE)
National University of Educational
Planning and Administration (NUEPA)

and
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A decorative graphic at the bottom left of the page, composed of several overlapping, abstract shapes in vibrant colors: purple, blue, green, red, and black.



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International Seminar on Teaching-Learning and New Technologies in Higher Education

25- 26 February 2016

Introduction

The fast expansion and diversification of the higher education system across the world pose challenges for sustaining, if not improving, quality. The emergence of knowledge economy and the accentuation of globalization processes have set global standards to be achieved by national institutions of higher education. Responding to these changes in the production sectors and in the employment market, it became necessary to set quality bench marks focusing on the outcomes of the institutions of higher education. The national higher education systems have set up external quality assurance mechanisms to assess study programmes and to accredit institutions. The university ranking exercises and national initiatives to establish world class universities are manifestations of increased interest in the quality and global standards in higher education.

Although quality broadly refers to inputs, processes and outcomes, the focus in discussions, very often, is on teaching-learning processes and classroom practices. This is primarily because of the accent on learning outcomes and student performance during and after the studies. The establishment of internal quality assurance cells reflect the felt need for closely monitoring teaching- learning process to ensure quality at institutional levels.

The recent advances in technology and its use in education have transformed the teaching-learning process



from an institutional level activity to a globally connected process. Technology is reshaping the landscape of higher education and poses challenge to the traditional brick and mortar framework of imparting education. The teachers and students now have access to on-line resources to supplement, if not substitute' the traditional class room teaching-learning processes. The use of OER (Open Educational Resources), MOOCs and other technology-mediated platforms to reinforce teaching- learning process is common in many institutions of higher education.

The empirical research on teaching and learning has been limited in quantity and has been mostly confined to developed countries. However, it is becoming an emerging area of research in developing countries. Many countries have established academies or specialized institutions of teaching and learning to carry out research studies and develop strategies to improve learning outcomes in higher education. India also needs to establish specialized institutions or academies to carry out research in the area of teaching-learning in higher education. The CPRHE is carrying out an empirical study on teaching and learning in higher education in the universities and colleges across different states of India and the Centre feels that this is an area which is import but got scanty attention in India. This forms the context for organizing the seminar.

The Centre for Policy Research in Higher Education (CPRHE) of the National University of Educational Planning and Administration (NUEPA), New Delhi and the British Council of India, as part of Global Education Dialogue series in South Asia, jointly organized the International Seminar on *Teaching-Learning and New Technologies in Higher Education* from 25 to 26 February 2016 at the India Habitat Centre, New Delhi. The seminar brought together educationists and policy-makers from Afghanistan,



Bangladesh, Canada, Denmark, Malaysia, Nepal, Republic of Korea, Singapore, Thailand, United Kingdom, United States of America and India. Over 160 participants including 35 international participants attended the International Seminar.

This seminar was an effort to bring together academics and policy-makers engaged in activities related to improving teaching- learning and effective use of technologies in higher education to learn from different experiences and practices. The objectives of the seminar were as follows:

Objectives

- To provide a platform for experts, researchers and practitioners to share their experiences;
- To discuss innovative practices in the area of teaching-learning and the use of technology in improving higher education.
- To explore possibilities of promoting research studies in the domain of teaching-learning and technology in higher education.

In addition to the above, the seminar provided a good opportunity to network with international partners, researchers, experts and policy-makers for sustainable knowledge-building.

Inaugural session

The seminar started with a welcome address by Prof. N.V. Varghese, Director of CPRHE/ NUEPA. It was followed by an opening statement by Mr. Rob Lynes, Director of the British Council, India. Professor Ved Prakash, Chairman, UGC delivered the inaugural address. The inaugural session was also an occasion to release the first volume of the India Higher Education Report. Mr. Veeraraghavan, the former Principal Secretary, MHRD, introduced the book titled *India*



Higher Education Report: 2015 and released it by handing over a copy of the book to the Chairman UGC and the Director of British Council. Dr. Sayantan Mandal of the CPRHE/NUEPA proposed a vote of thanks at the end of the inaugural session.

The statement by Mr. Rob Lynes in the inaugural session underlined the collaboration between India and UK in the field of education, research and innovation. Quoting the EU report on new modes of teaching and learning in higher education, he pointed out that “...if we teach today as we taught yesterday, we rob our children of tomorrow”. Therefore, there is need for new modes and methods of teaching and learning in higher education and technology will play an important role in this transformation.

According to Mr. Lynes, the e-learning is projected to grow 15 fold and will account for 30% of all educational provisions. A proliferation of open educational resources is the other key trend that will determine adoption of technology by the Universities. In the UK, Universities have been in the forefront of such innovations. In 2013, the Open University launched the first MOOC platform in the UK '*Future Learn*' which now has an enrolment of 3 million students globally. UK also has a Joint Information System Committee whose role is to support the education with digital devices and advise on resources and technology services. The main message is that change is happening very fast and technology is one of the most important determinants of this change.

The inaugural address by Professor Ved Prakash pointed to the increasing demand for higher education and emergence of India as an important global player in higher education. India has the largest youth population eligible for admissions in higher education institutions. By 2030 India will be providing one - fourth of the global workforce. The task of training the future workforce through the traditional face-to-face interaction mode seems to be an impossible one.



Therefore, many consider e-learning as an alternative to train the future workforce. As noted above, the OECD projects that e-learning will grow 15 fold and will account for 30% of all educational provisions by 2030. If integrated carefully, technology can help in mitigating challenges of access, issues of equity, quality and shortages of faculty to a great extent. MOOCs may perhaps provide answers to such aspirations particularly when support of online learning resources is available in variety of learning domains.

The advent of technology and massification of Higher education in India reconfirmed that it is no longer a monopoly of the elite. The sector is experiencing unprecedented expansion, thanks to proliferation of the private institutions. The private institutions offer courses mostly in engineering, management, medicines and allied disciplines leading to a truncated growth of the sector. Moreover, the share of private sector in higher education in India is now 62% in terms of number of institutions and 58 % in terms of share of student enrolment, most of which are offering certain subjects only. A major concern in the context of private sector involvement in higher education is commercialization of the sector.

An increasing surge in the aspirations for pursuing higher education certainly would necessitate either a proliferation of institutions of higher education or new modes of educational delivery or both. A host of technological initiatives can be accessed to undergo higher education at one's own pace. The learning models based on technologies are now available without sacrificing the benefits normally related to conventional face to face education models.

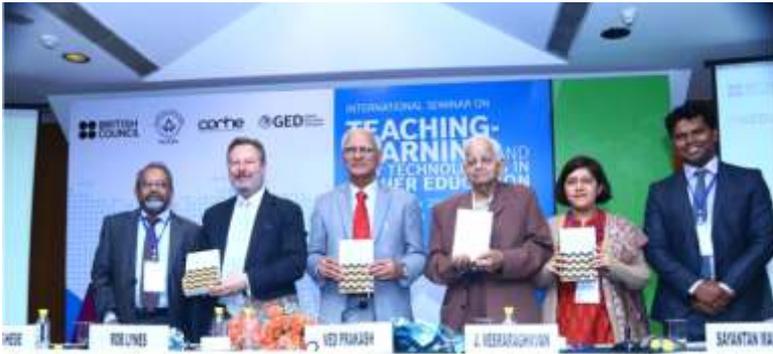
The challenge for India, like most of the developing economies, is to provide quality higher education at affordable cost. This also includes proper inclusion of technology in the teaching-learning processes. The public funding in many developing countries is not keeping pace with growing demand for higher education. Thus, institutions

are struggling to devise innovative ways to mobilize resources to provide quality higher education.

Release of India Higher Education Report 2015

The first issue of the *India Higher Education Report 2015* (IHER 2015) published by Routledge in 2016 was released by Mr. Veeraraghavan on the first day of the International Seminar.

Mr. Veeraraghavan in his introduction to the book pointed out that the IHER 2015 is an important initiative by the



CPRHE/NUEPA. He underlined the fact that the IHER 2015 is the first in a series of academic reports, which the Center plans to bring out regularly. In his view, the IHER 2015 is a comprehensive document and has articles on major issues and challenges facing higher education in the country. The specific themes included in the IHER 2015 are: i) The Higher Education Context i.e., Policies, Commission and Committees; ii) Equity in Higher Education; iii) Quality in Higher Education; iv) Diversification of the System, v) Employment of the Higher Education Graduates; vi) Financing of Higher Education; vii) Private Higher Education; viii) Governance and Management; and ix) Internationalisation. He hoped that it will serve as a good reference document for researchers and policy makers in India.



Resume' of discussions

The deliberations of the seminar focussed on issues related to teaching- learning process in the context of higher education and implications of technology for reorganizing and improving teaching and learning in higher education. How teachers and students interact in the classroom? What kind of teaching methods are used at the higher education level? What kinds of technologies are relied on? And importantly, how these can be woven together to make a sustainable synergy? These questions were part of major discourse in the seminar. The following paragraphs attempt to capture some of the important points that emerged during the discussions in the seminar.

Globalization and Changes in Teaching-Learning Processes

Globalization process touches upon all sectors of activity including education. The globalization process results in a move towards knowledge economy, a surge in the demand for educated workforce and an advent of technology in productive sectors, in professional and personal lives. The revolution in communications networks integrates people and products among the countries across the globe.

One of the effects of globalization in higher education is the integration of higher education systems across countries. This is achieved either through technology mediated provisions of higher education or by creating 'higher education areas'. The Bologna Process is a move to harmonize higher education across countries in the European region. The Bologna process succeeded in creating what is now called as the 'European Higher Education Area'. The South American and Caribbean countries have moved towards greater policy cooperation among themselves and created their own higher education areas. African countries also established the African Higher Education Area



(AHEA). All these efforts toward harmonization promote mobility programmes of students and faculties, joint policy agendas and curriculum reforms.

Another form of integration is achieved through technology mediated provisions of higher education programmes. The changes in the modes of delivery of educational services bring study programmes and students together even when institutional affiliation remains virtual. While integration of delivery of study programmes through technology is beyond the confines of any geographical boundaries, qualifications, very often, are awarded by institutions which are national in character. The certification and degrees are also awarded after assessment and evaluation of individual students through distance modes.

The exponential growth of knowledge and advances in information and communication technology give platforms to non-traditional alternative education systems in higher education which are more flexible and cater to the specific needs of individual learners. The technology enabled learning has resulted in a plethora of digital platforms and portals which offer easy access to educational resources and course materials from across the globe. The brick and mortar system no longer enjoys the monopoly as sole providers of education. Online institutions such as University of Phoenix online, Athabasca University, Canada; as well as on-campus universities offering online courses, such as, Harvard University and University of Toronto are becoming popular.

The technological advances have also influenced new modes of teaching and learning process. Face to face teaching is substituted by distance learning and online learning courses. The MOOCs is the fastest growing segment of higher education. Nearly 35 million students are enrolled globally in MOOCs in 2015. Several countries are relying on MOOCs platforms to offer new programmes of study.



The wide-spread of information technology has created a paradigm shift in the concept of teaching-learning since it has made knowledge available universally. The teacher in the context of technological advancement cannot remain as the major source of information and knowledge provider. Teacher has to act as a facilitator in the learning process. Teachers need to recognize potential of students and provide opportunities to improve their strength and must also focus on learning skills.

The new technologies have also increased the intensity of internationalization of higher education. Even doctoral programmes are offered online in universities such as Lancaster. Further, many universities enroll students from abroad. In these instances, teachers invest a good share of their time in managing teaching learning and evaluation processes. A major focus now a days is on facilitating learning and managing teaching- learning process rather than promoting teaching- learning *per se*. This changes the role of the teacher in the class room situations.

The contending approach to teaching and learning in tertiary education clearly suggests the emerging constructivist approach which emphasizes education as a social process of interaction, construction and collaboration among teachers, students and experts. Whether the institutions of higher learning are campus-based or online based, they do share the same sentiment to provide the new generation with active and interactive, social as well as constructive learning environment.

How does changing role of the teacher and teaching-learning process affect academic freedom of the teachers? Do they enjoy the very same level of freedom that they enjoyed in the traditional modes of teaching in institutions and class rooms? Do teachers have the freedom on what they can teach or are they bound by obligations or courses designed by others? In case of most of the online courses, the



courses are designed and modes of delivery and student assessments are centrally determined. This change may be reducing the individual freedom of the academics. However, given the idea of globalization and technology centered education the new learning space needs to take into account the changing academic cultures as a common phenomenon.

As of now, it seems there exists four cultures of faculty, namely: (a) Culture of profession; (b) Culture of discipline; (c). Culture of institution and (d) Culture of nation. The professional training of a teacher varies according to the culture of the profession. Similarly each discipline has its own culture. For instance, while historians mostly contribute single authored academic papers, the scientists mostly prepare and publish multiple authored papers. In the same line, the culture of institutions is impacted by the nature of university, such as public versus private or centralised vs decentralised governance structures. This is why, it seems important that along with the high investment in ICT infrastructure, the development of pedagogic method, the institutional arrangements and the involvement of inter-governmental efforts in creating dynamic academic culture and frameworks for learning cooperation are important. The freedom and the scholarship of individual faculty members are equally important and are related and relevant in these metamorphosing contexts. The teaching-learning process relying on new technologies thus needs to restore and retain the academic freedom enjoyed by the faculty members.

Impact of Technology on Teaching and Learning

How does technology impact on teaching and learning? Traditionally teaching-learning process revolved around the course content, textbook, teachers and lecture-based teaching. Traditional modes of teaching assumed 'knowing' and 'learning' as memorizing and recollecting facts. Teaching implied transmission of content to passive students and the



teaching- learning process used to be teacher-centric. However, the focus gradually shifted from 'what' the information is to 'how' information can be used as contemporary educational settings focus more on competency and performance.

The emphasis seems to be shifting from what one knows to what one can do with what one knows. That is why, at present, teaching-learning has become more of a social and less structured process involving participation and interaction with students. In fact teaching-learning has become student-centred or 'learner-centric'. The shift is from a 'transmission paradigm' to 'constructivist paradigm'. The students interact through debates and direct engagement with peers and experts both on-line and face to face.

At this juncture, digital technology provides an active learning environment through increased access and sharing of the digital devices. However, it also implies investment in infrastructure to support institution-wide use of digital technology in teaching and learning. Many universities recognize this need while others do not. However, there are those who argue that technology may not bring much change in the quality of teaching-learning since it constraints interaction of teachers with students in the classroom. The argument is that, technology should not be seen as a substitute for teachers and face to face interactions; it should be seen more as complementing the face to face learning process than replacing the teachers totally.

Studies conducted in this area show positive results of professional training on learning outcomes. Also, the changing dynamics of learners which is more technology friendly and related expansion of horizon of knowledge prompts inevitable requirement of professional training.

The technology enabled learning such as e-learning, virtual campuses and learning spaces offer students alternative avenues for learning, which are different from the



traditional face-to-face learning conditions. The ICT-based programmes provide wider access and flexibility of teaching and learning methods. E-learning can be synchronous, which involves interaction of participants with an instructor via web in real time and is supported by media, such as virtual classrooms, audio and video conferencing, chats, shared whiteboards etc. The most popular synchronous method is virtual classroom that has the features of real classroom, online. In virtual education situations, the teacher and students are separated by time and space but they interact with each other online as well as through instant messaging, chat, audio and video conferencing.

Asynchronous e-learning allows learners to progress at their own pace without live interaction with the instructor. Asynchronous technologies are audio cassette, e-mail, and message board forums, print materials, fax, voice mail and CD-ROMs etc. The learner logs on at an e-learning site(s) any time and downloads documents or send messages to teachers and peers any time. It allows learner to pace according to his/her own rate and is basically used in distance education system in the form of self-learning materials along with the provision for online learning and communication.

E-learning in the present context can be web-supplemented courses focusing classroom-based teaching but include elements such as putting a course outline and lecture notes online, use of email and links to online resources. It can also be web-dependent courses where students use Internet for online discussions, assessment, or online project/collaborative work along with classroom interactions. There are also instances, where mixed mode courses such as e-learning elements replace classroom time. In this case the on-line discussions, assessment, project/collaborative work replace some part of traditional face to face teaching and learning.

There are also fully on-line courses which allow students



to follow courses offered by a university located in one country far away from their own. The emerging converging trend in learning is promotion of blended learning which integrates ICT solution to provide wider online access and more flexible learning spaces to traditional classroom-based teaching and learning. Blended learning is based on the premise that while classroom are important sources of learning, a majority of student learning activities take place outside the classroom. Therefore, along with the traditional classrooms, the students should be given more freedom of access and interaction utilizing online learning technologies.

One also needs to look at this from the point of view of the learners. The 21st century learners are different from earlier cohort of learners. They are referred to as 'net generation learners'. These learners are more comfortable with the digital world and look for more flexible forms of learning processes. They depend more on online learning resources than the traditional library and printed books. MOOCs are becoming increasingly popular among the 'net generation learners'. A number of countries, such as UK (Future Learn), USA (Coursera, edX, Udacity), Australia (Open2Study and other university created MOOCs), Brazil (Unopar), China (XuetangX), Germany (iversity), Japan (JMOOC from Open University of Japan), Malayasian universities and New Zealand universities are using a variety of models of MOOCs for higher education. The Indian government has recently launched an Indian focused MOOC platform called 'Swayam'- Study Webs of Active-learning for Young Aspiring Minds.

The mobile-learning or M-learning is an extension of e-learning relying on mobile phones. IT devices such as mobile phones, laptops, and tablet PCs are being used in teaching and learning, which are supported by a wireless infrastructure. Mobile applications (Apps) are fast developing resources in higher education. M-learning

ensures easy accessibility of education in even the remote and rural areas and can be used as a cheap and an effective educational tool in the country, as India is the second largest player in the global telecom market.



One of the difficulties confronted in ICT based courses is the lack of sustainable inter-institutional collaboration for the promotion of e-learning or e-learning spaces. In 2003, the European Association of Distance Teaching Universities (EADTU) launched the so-called 'e-Bologna' to address the lack of an intergovernmental framework to promote e-learning spaces through creation of a European 'e-environment' to facilitate parallel learning and educational areas, along with the EHEA. Similar developments are taking place in Asia too.

Under the framework of Asia Cooperation Dialogue (ACD), there is an agreement among member countries to form an e-learning hub spearheading e-education efforts through mass education and lifelong learning as well as to complement existing HEIs in deploying education programmes using on-line infrastructure. There is also a proposal to establish an Asia e-University (AeU) which will be instrumental for greater cooperation, wider and flexible access to trans-border e-Education activities among Southeast Asian countries.



The proliferation of technology, e-learning spaces however, critiqued by its level of access, which is often limited to those who know and/or can access/ afford modern technology. Will technology based education reduce inequalities? It is found that the third generation learners have better access to technology than the first generation learners. The new ICT enables self paced learning through various tools such as assignments, tutorials, computer etc. with sensitivity to different learning styles and continuous assessment of student's progress. With the result teaching- learning enterprise has become more outcome oriented.

ICT facilitates the educational transaction between providers and users by keeping students well informed about the courses, enhancing teacher-learner contact through e-mail, chat sessions, etc., enhancing active learning, sharing ideas, providing immediate feedback, encouraging paced learning and allowing for effective mapping of learning pathways.

The active engagement through ICT is important, since the students at times finds less value in attending classes to get information which they can get, perhaps more up to date information, from internet and other facilities. Hence, the basic requirement for a healthy teaching learning necessitates concerns proper ICT infrastructure. However, ICT needs to be integrated in whole institutional set up, developing the capacity of the teachers in managing ICT.

Academic Impact of MOOCs

The study on the academic impact of MOOCs, by Duke University, found that for traditional courses the learning outcomes are at lower level. MOOC has improved the learning outcomes of the students. In the study, both the students studying in traditional method as well as MOOCs enhanced mode were treated equally. Students gain international and digital literacy skills in MOOCs enhanced



mode. The Boston University study has brought some revelations about the changing perceptions towards MOOCs. It is also found that students achieve equally well through MOOCs and the learning outcomes are of high level. However, students' satisfaction level is less, as it has to do with the students' expectations and perception of the classroom setup. Students normally interact with other students in university but in MOOCs, this is not possible. However, learners could and do interact online. Although, it varies between learners as they are more diverse than ever in the age of interconnected digital world.

The study on MOOCs by the Duke University is done in the context of a developed country, whereas, the situation in developing countries are somewhat different. For instance, while there is expansion of higher education in India, simultaneously we come across digital divide. There is inclusion of new technologies in the system and we also witness there is synchronous coming of private players to dispense with higher education utilizing the new technologies. The growth of private higher education especially in technical/engineering field is so much that at some places it (supply) has crossed the requirement (demand), whereas in other places, its vice versa. A unique kind of paradox has emerged where the technology, which is meant to expand access of higher education, is actually creating a divide. The latter though has 'intellectual capital' but is under-utilized. The need therefore is not to do away with the available technology; rather a conscious attempt is required to merge pedagogical skill with technological changes.

The UK experience, however, provides a glimpse of the pace of change in the institutional adoption of technology enhanced learning tools across the higher education sector. It addresses the rise of student-controlled and creative technologies to promote information, knowledge-sharing



and networking in learning and teaching activities. Expectation that technology will enable more flexible learning, offer better administration and be applied where relevant, but will not undermine contact time on campus. There is a need to enable active learning and transformative learning. There is also a need for active engagement, increased flexibility to access learning and extending the range of learning opportunities.

Perspectives on Teaching and Learning in Higher Education

Teachers need certain competencies to foster active and engaging teaching-learning. Considering the changing learning environment and the proliferation of modern ICTs, it is important to focus on this issue. The competences are required to perform the roles, which include inculcating core values (commitment to the profession in response to diversity and integrity), developing core competencies (communication skills), functional competencies, and technical knowledge and skills.

An effective teaching or elements of effective teacher in the classroom are the following:

a) content knowledge; b) pedagogic knowledge; and c) technical knowledge. The most important out of these three factors is the pedagogic knowledge, since it makes a significant difference in the teaching learning process in the classroom situation. The approach centered around the pedagogy in the classroom situation is however, questioned. The argument is for a shift from the dominant pedagogy to the alternative pedagogical models. The alternative pedagogical models will depend on various factors such as the student composition in the classroom and the resulting changes in the learning environment.

The access to and sources of knowledge are various. Usually teaching is seen in terms of a dyadic relationship,



where teaching and learning takes place in a synchronic fashion at a time and in a place. As noted earlier, this is no longer the case. The teaching and learning process has become asynchronous, which does not necessitate the student to sit in a classroom addressed by a teacher. Teacher and students can remain invisible. In other words, today's teaching and learning could be characterized as asynchronous, anonymous and invisible.

These developments have posed challenges to the university teachers. The teacher is no longer just a pedagogue. He or she needs to be a good manager of the classroom. Many teachers are finding it difficult to make this transition whereby one's subject expertise needs to be combined with his/her managerial skills. It also marks a situation whereby teaching becomes more flexible and can address the responses of the learners.

There is also a need to assess the cognitive load of the students that helps the teacher to choose most appropriate method in the classroom teaching. A teacher in higher education needs to equip herself/himself with required knowledge, understandings, skills and attitudes- both pedagogic and academic- required for the course taught by her/him. Some of these factors are included in self appraisal report to be submitted annually by the teacher.

A good teaching implies making an alignment of learning outcomes to teaching-learning processes involving wide range of complex interactions between teacher, students, classroom settings and learning activities. Teachers can be held accountable for the way they motivate students, respond to their questions, promote thinking, observe student cues indicating the nature of their engagement in learning tasks, comprehension of subject matter. To address the concerns of each student in the classroom a teacher needs to understand their difference in abilities to learn, and technology can help in this process.



It is however, heartening to note that there are sectoral challenges in the adoption and embedding of technology enhanced learning. Surveys and researches reveal motivations and inhibitors of change in universities and their relationship with the changing roles of academic staff in institutions. The research on such issues also should provide evidence on major challenges faced by universities across the globe and different approaches universities have taken to develop faculty and the institutional environment to respond to the context specific changes to improve the system to take into account the technology induced changes. However, as discussed previously there is no denial of need for such training and we need to have attempts towards it through orientation/training programme.

Looking at the issue from institutional and administrative perspectives, a few salient questions come to the forefront. Where should the emphasis lie-on inputs, on the processes or on the outcomes? The general trend that one finds is that the emphasis is shifting to learning outcomes. Consequently, the teachers and teaching- learning process are under strain and stress. In fact some of the countries in Europe have already moved towards output based funding formula. For example, in Denmark the university study programmes are funded according to output-oriented criteria rather than based on enrolments. In other words, the Danish government funds universities based on per student expenditure - which is calculated on the basis of successful completion of a course rather than entry into the course. Such approaches to funding of institutions put pressure on the teachers to be more effective in the classrooms and more productive in the system.

In Denmark, problem solving constitutes a key element of the experiential learning, which focuses on developing productive skills and critical thinking. This pro-actively



influences the teachers to organize university teaching to maximize student ability to solve problems. This is often realised through problem-based courses working with projects based on specific and current issues. As such, almost all Danish university study programmes are partly arranged according to a problem-oriented curriculum. As a consequence, the teaching methods have a high degree of project orientation, meaning that students apply theory in order to suggest adequate solutions to real life problems. In modern universities, educational focus has shifted from knowledge acquisition to knowledge application. This poses the second challenge, namely, the challenge of the transferring of knowledge and skills from university to the world of work.

The academics in Denmark traditionally enjoyed unquestionable freedom and authority in academic domains. At times it was referred to as a situation of professor hegemony at universities. The professors had almost total power to decide what was right and wrong, which books should be read and what syllabus was correct. Teaching mainly took the form of one-way communication from professor to students. Following the student uprising in 1968, the relationship between professors and students has gradually become more and more equal and democratic. An important element in Danish university didactics is therefore to train students to express themselves, both in writing and orally. They are allowed and encouraged to speak up. They are invited to discuss problems and solutions with their professors, and to find arguments for and against different points of view.

The experiences from Denmark show that its priority is to promote democratic structure of the teaching processes which includes flexibility, practical based education and problem-oriented university teaching method. The structure in the Danish higher education system is characterised by a



principle of flexibility. Students can obtain credit transfer from one study programme and benefit from this in another study programme, Rather than concentrating solely on the acquisition of skills and knowledge, teaching and pedagogy in Denmark focuses more on the practical application of such skills and knowledge outside the university. The pedagogic strategy must focus on the ability to solve problems and the ability to transfer knowledge from the university context to practical real-life situations.

In most of the countries however, it is less interactive and democratic. Traditional lecture method is the most common teaching method employed especially in the institutions of higher learning. One of the reasons may be the belief that lecture is the most suitable method to handle large classes. The most common lecture method implemented in class is in the form of oral presentation to a group of students. Most lectures these days are however delivered with slideshow presentation in the background, distributed printed document and in some cases, through relevant videos or films. Some lecturers would utilize the whiteboard available in the lecture room to highlight the gist of the lecture delivered.

In line with the rapid development of communication technology, many web-based applications are available for the classrooms, which need to be adapted in implementing interactive lectures. Among the web applications to be considered are the tools that provide opportunities for collaboration or to get feedback online are “Padlet”, “Todaysmeet”, “Kahoot”, “Etherpad”, “Edpuzzle” etc. These web-based applications and their features can help us make the choice of what and how they can be used within the context of an interactive lecture.

A recent study by the CPRHE/ NUEPA shows that teachers in Indian colleges and universities are more focussed on the rigorous process whereas for students, effective



teacher is one, who fosters joyful teaching-learning experiences. However, there are debates over giving high value to the students' opinion, as it is often argued that students do not see every aspect of teaching. The effort to find and put meaningful content together and all the other hard work remain hidden from them. Moreover, there are chances that students confuse between popular lecture and 'good' lecture. However, it is counter-argued that what students do see comprise a very important part of the whole. Firstly, because they are adult learners and by the time they reach undergraduate or postgraduate levels, they become astute commentators on teaching. However, these factors are not contradictory, as rigorous study can also be joyful and it can be mastered by an effective teacher.

It is also found in the Indian study that, like many other countries, lecture method is the predominant method of teaching at the undergraduate and postgraduate levels in India. However, lecturing at the undergraduate level is much more authoritative, and information driven and focuses on contents. The students are passive respondents of the content knowledge and are mostly listeners to the lectures. This traditional didactic lecture represents a teaching method which is seen from the teacher-centric and is 'teaching as telling or transmission'.

The teaching at the postgraduate level is much more interactive, involving questions and answers, and students are more engaged in the process. This positive attitude from the teachers may also be because they think that students are sometimes more informed and knowledgeable than themselves. The study pointed out mainly two predominant methods of teaching across different discipline: 'practical' and 'theory' based. Though there is a growing shift in emphasis from teaching to learning, the prevailing class room conditions act as a major constraint to create a student



friendly environment where student participation can be improved. The capacity of the teacher to manage classrooms and learners is at times rather poor. Added to this, the poor infrastructural facilities, large class size, lack of electricity and laboratory equipments are making teaching-learning far from perfect in the Indian colleges and universities.

It is therefore important to focus on good teaching, as on good teachers. There is a serious need to focus on the teaching processes, device robust feedback mechanism from different stakeholders and continuous analytical insights to understand the changing needs before suggesting reform measures. It is perceived that students in higher education want a joyful learning experience. Teachers recognize it too. Hence, the linkages between the students' approach to learning and teachers' approach to teaching should be synchronized.

Along with the focus on good teaching, it is equally important to focus on building 'good' learning environment. It can be found from the research evidences that the learning environment goes beyond the mere existence of teaching-learning materials. It is more of providing the ground where variations in learning and learners needs can be supported by equally dynamic teachers and administration. The administrative focus should be on shared and supportive leadership development, collaborative management and dynamic accountability measures, which go beyond taking account of personal or institutional achievements and focus on the process of environment building for a sustainable future.

There are however several other models of teaching in higher education institutions. Looking beyond India and to other developing countries can give us some clue. Among the new age models, the '*Interactive lecture method*' (ILM) is one such new model, which stands out. It is rather different from the traditional *lecture method*. Interactive lecture method



enables students to contribute actively in their own learning process. There are varieties of techniques which could be used in the ILM. There are also free online web applications available to make lecture method more interactive. The modalities of the working of interactive lecture help students to break-up the lecture in various segments and provide them the opportunity to apply the lecture contents. The AKEPT in Malaysia attempts to transform teaching and learning at the higher education. Interactive lecture training modules developed by AKEPT is an example of these efforts. The effect of the training programmes seems to be positive in promoting democratic practices through ILM. It is therefore important to constructively allow experiments in teaching and learning, which might lead to the establishment of a new effective teaching-learning model.

It can also be inferred that to develop and train students' critical thinking and academic performance, a democratic learning process is appropriate and necessary. The democratic element in the study process means that there is a no distance between students, their professors and the institutional administration. It also implies that students are to be trained to think in new directions and find ways of dealing with problems, it is vital that they are allowed to formulate their points of view freely to improve their participation in learning. Several studies are going on to streamline this process. For example, a Higher Education Leadership Academy (AKEPT) was established in 2008 to support the transformation of higher education in Malaysia in line with the objectives of the National Higher Education Action Plan. There are three centers under AKEPT namely, the Leadership Training Center, Leadership Research & Innovation Center and Teaching and Learning Center. All these centers are responsible for providing training to officers and lecturers in institutions of higher learning. The training modules



developed are divided into three levels, namely, basic, intermediate and advanced level.

As part of the higher education assessment and institutional accreditation in Korea undertakes evaluation of various components of the higher education process. To make a detailed assessment of the teaching and learning processes, Korean government launched a survey 'NASEL' involving 15 universities. This assessment is based on 6 indicators of teaching and learning. NASEL findings point very low student satisfaction and relatively less experience in interaction with the professors. It seems the interaction is more frequently with young professors than with the senior professors. Interestingly, interaction is less with professors from humanities compared to those in the sciences. Survey also shows relatively better level of interaction in private universities than public universities.

Based on the results, a number of tasks are recommended to improve teaching-learning competency at a university level such as designing plans to enhance interaction between professors and students, enhancing students' self-directed learning ability through positive-collaborative learning, developing plans to enhance satisfaction with education in major and liberal arts, improving global competency of the students, establishing strategies to improve students' competency in reading and writing, etc.

All of these studies promote the principle of flexibility, which also allows students to transfer credit from one study programme to another. Student's work experience is acknowledged and accredited by the university and integrated in the new curriculum. The student's prior learning is assessed and is used in the study programmes in conjunction with more theory-based elements. This goes along with building a problem solving skill to develop productive and critical thinking. These are guiding principles,



contributing to the optimisation of learning outcomes in a changing world.

Learning Outcomes and Accountability Measures

It can be difficult to operationally define learning outcomes as it varies as per contexts and depends on various aspects and interests. It is however essential to reckon that learning outcomes are beyond enrolments, attaining a degree and improving employability skills. Traditionally getting a good degree was considered the end of responsibility of educators and in this frame of analysis teacher quality and the teaching-learning process were very important in deciding the learning outcomes. The employees pick up many skills on the job. The informal learning that takes place on the job is equally important as formal learning to do a job. However, informal learning today, is recognized more than ever. The national qualification frameworks assess and certify prior learning. The idea of recognition of prior learning gives credence to informal and non-formal learning.

The discussions on learning outcomes have a tendency to center around issues related to employability of graduates in higher education. The common argument is that a well structured curriculum play significant role in improving employability of higher education graduates. The curriculum changes alone may not be an answer to improving employability skills. For example, language competency, communication capacity, numerical ability, capacity to work teams etc. are considered to be important employability skills which are rewarded very well in the labour market.

In some contexts, employability skills are closely associated with vocationalization of education. The discourse of learning outcomes and employability, the quality of vocational and educational training for the graduates has got attention. It also promotes inclusiveness. For instance, the



Malaysian government extends its inclusive efforts for those who could not go for higher studies. Malaysian technical university and colleges have a tradition of training and skill development. This is for Technical Vocational Education and Training (TVET). Currently, 14 ministries are doing skill training in line with TVET. In the Indian context, the role of the technology is argued to facilitate teaching with the use of technology rather than replacing teaching with technology.

However, teaching in the higher educational institutions has to do more than facilitating employability skills. Going to the basics, it is important to fix the learning, re-design the curriculum and there after teaching methods and evaluation. However, the challenges vary from institution to institution. Nevertheless, it still can be classified in terms of enhancement of teachers' outcome from teachers and learners perspective. The learning outcome is influenced by the teachers and their working conditions. The issues in Indian higher education system related to teacher's outcomes are many. The teaching stock is an issue impacting learning. In countries, such as India, a large number of teaching positions are remaining vacant. Good shares of the teaching responsibilities are carried out by ad hoc lectures and guest teachers. It is utmost important to review the existing recruitment policies and focus more on sustainable development of academic professionals. The focus on teaching-learning and interactive skills, among others should be viewed with a long term developmental perspective.

Another related issue is the system of affiliation in higher education in India. India has an affiliating system and some of the universities have a large number of colleges (at times more than 500 colleges) affiliated to it. Although universities are expected to have guidance and academic monitoring, given the large number of institutions affiliated to each of the universities, any meaningful academic monitoring becomes



almost impossible. It seems important to keep the number of affiliated colleges within a manageable figure, and necessary policies should be framed in this regard.

Students' engagement in a diverse learning environment impacts the quality as well as outcome of learning. The teachers believe that if students' fail to perform well in the examinations, the responsibility is that of the students only. They feel that while teaching is the same, some students perform well while others do not. Under such situation how can a teacher be blamed for poor performance of students! However, each student is different and has different capabilities. It is therefore essential to rethink about the re-building of learning environment to make them learning friendly in operation, both for the students and the teachers.

One of the important changes that higher education campuses face is the diversification of student body. The share of students belonging to disadvantaged families and first generation higher education groups is increasing. The orientation and preparedness of these students may be different from those traditional groups from more elite background. The faculty members in many institutions in India feel it is difficult to teach diversified students in one class room. They also point out that in many campuses, which are more diversified; the teacher student engagement is low. This is also partly due to the fact that the teachers are not oriented to address the issues of diversity. Unfortunately, as aforesaid, many teachers believe that this is the problem of the students' rather than teachers' or administrators'. This attitude needs to be changed. There are also some basic reforms needed to enhance the learning outcomes of the students from the deprived groups. There is the need for institutional and systemic approach for teacher-student engagement. In this regard more interaction between teachers, students and administration should be encouraged.



Group work and team building skills should be the utmost focus, rather than the literal outcome of the task given to the groups. It is essential to view and value diversity as a positive change. This necessitates an academic climate, where teachers become more sensitive and are oriented towards the benefit of learners. This should also inject a sense of collaboration and belonging and will eventually make the campuses more democratic and supportive towards diversity.

More research in these areas can help exploring the complexities better. It is also evident that research and teaching are related. Those who carry out academic research are familiar with the developments in the discipline, especially in their domain of research engagement. However, research is a weak area in the Indian higher educational context. The research facilities in the state universities and in affiliated colleges are very poor. Many teachers consider that teaching is their main, if not only, academic responsibility. A majority of the teachers in Indian higher education system do not publish any article or books throughout their career extending three decades or more. The status of employment of teachers adds further disincentive to carry out research. As noted earlier, many teachers are ad hoc, guest lecturers and temporary employees. However, this does not imply that all permanent teachers are very active in research. The situation warrants a dramatic improvement in the conditions promoting research in the higher education institutions in India.

It is therefore evident that, in addition to the large class sized, lack of basic infrastructure and pedagogical training, dominance of unidirectional lecture method, poor development of ICT facilities in campuses, the disconnect between teaching and research are posing major hindrances in achieving desired outcomes and hindering in upgrading the qualities of higher educational institutions.



Changing Teacher Profile and Teacher Development

At one end we desire to build world class universities and on the other hand there are several shortcomings existing simultaneously. In the wake of inevitable inroads by technology there is need to comprehend the dynamics associated with teacher profile and synchronized development in higher education. There emerges confusion if we have a scenario of 'Teacher' vs. 'Technology'. It may be important to mention here that such a proposition about higher education system is a myth where it is assumed that role of teacher has been sidelined due to technology. Teacher has always remained and continued to be an axial component of any level of education, in spite of the entry of technology.

In the system of higher education, the role of teacher has been like a 'Bank' (concept of Paulo Freire), 'Narrator' and that of 'Changing Agent'. If we try to understand changing teacher profile and teacher development in higher education system, some of the key aspects become prominently important, especially for the non-professional undergraduate courses. One is about rigid pyramid structure of teacher profiling and rigid non-interdisciplinary subject classifications. A very crucial feature of such a structure, which has an impact on development in higher education, is the 'horizontal immobility' of teachers and students across the institutions, which is essential to attract the best talents. Several reasons may be held responsible for this including spatial-cultural diversity and issue of transferability in academic jobs.

Along with this immobility there are other issues as inadequate preparation at entry level. For instance, in India, unlike teaching at any other level, no prior training is required at higher education level. The only requirement is to have a Post Graduate degree with NET (National Eligibility Test) certificate. There are some debates around holding of



doctoral degree as a prerequisite of ensuring quality at higher education level.

Therefore, it is generally seen that effective teaching and the elements of critical pedagogy in it, are missing. The (newly recruited) teachers are often on their own, whereby they either try to reproduce those mechanisms through which they have undergone during their study or they have trial and error method. In any case, it is the higher education teaching-learning that suffers the most.

Another important aspect of higher education system in developing countries is about changing profile of teachers. There is no doubt about the fact that teaching profession has become more inclusive in terms of representation than it was thirty years ago. The student population is now largely comprises of first generation learners. These entail a problem about their handicap towards social and cultural capital and more importantly for use of technology. And the result is a vast gap between those who entered previously and those who are entering now in the teaching profession. Although there are certain normative measures like providing orientation programmes, however the need is to qualify such programme beyond certification.

It can be said that although some expansion of higher education has already taken place, there are several other challenges. One of the most prominent concern is about 'quality'. To improve the quality of the teachers, universities, mostly in developing countries (e.g. in India) conduct induction programme for new faculties for their development leading to effective teaching and learning. However, a short term induction programme is certainly not enough, especially considering the changing nature and demands of teaching-learning today. To impart the effective teaching-learning in higher education, it is therefore equally important to introduce learning and teaching excellence centre. The



centres are to offer training, support, curriculum development etc. There should be support to digital learning, such as use of social media for self-learning. The experiences from the developed countries, their researches and experiments can certainly enrich the teacher training in higher educational contexts.

The process, whether it is teaching-learning and/or teacher-training should be participatory, where students and academic staff work together. It is imperative to recognize teaching/learning as an academic activity which deals with adult and informed learners it is however, difficult to bring in changes unless we get faculty on board. The shortage of quality faculty recruitment must be addressed simultaneously with the implementation of robust teacher-training mechanisms.

There is vitality of teacher and thus, there should be policies which may provide appropriate recruitment, remuneration and empowerment with sensitization towards equity (as has been mentioned in the Education 2030 framework for action).

Reflections and Observations

Reforms in higher education amidst the impending announcement of one or more major policy push highlight the intent and we come back to the table repeatedly to discuss the issues and problems. The fact that HE in many countries is a concurrent topic, requires a consensus with regard to a range of issues that enhance the existing capacity of teachers and expands the learning opportunities for students. We need to understand the processes and nature of institutional players that are emerging to address this.

The discussions in the International Seminar have highlighted several important insights related to the teaching-learning and new technologies in higher education. The delegates from over 14 countries have expressed a wide



variety of ideas and reflected on the contemporary issues concerning the theme of the seminar. In terms of richness, the seminar also demonstrated a deep and critical discussion with the audience, in which many renowned educationists and policymakers were present.

It is found that improving the quality of teaching-learning is a major concern for the contemporary higher education around the world. It is even more relevant in the context of developing countries, to invest in human resource development, to keep pace with the global knowledge driven society. In this regard, effective use of technologies in higher education is one of the keys and the other being policies based on context specific research evidences.

It is understood that bringing any change in the teaching-learning processes in higher education system is challenging nevertheless needed. Any efforts to bring changes in teaching and learning process need to take into account four important factors: learners, teachers, teaching- learning process and technology. Learning should become interactive and an enjoyable experience.

It has been also reflected that for improving higher education, besides improving teaching learning process, giving importance to the context of teaching is needed. It is unavoidable, technology is the driving force at present and it



has already entered the classroom and our daily lives. So, the concern is how best we can help the instructors to make use of technology, which cuts across contexts and spaces of lives.

The first step is perhaps the academic freedom. The



reform agendas should encourage academic freedom to the facilitator/teacher for bringing any innovation in teaching-learning process or classroom teaching. For improving the teaching- learning process, having good collaboration among sectors, stakeholders and even countries is the need of the hour. In this process, it is possible to comprehend diversified perspectives and similarities, which further helps to strengthen the system or share the best practices. The way forward for improving higher education, is therefore through sharing of knowledge and experiences.

It was also suggested that for sharing the experiences it is important to device mechanisms for open feedbacks or inputs from other entities. Sharing experiences and meeting from time to time are important to overcome academic isolation experienced by especially teachers in the colleges. Although meeting face to face is the most desirable, it may not be feasible always given the cost involved. The use technology can be an alternative which is cost effective and user friendly.

On the questions of professional development of the teachers, several issues were highlighted. Revamped orientation programme, flexible faculty exchange programme (within the country and internationally), effective accountability measures are some of the suggestions came up in the seminar. It is important to move from superficial strategies to train academics through short courses towards building a robust system of teacher development. Effective academic development is the key in this regard, where the focus should also be on building a dynamic understanding of the changing demands. It is to reckon that this is a long and hesitant process and hence, policies should be planned accordingly.

While thinking for incorporating teaching- learning with technology, there is, however, a need to think what level of technology can be used most effectively. It needs to identify



the whole system of provision of higher education in the country and there is a need to share the experiences of different contexts in teaching- learning process to get a better understanding before formulating policies and programmes.

At the institutional levels, encouraging the departments, schools and faculties to innovate in teaching- learning process is one of the core components of improving teaching-learning processes. In this regard, institutional and infrastructural support is equally important. There is also a need to integrate the diversity of technology in teaching-learning process. There is also a requirement of having centres for development of teachers, in which appropriate resources need to be provided.

Especially in the Indian context, it is discussed that a combination of traditional and modern technology based teaching could be a better approach towards university teaching-learning. Moreover, the technology has to be purposeful and it should not promote the societal divide further, rather help to reduce it. Equity here is an important component. It is therefore important to rethink about the learning environment first, to make them learning friendly in operation, both for the students and the teachers.

Finally, there is a need to re-examine the meaning of quality teaching and importance of capacity development. In the same line, it is important to introduce teacher development programmes, redesign the teacher accountability mechanisms and rethink faculty development. Blended learning through capacity development programmes can be undertaken as a method. The reform measures need to be rooted in empirical evidences on classroom practices. This requires a concerted effort to promote research on pedagogical dimensions and teaching-learning processes in higher education. The education departments in the universities need to be oriented to undertake research in the



area of teaching and learning. It is important to realize that no one but the teacher is to take active role. It is not that teachers do not realize and do not try. Rather the opposite. However, the key is to synchronize the coordination among the teacher, learner, learning environment and technology in a professional way to improve the overall outcome of teaching-learning in the tertiary sector.



Appendix-1

DETAILED PROGRAMME

Day 1: Thursday, 25 February (Venue: Jacaranda Hall)

09:00	Registration
09:30 - 11:00	Inaugural Session Welcome: Professor NV Varghese, Director, Centre for Policy Research in Higher Education Opening Remarks: Mr. Rob Lynes, Director, British Council India Inaugural Address: Professor Ved Prakash, Chairman, University Grants Commission Book Launch Presenting a copy of the book India Higher Education Report 2015, Routledge, to Shri J. Veeraraghavan, Former Principal Secretary, MHRD Vote of thanks: Dr. Sayantan Mandal, Assistant Professor, CPRHE/NUEPA Rapporteur: Nidhi Sabharwal, CPRHE/NUEPA, India

Day 1: Thursday, 25 February (Venue: Jacaranda Hall)

11:00 - 11:30	Coffee and networking (Venue: Pre-function Area)
11:30 - 13:00	Plenary Session: Globalization and changes in teaching-learning processes Chairperson: Kavita Sharma, President, South Asian University, India
11:30 - 11:45	Key note: William G. Tierney, University of Southern California, USA
11:45 - 12:30	Panel Discussion Discussants: 1. Don Passey, Lancaster University, UK 2. Anjali Bajpai, Banaras Hindu University, India 3. Nopraenu Dhirathiti, Mahidol University, Thailand 4. Thushari Welikala, King's College London, UK
12:30 - 13:00	Open for Discussion Rapporteur: Malish C M, CPRHE/NUEPA, India
13:00 - 14:00	Lunch



14:00 - 15:30	Plenary Session: Impact of technology on teaching and learning Chairperson: M. Anandkrishnan, Chairman, IIT Kanpur, India				
14:00 - 14:15	Key note: Neil Morris, University of Leeds, UK				
14:15 - 15:00	Paper Presentations <ol style="list-style-type: none">1. Abdul Mannan, UGC, Bangladesh2. Gwen Van Der Velden, University of Bath, UK3. Sudhanshu Bhushan, NUEPA, India4. Richard Walker, University of York, UK				
15:00 - 15:30	Open for Discussion Rapporteur: Garima Malik, CPRHE/NUEPA, India				
15:30 - 16:00	Coffee and networking (Venue: Pre-function Area)				
16:00 - 17:00	Parallel Session: Impact of technology on teaching and learning				
World Café					
	<table><tr><td>Parallel Session 1 Chairperson: Richard Everitt, BritishCouncil India Paper Presentations:<ol style="list-style-type: none">1. Saroj Pandey, IGNOU, India2. Beth Caldwell, BCEESIPL, India3. Neenaz Ichaporia, BCEESIPL, India4. Sunil Khijwania, Center for Educational Technology, India5. Rupesh Vyas, IIT, India</td><td>Parallel Session 2 Chairperson: Pankaj Mittal, UGC, India Paper Presentations:<ol style="list-style-type: none">1. Anupam Basu, IIT-Kharagpur, India2. Uma Natarajan, The HEAD Foundation, Singapore3. Bhaskarijyoti Bora, Gauhati University, India4. Sidhartha. N. Sharma, Gauhati University, India5. Manas Behra, R.D.Women's University, India</td></tr><tr><td>Open for Discussion Rapporteur: Anupam Pachauri, CPRHE/NUEPA, India</td><td>Open for Discussion Rapporteur: Pradeep Kumar Choudhry, JNU, India</td></tr></table>	Parallel Session 1 Chairperson: Richard Everitt, BritishCouncil India Paper Presentations: <ol style="list-style-type: none">1. Saroj Pandey, IGNOU, India2. Beth Caldwell, BCEESIPL, India3. Neenaz Ichaporia, BCEESIPL, India4. Sunil Khijwania, Center for Educational Technology, India5. Rupesh Vyas, IIT, India	Parallel Session 2 Chairperson: Pankaj Mittal, UGC, India Paper Presentations: <ol style="list-style-type: none">1. Anupam Basu, IIT-Kharagpur, India2. Uma Natarajan, The HEAD Foundation, Singapore3. Bhaskarijyoti Bora, Gauhati University, India4. Sidhartha. N. Sharma, Gauhati University, India5. Manas Behra, R.D.Women's University, India	Open for Discussion Rapporteur: Anupam Pachauri, CPRHE/NUEPA, India	Open for Discussion Rapporteur: Pradeep Kumar Choudhry, JNU, India
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Open for Discussion Rapporteur: Anupam Pachauri, CPRHE/NUEPA, India	Open for Discussion Rapporteur: Pradeep Kumar Choudhry, JNU, India				
17:00-17:15	Conclusion of Day I: Manjula Rao, British Council.				



Day 2: Friday, 26 February (Venue: Jacaranda Hall)

09:30 - 11:30	Plenary Session: Perspectives on Teaching and Learning in Higher Education Chairperson: D. P. Singh, Director, NAAC, India
09:30 - 09:45	Key note: R. Govinda, Former Vice Chancellor, NUEPA, India
09:45 - 10:30	Paper Presentations: <ol style="list-style-type: none">1. Hyun-Sook Yu, KEDI, Republic of Korea2. Sayantan Mandal, CPRHE/NUEPA, India3. Bjarne Wahlgren, Aarhus University, Denmark4. Saemah Rahman, Universiti Kebangsaan, Malaysia
10:30 - 11:00	Open for Discussion Rapporteur: Naresh Kumar, NUEPA, India
11.00 - 11.30	Coffee and networking (Venue: Pre-function Area)
11:30 - 13:00	Plenary Session: Learning Outcomes and Accountability Measures Chairperson: Karuna Chanana, Former Professor JNU, India
11.30 - 12.30	Panel Discussion Discussants: <ol style="list-style-type: none">1. Ruhizan Mohammad Yasin, Universiti Kebangsaan, Malaysia2. M.S. Lalitha, Pondicherry University, India3. Neeru Snehi, NUEPA, India4. Kyriaki Anagnostopoulou, University of Bath, UK5. Nidhi Sabharwal & Malish C M, CPRHE/NUEPA, India
12.30 - 13.00	Open for Discussion Rapporteur: Jinusha Panigrahi, CPRHE/NUEPA, India
13.00 - 14.00	Lunch
14.00 - 15.30	Plenary Session: Changing Teacher Profile and Teacher Development Chairperson: Abhimanyu Singh
14.00 - 14:15	Key note: N. Jayaram, Formerly with TISS, India



14:15 - 15:15

Paper Presentations:

1. Tom Sork, University of British Columbia, Canada
2. K. Ramachandran, NUEPA, India
3. B.P. Sanjay, University of Hyderabad, India
4. C.P.S. Chauhan, Aligarh Muslim University, India

Open for Discussion

Rapporteur: Dharma Rakshit Gautam, CPRHE/NUEPA, India

15:30 - 16:00

Coffee and networking (Venue: Pre-function Area)

Open Panel: Reflections and recommendations from the seminar

16:00 - 17:00

1. Manjula Rao, British Council, India
2. N.V. Varghese, CPRHE/NUEPA
3. Don Passey, Lancaster University, UK
4. Neil Morris, University of Leeds, UK
5. Ram Sharma, Shiv Nadar University
6. Nopraenu Dhirathiti, Mahidol University, Thailand
7. A K W Ananda Jayawardane, University of Moratuwa, Sri Lanka

Rapporteur: Sangeeta Angom, NUEPA, India

Concluding Remarks: J.B.G. Tilak, Vice Chancellor, NUEPA

Appendix-2

International Seminar on Teaching-Learning and New Technologies in Higher Education

New Delhi, 25-26 February 2016
India Habitat Centre (Jacaranda Hall)

International Participants

1. Mohammad Naim Azimi
Academic Vice Chancellor
Rana Private University
Afghanistan
2. Mohammad Amin Joya
Academic Vice Chancellor
Bamyan University
Afghanistan
3. Abdul Qayuem Karim
Senior Professor
Engineering School of Kabul
University
Afghanistan
4. Gulghutai Waizi
Programme Manager, British
Council
Afghanistan
5. M. Shah Nowaz Ali
University of Grant
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6. Dil Afroza Begum
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9. Md. Towhidur Rahman
Regional Manager
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12. Saemah Rahman
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Department of Teaching and
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Faculty of Education
University Kebangsaan
Malaysia
13. Ruhizan Mohammad Yasin
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Vocational Education)
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Learning Innovations
Faculty of Education
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14. Hyun-Sook YU
Director
Quality Assurance and
Evaluation in Higher
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KEDI, Seoul
Republic of Korea
15. Uma Natarajan
Senior Researcher
Foundation in Teacher
Education and School
Improvement
The HEAD Foundation
(Human Capital & Education
for Asia Development)
Singapore
16. Sumithra Jayaweera B
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