Dr. Anjali Khirwadkar Assistant Professor, Department of Education, Faculty of Education and Psychology, The Maharaja Sayajirao University of Baroda, Vadodara

Pinkal Chaudhari UGC-JRF, Department of Education, Faculty of Education and Psychology, The Maharaja Sayajirao University of Baroda, Vadodara

Indian Higher Education and Sustainable Development

INTRODUCTION:

India is expected to be the fastest growing economy in the world over the next 15-20 years. Higher education is perceived as a viable tool for economic, scientific and technological development of nation along with societal upliftment. The new challenge before the country at the beginning of the twenty first century is making education accessible to all, equity and equality in Higher education should be maintained by providing equal educational opportunity to all. Today the world economy is experiencing an unprecedented change. New developments in science and technology, media revolution, internationalization of education scene. Because of interdependence and integration of world economy in recent years, the Indian higher education has a challenge to provide to the nation and the world at large, skilled human power at all levels, having breadth of knowledge and confidence to effectively confront the social and economic realities. The major challenge before the Indian higher education system is to bring equity and quality in higher education (Khirwadkar and Chaudhari, 2012).

The Indian higher education system has undergone massive expansion to become the largest in the world enrolling over 70 million students. Such expansion would have been unimaginable without the extensive use of ICT tools. In India there is National policy of Education (NPE, 1986) and Program of Action (POA 1992) and five year developmental plan of the government along with National assessment and Accreditation Council to maintain quality in higher education and at the same time to bring measures for equity and equality in higher education.

SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT OF HIGHER EDUCATION:

There are many definitions of the term "sustainable development", but the most widely accepted is the one used in the publication "Our Common Future", sometimes referred to as the Brundtland definition: "Development which meets the needs of the current generation without compromising the ability of future generations to meet their needs" (UN, 1989).

UNESCO (2004) identifies two unique opportunities for HEIs to engage in sustainable development. First, "Universities form a link between knowledge generation and transfer of knowledge to society for their entry into the labour market. Such preparation includes education of teachers, who play the most important role in providing education at both primary and secondary levels. Second, they actively contribute to the societal development through outreach and service to society."

The higher education in India can sustain based on following four factors 1) Increasing private partnership, 2) International Collaboration, 3) Increasing industry academic partnerships, 4) Increased government allocation



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Increasing private participation

- Increase in the share of the unaided private sector in terms of the number of institutions and enrollment since 2001.
- Rise in the share of state private universities due to increased private participation (CAGR: 44% since 1995)

Increased government allocation

- Increased budgetary allocation for higher education by the Government
- Budgetary allocation for implementation of National Mission on Education through Information and Communication Technology (NMEICT)
- Establishment of new model degree colleges
- Setting up of National Knowledge Network (NKN)

Increasing industry-academia partnerships Increased government allocation

- Initiatives include guest lectures by industry practitioners, management development programs, live projects, consulting assignments, joint seminars, scholarships etc.
- Participation of industry bodies such as FICCI and institutions such as ISB, the IIMs and the IITs

International collaborations

• Increase in collaborations between Indian and foreign universities for faculty support and curriculum design, joint research, student-faculty exchange and twinning programs

HIGHER EDUCATION IN INDIA:

India possesses a highly developed higher education system which offers facility of education and training in almost all aspects of human creative and intellectual endeavours: arts and humanities; natural, mathematical and social sciences, engineering; medicine; dentistry; agriculture; education; law; commerce and management; music and performing arts; national and foreign languages; culture; communications etc. The institutional framework consists of universities established by an Act of Parliament (Central Universities) or of a State Legislature (State Universities), Deemed Universities (institutions which have been accorded the status of a university with authority to award their own degrees through central government notification),

Institutes of National Importance (prestigious institutions awarded the said status by Parliament), Institutions established State Legislative Act and colleges affiliated to the university (both government-aided and unaided).



Figure 3: Number of Universities and Colleges in India

The higher education system in India has grown in a remarkable way, particularly in the post-independence period, to become one of the largest systems of its kind in the world. There are around 659 Universities and 33,023 Colleges so far up to 2011-12 and Total Enrolment in Higher education was about 18.5 million (FICCI, 2014)

 Table 1. Number of Central, State and Private Universities and Colleges in India

	University-	Colleges
	659	33,023
Central	152	669
State	316	13,024
Private	191	19,930
Enrollment in 2012	18.5 million	
2012		



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Figure 4: Enrollment by field of study

Sources: UNESCO (2011), UGC (2013), UGC Annual Report 2011-12;

MHRD Annual Report 2012-13

Over the last decade, the number of universities in the country has grown at a CAGR (Compounded Annual Growth Rate) of 7.5% as against the 4.7% growth observed from 1951-2001. The number of colleges has grown at a pace of CAGR of 11% in the period 2001-2011 as against 6.1% in the period 1951-2001 (Federation of Indian Chambers of Commerce and Industry, 2011) as indicated in Figure 3. Higher education enrollment has grown at a healthy pace, with 3.6 million students being added over the last four years (National Center of Education Statistics (2008); University Grant Commission (2010)).

Table 2. Gross Enrolment Ration in Indian Higher Education

Year	Percentage	
2005	11%	
2011	13.8%	

The Gross Enrollment Ratio (GER) as per Table 2, currently stands at 13.8%, up from 11% in 2005. The GER has increased over the last decade at a CAGR of 3.3%. With a GER of 13.8% and enrollment of 14.6 million, access to higher education in India is currently restricted to a limited population (FICCI, 2011).

Department of Higher Education (XITH Five Year Plan: 2007-2012) had proposed following areas of concern:

- I. Provide greater opportunities of access to higher education with equity to all the eligible persons and in particular to the vulnerable sections.
- II. Expand access by supporting existing institutions, establishing new institutions, supporting State Governments and Non- Government Organizations/civil society to supplement public efforts.
- III. removing regional or other imbalances that exist at present.
- IV. Initiate policies and programmes for strengthening research and innovations and encourage institutions –public or private – to engage in stretching the frontiers of knowledge.
- V. Skilled development so as to reap the benefits of the demographic advantage of the country.
- VI. Promote the quality of higher education by investing in infrastructure and faculty, promoting academic reforms, improving governance and institutional restructuring.
- VII. Engage with civil society, state governments and with the international community in furtherance of knowledge, language and culture.

Looking forward to progress under Eleventh Five year Plan (2007-2012). Few steps has been taken for the Higher education under 12th Five Year Plan (2012-2017) like

- Spending to be raised from 1.1 to 1.5% of Gross Domestic Product (GDP) (INR 250 billion)- for state universities, scholarship, etc.
- Increase expenditure on research to 2 % of GDP.
- Autonomy of institutions for quality and employability, competitive grant and performance contract in hiring
- Private sector already providing 80% of professional courses; more Public–Private Partnership (PPPs) in other feasible areas
- Entry of foreign education provider
- Creation of teaching resources through leveraging information technology: creation of meta-university for multi-disciplinary learning and innovation

Problems of Higher education:

According to FICCI (2014), India is expected to become the most populous country by 2030. Population aged 18-23 years is expected to reach 142 million by 2030



Figure 6: Estimated Population in the age group of 18-23

India's tremendous potential- Demographic Dividend

- By 2020, the average Indian will be only 29 years old, compared with the average age of 37 years in China and the US, 45 in west Europe and 48 in Japan.
- India only large economy with declining age dependency ratios till 2030.
- Working age population to comprise over 63 % of the aggregate by 2016
- A third of India's population below 15 years of age and 20 % of the population in the 15-24 age groups.
- Projections indicate the emergence of a young Indian will 800 million in the productive age group by 2015; the comparable no. of China is 600m

Source: (National Population Policy (2000), BRICS report of Goldman Sachs, (2007)

SUGGESTIONS FOR SUSTAINABLE DEVELOPMENT OF HIGHER EDUCATION:

Suggestions for sustainable development of Higher education are listed as below:

The planned expansion of a differentiated university system

The Indian higher education system has undergone rapid expansion. In less than 20 years, the country has created additional capacity for a mammoth (huge) 40 million students. While the scale of this expansion is remarkable in itself, what sets it apart from earlier decades of equally aggressive expansion is a deliberate strategy and an organized design. India's higher education system has finally broken free of decades of colonial overhang. In recent years, the country has undertaken massive structural and systemic changes that have started to yield encouraging results.

The transition to a learner-centered paradigm of education

An Indian student in 2013 was a 'passive player' on a predefined education pathway. The curriculum was predesigned and worse still, outdated and seldom relevant, and the dominant mode of instruction was information-loaded, one-way lectures from the teacher to the student. If one were to describe the transformation in higher education pedagogy from then to now, dramatic would be an understatement. In today's classrooms, the student is an active participant in the education process and the role of a professor is that of a facilitator as opposed to an instructor. The instruction is designed to engage students in learning experiences that not only enable them to learn content but also to develop greater passion for learning – enabling them to 'learn to learn' and to be lifelong learners.

Intensive use of technology

Online platforms and ICT tools have helped take higher education to millions of deserving students in far-flung areas who would otherwise have no access to university education. Online education has become the first port of call for many students who were earlier left out of the higher education system, or had to settle for lower quality alternatives. The MOOCs model made it possible for the country to provide a quality education to the masses despite poor faculty-student ratios. Students today increasingly learn from leading faculty at elite institutions beyond the four walls of their classrooms as top-tier institutions have donned the mantle of being content generators. Professors collaborate across universities to collectively create and distribute for-credit curriculum for an online semester.

Online analytics provide faculty with data on how and at what pace each student is learning, enabling them to provide personalized support to aid student learning outcomes. The model also acts as a great democratize, allowing students to learn at their own pace – for instance, slow learners can go over certain content and exercises multiple times with special tools to aid their learning. In short, technology has been nothing short of disruptive for Indian higher education, solving for three of India's pressing problems – access, equity and quality - at once.

Reforms in governance

The imperative of the previous decade towards 'good governance' in all realms – business, administration and politics – has resulted in dramatic changes in the governance framework for higher education in areas both internal to institutions (their management and leadership structures) as well as areas external to institutions (the regulatory framework). While much has been done towards ensuring quality, instituting accountability, enabling private participation, promoting internationalization and so on, there are five salient trends that deserve particular mention when talking of governance reforms since 2013

- 1. Adopt a learner-centered paradigm of education
 - Introduce multi-disciplinary, industry-oriented, entrepreneurship, and skill-based courses
 - Include courses on social sciences and general awareness for societal development
 - Encourage lifelong learning for professionals
 - Provide students the choice of entry/exit from the higher education system
 - Adopt new pedagogical techniques: blended learning, flipped classroom, experiential learning
- 2. Ease faculty recruitment norms and offer incentives for attracting faculty
 - Retain high-quality faculty by implementing tenure based and rewards-based systems
 - Incentivize/facilitate faculty development and exchange programs with top-end institutions
- 3. Attract best-in-class faculty to conduct research
 - Adopt the mentor model to develop research capabilities in Indian institutions
 - Promote collaborations with international institutions, industry, and research centers for generating high-quality basic and applied research
 - Encourage community-focused/development- oriented research at academic institutions
- Strengthen industry-academia linkages across all aspects of the education value chain, from curricula and faculty to infrastructure, research, and placements
 - Encourage tie-ups between higher education institutions and providers of skill-based training to conduct skilling modules
- 5. Target capacity enhancement for socially- and geographically-deficient segments
 - Incentivize high-quality private and foreign participation
 - Widen access through virtual classrooms and MOOCs
 - Leverage Government initiatives in technology such as NKN, NMEICT
- 6. Provide competitive access to public research grants to all institutions

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- Encourage corporate and alumni funding
- Link public funding to institutional performance
- Promote individual-based funding

Following are the points on which vision is envisaged for Indian Higher Education System with reference to four pillars like- wider access, accountability, effectiveness, and efficiency. The latter two pillars are addressing the quality aspect.

- Offering Wider access to Higher Education in terms of Diversified Courses and Promoting Quantitative Expansion of Indian Higher Education.
- Providing Quality Higher Education & Projecting the Indian System of Higher Education in International Market.
- Making Universities and Colleges Generate Alternative Financial Resources.
- Decentralization of Educational Bodies
- Bringing Change in NAAC Accreditation Policy
- Introducing Legal Provision to Elevate the Status of Teacher as that of Medical and Lawyer Profession
- Local and Global Specific Curriculum
- Moving from Academic Research to Relevant and Quality Research
- Practicing Research based Teaching, and Teaching based Research in School and Teacher Training Institutes
- Incorporate the ICT in Higher Education
- Listening Students' Voice and Considering them as Stakeholders for the Renewal of Indian Higher Education System
- Developing National Higher Education Data bank to Accelerate the Research

Strategies for future...

- Specific policy pertaining to level of education/area /problem /regional aspect is the need of the hour as one policy is not going to fit in for all
- Challenge is to Create An Integrated Education System that provides
- Access to Quality education that is Practical /Relevant/ Customized & Effective
- Innovative ways (Tech Based) to provide Faster Expansion of opportunities of education to all
- Bridges the Gap between Education and Employability
- Promotes Social Equality /Economical Viability

Redefining Education Landscape for Vision 2020:

- Integration of vocational education at the school level to impart the basic technical skills
- Professional career counseling
- Special orientation for the school drop-outs
- Extensive use of ICT in skill training
- Creation of large scale infrastructure and skill development opportunities
- Skill Mapping to identify precise skill requirement for the growth of industry-ready manpower
- Affordability and Informal System to be valued.
- An integrated model of skill building through Optimum utilization of available existing resources
- Private share in education market is: 7 % in Primary, 21 % in Upper Primary and 32 % in secondary.

Facilitating Participation at every level will help:

- Setting of schools with proper infrastructures
- Teacher Training Institutes /Universities /Colleges
- Develop quality ITI's and Polytechnics with skill development courses in association with industry
- Institutionalize and establish coordination between the private sector and the government run institutions for skill development.
- Rules & regulations can be appropriately framed by the Government for regulation.
 Independent Autonomous Regulating Agency may be set up.

E learning / Goverence /SMS solutions companies will play a huge role to bridge gaps of education sector in almost all areas. Potential can be and should be exploited fully.

The reasons of success should be explored and on that basis, sound framework of Indian Higher Education System should be drawn for steady progress of India in upward direction.

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