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Special Issue

on

**REALIZING SUSTAINABLE DEVELOPMENT GOALS
THROUGH HIGHER EDUCATION INSTITUTIONS**

on the occasion of

96TH ANNUAL GENERAL MEET

&

**NATIONAL SEMINAR OF VICE CHANCELLORS
IN PARTNERSHIP WITH UNITED NATIONS**

&

**96TH FOUNDATION DAY OF AIU
(MARCH 23-25, 2022)**

at

University of Mysore, Mysuru

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EDITORIAL

A few decades ago, education had man-making as the main aim with earning a livelihood as one among several peripheral aims. Today, the main aim of education is generating human capital with man-making among other peripheral aims. With this scenario, though we can rejoice in the feats of development, there is no denying the fact that we have faltered in achieving the real aim of education, i.e. the man-making. The education that develops the mindset of *Sarve Bhavantu Sukhinah, Sarve Santu Niramaya; May all be Happy, all be Free from Disease* as an everlasting desire.

Man's priority for accelerated growth and development for fulfilling his luxuries, desires and comforts made him exploit the nature to the core. Now the nature is bouncing back at a higher magnitude and is disturbing the balance of the Earth Ecosystem. The earth has now started to undergo deadly climatic change leading to devastating effects of global warming. The predicted consequence of this is disappearance of Earth itself from the solar system. However, the time frame calculated for this devastation is centuries ahead. But due to our excessive interference with nature we may reach the verge of extinction very soon. The pace of change is so vigorous that Peter Drucker in one of his speeches said, '*Future has already happened*'. Moreover, the trouble with the present times is that it does not provide any consistent clues for future. And this is the most dangerous aspect of this whole development process. Unless, this situation is brought into grips, the threat of extinction continuous.

Education has always been a tool to achieve objectives of social, economic, and political development. While school education equips society with an enlightened workforce, higher education provides competent leadership by supplying well-developed human resources such as scientists, engineers, doctors, teachers, managers, and so on. It is this human resource that finally takes the responsibility of operating the development system of a Nation. In the past, there have been lots of developments in various fields like Agriculture, Industry, Science, technology and so on. Today, we are living in the knowledge era which is being operated by information and communication technology through the internet. Knowledge has now become the tool for development. All this has been possible through the brilliance of the human mind produced by the system of higher education. Unfortunately, it is this human mind which has brought us to this juncture where the Earth itself is in existential crisis.

According to Klaus Topfer (2002), development rests on three pillars---society, economy, and environment. The environmental pillar provides the physical resources and ecosystem services on which humankind depends. The well-being of these three areas is essential to creating a sustainable world. For this, the world needs people with the values, competencies, skills, knowledge, and mindset necessary to contribute towards the wellbeing of these three pillars. Such qualities can be nurtured in people only through right education. Education for Sustainable Development should start as a race with such a competitive spirit so as to ensure that education triumphs over environmental degradation.

Universities with their prime function of generating new knowledge and relevant expertise in all disciplines and disseminating it to students, have a significant role to play in this context. Being knowledge-based organizations, universities are also expected to percolate the wisdom of knowledge to the community for its betterment. As social entities universities interact continuously with community and are one of the key drivers of change in the society. Thus, community engagement is also one of the important functions of a university. The universities therefore, serve the society in three dimensions – Research, Teaching and Community Engagement.

One of the key activities of the AIU is to convene the Vice Chancellors' Meets at Zonal and National level to discuss various issues related to higher education in general and issues related to of the zone in particular. India being a country with large geographical area, we have categorised into different zones— East, West, North, South and Central. These Meets are important platforms not only to discuss the significant issues of higher education but they also play a catalytic role in carrying the voice of the leaders of higher education to appropriate agencies and authorities.

Every year in our Annual Vice Chancellors' Meet, we deliberate on a specific theme which is of topical significance for higher education community and in the Zonal Meets, we deliberate on subthemes of the same theme. I am delighted to inform you that this year we have identified a theme of great consequence i.e. '*Realising SDGs through HEIs*'. The topic has been specially identified for the Meets with an aim to bring out a roadmap which can help the universities to gear themselves towards becoming more responsive to the present and future initiatives required to sustain our Planet Earth.

This Special Issue of the University News being brought out on the occasion of National Seminar of Vice Chancellors on the same theme '*Realising SDGs Through HEIs*' is also to commemorate the 96th Annual General Meet and 96th Foundation of the Association of Indian Universities (AIU) a premier apex body of Higher Education in India. Founded on 23rd March, 1925, AIU has successfully traversed a long journey of 96 years and proudly entered its 97th year in the month of March 2022. In these 96 years, many similar institutions came into existence, functioned for some time, became ineffective and then simply faded away. In contrast, the resilient and resolute AIU grew continuously in strength and stature, carrying forward the rich legacy and glory; brazening out the setbacks, difficulties and hurdles which hindered its smooth journey. Today, it is an icon in the landscape of Indian higher education playing a very vital role as a research-based policy advice institution to the Government of India in the field of Higher Education, Sports and Culture. It is indeed a matter of pride to celebrate this momentous occasion by recounting the story of its glorious journey and paying tribute to all those who have connected us to this string of history making. Obviously, our history is a vital part of who and what we are!

Little did I realize while taking up this responsibility, how challenging it is to get articles on such significant topics in such a short notice of time. To my surprise, I received piles of articles from both academia as well as industry from every nook and corner of the country. Overwhelming response from the contributors is a great inspiration for me and I am thankful to all the contributors for it. I must confess that I could not include all the articles in the Issue because of the space constraint though most of them deserved to find a place in it. The articles included in the Issue consists of a varied spectrum of topics reflecting a wide range of views on this highly significant topic which might be of great implication for improving the performance of our higher education institutions vis a vis contribute to sustainable development.

With these efforts of AIU and the cooperation of Higher Education Institutions, I am sure India will turn out to be effective propeller of meaningful and powerful agendas of sustainable development.

Here I am reminded of what Swami Vivekanand said, "*If the Lord grants that you can help any one of His children, blessed you are; that that privilege was given to you when others had it not. Do it only as worship.*"

We, the higher education community got this privilege of leading the world towards sustainable development. With sustained support from Government and strong links with Community and our indigenous value system, we shall definitely be the major contributors to this global movement of creating a sustainable world. Lest, we continue to give importance to three important things the students, nature, and humankind!

Sistla Rama Devi Pani

Conceptualising the National Seminar of Vice Chancellors on Realizing Sustainable Development Goals through Higher Education Institutions

Pankaj Mittal* and Sistla Rama Devi Pani**

Modern Indian Higher Education has come a long way since the first three Universities (the University of Calcutta, University of Bombay, and University of Madras) were established in 1857. Now when we are celebrating the 75 Years of Independence and simultaneously 75 years of education in Independent India, we see a considerable expansion of higher education in our country. It is a matter of pride that the higher education system in India at this juncture is the world's 3rd largest system after US and China today. It has witnessed profound expansion in the past few decades with the number of universities in our country increasing from 19 at the time of independence in 1947 to around 1050 and the number of colleges from 496 to around 50,000. This has been the result of projected demand for trained and skilled professionals running into millions in different sectors like Engineering, Telecom, Banking, Insurance, Pharmacy, Health Care, Tourism, Dairy Products, and Construction. We also envisage an unprecedented increase in demand for higher education primarily due to the high aspiration of the youth of the country.

Quality, impact, and relevance are important criteria by which society measures the performance of education. The rapid growth of higher education over the years has not resulted into commensurate qualitative changes. The dilution of its quality and standard, in turn has affected the quality of manpower produced. Moreover, access does not always mean accomplishment of education. Today there is a strong feeling that the skills of a graduate/postgraduate produced by our colleges and universities do not match the needs and expectations of the job market. They are not able to function in proportion to the education acquired. On the one hand, we do not want such a large number of educated unemployed and on the other, we have jobs for which suitable candidates

are not available. Only those institutions which can impart quality education on a continuous basis shall be in a position to compete in the global market. Improving the quality of higher education, has, therefore, become a primary concern of countries the world over. It is obvious that the quality of a nation depends upon the quality of its citizens which in turn, depends on the quality of their education. And that is what the Sustainable Development Goals emphasizes.

Quality alone will not suffice if we have to achieve the SDGs, education should have a positive impact on society. It should be able to inculcate required awareness on health, fertility, wellbeing and even the quality of a country's governance is linked with levels of educational attainment. Education should be helpful in combating ills of the society like terrorism, corruption, immoral and unethical activities. Educational institutions should engage with the community around it. It should undertake welfare measures for the local areas. Schemes like NCC and NSS should be made more popular. In a democratic country like India this is all the more important.

There has been major progress in education access, specifically at the primary school level, but still India contributes to almost India constitutes 1/3rd of illiterate population in the world. Eradication of illiteracy from our country will help us in realizing one of the targets of SDG. While completion of a basic education is associated with higher quality health indicators, progress on the other SDGs can be influenced by the completion of a secondary education. People, particularly women with a secondary education are more aware about antenatal care and better medical treatment in general, take more measures to have fewer children, improve their children's health, are more likely to send their children to schools and colleges, and thus they can have greater economic opportunities that will alleviate poverty and hunger.

Thus, education plays an important role in advancing the quality of learning and supporting

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life-long learning goals but it is also an important part of other goals from reducing poverty, supporting economic growth and increasing access to decent work; to advancing knowledge and innovation around health care, climate change and peaceful institutions. Achieving the goal of education will influence the achievement of all the other 17 goals directly or indirectly.

In view of this, the concepts of sustainability and sustainable development are being promulgated at international level by the UNESCO. Sustainability, in this context is the development that fulfils the needs of the present generation while guaranteeing the balance between social wellbeing, economic growth and environmental protection so that the needs and well-being of the future generations are not compromised. The official definition of Sustainable Development was derived for the first time in 1987 in the Brundtland Report, also called Our Common Future, published by the World Commission on Environment and Development (WCED). According to the Report, Sustainable Development is defined as the development that –meets the needs of the present without compromising the ability of future generations to meet their own needs.¶ While warning on the negative environmental consequences of economic growth and globalisation, the Report also described how it could be achieved.

In the world Conference of 1998, on higher education the World Declaration on Higher Education for the Twenty-First Century: Vision and Action were framed and adopted. This declaration is to prioritize the action plan for change and development of higher education. Time to time meetings is held to follow up on the action plan. Preamble of the declaration is as follows:

On the eve of a new century, there is an unprecedented demand for and a great diversification in higher education, as well as an increased awareness of its vital importance for sociocultural and economic development, and for building the future, for which the younger generations will need to be equipped with new skills, knowledge and ideals. Higher education includes ‘all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that are approved as institutions of higher education by the competent State authorities’. Everywhere higher education is faced with great challenges and difficulties related

to financing, equity of conditions at access into and during the course of studies, improved staff development, skills-based training, enhancement and preservation of quality in teaching, research and services, relevance of programmes, employability of graduates, establishment of efficient co-operation agreements and equitable access to the benefits of international co-operation. At the same time, higher education is being challenged by new opportunities relating to technologies that are improving the ways in which knowledge can be produced, managed, disseminated, accessed and controlled. Equitable access to these technologies should be ensured at all levels of education system.

Subsequently in the year 2000, in a three-day Millennium Summit of world leaders held in New York at the headquarters of the United Nations, the UN General Assembly proclaimed the Millennium Declaration from where the millennium development goals originated. The eight Millennium Development Goals (MDGs) mainly focused on reducing extreme poverty by 2015, among other things. On seeing the impact of MDGs which were targeted only till 2015, and also in view of urgent need to take care of the planet Earth, in June 2012, the United Nations Conference on Sustainable Development was held at (Rio+20) in Rio de Janeiro, Brazil where the Member States adopted the document ‘The Future We Want’ in which they decided, *inter alia*, to launch a process to develop a set of Sustainable Development Goals (SDGs) by upgrading the MDGs and to establish the UN High-level Political Forum on Sustainable Development. In January 2015, the General Assembly began the negotiation process on the post-2015 and in the UN Sustainable Development Summit held in May, 2015 it came out with 2030 Agenda for Sustainable Development with 17 SDGs at its core. The 17 goals of the new agenda of the UN are: Goal 1, end poverty in all its forms; Goal 2, End hunger, achieve food security and improved nutrition and promote sustainable agriculture; Goal 3. Ensure healthy lives and promote well-being for all at all ages; Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; Goal 5. Achieve gender equality and empower all women and girls; Goal 6. Ensure availability and sustainable management of water and sanitation for all; Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all; Goal 8. Promote sustained, inclusive and sustainable economic growth, full

and productive employment and decent work for all; Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation ‘Goal 10. Reduce inequality within and among countries; Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable; Goal 12. Ensure sustainable consumption and production patterns; Goal 13. Take urgent action to combat climate change and its impacts; Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development; Goal 15. Protect, restore and promote sustainable use of terrestrial; ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss; Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels; Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

In essence, Sustainable Development Goals also known as Global Goals are a call from the United Nations to all countries around the world to address the great challenges that the humanity faces and to ensure that every living being has the same opportunity to live a better life on our planet without compromising on essential requirements. In view of the interlinkages between the social, economic and environmental dimensions of sustainable development as well as the linkage between the 17 goals themselves it is essential to achieve all the goals collectively at the same time instead of working Whereas, achieving SDGs require cooperation, contribution and effort of every single individual on the Planet, it’s not easy to comprehend the wide range of complex social, economic, and environmental challenges and translate them into tangible action points. This will require guidance and handholding from the intelligentsia of the society.

Higher education institutions have the responsibility to aid society in its development and in meeting new challenges as they come along. As educational establishments, their function is to provide able, self-directed learners that are independent and confident and contribute to the society through civic duties. Due to their unique position in the society, they have a critical role to play in the achievement of the SDGs. In fact, realizing the SDGs without the involvement of higher education sector is quite an impossible task. The role of HEIs is thus very crucial

if we have to realize all the SDGs. HEIs have a direct role in the components of education and research towards realising the SDGs. HEIs can provide the best research-based knowledge and opportune platforms for much needed partnerships. But there are several other known and unknown ways in which the universities can contribute in realizing each one of the SDGs which need to be crystallized collectively through seminars, conferences, discussions etc.

In India, NITI Ayog has been entrusted with the task of coordinating the SDGs. The Ministry of Statistics and Programme Implementation (MoSPI) is engaged in the process of developing national indicators for the SDGs. Many of the Government ‘s flagship programmes such as *Swachh Bharat*, Make in India, Startup India, Skill India, Digital India, etc., provide the ladder to climb the steps in realizing SDGs. State and local governments have a very vital role to play in visioning, planning, budgeting, and developing implementation and monitoring systems for the SDGs.

Association of Indian Universities (AIU) as an apex representative body of higher education plays a significant flagship role in motivating and reinforcing the higher education institutions towards the issues of common cause for the society. As research-based policy advise institution, it has always been supporting the Government in various activities related to higher education in general, and youth in particular. In case of working towards meeting the United Nations Agenda 2030 for Sustainable Development also, AIU has initiated its forwards march and is now instigating the universities to join this righteous initiative. It also aims to support the Government in the process of realizing SDGs. As a preliminary step in this process AIU, has set-out to organize all the Zonal and National Vice Chancellors Conferences in 2021-22 on the themes based on ‘Realising Sustainable Development Goals through Higher Education Institutions’. This is in view of apprising the Indian HEIs about their role, and to reinforce them to take up the task of accomplishing SDGs as their prime responsibility. Accordingly, the Annual Vice Chancellors’ Meet of AIU in 2021-22 is on the theme *Realising Sustainable Development Goals through Higher Education Institutions*’ which will encompass all the 17 SDGs for discussion. At zonal level, a set of 4 closely related SDGs will be deliberated in each of the Zonal Vice Chancellors’ Meets. On the basis of the recommendations of the Zonal and National Vice Chancellors’ Meets, a

Roadmap for HEIs ‘Action Plan on realizing SDGs’ and a policy document for the Government entitled ‘*Realizing SDGs through HEIs*’ is proposed. This preliminary step is quite crucial to gear the HEIs towards this most urgent, important and inevitable task. The outcome of these Meets will help in providing input to the Government in its efforts to accomplish these goals in our country.

As per the scheme of things, a set of 4 closely related SDGs were deliberated in 4 Zonal Vice Chancellors Meets in East, West, North and Central Zones and SDG--4 relating to education was discussed exclusively in South Zone Meet. The present Meet is the Annual Meet and National Seminar of Vice Chancellors. The Meet is of three days in which the second and third day will be dedicated for National Seminar on the theme *Realizing Sustainable Development Goals through Higher Education Institutions*. All the 17 SDGs will be discussed in 8 parallel and 1 plenary Session. Plenary Session is dedicated exclusively for the SDG 17. Rest of the 16 SDGs will be discussed in 8 parallel sessions. Two related SDGs will be taken up in each Session. The discussions will primarily address the role of HEIs in the perspective of their contribution. Besides, there will be stocktaking of global progress towards achieving these goals; share knowledge, success stories and good practices; identify particular areas of concern and main challenges; and suggest ways forward in terms of action points for HEIs, government and other stakeholders. Action points for HEIs will be for all the three dimensions of HEIs i.e., Teaching, Research and Community Development.

Themes and Subthemes for National Seminar

The National Seminar will have five Technical Sessions. First Technical Session is on *Realizing SDGs through HEIs for Securing Basic Essentials of Well-being*. Subthemes to be dealt with in the session are:

- Contribution of HEIs in Ending Poverty in all its Forms (SDG-1)
- Contribution of HEIs in Ending hunger and Promote Sustainable Agriculture (SDG-2)
- Contribution of HEIs in Ensuring Healthy Lives and Well-being (SDG-3)
- Contribution of HEIs in Sustainable Management of Water and Sanitation (SDG-6))

The second Technical Session is on *Realizing SDGs through HEIs for Ensuring Equality and Sustainable Society*. Subthemes to be dealt with in the session are:

- Contribution of HEIs in achieving gender equality and empower all women and girls’ (SDG-5)
- Contribution of HEIs in reducing inequality within and among the countries’ (SDG-10)
- Contribution of HEIs in making cities and human settlements inclusive, safe, resilient, and sustainable (SDG-11)
- Contribution of HEIs in ensuring sustainable consumption and production patterns (SDG-12)

The third Technical Session is on *Realizing SDGs through HEIs for Promoting Industrialization, Employment, Peace Partnership, and Prosperity*. Subthemes to be dealt with in the session are

- Contribution of HEIs towards Promoting Peace, Justice and Strong Institutions (SDG-16).
- Contribution of HEIs in Strengthening Global Partnership for Sustainable Development (SDG-17).
- Contribution of HEIs towards Promoting Productive Employment, Decent Work and Sustainable Economic Growth (SDG-8).
- Contribution of HEIs towards Promoting Sustainable Industrialization, Building Resilient Infrastructure and Fostering Innovation (SDG-9).

The fourth Technical Session is on *Realizing SDGs through HEIs for Clean Energy and Creating Sustainable Ecosystem*. Subthemes to be dealt with in the session are:

- Contribution of HEIs in Ensuring Access to Affordable and Clean Energy (SDG-7)
- Contribution of HEIs in Taking Urgent Action to Combat Climate Change (SDG-13)
- Contribution of HEIs in Conserving Marine Resources for Sustainable Development (SDG-14)
- Contribution of HEIs in Protecting Terrestrial Ecosystems and Halting Biodiversity Loss (SDG-15)

Fifth Technical Session is on *Realizing SDGs through HEIs for Actualizing Inclusive & Equitable Quality Education*. Subthemes to be dealt with in the session are:

- Contribution of HEIs in Actualizing Inclusive and Quality Early Childhood Care, Primary and Secondary Education
- Contribution of HEIs in Actualizing Inclusive and Quality Technical and Vocational Education
- Contribution of HEIs in Ensuring Access and Equity in Higher Education
- Contribution of HEIs in Promoting Quality and Excellence in Higher Education.

Apart from these specified subthemes the discussions will also revolve around:

- Implementation of SDGs in India: Status, Scope and Future Action
- Strategies and Approaches in Teaching-Learning to Realize SDGs
- Realizing SDGs through Research and Innovation: Strategies and Approaches
- Engagement of Universities with Society to Realise SDGs
- Creating Policies and Roadmap for Realizing SDGs through Indian Higher Education
- Strategies for Realising the 17 Sustainable Development Goals
- Any other topic related to Sustainable Development Goals

Format and Approach

The Sessions will be of 1 Hour and 30 Minutes each. In each Session there will be experts from United Nations, NITI Aayog, Line Ministries in India and academicians. Presentations will be followed by interaction and Q and A. On the basis of deliberations, a commitment statement will be framed for the universities to further the cause of achieving in the SDG. In addition to academic deliberation, capacity development initiative will be taken by forming a group of Vice Chancellors who will work on various dimensions of realizing the SDG through HEIs.

Questions That the Sessions Seek to Address

Each speaker of session will address these

four fundamental questions pertaining to the related Goal:

1. What is the status of realization of the concerned SDG in India?
2. What are the reasons for not being able to achieve the concerned SDG to its fullest potential?
3. What are the strategies which HEIs can adopt to contribute in realizing the concerned SDG?
4. Recommendations for the Government for speedy implementation of SDGs.

Apart from these fundamental questions, the following questions are proposed to guide the discussions during the conference:

Questions Pertaining to International Experts

1. What is the assessment of international agencies on India's performance on this Goal, and likely cooperation available from other countries to the HEIs in India for addressing the issues involved in achieving this goal?
2. What are the Best Practices and Bottlenecks of HEIs in other countries which have performed well in achieving this goal? What are the takeaways for Indian HEIs from them?
3. What is the cause and effect of accomplishing this SDG in India on achievement of SDGs in global context? How Indian HEIs can support HEIs of other countries in achieving this goal?
4. How can Indian HEIs contribute substantially towards achievement of this SDG?

Questions Pertaining to Government and Policy Makers

1. What is the progress of India in the global context in achieving this SDG? What are the various social, financial, administrative, governance and other dimensions of addressing the problems involved in achieving this SDG?
2. What are various challenges and bottlenecks for the country in achieving this goal and what are the specific ways through which HEIs can support the Government in accomplishing this SDG?
3. What are the administrative, financial and other ways of support that the government can provide to HEIs in their process of achieving this SDG?

4. How can the Government facilitate national and international collaborations among HEIs to accomplish this Goal?

Questions Pertaining to Academics and Practitioners

1. What are the specific ways through which HEIs can support the Indian Government and the United Nations in accomplishing this SDG? Are there any exemplary cases?
2. What are the various social, financial, administrative, governance and other dimensions of addressing the problems involved in achieving this SDG? What are the structural barriers/challenges for HEIs in achieving this SDG?
3. How can HEIs mainstream this SDG in all key strategies, policies, curriculum, governance, operational and administrative aspects in the HEIs and embed sustainable development component in teaching, research and community engagement?
4. In what ways can HEIs create capacity, generate skills and produce suitable manpower required to achieve this goal?
5. How can HEIs create quality and resilient systems which can sustain crisis situations like COVID-19?
6. What are the areas of common interests of different universities which can lead to linkages and collaborations and how can the HEIs engage stakeholders and form partnerships with local authorities, private players, civil society and philanthropic organizations, among others, for strengthening the efforts towards achieving this SDG?
7. What is the support which HEIs need from Government and international organizations, particularly, the United Nations to accomplish this goal?

Participation and Organization

Vice Chancellors of Indian Universities, Experts from United Nations System, Line Ministries in Government of India, Heads and Officers from Apex Bodies of Higher Education and School Education, dignitaries from international organisations and embassies and High Commissions in India International delegates from different countries and Academia will be speakers and Session Chairs. Experts from the UN system and other international organizations will also be invited to speak. Discussions will be conducted in English. Sessions will be through blended mode. The speakers, chairs and participants need to inform in advance about the mode through which they would attend the Meet.

Conclusion

Given the increased demands placed on societies and the environment due to, increased urbanisation, migration, industrialization, deforestation depletion of non-renewable resources etc., it is clear that action is required from all quarters to create a sustainable future. sustainable development not only deals with environmental issues, but economic, social and cultural issues as well. In this scenario, it is befitting for higher education institutions to take the lead and work towards realization of all the 17 Sustainable Development Goals. Motive of AIU is to realise this responsibility of Higher Education System.

The recommendations of this Seminar will constitute the discussions at the national level along with all the other SDGs received out of deliberations in the Zonal Meets in the National Vice Chancellors' Meets. On the basis of the recommendations of this National Seminar, '*University Action Plan on Realizing SDGs*' will be prepared which will be a handy guide for Higher Education Institutions of the Country and a Policy Document entitled '*Realizing SDGs through HEIs*' will be prepared and presented to the Government of India. □

University of Mysore: A Profile

University of Mysore, Mysuru is hosting the 96th Annual General Meet and National Seminar of Vice Chancellors—2021-22 of the Association of Indian Universities (AIU), New Delhi on March 23–25, 2022.

The University of Mysore (<http://uni-mysore.ac.in/>) was established on July 27, 1916. It is the sixth oldest in the country and the first in the state of Karnataka. Also, in a sense, it is the first university in the country to be established outside the limits of British India. The University was founded due to the efforts of the benevolent and visionary Maharaja of erstwhile Princely State of Mysore, His Highness Shri Nalvadi Krishnaraja Wadiyar – IV (1884-1940), and the then Diwan Sir M. Visvesvaraya (1860-1962). It was the first University in Karnataka to be accredited by NAAC in 2000 with Five Star Status. In subsequent cycles of accreditation by NAAC also, the University has performed well by scoring higher grades. The University has been graded ‘A’ in its fourth accreditation cycle. In the current NIRF ranking, the University is placed 19th in the University category and 37th in the Overall category. The UGC has accorded the University with Grade-2 autonomous status, and the DST identified the University as one of the country’s top 20 universities in scientific and research activities.

Two phrases from the *Bhagavadgītā* are a part of the University’s logo: “*Na hi jñāna sadrśam*” (Nothing Equals Knowledge) and “*Satyamevoddharāmyaham*” (I Will Always Uphold the Truth). This spirit highlights the moral fabric and the shining idealism of the University’s founders. Befittingly, the University of Mysore aspires to become a world-class University by tapping human potential from all sections of society towards excellence and building human capital, men and women of strong character and competence capable of being leaders of tomorrow and solving problems arising out of fast-changing realities, global and local.

The University’s vision envisages becoming the model University and a directional orientation towards becoming a world-class learning centre. It has an aspiration and goal to realize cutting-edge competitive performance networking possibilities in an era of globalization and information technology revolution through individual excellence. It sets an endeavour for community services and building a humane and compassionate society. It seeks the University to play

a leading role in the nation’s socio-economic, technological and cultural development. Built on a great legacy inherited from founding fathers, the mission is to create an environment of stimulating intellectual dialogue across disciplines and harvest knowledge with a cutting-edge through high-quality teaching, research, and extension activities leading to the generation of students who would provide leadership, vision, and direction to society.

The University has 52 Postgraduate Departments on the Main Campus, Manasagangotri, Mysuru and 3 Postgraduate Centres at Mandya, Hassan and Chamarajanagara. In addition, the University has 7 constituent colleges and 220 affiliated colleges. The main campus was named ‘Manasagangotri’ – the eternal flow of the mind – by the Poet – Laureate Sri Kuvempu. It spreads over 739 acres of picturesque land, containing a sprawling Kukkarahalli lake surrounded by verdurous trees extending to 261 acres. The main campus houses around 400 different species of trees. The Kukkarahalli lake attracts more than 125 species of birds, some of them migrate from different parts of India and abroad.

The University every year provides higher education to about 1,30,000 students, of which over 10,000 are postgraduate students. (including postgraduate students studying in affiliated colleges). The University of Mysore leads from the front in implementing the new NEP 2020 based education. The University has a separate cell for counselling foreign nationals. About 800 students from 63 countries are pursuing higher studies in the University. The Career Guidance Bureau and a Placement Cell in the main campus help the Indian students shape their careers with purpose and confidence.

The University of Mysore imparts quality higher education via its five faculties: Arts, Commerce, Education, Law, and Science and Technology. Recently, the University has also added the School of Engineering. The University programs are of a high standard due to the periodically updated curricula and relevant to local/national/regional/global developmental needs. Admission to various postgraduate programs

is online and completely transparent, adhering to the guidelines of the Government. The University always conducts examinations and announces the results on time. Numerous Gold Medals and Prizes are instituted to recognize and reward the deserving students.

The University maintains its quality, excellence, and vibrant existence through various programs comprising 1 Integrated UG Program, 3 UG Programs, 73 Masters Programs, 2 Certificate Programs, 12 Diploma Programs, 23 PG Diploma Programs, and 58 Doctoral Programs. The University's publication profile has been impressive over the last several decades. The faculty of the University disseminate their research findings in journals with high Impact Factor/CiteScore values. The current h-index of the University is more than 85. The University produces more than 300 PhDs every year. More than 60% of the students are supported with financial benefits for their studies through scholarships/fellowships funded under various schemes of the central and state governments.

The University's linkage with many reputed institutions in India and abroad has nurtured multidisciplinary research. The postgraduate campuses are networked with a Wi-Fi facility and CCTV surveillance. The unique facilities on the University campus include UGC's Certified Centre for career-oriented programs on Information Science and Technology, Postgraduate Departments with UGC/SAP/DRS innovative programs, and DST-FIST supported departments.

The University has a centralized state-of-the-art instrumentation facility, Vijnana Bhavan, that houses sophisticated scientific equipment (NMR, SEM, TEM). It also has many JRFs, SRFs, PDFs, Research associates and other research fellows. Annually, about 500 external researchers use the facilities for individual research and collaborative research pursuits. Twenty departments have been awarded UGC-SAP, CAS, DST-FIST, DBT, ICSSR and VGST grants. NGOs also sponsor research projects. The University has created an innovation ecosystem that includes an incubation centre and IPR cell under which many seminars and symposia have been organized. The

University has a Code of Ethics to check malpractices and plagiarism in research for all the PhD theses submitted. The progress of the research work is monitored by Doctoral, animal ethical and human ethical committees. The University has provided Wi-Fi and computerized Central Library facilities to all the faculty, research scholars, and P.G. students to facilitate the research activities. Several international/national conferences, seminars, symposia, workshops, faculty development programmes, and special lectures are regularly organized to meet the emerging academic and research needs. There are 228 ICT-enabled classrooms, 122 well-equipped laboratories, 10 sophisticated laboratories of global standards used as national facilities, 39 seminar halls, and 8 mega-conference halls with ready-to-use facilities.

As a part of disseminating knowledge to society, the University created a publication division called Prasaranga, which has published 2,800 books on topics ranging from philosophy to science. Currently, it brings out newsletters, Gazettes, Vijnana Karnataka, Manavika Karnataka, Prabhuddha Karnataka, mySCIENCE and mySOCIETY journals for science and social science research, in addition to the publication of other works. The collection of books, journals, bound volumes, theses, reports and manuscripts at the Mysore University Library is more than 12,50,000. The library has access to 18,000 e-books and 7,500 e-journals. It has provided access through the Online Public Access Catalogue (OPAC) to its collection. The University's Oriental Research Institute is a treasure house for ancient palm leaf scripts and rare manuscripts. The pride of the collection is the original version of *Arthaśāstra* by *Kautilya*.

Considering the university's achievements over the years, the University has been recognized as an Institution of Excellence, University with Potential for Excellence, Centre with Potential for Excellence in a Particular Area, and DST-PURSE scheme. The University has been one of few universities to receive munificent grants under RUSA-1 and RUSA-2 for infrastructure and research. It also has special funding from the Government of Karnataka for the centenary celebrations. □

Agenda SDGs for Higher Education Institutions in India

Rajesh Tandon*, Niharika Kaul** and Anshuman Karol***

Higher Education's potential and role in addressing societal challenges has now acquired particular significance, in a deeply divided and increasingly unequal world. The COVID-19 pandemic has pushed back decades of successes in improving access and inclusion in higher education institutions (HEIs) for excluded communities. In India, a recent survey showed that over 50% of Indian students in both urban and rural areas don't have access to the internet for online studies (India Today 2021). The recent case of the Dalit boy who was denied admission by IIT-Bombay authorities due to a technical glitch, but who was then provided relief from the Supreme Court of India, provides a glimpse of the vast set of inequalities present in accessing higher education in India (Live Law 2021). The climate crisis, health inequities, poverty, discrimination and violence based on gender, caste, class and race are among several challenges that need active contribution for redressal from higher education institutions in India today.

Higher Education in India is in need of radical transformation. The importance of HEIs in transforming relations of power, by rejecting the neo-colonial profit-driven models of knowledge creation and accumulation, is now an urgent necessity. An emerging discourse of knowledge democracy, a decolonizing practice has provided a pathway for this radical shift to take place in higher education, for the creation of a more equitable world (Hall 2015). It acknowledges the existence of multiple epistemologies; recognises the potential of knowledge as a powerful tool to take action to deepen democracy; and intentionally links the values of justice, fairness and action to the process of using knowledge (Hall 2015). In this increasingly unequal world, it is imperative that higher education institutions make their walls porous, and create a mutual learning

space for different stakeholders, academics and practitioners, from different communities possessing different kinds and forms of knowledge, to co-produce and disseminate knowledges relevant to find solutions to their local challenges.

The United Nations adopted the Sustainable Development Goals (SDGs) in 2015 as targets to be achieved by 2030, dealing with socio-economic and ecological development. The National Education Policy-2020 (NEP-2020) released by the Ministry of Human Resource Development, Government of India laid the foundation stone for integrating SDGs in teaching and research in HEIs in India, by stating:

“The global education development agenda reflected in the Goal 4 (SDG4) of the 2030 Agenda for Sustainable Development, adopted by India in 2015 - seeks to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” by 2030. Such a lofty goal will require the entire education system to be reconfigured to support and foster learning, so that all of the critical targets and goals (SDGs) of the 2030 Agenda for Sustainable Development can be achieved.” (GOI 2020, 3)

The Educational Framework for Global Citizenship in Higher Education published by the University Grants Commission recently in 2021, also recognises the value of integration of global education development agenda reflected in the Goal 4 (SDG4) of the 2030 Agenda for Sustainable Development, within the higher education system in India (UGC 2021). The engagement of national and state governments with the implementation of the UN 2030 Agenda has taken place, where in efforts have been made to map SDGs as per respective ministries and programs under these ministries (NITI Aayog 2018). However, these endeavours have remained somewhat in silos between different government ministries.

In order for SDGs to be achieved at the micro level, a multi-disciplinary approach is required, so that several SDGs are understood in the local context of the region, and dealt with collectively. Some steps have been taken in this regard by the creation of working groups with a multi-sectoral focus

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towards achieving SDGs (NITI Aayog 2020). State Governments have a unique position in India's federal structure in accessing locally-available technical expertise for specific SDGs being addressed in a particular local context (NITI Aayog 2020). Many states have taken up SDGs as part of their regular district level coordination by carving out a district unit/team for the work (NITI Aayog 2020). This approach can be scaled up by other states in India, in getting large-scale results in achieving the SDGs. The recent National Family Health Survey (NFHS-5) results not only highlighted the gaps but also make a case for targeted and local action for achieving ambitious SDG goals across major health indicators by 2030 (Financial Express 2021).

Higher Education Institutions can be pivotal in addressing the SDGs. They can lead the way by tailoring their pedagogy and research through a future-looking lens. Having access to young minds, they can train their students to produce path breaking knowledge and solutions, in partnership with their local communities and institutional stakeholders. In 2020, the University Grants Commission (UGC) launched the policy framework "Fostering Social Responsibility & Community Engagement in Higher Education Institutions" (HEIs) under the Unnat Bharat Abhiyan (UBA) 2.0, a flagship programme of Ministry of Human Resource Development (MHRD), Govt. of India (UGC 2020). The policy framework states that HEIs can play a significant role by teaching and conducting locally prioritised research about SDGs with their local communities (UGC 2020, 6).

This paper discusses four pillars that can provide an actionable framework for higher education institutions to become drivers of change for achieving the UN 2030 Agenda.

Pillar 1: Focus on locally-defined SDG indicators

SDGs can only be achieved when they are context driven and embedded in the local realities of the specific region. HEIs can therefore align their teaching and research according to SDG indicators that are of particular relevance in that area. For doing this, they first need to take a deeper look at challenges faced by communities where they are located.

For instance, Pandit Ravishankar Shukla University, Raipur (PRSU) is a hub under the Knowledge for Change Global Consortium (K4C), an initiative of the UNESCO Chair in Community-

Based Research and Social Responsibility in Higher Education (UNESCO Chair CBR-SR). Students from PRSU conducted a study with women informal workers after the COVID-19 lockdown. From their past experience over the years with working with this group of women, they already had some idea of their particular situations, working conditions, and challenges these women face in their day-to-day lives. During COVID-19, these challenges had exacerbated for the women informal workers.

Students from PRSU studied the impact of Covid-19 on women informal workers, with regard to their socio-economic conditions; health and psychological conditions; as well as their awareness about COVID-19. They used community-based participatory research (CBPR) methods during the process, and communicated with the women workers using telephonic conversations and focus group discussions. They also spoke to MGNREGS workers as part of their study.

What the students found was that for these women workers, the lockdown had led to an increase in care work for these workers as well as increased incidences of domestic violence against them, not only by their husbands but also by other family members. A majority of women informal workers lost their livelihoods and did not receive salaries during the lockdown periods. Many of their employers even replaced salaries with food, thereby justifying the non-payment of salaries. These findings directly pertained to SDG 1 (No Poverty); SDG 3 (Good Health and Well Being); SDG 5 (Gender Equality) and SDG 8 (Decent Work and Economic Growth). Having understood the major challenges faced by these women, and having mapped them to the relevant SDGs, the students are now working towards addressing some of these challenges through several interventions.

This example highlights how CBPR methods can be used to define local indicators to address SDGs. Such an approach also leads to meaningful solutions, which are locally produced and understood, and that can truly lead to change in that particular community.

Pillar 2: Building ownership of SDGs through mutually respectful and trusting research partnerships

Addressing SDGs at the local level requires building of ownership of those issues among the

community and institutional stakeholders. CHRIST University, Bangalore conducted a study on analysing women's effective participation in family, rural community and local governance, as part of the Mentor Training Program which is a training course on community-based participatory research (UNESCO Chair CBR-SR 2020). Their research partners included Centre for Social Action at CHRIST University and Chetana Women and Community Development Multipurpose Souhardha Co-Operative Ltd. Their co-researchers included Accredited Social Health Activists (ASHA workers) and local field co-ordinators.

The research questions were discussed with ASHA workers, field co-ordinators and Self-Help Groups (SHGs) representatives. During the discussions with them they expressed that they would like to understand how the SHG membership impacted their lives, and what changes have happened to their leadership roles in the family, community and local governance. During the study, building trust was not that difficult because prior investments had been made to form trusting relationships through prior action projects.

Based on the discussions, informal and in-depth interviews were conducted. In addition, photographs and video recordings were used for the data collection. For creating local knowledge community members decided to use folk songs in Kannada language. A life history approach was used to collect the data and do the analysis, which helped to understand the life stories of women in a chronological order. The summary of stories were created with the co-researchers. Research findings suggested that before joining the SHGs, the women's lives were monotonous; they had to stay mute in decision making processes and did not enjoy economic freedom. The SHG representatives also prepared a folk song which gave new expression to their conditions before joining the SHGs:

*“Hey woman, is this your life?
Do you have any meaning and purpose in your life?
What is your status in your family?
Is there somebody to listen to you at home?
How can you contribute to your family? By cooking?
By cleaning?
Do you have any alternatives to make your life better?
Hey woman...time has come for you to change.
Are you ready?”*

After joining the SHG, their lives changed in many ways. They found new hope, their voices were valued and heard, and they began to participate in local leadership roles. The new folk song based on the lives of these women after SHG membership was:

*“Let us form & strengthen our SHG!
Let us achieve
Let us be & learn together
Let us question
Let us end illiteracy and educate our children
Let us mobilize our sisters and mothers”*

Once these findings emerged, the researchers began the process of knowledge mobilisation. For instance, they began the local dissemination of the new knowledge through media channels during Women's Day in 2021. This example throws light on the importance of building trusting and mutually respectful research partnerships, for creating ownership among community and institutional stakeholders, of the issues being addressed. This can motivate them, and allow them to use the newly produced knowledge to take action to change their own situations. Translating SDG indicators to the local language of that community, and understanding their meanings from the perspective of the community and institutional stakeholders can provide transformative solutions to tackle them.

Pillar 3: Sensitizing next-gen professionals through SDG integration in curricula and research

Institutions of higher education are capable of becoming catalysts for the achievement of SDGs. With their enormous physical, digital and human resources, they can bridge the 'learning and collaboration deficit' to link them with contextual solutions for SDGs (Hall and Tandon 2021, 6).

National Law Universities (NLUs) in India have adopted several mechanisms to make their faculty and students socially responsible for achieving SDGs, including establishing committees and Centres of Excellence for Research and Development (Hall and Tandon 2021, 155). The Centres focus on producing knowledge across a wide variety of disciplines, including Law, Sociology, Anthropology, Politics, Science and Technology, Environment, Sustainable Development, International Relations, Human

Rights, Economics, Geography and Art History for examining the interface of law and society (Hall and Tandon 2021, 156). The Centres give students an opportunity to engage in policy-based research on contemporary challenges, offer free legal services through legal aid clinics, and use a legal lens to work with local villages and communities (Hall and Tandon 2021, 156).

The Institute of Law at Nirma University has also been using new means to integrate SDGs in their teaching and research. They recently engaged with Participatory Research in Asia (www.PRIA.org), a civil society organisation based in New Delhi, to conduct an orientation with their faculty members on mainstreaming SDGs in their institution. The orientation workshop focussed on the conceptual understanding on SDGs, pedagogical innovations, ways of creating resource materials, and reaching out to the students for mainstreaming SDGs in their curriculum. The workshop also engaged with the state government's strategies linking SDG targets with specific government schemes in their region in Gujrat.

Taking the example of SDG 2- Zero Hunger, the participants discussed opportunities for law students to be able to analyse implementation of legislations such as the National Food Security Act 2013 (which aims to provide subsidized food grains to approximately two thirds of the country's population) in their region. For doing so, they may have to work with students from other departments such as department of agriculture, or department of social work. In this manner, a cross-disciplinary approach would be required to sensitise professionals about the local and contextual challenges pertaining to specific SDGs.

Pillar 4: Mainstreaming Recognition and Integration of Experiential, local and Indigenous knowledge systems in Higher Education

In order to provide sustainable solutions for SDGs, multiple ways of knowing and forms of knowledge must be mainstreamed in higher education institutions. This provides an opportunity for new, often suppressed and excluded knowledge and expressions to come to light, and gives new perspectives to the same issue. The role of experiential, local and indigenous knowledge systems in creating solutions for specific SDGs can be critical.

Sido Kanhu Murmu University in Dumka provides an interesting example of how HEIs can integrate experiential, local and indigenous knowledge systems in their teaching and research (SKMU 2021). The university is located in Jharkhand, and is home to the Santal people, the largest tribe in Jharkhand. Dr Sonajharia Minz, the first Santal person to become a Vice-Chancellor of the university, has been adopting several measures for enhancing recognition and use of indigenous knowledge at her university.

One of the most interesting initiatives is related to the Santal Knowledge Centre (PRIA 2021). Dr. Minz has been working with her team to build a knowledge resource centre, for welcoming the elders from the Santal Tribe of the region. The elders will be seen as resource persons, who will work at the Centre to validate and systematise Santal knowledge on health, environment, forests, agriculture, water and other subjects, using different forms of knowledge creation including arts and crafts. Dr. Minz and her team are also planning to use technology to digitise much of the knowledge produced by the Santal elders. This new knowledge produced can be deployed to generate long-term and locally sustainable solutions for several SDGs.

Another example is Amrita Vishwa Vidyapeetham, which worked to improve health care in tribal areas in Odisha, by integrating government Public Health Centres, Allopathic and Ayurveda practitioners and Traditional Healers (Amrita 2019). The team aimed to build awareness about health and hygiene, along with simple natural remedies from traditional Ayurveda, based on the locally available resources (Amrita 2019). They conducted a comprehensive household survey to determine cultural and traditional aspects that impact health, to assess health practices and preferences for tribal healers and PHC health workers, to determine how Ayurveda could or did help improve health outcomes in the target group, and to enhance training programs based on needs of the communities (Amrita 2019). Digital training of health workers was also conducted thereafter (Amrita 2019). This kind of needs analysis of the community, treating the community's traditional and local knowledge and practices at par with any external understanding of health practices is integral, for understanding the community's challenges holistically and thereby addressing SDGs.

Community-Based Participatory Research presumes that the community's experiential knowledge is also valuable. This approach is now being institutionalised by the University Grants Commission in India, through the Master Trainers Training Program (UGC 2021). Under the program, seven universities across India have been identified as regional centres, for capacity building of faculty as Master Trainers for CBPR (UGC 2021). These Centres would host annually at least two batches of training of 30-40 Master Trainers so identified from colleges & universities of that region (UGC 2021). Each batch of Master Trainers would undergo a combination of virtual and physical (face to-face & residential) training of a week's duration at the Regional Centres (UGC 2021). This initiative has put into practice the ever-growing relevance of CBPR in making higher education socially responsible in India.

Conclusion

The pandemic of the past two years has significantly altered the received wisdom of implementing SDGs in a differentiated and linear fashion. Not only the timelines planned have been disrupted, but the virus has further 'infected' the very systems of governance mandated to implement SDGs at all levels. The future pathways have to be different, circular, local and holistic. In order to #buildbackfairer, new ways of understanding and addressing SDGs have to be invented.

In this paper, it has been argued that new ways have to be contextually and locally relevant, within the broad, universal mandates of SDG agendas. For contextually local knowledge solutions to be invented, trusting partnerships with local communities and local governance agencies is essential. Actionable knowledge that drives change has to be locally owned and agreed upon, not imposed from outside, even if external expertise is required to mediate local solutions.

HEIs have a special responsibility, therefore, for developing such relationships of mutuality and trust locally to collaboratively develop solutions. Such a responsibility is discharged most effectively when HEIs are open to listen to local knowledge in local idioms, and link their academic expertise with the same. Community-based Participatory Research is now a globally recognised methodology for such

knowledge co-creations. This will entail HEIs 'rebalancing the global and the local' in pursuit of their teaching and curriculum too. Preparing next generation of professionals with such aptitudes and competencies can be important towards achieving our collective aspirations to #buildbackbetter after the pandemic.

As explained earlier, India today provides one of the most supportive policy eco-systems for mobilising multi-faceted contributions of HEIs in achieving SDGs. The leadership of HEIs, and their faculty and students, have to take the leap towards contributing to India's rapid and equitable achievement of SDGs within the 2030 timeframe

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Demystifying Sustainable Development Goals through Higher Education Opportunities

Kahlon L K* and Dhawan Vibha**

There are 17 Sustainable Development Goals (SDGs) enshrined in 2030 Agenda for Sustainable Development. These goals adopted by the global community in 2015 are a wakeup call for action to facilitate a unique partnership benefitting the human race and supporting environment. These goals are a blueprint for sustainable development that all countries need to achieve for a common global viable future (Sachs, 2012). These 17 goals address universal global challenges, and are linked with the 3 pillars of sustainability- social, environment and economic. Within this broader framework are nested issues related to poverty, inequality, climate, environmental degradation, prosperity, peace and justice. There are three characteristics that make these goals unique- universal nature, integrated application and inclusiveness. SDGs pledge to leave no one behind! Translated into application, this means that no goal will be considered as achieved, unless it is for the benefit for everyone (General Assembly of UN, 2015). Although these goals are unanimously agreed upon still they are not legally binding. These goals also provide a unique opportunity for all stakeholders- businesses, government, researchers, and academia, to work cohesively for benefit of all. They also give a chance to enhance accountability by measuring progress against indicators laid out by nations.

The global demography is tilted towards young population. At 1.8 billion, the youth population (15-29 years) is a clear global majority. As per United Nations (UN) population prospects, every fifth youth in the world, resides in India. This accounts for ~20 percent of the total world population. These numbers reflect an importance of young people in the country. However this is also an area of concern, because of their low employment rate. This is aggravated by the fact

that there is a growing trend of young people who are neither in employment, nor receiving education and training. This is surely a lost opportunity which will cascade into a global problem of unimaginable proportion. Equating this into numbers, out of the total 1.3 billion youth worldwide, 267 million are neither gaining experience in labour market, nor receiving income from work. They are also not enhancing their education and skills. Young people missing out from educational institutions is a cause of worry. This is clearly a missed opportunity for youth since they are unable to participate in any of the collaborative teaching- learning experience. The youth are facing several challenges, and one of the most serious one is a growing number of idle youth, who according to World Youth Report (2020) are 'Not in Employment, Education and Training' (NEET).

Youth also personify hope, and their meaningful participation in decision making and implementation of post 2015 agenda is of critical importance. To tap energy and enthusiasm of a large youth population, interventions at colleges and universities are sought as a first step. Globally governments are inviting youth representatives to voice their opinion in dialogues and discourses that concern our future citizenry. These opportunities also facilitate development of competencies amongst young people to build up their knowledge and skills to integrate sustainability principles in their everyday lives (Barrett *et.al*, 2014). In order to solve the world's problems, we need to link these with goals that are measurable and achievable. Since SDGs fall in this category, we need to provide ample opportunities through our educational institutions to teach our younger generation about SDGs (Zamora-Polo, 2019).

SDG awareness through Higher Education Institutions

It is important to understand the purpose behind SDG awareness within an academic institution. It is either to increase the level of awareness of students about SDGs or scale up an institution's ranking of

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how it scores on parameters laid out as indicators. Accordingly two set of approaches are proposed, as below:

Infusion Approach

This is a tested technique wherein information about SDGs can be promoted while teaching core academic subjects. For example, while introducing Goal 3 ‘Good health and well-being’ in a language class, students can be asked to research and analyse media stories around it; or if to be done within a mathematics class by asking students to calculate BMR based on daily nutrition requirements.

Whole Institution Approach

A longer lasting impact can be created only if activities are made self-sustainable and an interest is created amongst larger numbers in terms of ownership and ripple effect. For this to happen an array of activities can be taken up by students of different levels. This also promotes an inclusive and participatory approach (Jochem *et al*, 2019). For example, a SDG club can be constituted within an institution with members from every level. The functioning of the club can be monitored by a ‘student task force / committee’, giving simultaneous chance to several students to lead activities and programmes through assembly sessions, competitions and campaigns. A faculty expert should be able to guide and navigate the activities so that these can be mapped and measured against indicators laid out for the goals. These type of a multilevel and interdisciplinary activities enables an institution to push its work in limelight and is consequently scored high for meeting the SDG grid.

SDG clubs formed at an institutional level can organise outreach events wherein the youth and community are brought together through screening of informative documentaries followed by interactive sessions with subject experts; observance of SDG days through advocacy events; curriculum linked assignments on SDGs; etc.

TERI's Role in Promoting Education for Sustainable Development

The Energy and Resources Institution (TERI; www.teriin.org) is an internationally acclaimed research organization with capabilities in research,

policy, consultancy and outreach. Striding ahead in sustainability space with projects in fields of energy, environment, and climate change TERI is a strong advocate of resource efficiency promoting smart, sustainable and inclusive development. It also has a strong team of environment educators who are spearheading youth centric outreach activities to support them in pursuing sustainability avenues, engaging and enabling youth to ideate, innovate, incubate and implement scalable solutions. All youth driven activities are thematic and supported by TERI's rich research experience. Multicultural projects and activities revolve around WaSH initiatives focussing on good health and well-being, water conservation including access to clean drinking water, resource efficiency initiatives, waste management, sustainable agricultural practices, and affordable and clean energy drives. Non-formal, informal and formal tools and techniques are employed in addressing these vast range of sustainability issues across the country. In furtherance to these, awareness about SDGs in integrated into every initiative since 2015. A balance of knowledge, outreach and empowerment is promoted through the projects. A contemporary and leading example is the Youth Climate Conclave (YCC), an annual programme being implemented in partnership and support from Delegation of the European Union to India and GIZ. The project engages proactively with youth from across the country and builds their capacities in understanding SDG 13 and other interconnected goals focusing on industry, partnerships, biodiversity, energy, resource efficiency and gender issues. Another prestigious youth led global initiative was the ENZ sustainability challenge, an exchange programme between HEI of India and New Zealand wherein youth were trained to develop scalable and sustainable solutions to address environmental and societal challenges through a competition mode. Every initiative chosen under this project was linked with the SDGs. Yet another youth driven initiative on leadership and environment sustainability was termed as LEAD earth SHIP with a twin objective of enhancing 21st century skills and empowerment opportunities amongst youth.

Competency Scale ups for Understanding SDGs

Prioritization is a step towards empowerment. Out of all the 17 equally important global goals it is important that we map our understanding of

these both at an individual and transverse level. Goals measured around sustainability principles have been translated into measureable indicators that provide a report card perspective on how the international community is responding to a global framework ensuring our future citizenry an improved environment. What we need to keep in mind is that development is both a qualitative and quantitative measure. Hence development is not at a glance assessment but a comprehensive evaluation of various parameters, and requires a systemic and continuous engagement with stakeholders. For designing a programmatic approach to enable a comprehensive understanding of SDGs, it is important that we are able to map the current level of understanding about SDGs, and then take steps to strengthen this further. A standardized questionnaire can be implemented with the target group and responses be collated to grade the knowledge level of respondents (both as a pre and post intervention).

Opportunities of Innovative Learning for Higher Education Institutions (HEI) through Socio-emotional learning (SEL)

Youth need support to scale up their competencies to develop a sense of motivation in simultaneous improvement of community action and academic success. For this they need to strengthen their Socio-emotional learning (SEL) (Durlak *et al*, 2011). In a world grappling with challenges of diversity and inclusion, SEL facilitates positive behavioral changes, which lay the foundation of peace and harmony, with respect for diversity and human rights (Conley, 2015). Promoting awareness about SDGs requires an open frame of mind to be able to accommodate the diverse view points and implementation challenges across political, geographical and cultural boundaries. For this to happen, SEL is a tool that can effectively connect youth with society, enabling him/her to expand the learning horizon beyond the walls of academic institutions (Elias *et al*, 1997). Hence the role of SEL in achievement of SDG target 4.7 is undeniable. The target states that: *'By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles; human rights; gender equality; promotion of a culture of peace and non-violence; and global citizenship'*.

With a greater understanding of interlink ages between SEL and SDG awareness, an escalating focus on social and emotional learning (SEL) needs to be promoted at all levels of academic institutions (Srinivasan, 2019). Highlighting the SEL quotient is therefore an innovative approach to strengthen quality teaching and learning experiences in academic institutions.

Mapping the Challenges

In absence of a flexibility in creating awareness about SDGs within the existing curriculum framework of HEIs, innovative approaches need to be identified to bridge this gap. Interdisciplinary learning opportunities will enhance competences related to understanding of SDGs. Further, challenges need to be mapped and solutions are to be identified within a monitored system to secure a sustainable and measurable change. Several studies highlight the relationship between SDGs and university teaching. But a clear score of students' knowledge about this subject is limited, since the assessment designs are institutional specific and cannot be applied over all entities. Hence it is desirable to evaluate students' current level of awareness about SDGs. We can also map progress of an institution at addressing the SDGs through several project designs. An important component will be to integrate transition from the campus to society level.

Global efforts to align compliance initiatives of higher education institutions to meet the objectives of SDGs are being undertaken. The world university ranking agency, Times Higher Education (THE) has also designed a ranking score that takes into account the progress made by academic institutions based on SDGs. India's progress towards attainment of SDGs is of paramount importance. With a burgeoning young population in India, the next decade is "critical" to the world in terms of attainment of SDGs. In spite of a majority of India's population falling under the 'youth' category, only 57 universities participated in the process for the year 2021. This scenario needs to change. Globally institutions have linked SDGs into the core curricula across disciplines. It is through discussions, deliberations and research that we can enhance knowledge about SDGs thereby facilitating sustainable campuses and sustainable communities. As per the current statistics, youth is the most important demographic group in the world,

and their active and well informed participation in achieving success with goals such as Goal 4 (Quality Education), Goal 8 (Decent Work and Economic Growth), and Goal 17 (Partnership for the Goals) is important. In the current global scenario where anthropogenic activities are pushing towards the sixth extinction (Kolbert, 2014), youth with their demographic strength and their role as the leaders of tomorrow can lead innovative initiatives related to environment protection and conservation.

A few recommendations are being proposed for an active engagement of youth in mapping SDG progress across HEI:

1. Inspire the next generation of youth leaders through innovative and cutting edge sustainable practices in which students identify the problems in their campus and design appropriate and scalable solutions
2. Deliver real world project experiences within the college campuses to instill values of multidisciplinary teamwork, real world business challenges and leadership
3. Develop competency building initiatives through an interdisciplinary curriculum approach to integrate sustainability in thought and practice amongst the young population
4. To enhance the 21st century skills (creativity, critical thinking, decision making and learning, communication, collaboration and information literacy, citizenship values, personal lifestyle changes and social responsibility) of youth

Conclusion

Higher Education Institutions can foster learning about SDGs by advocating innovative approaches that simultaneously strengthen an institution's ranking on SDG score card and also contribute towards enhancement of academic learning amongst youth. A comprehensive understanding of SDGs ensures an in-depth awareness on social, economic and environmental challenges. This multi-sectoral knowledge helps in development of interdisciplinary and intercultural skills amongst youth, thereby enhancing their academic and ethical competency.

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Sustainable Development Goals in Gandhi's Thought Perspective

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It is about 110 years since Gandhiji gave the world his vision of the possible human society. He had envisioned a society in which the driving force was Love Force and he used the term interchangeably with Soul Force and Truth Force. He contrasted it with Brute Force which he argued was the prime force of the day when he penned *Hind Swaraj* in 1909. Humanity of course did take cognizance of the philosophy propounded in the *Hind Swaraj*, but the forces promoting material development driven by rapidly expanding scope of science and technology in economic and social affairs relegated such profound philosophical thoughts into background. Even the then Indian leaders ignored the document after India won freedom, let alone others in the world. The course that was chartered by humanity was a mix of liberal and socialist development. Development meant economic development and it was highly techno-deterministic. Economic Man was given prime spot and other faces of human persona were neglected. It was assumed that values embedded in libertarian philosophy would take care of morals and values. For Gandhiji development meant an overall development of the human persona that would be self-regulating and that it pursued limited economic prosperity. For him development was for aiming at peace and harmony with self, with others and with nature. After returning to India from South Africa in 1915, he made his position clear in a lecture that he delivered at the Muir College Economic Society in Allahabad on 22 December, 1916. He said,

By economic progress, I take it, we mean material advancement without limit and by real progress we mean moral progress, which again is the same thing as progress of the permanent element in us...I should not have laboured my point as I have done, if I did not believe that, in so far as we have made the modern materialistic craze our goal, in so far as we are going downhill in the path of progress. I hold that economic progress in the sense I have put it is antagonistic to real progress. Hence the ancient ideal has been the limitation of activities promoting wealth. This does not

put an end to all material ambition. We should still have, as we have always had, in our midst people who make the pursuit of wealth their aim in life. But we have always recognised that it is a fall from the ideal. It is a beautiful thing to know that the wealthiest among us have often felt that to have remained voluntarily poor would have been a higher state for them.¹

There is a possible argument that rational and material world of the day would dub the Gandhian concept as bordering over spirituality and hence of restricted relevance to humanity at large. But arguing so would reflect failure to see practical wisdom in it for sustainable human development that has become humanity's most recent concern.

By the end of the Second World War, humanity witnessed explosion of material wealth, huge destruction of men and material notwithstanding. About twenty years later when the euphoria lowered, it was slowly realised that relentless devouring of natural resources produced significant and substantial negative environmental and ecological externalities. The human collectives living in different geographical areas defined as countries and under the political concept of nation states have been trying hard to come together to come to terms with it. In 1972 first global environmental Summit took place where environmental and ecological concerns were raised. Scientists argued both ways, debated over the evidences' adequacy, issue of attribution etc. However, by the first decade of twenty first century there has been an agreement that environmental and ecological externalities are real and they pose serious threat to human survival. The noises about development being sustainable grew and got noticed. United Nations Organisation took serious notice of the situation and set up special institution to deal with global environmental crisis. UN also mooted the idea of setting up nuanced economic development goals incorporating the concept of sustainable development. The first set of such development goals were called Millennium Development Goals (MDGs) and when the MDG period was over Sustainable Development Goals (SDGs) have been set up.

How far the concerns that are reflected in MDGs

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and SDGs try to address the issue of development with peace and harmony within selves and with nature needs to be examined. A techno-economic approach to it would severely limit the efforts as it would fail to take into account the issue of peace and harmony. Gandhiji was in no way an ecologist or an environmental activist.³ But the approach he suggested for the reconstructing the society had implicit in its core the ecological and environmental concerns. Hence, it should be interesting to examine in brief the United Nations' Sustainable Development Goals (SDGs) from Gandhian thought perspective. It is attempted in this article. In section I the core discourse of MDGs and SDGs is discussed in brief. In section II Gandhi's concept of human development is discussed. In section III convergence and divergence between the two sets of concepts are analysed.

I

1990 has been a watershed for humanity. The Iron curtain was raised for ever. USSR gave up its commitment to communism and embraced democracy and open economy. Liberalisation, Privatisation and Globalisation (LPG), became the dominant discourse. India also opened up and embraced the LPG. China retained its iron grip with communist party ruling but gave free hand to capital. Market economy was allowed to function. The reason was the communist and socialist discourses could not relieve the world of its poverty and unemployment problems. Economic prosperity was still far. Economic growth had remained stunted in most of the communist and socialist countries. The world increasingly realised that there was no alternative. At the turn of the twentieth century humanity was not in peace. Development eluded, inequality increased and poverty persisted. Most important of all, economic growth led to high and increasing environmental and ecological damages. A solution has to be found. Strategies for economic development with minimum environmental damages had to be worked out. Economic development had to solve poverty and hunger problem as well. Hence, UN Members deliberated together and formed a vision for the future.

In September 2000, leaders from 189 nations agreed on a vision for the future: a world with less poverty, hunger and disease, greater survival prospects for mothers and their infants, better educated children, equal opportunities for women, and a healthier environment; a world in which developed and developing countries worked in partnership for the betterment of all. This vision took the shape of eight

Millennium Development Goals, which provide a framework of time-bound targets by which progress can be measured.⁴

Fifteen years' time frame was set. Eight goals were set. The first goal was to eradicate poverty and hunger from the earth. By 2015, the number of poor had to be reduced to half the number that obtained in 1990 with per capita per day expenditure of \$ 1. Productive and full employment was to be provided to all including women so that a decent livelihood was ensured. The goal was also to reduce the population in hunger by half. Developing human resource by making available primary education to all was the next goal. This was followed by four goals relating to women empowerment and children survival. The seventh goal was to ensure environmental sustainability. The eighth goal was seeking the coordination and commitment from developed countries to support developing countries in achieving the MDGs with financial aid also.

Fifteen years is a long duration and UN had set up sound monitoring systems. 60 indicators were identified against which monitoring was done. The economic indicators used were obviously relating to income and employment. Health and education related indicators monitored the physical and social infrastructure and target population coverage and tolerable levels of morbidity and mortality among women and children. The environmental indicators that determined the sustainability involved three types of indicators. One related to access of population to basic amenities such as potable drinking water and sanitation, and extent of population living in slums in urban areas. Second type related to availability of stock of forests, fish, extent of protected areas, and stock of water resources used. The third type of indicators with respect to environment relate to CO₂ emissions, and consumption of ozone-depleting substances.

It should be of interest to know how the humanity performed with respect to MDGs by 2015. The UN report titled 'The Millennium Development Goals 2015' notes the following in the beginning in the chapter 'Overview'.

As we reach the end of the MDG period, the world community has reason to celebrate. Thanks to concerted global, regional, national and local efforts, the MDGs have saved the lives of millions and improved conditions for many more. The data and analysis presented in this report prove that, with targeted

interventions, sound strategies, adequate resources, and political will, even the poorest countries can make dramatic and unprecedented progress.

The report also acknowledges uneven achievements and shortfalls in many areas. The work is not complete, and it must continue in the new development era.⁵

The Report contains three tones. The first tone is about unprecedented efforts resulting in impressive achievements. The second tone sounds out continued neglect of the poorest and most vulnerable sections of population. The third tone announces success of global action in implementing MDG agenda. It also announces the scope for setting new development agenda on similar line.

With respect to achievements the poverty statistics draw immediate attention. The claim is that compared to 1990 when more than 50 per cent of all people lived with an income of less than \$ 1.25 a day, in 2015 only 14 per cent fell in this category. 1.9 billion People lived in extreme poverty in 1990; the number went down to 836 million in 2015. 36 per cent of world population lived in extreme poverty in 1990 and in 2015 the figure came down to 12 per cent. About gainful employment the report is silent. Data gap is a well-known phenomenon. Time series and cross section comparable data are difficult for the all countries. It may also be that while the incomes of poor have purportedly increased one is unable to say about its sustainability in the long run. The performance report also claims that proportion of undernourished people in the developing regions also fell by almost half since 1990, from 23.3 per cent in 1990-1992 to 12.9 per cent in 2014-2016.

Achievements with respect to education and mother and child health are also shown to be impressive. On Environmental front too, the Report notes,

- Ozone-depleting substances have been virtually eliminated since 1990, and the ozone layer is expected to recover by the middle of this century.
- Terrestrial and marine protected areas in many regions have increased substantially since 1990. In Latin America and the Caribbean, coverage of terrestrial protected areas rose from 8.8 per cent to 23.4 per cent between 1990 and 2014.
- In 2015, 91 per cent of the global population is using an improved drinking water source, compared

to 76 per cent in 1990.

- Of the 2.6 billion people who have gained access to improved drinking water since 1990, 1.9 billion gained access to piped drinking water on premises. Over half of the global population (58 per cent) now enjoys this higher level of service.
- Globally, 147 countries have met the drinking water target, 95 countries have met the sanitation target and 77 countries have met both.
- Worldwide, 2.1 billion people have gained access to improved sanitation. The proportion of people practicing open defecation has fallen almost by half since 1990.
- The proportion of urban population living in slums in the developing regions fell from approximately 39.4 per cent in 2000 to 29.7 per cent in 2014.⁶

With all the impressive listing of performance of the MDGs the sustainability health of the globe was far from satisfactory. On the environment front itself, there were serious developments which continue to threaten decent human survival let alone prosperity for all. The Report notes following major areas of concern.

Gender inequality continued. In Latin American countries women faced more discrimination in labour markets, they were more likely to be poorer than men and vulnerable to health issues. Gap between rich and poor increased. Rural – urban gap also persisted. Global emission of carbon dioxide increased by 50 per cent by 2015 compared to the 1990 level. Climate change assumed certainty. Marine fish stock were overexploited, 5.2 million hectare of forests were lost. Water scarcity had hit 40 per cent of people in the world. People depending upon natural resources for livelihood faced severe deprivation. Conflicts between countries and communities have increased and affecting peace and stability of millions of people. The situation is grim to an extent because the efforts to improve the lot of poor through rapid economic development leads to over exploitation of natural resources which in turns leads to environmental disasters.

The Report sounds optimistic and lays foundation for the next agenda and states, A bold new agenda is emerging to transform the world to better meet human needs and the requirements of economic transformation, while protecting the environment, ensuring peace and realizing human rights. At the core of this agenda is sustainable development, which must become a living reality for every person on the planet.⁷

It would be relevant to know how India performed with respect to the MDGs. Country report has been published in 2015 by the Ministry of Statistics and Programme Implementation, Government of India and titled *Millennium Development Goals: India Country Report 2015*. The assessment for 8 goals has been as follows.

Proportion of people who lived below poverty line reduced from 47.8 per cent in 1990 to 20.74 per cent. The country was on track. On working with population in hunger, it is conceded that the country was slow and off track. On universalising primary education it is conceded that country had modest achievement. On health issues related targets the country was either moderate or slow and off track in case of some specific targets. On environmental indicators the base lines data are not placed to facilitate comparison between 1990 and 2015. It is conceded that the country was moderately on track. The Report has summarised the status in following words.

While talking about India's progress towards MDGs, the progress so far has been mixed. The nation has already achieved the target of halving the poverty head count ratio, eliminated gender inequality in primary and secondary education... The Country is moderately on track, while considering the targets of achieving universal education, reducing child mortality as the sharp decline in the recent years in Infant Mortality and Under Five... measures have taken to reverse the loss of environmental resources, progress has been achieved in improving the environment by improving the coverage of forest area, protected areas, reducing CFC emissions, though there are still areas of concern like Carbon Di Oxide emission and Energy intensity. Hunger remains a tough challenge in India. Also achieving the desired target for ensuring sanitation facility is lagging behind. Similarly, the Country has to strive more to reduce the maternal mortality to reach the desired level.⁸

In a programme like MDGs there will be problem of attribution. Each country would be pursuing its own development programme with different national priority and understanding. MDGs only help in monitoring the targets that are set under each goal which have universal application. There is also problem of data that has already been mentioned. The India report categorically admits the data problem relating to data gap which means non-availability of data at desired levels of disaggregation and periodicity. However, even with all the data limitations member countries could make dent

on poverty, to an extent on health and education, but on environment and ecology related targets countries have not been able to perform well. Hence, the global picture was also dim.

Between 1990 and 2015 most countries opened up and globalisation boosted economic growth. The reduction in poverty is directly related with economic growth. However, rapid economic growth happens at the cost of more intensive use of natural resources. Agriculture, animal husbandry and forestry based livelihoods are adversely affected as industrial based growth picks up. Industrial growth adds to carbon dioxide emissions and other pollutants. Monitoring MDGs helped bringing out the conflict between development and environment and ecology.

Sustainable Development Goals (SDGs)

The backdrop for setting up a bolder agenda was set by the UN members while preparing the final report on the MDGs. In August 2015 an agenda was set and adopted to continue onward from MDGs. This agenda was named Sustainable Development Goals (SDGs). 17 SDGs and 169 targets were set to be achieved by 2030. The focus was people, planet, prosperity, peace and partnership. In the preamble it was noted. We recognise that eradicating poverty in all its forms and a dimension, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development... We are determined to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind.⁹

By people the SDG agenda implies removal of all forms and dimensions of poverty and facilitate all human beings to realise potential with dignity and in a healthy environment. The focus on planet is for safeguarding and conserving nature through sustainable consumption and production and taking urgent action on climate change in inter-generational equity perspective. The agenda also aims to ensure prosperity which implies that all human beings can enjoy prosperous and fulfilling lives through economic, social and technological progress that occurs in harmony with nature. The peace discourse of the SDG agenda is interesting. It says the society should be free from fear and violence. Sustainable development is not possible without peace and peace is not possible without sustainable development. This circular formulation has a problem in it which will be discussed later. Partnership

implies global solidarity where help has not at human and as well as country level.

Two major factors that have potential to create adverse impact are environmental and ecology related stress and strain while making efforts for economic growth, and socio-political tensions within and among communities and countries disrupting peace which is essential for economic development. ODI has published an interesting report in which an attempt has been made to project possible progress of the SDGs agenda across the countries. It is claimed that the exercise should be working as a wake-up call to prepare well for efforts.¹⁰ There is another report published by International Council for Science (ICSU) and International Social Science Council (ISSC) that has tried to provide a science perspective to SDGs.¹¹ It should be relevant and useful to know the understanding and wisdom contained in the two reports.

The projection for progress suggests path similar to that of MDGs. Extreme poverty is likely to be eradicated by 2030 with the efforts that are on and ones that are anticipated. The Least Developed Countries especially sub-Saharan Africa will experience good economic growth. Reduction of in area under forest is expected to be arrested by 2020 and after that there is likely to be improvement. These three targets relating to Goals 1, 8, and 15 are likely to be achieved. Next set of targets set for 9 SDGs are those where the progress, if slow, will not help meet the targets by 2030 and hence will not show desired achievement of those goals. It means that countries will have to make more efforts than what they have been employing now with respect to specific targets set. These targets are reduction in maternal mortality (Goal 3), universal secondary education (Goal 4), reduction in violent deaths (Goal 16), mobilising domestic resources (Goal 17), end hunger (Goal 2), universal access to sanitation (Goal 6), universal access to energy (Goal 7), stop all types of child marriages (Goal 5), and industrialisation in LDCs (Goal 9). Targets pertaining to Goals 10 to 14 that are likely to seriously fall short of their achievements are reduction in income inequality (Goal 10), reduction slum population and improved slums (Goal 11), reducing waste (Goal 12), combating climate change (Goal 13), and protection of marine environment (Goal 14). In case of the above five targets the projection report suggests that the direction of efforts have to change and what was tried during MDGs implementation was neither enough nor right in its direction. The Report notes A final group of targets

are heading the wrong direction and require a reversal of current trends. They include inequality, slum populations, climate change, waste management and marine (reef) conservation.¹³

The targets mentioned above have been graded in 'F' category in the Report. Target 10.1 is about income inequality and present trends show that it is not reducing. The reason is that 80 per cent people in the world live in countries where poorest 40 per cent people continue to experience low income growth than the average for that country. Simply said poor are becoming poorer. Thus 'people' are getting missed out in the run for SDGs. Next is slum population in urban areas. It is projected that it would rise to 1 billion people from the present 850 million. Sub Saharan Africa, which is likely to experience economic growth during 2015-30 to reduce extreme poverty and hunger, will also go through rapid urbanisation resulting into rise in slums. A reversal here is necessary in strategy for moving toward the SDG.¹⁴ The next threat is with respect to waste management and reduction in its quantity. The Report notes that solid waste generation is going to almost double, from 3.5 million tonnes in 2010 to 6.1 million tonnes in 2025. In East and BRICS especially East and South Asia (India prominently) solid waste is projected to increase three fold. In less-developing countries it will double. Only in developed countries it will remain same. A reversal in strategy is needed here too. Combating climate change is perhaps most difficult challenge in achieving SDGs. Greenhouse Gases (GHGs) current level is very high according to IPCC. For achieving the SDGs it is most important to hold the GHGs at the present levels. However, GHGs are going to increase by 2030 and thus is a clear threat to achieving SDG target on this front. Ending poverty in a sustained way is directly related with GHG emissions and rise in temperature. The Report notes the following in the context.

Eradicating poverty by 2030 will be a great accomplishment only if we are capable of sustaining that achievement from 2030: unless changes are made, the impact of climate change from 2030 on will work powerfully against efforts to eradicate poverty. With a rise of only 2°C in global mean temperature, up to 720 million poor people can expect declines in primary-sector productivity, corollary increases to food prices, malnutrition and stunting, and extreme weather events like drought. A rise of more than 2°C would make poverty eradication increasingly implausible.¹⁵

The GHGs also impact the coral reefs that are very

essential for marine life and environment. Thermal stress adds to acidification which destroys coral reefs. With present levels of emissions and rise in temperature 90 per cent of the coral reefs are likely to be adversely affected.

The ICSU Report providing science perspective to the SDGs also needs to be briefly reviewed to know if some additional understanding is developed. The Report emphasises the need for integration among various moves simultaneously. It says, The success of the SDGs is partly dependent on aligning targets and goals with existing international agreements and political processes. These include the Post-2015 Framework for Disaster Risk Reduction (to be agreed in Sendai, March 2015), the UNFCCC negotiations with the new climate agreement expected in December 2015, and the process on Financing for Development. All of these depend on each other for success.

In addition, the report suggests harmonization of targets with the Aichi Biodiversity targets, and International Labour Organization social protection floors.¹⁶

The Report contains some independent researchers' analysis and recommendations. Mans Nilsson and Robert Costanza have provided a critical overview of the SDGs framework and argued that the 'narrative of change' was missing from the SDGs original framework. Outcome and processes are not well-defined and means-ends continuum was missing. Poverty reduction and its various dimensions are well elaborated in the SDGs but the development agenda is not so clear. They argue that for example the agenda fails to articulate clearly whether it includes what Amartya Sen had called key 'freedoms', including economic opportunities, political liberty, social empowerment, dignity and basic conditions such good health and education. The Goals according to authors is presented in silo approach i.e. goals address different issues but are stored in one place. System science tells that goals overlap. Many targets may impact more than one goal and the some goals may be in conflict. It is suggested by the experts that the SDGs should form an overarching goal which may be worded as "*a prosperous, high quality of life that is equitably shared and sustainable.*" It implies that in the SDGs' discourse a discussion has to be initiated about the future that the humanity envisions. Taking the vision as a reference point each goal should be addressed with rigour and targets needs to be further sharpened and specified.

The Report then contains expert's analysis of each

goal. Goals and targets are reviewed analytically and there are also suggestions for adding a few more targets to make the goal more achievable. Not all commentary and recommendation is warranted here. However, on some critical goals that deal with energy, ecology and environment are briefly discussed.

The experts are of the view that there is a need to bring out specifically the trade-off between economic growth and environment. Further specification is necessary for social safety and protection for ending hunger and extreme poverty. Sustainable agriculture is a complex issue and food security and environmental factors are in conflict. Additional target is suggested for nutrition security. Goal relating to income inequalities within and among countries is also critiqued. Redesigning and addition of targets are suggested (Goals 1, 2 and 10). On health, education and gender issues the complex interrelations are discussed and argued that conflicts and overlaps needs to be sharply defined and limitations stated upfront. Water and Sanitation (WATSAN) is critical for sustainable development. It is recommended by the experts that three targets could be merged to form parts of Goal 10 and 16. Water quality has to be further sharply defined. Baseline national data on conditions is most essential to monitor targets and goals (Goal 6). Goal 7 on energy suffers from unclear definition of access. Further, a new target of monitoring indoor pollution levels is recommended. On Goal 8 the focus is not decent employment to all, but experts have instead suggested 'Recent science suggests that 'inclusiveness' is critical for sustaining economic growth...

A new sustainable development index is proposed which integrates the economic (composite of GDP per capita and income inequality), environmental (CO2 per capita) and social (expected longevity at birth) dimensions.¹⁷

Making cities and human settlements inclusive, safe, resilient and sustainable (Goal 11) is going to be tough. Within and across countries cities are defined differently and devolution of political and economic powers is limited and different. Interestingly, the science perspective has not suggested any alternative for slums. Urbanisation is treated as *fait accompli*. Action to combat climate change (Goal 13) depends on the agreements in United Nations Framework Convention on Climate Change (UNFCCC). The expert comment on the Goal notes, Stressing the urgency to take action is fully backed by the latest science as

presented in the IPCC 5th Assessment Report (2014). AR5 notes that the impacts of climate change constitute a major risk for all dimensions of sustainable development. While it makes sense that the goal does not include quantitative targets as these are part of the UNFCCC negotiations, several qualitative improvements of the targets are suggested.¹⁸

Goal 15 which pertains to protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainable management of forests, combating desertification, halting biodiversity loss and reversal of land degradation is most crucial. If the targets in the Goal are not achieved to significant extent, almost all goals are affected adversely. The experts have recommended a new target which is the role of indigenous, local and traditional knowledge in biodiversity use and management.

Peace has been recognised as an important goal in the SDGs framework (Goal 16). There are three elements considered and stated. The first element is inclusiveness. Second is justice and third are institutions. Society has to be inclusive, it should provide access to justice and the institutions have to be effective, accountable and inclusive. The report notes,

The scientific case for including a goal on peace and governance is overwhelming, and its presence among the SDGs constitutes a major improvement on the MDGs... Yet SDG 16 is not formulated in a manner conducive to such innovation. The peace goal and its associated targets should be made more clear and specific, and the governance targets should extend beyond the traditional 'good governance' agenda and tackle head-on the institutional requirements for sustainable development.¹⁹

The UN summit for adoption of SDGs categorically committed to transform the world in coming fifteen years beginning 2016. People indeed are at the centre and there is total commitment to protect the planet. Partnership and cooperation is agreed upon to maintain peace and bring prosperity. The SDGs promise to go beyond the GDP and offer scope for aspiring for human development. The SDGs have been developed in the above context. It should be of interest now to see how the SDGs could be viewed in Gandhian perspective. In the section that follows contains in brief Gandhian perspective of human development.

II

Gandhiji first discussed his perspective on sustainable human development in *Hind Swaraj*.²⁰ The context and reference for Gandhiji was not environment and ecology as the concepts were decades away. His formulation was as alternative to the modern civilisation he witnessed in England as a law student and later in South Africa as a practicing lawyer and a *Satyagrahi*.²¹ His vision of society contains elements of sustainability without any overt intonations. An attempt is made in this section to discuss Gandhiji's basic formulation on human development and reconstruction of non-violence society and try to interpret it in terms of sustainable human development.

In *Hind Swaraj* his formulation for alternative society is preceded by his rejection of modern civilisation. His first and main criticism was that the people of modern and civilised world made bodily welfare the object of life. Citing example he wrote,

The people of Europe today live in better-built houses than they did a hundred years ago. This is considered an emblem of civilization, and this is also a matter to promote bodily happiness. Formerly, they wore skins, and used spears as their weapons. Now, they wear long trousers, and, for embellishing their bodies, they wear a variety of clothing and, instead of spears, they carry with them revolvers containing five or more chambers. If people of a certain country, who have hitherto not been in the habit of wearing much clothing, boots, etc., adopt European clothing, they are supposed to have become civilized out of savagery. Formerly, in Europe, people ploughed their lands mainly by manual labour. Now, one man can plough a vast tract by means of steam engines and can thus amass great wealth. This is called a sign of civilization...²²

Gandhiji also commented negatively on rising speed in human lives. He did not approve of the speed with which trains had started running. A travel speed of 400 to 500 miles a day was an anathema for him and he said so.²³ Promising inventions had taken place that would have made air plane travel a reality soon. Gandhiji took note of it. He could visualise machines playing vital role in human living.

Men will not need the use of their hands and feet. They will press a button, and they will have their clothing by their side. They will press another button, and they will have their newspaper. A third, and a motor-car will be in waiting for them. They will have a variety of delicately dished up food. Everything will be done

by machinery. Formerly, when people wanted to fight with one another, they measured between them their bodily strength; now it is possible to take away thousands of lives by one man working behind a gun from a hill. This is civilization... Now they are enslaved by temptation of money and of the luxuries that money can buy... This civilization takes note neither of morality nor of religion.²⁴

Interestingly, he did not have anything against people. He blamed the values and the systems. He thought that English were really good people, they were misled by the values that modern civilisation promoted. He thought that English people deserved sympathy. They were not bad at heart. It was the civilisation which they had adopted was incurable disease and the English people were afflicted by it.²⁵ Gandhiji then described civilisation in his terms. Human behaviour occupied first priority for him. For him civilisation is quintessentially 'good conduct'.²⁶ Civilisation is the mode of conduct that helps the individual with the path of duty. For Gandhiji performing duty and being moral are interchangeable expressions. Every individual in Gandhiji's scheme should be able to attain mastery over mind and passions. Material richness to him was not real happiness. He wrote,

We notice that the mind is a restless bird; the more it gets the more it wants, and still remains unsatisfied. The more we indulge our passions, the more unbridled they become. Our ancestors, therefore, set a limit to our indulgences. They saw that happiness was largely a mental condition. A man is not necessarily happy because he is rich, or unhappy because he is poor. The rich are often seen to be unhappy, the poor to be happy. Millions will always remain poor. Observing all this, our ancestors dissuaded us from luxuries and pleasures... They further reasoned that large cities were a snare and a useless encumbrance and that people would not be happy in them, that there would be gangs of thieves and robbers, prostitution and vice flourishing in them and that poor men would be robbed by rich men. They were, therefore, satisfied with small villages. They saw that kings and their swords were inferior to the sword of ethics, and they, therefore, held the sovereigns of the earth to be inferior to the Rishis and the Fakirs.²⁷

Kishor Mashruwala a profound thinker and a commentator on Gandhian thought has argued that economic behaviour is result of the culture that prevails in a society. He has named the western society's culture as the elitist culture. Describing the culture he said,

The elitist civilisation (culture) is characterised by the development of the reasoning and power of imagination. Scholars, experts, religious scholars, poets and fine arts people represent the cultural arena. Lawyer, doctor, teacher, master and clerk represent the arena of worldly affairs. The British have developed some white collar professions that require both labour and brain.... Elitist civilisation is not founded on the principles of equality. Philosophically, it would show equality not only among human beings but also with evil, but in the practical world it says that not only there is disparity among individuals, but also that differences should obtain. Hence for managing such a society violence and animal force was unavoidable and state that the society should continuously wield the state power to keep individuals in limits. He further says, "In practice the elitist civilisation includes within it only those individuals who are in elitist professions and work. Rest are outside it."²⁸

Mashruwala has termed Gandhiji vision of culture and civilisation as *sant sanskriti* - saint culture. The goal of human being is to live with values where material prosperity is not the ultimate aim. Ultimate aim is to live according to indication given in *Ishavasya Upanishad*, which says that you should denounce first and then indulge. The value of self-denial comes from the *Ishavasya Upanishad's* first Shloka –Chant:

Ishavasyam idam sarvam Yatkinchit Jagatyam Jagat;

Ten tyaktena bhunjitha maa grudha kasya swid dhanam.

Whatever there is changeful in this ephemeral world, - all that must be enveloped by the Lord. By this renunciation (of the World), support yourself. Do not covet the wealth of anyone.

It should thus be clear to all of us that the foundation of Gandhian economic philosophy is on moral values. I should clear a possible confusion here. When we talk about *Sant Sanskriti*, it is likely to give a feeling that humanity's concern in Gandhian frame was perhaps other worldly. This is likely to happen because Gandhiji has time and again said that his values are not any sense original, but they have been there with Indian culture and civilisation for centuries and it is the *dharma* that he is talking about. This use of word *dharma* is easily read as religion and being religious and thus it can be termed as irrationality taking over the value of rationality which is held in supreme state in the modern Western civilisation. The fear is not

unfounded. It can be noted that prominent leaders beginning with Gokhale and followed by Nehru and others conveniently pushed the *Hind Swaraj* agenda aside. It is necessary to clear this confusion. The point being belaboured here is that modern economics is not as objective as it is made out to be. The civilisation and culture arising out of a set of value system influence the economic analysis and behaviour. The present crisis in the economies and the modern economics is result of the basic approach which the modern economic thought took and the practices that followed suit. Gandhian thought helps us in understanding the source of from which unsustainability arises. It also enables us to understand that why the solution does not lie where it is being looked for.

From the text above it is clear that Gandhiji visualised a rural society where people led simple lives and no one would be extraordinarily rich and no one will die of hunger. Luxury and bodily pleasures had to be limited and regulated. Aspiring and making supreme efforts to attain material prosperity promotes violence and use of brute force. By using brute force and violence one cannot arrive at peaceful and harmonious society. Means – end continuum is an important formulation and theme in *Hind Swaraj*. In arguing about right means Gandhiji concedes that English gained power and prosperity using brute force, but what they had got was not desirable. He wrote,

Your belief that there is no connection between the means and the end is a great mistake. Through that mistake even men who have been considered religious have committed grievous crimes. Your reasoning is the same as saying that we can get a rose through planting a noxious weed. If I want to cross the ocean, I can do so only by means of a vessel; if I were to use a cart for that purpose, both the cart and I would soon find the bottom. “As is the God, so is the votary”, is a maxim worth considering. Its meaning has been distorted and men have gone astray. The means may be likened to a seed, the end to a tree; and there is just the same inviolable connection between the means and the end as there is between the seed and the tree. I am not likely to obtain the result flowing from the worship of God by laying myself prostrate before Satan. If, therefore, anyone were to say: “I want to worship God; it does not matter that I do so by means of Satan,” it would be set down as ignorant folly. We reap exactly as we sow.²⁹

Gandhiji did not give up this belief even after 25 years of writing *Hind Swaraj*. Between 1909 and 1945 the world of science and technology had drastically

changed. Power of destruction in wars had increased many folds. Material prosperity and variety had increased substantially. Dozens of inventions and scores of innovations were happening every day. Most of it was for material betterment and bodily survival. Gandhiji was witness to all of it. He used motor cars for travel, he travelled in trains and he also had a telephone connections. He used modern amenities. Did he yet hold the view that he held in *Hind Swaraj*? Answer to this is available in a correspondence he had with Jawaharalal Nehru, Independent India’s first Prime Minister in October 1945. Both were able to see the coming of India’s freedom. Gandhiji wanted to be clear about the vision around which free India was to be reconstructed. He clarified his position in the following way.

I have said that I fully stand by the kind of governance which I have described in *Hind Swaraj*. It is not just a way of speaking. My experience has confirmed the truth of what I wrote in 1909...I believe that if India, and through India the world, is to achieve real freedom, then sooner or later we shall have to go and live in the villages-in huts, not in palaces. Millions of people can never live in cities and palaces in comfort and peace. Nor can they do so by killing one another, that is, by resorting to violence and untruth. I have not the slightest doubt that, but for the pair, truth and non-violence, mankind will be doomed. We can have the vision of that truth and non-violence only in the simplicity of the villages...It does not frighten me at all that the world seems to be going in the opposite direction. For the matter of that, when the moth approaches its doom it whirls round faster and faster till it is burnt up. It is possible that India will not be able to escape this moth-like circling. It is my duty to try, till my last breath, to save India and through it the world from such a fate.³⁰

He had mentioned in the *Hind Swaraj* that Indian villages were not free of issues, vices and problems. But he was sure that idea of his village existed in his imagination. It is the form of settlement and society that he was talking about. He was also not against modernity. He had learned so much from it. He had been a strong votary of sanitation and hygiene. He was highly appreciative of civic sense and role of municipalities in keeping the cities and town clean and disease free and provide basic amenities. He further wrote,

While I appreciate modern thought, I find that an ancient thing, considered in the light of this thought

looks so sweet. You will not be able to understand me if you think that I am talking about the villages of today. My ideal village still exists only in my imagination. After all every human being lives in the world of his own imagination. In this village of my dreams the villager will not be dull-he will be all awareness. He will not live like an animal in filth and darkness. Men and women will live in freedom, prepared to face the whole world. There will be no plague, no cholera and no smallpox. Nobody will be allowed to be idle or to wallow in luxury. Everyone will have to do body labour. Granting all this, I can still envisage a number of things that will have to be organized on a large scale. Perhaps there will even be railways and also post and telegraph offices. I do not know what things there will be or will not be. Nor am I bothered about it. If I can make sure of the essential thing, other things will follow in due course. But if I give up the essential thing, I give up everything.³¹

In 1939 he had made reference to nonviolence economy and had written in the Issue of *Harijan* of 30 December that if India had to evolve along nonviolent lines, it will have to decentralise many things. Centralisation could not be sustained and defended without adequate force. Bigger homes and palaces required security and defence, so also huge factories. He argued that rurally organised India would run less risks of foreign invasion than urbanized India - well equipped with military, naval and air forces.

Sustainable world came to him from nonviolent economy. Elsewhere, he has argued that modernity promoted stealing and possession (acquisitiveness). In the early 1920s he had suggested to Sabarmati Ashram dwellers eleven vows that each inmate should follow in order to be able to perform *Dharma* – duty to self and others and also to the nature. Two of the eleven vows are *Asteya*, and *Aparigraha*- Non-stealing and being non-possessive. He later evolved the idea and advocated trusteeship wherein he expected everyone and especially the material wealth creators to be trustees of the wealth they create. Being a trustee served two purposes. One indulgence in material world by the creator of the wealth would be avoided, and two, a trustee would utilise such wealth for the material welfare of those who are deprived and for the social welfare in general. Gandhiji said, I suggest that we are thieves in a way. If I take anything that I do not need for my own immediate use and keep it, I thief it from somebody else. It is the fundamental law of nature. Without exception, that Nature produces enough for

our wants from day to day; and if only everybody took enough for himself and noting more, there would be no pauperism in this world. I am not socialist, and I do not want to dispossess those who have got possessions; but I do say that personally those of us who want to see light out of darkness have to follow this rule. I do not want to dispossess anybody; I should then be departing from the rule of nonviolence.³²

Gandhiji had thought through sustainable development framework in the context of nonviolent economy and society. We can see glimpses of it in the quotations that have been given above. Long before India won political freedom Gandhiji had a dream of what his India would be. If we reinterpret his writings in today's context where sustainability is the biggest issue in human survival, we find that he had laid down principles and values for the SDGs he had set for India in his dream world. We end this section by the quotes that depicts Gandhiji's dream of Sustainable India.

I shall strive for a constitution, which will release India from all thralldom and patronage, and give her, if need be, the right to sin. I shall work for an India in which the poorest shall feel that it is their country in whose making they have an effective voice; an India in which there shall be no high class and no low class of people; an India in which all communities shall live in perfect harmony... Women will enjoy the same rights as men. Since we shall be at peace with all the rest of the world, neither exploiting, no being exploited, we shall have the smallest army imaginable. All interests not in conflicts with interests of the dumb millions will be scrupulously respected, whether foreign or indigenous... This is India of my dreams.³³

Eradicating poverty, ending hunger, constructing an equitable society, gender empowerment, non-exploitative mode of production and limiting consumption by regulating ones behaviour including limiting ones material wants form the crux of sustainable society for Gandhiji. In the final section that follows an attempt is made to read the SDGs in Gandhian thought framework.

III

The UN Assembly committed and dedicated itself in favour of, People, Planet, Prosperity, Peace and Partnership in that order. The outcome document says that the goals and targets will simulate action over next fifteen years in areas of critical importance for humanity and the planet. Five components are described as

important for humanity and the planet. Let us revisit each of the components and compare what the modern humanity's wisdom has to say and how Gandhiji reflected in his thought framework.

On people the UN document says,³⁴

We are determined to end poverty and hunger, in all their forms and dimensions, and to ensure that all human beings can fulfil their potential in dignity and equality and in a healthy environment.

First eight SDGs are directly devoted to people. The goals relate to poverty, hunger, health, education, gender, water and sanitation, clean energy and work. Each of them has been dealt with great details and each one is linked to specific targets. As mentioned detailed analytical work has been done on each of these targets, improvements are suggested by experts and there are some additions as well.

People are the centre in Gandhi's thought framework too. He would have been in complete agreement with the statement made by the UN about people. The difference between the UN approach and Gandhi's approach are significant.

Goals 1 and 2

For instance in case of Goal 1, targets are specific, quantitative and measurable.³⁵ The experts have modified the approach for the first goal of eradicating poverty. United Nations assumes responsibility of eradicating poverty in the less developed countries (LDCs) by significant global resource mobilisation and distribution from rich to poor countries. It also recommends appropriate policies at local, regional, national and global level for social protection and solidarity.³⁶ Both the modified approaches are top down. Developed or rich countries are expected to support LDCs and each country has to make appropriate policy at multiple levels.

Consistent with his philosophy and vision Gandhiji and Gandhian thought recommends poverty removal efforts from below. Village has primary responsibility. Basic needs *Roti, Kapda, aur Makan* – food, clothing and shelter and other basic amenities are to be met at village level in a self-reliant manner. His vision for removing poverty and hunger for ever was working through *Gram Swaraj* – Village Swaraj. Sometime in 1942 Gandhiji was asked by a reader of *Harijan*³⁷ whether Gandhiji could give an outline of a village Swaraj committee, which could function in all

village matters in the absence of, and without relying upon, an overhead government or other organisation, and also its authority, scope areas of operations etc. etc. Gandhiji responded comprehensively to this question in the following manner.

My idea of village swaraj is that it is a complete republic, independent of its neighbours for its own vital wants, and yet interdependent for many others in which dependence is a necessity. Thus every village's first concern will be to grow its own food crops and cotton for its cloth. It should have a reserve for its cattle, recreation and playground for adults and children. Then if there is more land available, it will grow *useful* money crops... The village will maintain a village theatre, school and public hall. It will have its own waterworks, ensuring clean water supply. This can be done through controlled wells or tanks. Education will be compulsory up to the final basic course. As far as possible every activity will be conducted on the co-operative basis. There will be no castes such as we have today with their graded untouchability. Non-violence with its technique of satyagraha and non-co-operation will be the sanction of the village community. There will be a compulsory service of village guards who will be selected by rotation from the register maintained by the village. The government of the village will be conducted by a Panchayat of five persons annually elected by the adult villagers, male and female, possessing minimum prescribed qualifications. These will have all the authority and jurisdiction required. Since there will be no system of punishments in the accepted sense, this Panchayat will be the legislature, judiciary and executive combined to operate for its year of office. Any village can become such a republic today without much interference even from the present Government whose sole effective connection with the villages is the exaction of the village revenue. I have not examined here the question of relations with the neighbouring villages and the centre if any. My purpose is to present an outline of village government. Here there is perfect democracy based upon individual freedom. The individual is the architect of his own government. The law of non-violence rules him and his government. He and his village are able to defy the might of a world. For the law governing every villager is that he will suffer death in the defence of his and his village's honour.³⁸

Gandhiji knew that it was a paradigm shift from the business as usual scenario. He invited committed and enlightened volunteers who would play the role of

village scavenger, spinner, watchman, medicine man and schoolmaster all at once.

It is clear from Gandhiji's vision of village Swaraj that he addressed the first eight SDGs and if the country and the society opted consciously for his model of village development, it will achieve first eight SDGs with comfort. Gandhiji has also further elaborated on each area that concerns the first eight SDGs today.

By ensuring basic needs within the village in a radius of 50 or 100 kms, self-sufficiency of the region will be ensured. Gandhiji had evolved the concept of *Swadeshi* from his approach to development. Village Swaraj cannot be achieved if *Swadeshi* is not followed. This concept stands in stark contrast to the way world lives now under globalisation. If we examine SDG 2 of ending hunger, achieving food security, improving nutritional status and promotion of sustainable agriculture, the suggested approach to achieve targets are once again top down. Increasing investment and international cooperation in agriculture research and extension, increase agriculture productivity, correcting trade restrictions and distortions as being deliberated as part of WTO meetings and meets, removing of all export subsidies on agricultural products, proper functioning of community markets and providing access to information to correct market failures etc. How did Gandhiji solve it using *Swadeshi* concept is equally interesting. His approach is essentially decentralised and working from below.

Swadeshi is the spirit in us which restricts us to the use and service of our immediate surroundings to the exclusion of more remote. If we follow the *Swadeshi* doctrine, it would be your duty and mine to find out neighbours who can supply your wants and to reach them to supply them where they do not know how to proceed, assuming that there are neighbours who are in want of healthy occupation. Then every village of India will almost be self-supporting and self-contained unit, exchanging only such necessary commodities with other villages as are not locally producible.

It is clear from above that Gandhiji believed and perhaps rightly that India should not rely on Australia for wheat and other countries for oil and other food items. Similarly, the approach for LDCs to come out of hunger and poverty is not through international cooperation, and free trade in commodity markets, but by trying to be self-sufficient at as local level as possible. Gandhiji was not against trade among regions

and countries, but he advocated strongly self-sufficiency in basic needs. For achieving SDG one and two, he would strongly recommend *Swadeshi* and self-reliance as the key. Gandhiji did not neglect agriculture. If a village had to be self-reliant in food and clothing, agricultural productivity was to be at the centre. According to him every village's first concern was to grow its own food crops and cotton for cloth. Land use plan must provide for recreation, playground, and cremation etc. If there was surplus land then farmers could grow cash crops other than tobacco and opium. For improving productivity in agriculture he was a practitioner and votary of organic farming. Gandhiji has written methods of preparing farm year manure and cattle feed at great length. He was against modern agro-mechanical and bio-chemical agriculture. Gandhiji was not off the mark. After decades of modern agriculture, low input organic agriculture with local seeds and farm yard manure is on the return and perhaps this holds the key to sustainable agriculture which would help eradicating hunger and poverty. SDGs strategy has practically ignored this aspect.

Goal 3

With respect to SDG three on health and well-being, there is convergence on all points. Both Gandhiji and the SDG's strategy are to do away with tobacco use. Gandhiji was one step ahead and he would not allow growing tobacco as crop. SDG 3 has nine targets that deal with controlling morbidity and mortality through programmes, campaigns, infrastructure, finance, and of course research for cure. For Gandhiji, health is responsibility of the individual first. Modernity has developed public health very well but major emphasis is on curative medicine. For sustainable health and well-being of human being Gandhiji's approach was the following.

In a well-ordered society the citizens know and observe the laws of health and hygiene. It is established beyond doubt that ignorance and neglect of the law of health and hygiene are responsible for the majority of the diseases to which mankind is heir...*Mens sana in copore sano* is perhaps the first law for humanity. A healthy mind in a healthy body is a self-evident truth...The fundamental laws of health and hygiene are simple and easily learnt. The difficulty is about their observance.³⁹

Gandhiji would not have disagreed with any of the targets spelt out for SDG 3, but the approach would have been focussing in a major way on educating

population about health and hygiene. This aspect is neglected by the SDGs and even the experts who claim to discuss science have not mentioned being in the state of sound health as the main paradigm. Gandhiji's framework needs to be incorporated for better and assured results. The implications for research and finances would certainly be that of saving resources. With governments withdrawing from the health services, commercialisation of health service is fast increasing the cost of private individuals and to that extent it would be difficult to achieve related SDGs especially in the LDCs.

Goal 4

Targets laid down for SDG 4 match very well with Gandhian framework for education. However, there is a fundamental difference. Education in SDG framework is for an evolving society which is taken as given. In Gandhian framework education is *de novo* designed to reconstruct a new world.

Inclusive and equitable quality education is in the design of Gandhiji's basic education. No boy or girl in village or city can be left out if Gandhiji's Basic Education is followed. Succinctly put, Gandhiji's basic education is a philosophy of education where heart, hand and head are to be educated with values, skill and knowledge with an objective of reconstruction of non-violence society where village is the basic unit and Swaraj is attained at that level. Education is imparted through work, and learning by doing is the method. Community is made responsible for educating its children. Access has to be all without any discrimination on grounds of social and economic factors. Both primary and secondary education is compulsory and free in Gandhian education framework as the community bears the cost. Human values and values for sustainable survival is core of Gandhi's basic education. It is gained by living, working and learning together. Skills are not alien, the major occupations in the community remains in focus and children are skilled in those occupations and educated around them. Education is not a commercial and market activity. With market economists' insistence advice on structural adjustment to the governments in the poor countries, it will be extremely difficult to reach any of the targets stated in SDG 4 ever let alone 2030.

Goal 5

On gender equality and empowering all women and girls there is almost full convergence between

SDG's basic thrust and that of Gandhian framework. Gandhiji discussed women and girls in Indian context. In one of his speeches he said,

Woman is the companion of man, gifted with equal mental capacities. She has the right to participate in every minute detail in the activities of man she has an equal right of freedom and liberty with him. She is entitled to a supreme place in her own sphere of activity as man in his... By sheer force of vicious custom, even the most ignorant and worthless men have been enjoying a superiority over women which they do not deserve and not ought to have.⁴⁰

Elsewhere he wrote,

I am uncompromising in the matter of women's rights. In my opinion she should labour under no legal disability not suffered by men. I should treat the daughters and sons on a footing of perfect quality.⁴¹

The Gender issue is addressed by changing values, attitude and behaviour by men towards women and girl children, but it is also very important to think and act in Gandhian thought framework of promoting economy that runs with non-violent forces and not by brute force. If the basic approach is not altered significantly then the gender equality and dignity will also be as difficult as the economic inequality. Without moving towards Gandhian paradigm of development Goal 5 remains a challenge.

Goal 6

Availability and sustainable management of water and sanitation (WATSAN) is a goal that Gandhiji also cherished and for sanitation and hygiene he practiced and advocated intensely all through his life. In Village Swaraj it assumes paramount importance. Gandhiji was opposed to open defecation. In case of contingent situations he was strong practitioner and votary of *Tatti pe Mitti*, covering the night soil under earth. He considered human excreta to be highly valuable and developed techniques to convert into manure. In rural areas with all public health and hygiene science and consciousness about it, converting human excreta into manure is best recycling of the waste leading to increase in farm productivity.

The accepted understanding of modern WATSAN development promotes clean and potable water sources for drinking and adequate supply (WHO standards given in terms of litres per capita day – LPCD) for domestic use. Construction and use of latrines with

different quantities of water required for flushing the faecal material are recommended. Added to this is the system of drainage in urban settlement and treatment of waste water.

In case of WATSAN related SDGs most targets are set against the present urban-industrial society where water will have to be sourced brought from distant locations. Sustainability of supplies from such sources has remained always doubtful. Hardly any LDC will be sure to achieve the goal.

Gandhiji had placed his priority to local sources and community management. Once again there is basic contradiction between Gandhiji's vision and that of the SDGs. SDGs visualises an urban industrial society by 2030 (which may be a reality if the paradigm of development does not shift decisively soon). Gandhiji had visualised a rural society and let us look at his thought on sustainable WATSAN for a settlement. Gandhiji's recommendation is in concurrence with target 6.6 of the SDG 6 which calls for protection and restoration of water-related ecosystems, and the strategy spelt out in SDG 6b which says that supporting and strengthening of local communities in improving water and sanitation management. In Gandhian framework target 6.6 and approach 6b would top the list. It would become clear from the following quotes from Gandhiji's writings.

The intelligentsia - medical men and students - can deal with the problem successfully if they would conscientiously, intelligently, jealously and regularly *do the work* in the villages. Attention to personal and corporate hygiene is the beginning of all education.⁴²

For drinking water and sanitation and hygiene he said,

The things to attend to in the villages are cleaning tanks and wells and keeping them clean, getting rid of dung heaps...Lanes and streets have to be cleansed of all the rubbish, which should be classified. There are portions which can be turned into manure, portions which have simply to be buried and portions which can be directly turned into wealth...Village tanks are promiscuously used for bathing, washing clothes and drinking and cooking purposes. Many village tanks are also used by cattle. Buffaloes are often to be seen wallowing in them. The wonder is that, in spite of this sinful misuse of village tanks, villages have not been destroyed by epidemics. It is the universal medical evidence that this neglect to ensure purity of the water supply of villages is responsible for many of the

diseases suffered by the villagers...I hope it is clear from my description of the way in which the problem should be tackled...⁴³

Gandhiji learned great deal from the way in which municipalities worked in England. He therefore commented on municipalities function and citizens responsibilities during series of articles he wrote in 1924-25. He wrote,

The one thing which we can and must learn from the West is the science of municipal sanitation...We must modify western methods of sanitation to suit our requirements...No municipality can cope with insanitation and congestion by the simple process of taxation and paid services. This vital reform is possible only by wholesale and voluntary co-operation of the people both rich and poor.⁴⁴

Thus in Gandhian framework SDG 6 is addressed with harnessing local sources and resources and local management with scientific education.

Goal 7

Access to clean energy and its optimal use was not an issue in Gandhiji's times. There is nothing substantial to interpret with respect to this goal. The only point that can be made is that in Gandhian framework, the entire economy is structured on low energy inputs. Railways and motor cars were operating in his times. He took interest in comparative cost of using animal energy for short distance versus mechanised energy. Animal energy was provided by a pair of bullocks. He was not sure whether the motorised vehicle will invade all rural transport within and between villages, but he thought that the wisdom lied in doing a comparative cost analysis. He was in favour of animal energy use for local transport.⁴⁵

Goal 8

The focus is on inclusive economic growth and decent and full employment for all who seek work with special emphasis on youth. Economic growth per se does not appear in Gandhian framework. One of the targets in SDG 8 is ensuring sustained economic growth of 7 per cent per annum until at least 2030 in the developing economies and LDCs. This is already proving difficult for a large country like India and is not going to be easy for the LDCs. The experts have also expressed reservation about achieving this particular target.

In Gandhian framework the rural economy offers scope for decent livelihood for all those who seek work. However, in the present economic structure the issue of employment is complex. The ISCU experts have commented that target 8.3, which is about promotion of development oriented policies supporting productive activities, decent job creation, entrepreneurship, innovation etc. and encourage micro-small and medium enterprises, was irrelevant as it could not be measured. This target would go well with Gandhian framework of sustainability in employment generation.

Goals 9 to 12

The divergence between the SDGs 9 to 12 and the sustainability discourse in Gandhian framework is very high. As discussed, Gandhiji was against uncontrolled mechanisation and industrialisation. Urbanisation and industrialisation go together. Infrastructure issue comes up when there is heavy industrial and urban development. Gandhian model of industrialisation is different. He promoted handicraft civilisation. The industry was to be located in rural areas and they would be farm based and non-farm based as well. He visualised that the clothing requirement in the village had to be met with hand spun, hand woven cloth. It could also generate surplus and market could be there for it. For urban areas he would tolerate cloth mills and he had no problem if those mills also exported cloth. The core of Gandhian approach lies in decentralisation of all production. Gandhiji recommended and promoted innovations that helped development of decentralised production systems. Gandhiji was pragmatic enough to realise that there would be some large scale production of goods and services as well and hence wealth concentration may take place. Innovators do make abnormal profits and so also the monopolists. Income inequalities arise from there. SDGs aim to reduce income inequalities within a country and among countries. This is easier said than done. MDGs failed in it. SDGs also have a strong challenge. Seven per cent consistent growth in GDP for decades is not possible without a lopsided development and unequal creation of wealth. Poverty may be reduced but the income inequalities would grow. There is already evidence for it. In Gandhian framework there is a way out. Gandhiji advised to follow principle of trusteeship. His said,

Suppose I have come by a fair amount of wealth either by way of legacy, or by means of trade and industry, I must know that all that wealth does not belong to me, what belong to me is the right to an

honourable livelihood, no better than that enjoyed by millions of others. The rest of my wealth belongs to the community and must be used for the welfare of the community.⁴⁶

This theory may appear idealistic with high moral overtones but it is consistent with the theory of non-violence society. According to Gandhi trusteeship was not a legal fiction but if people mediate constantly and tried to act up it, then life on earth would be governed far more by love than it is at present. Gandhiji unhesitatingly endorsed the opinion that generally rich men and for that most men are not particular as to the way they make money. The economies are thus operating with brute force. Equity and equality becomes a myth under such circumstances. SDGs promoters have conveniently glossed over this value premise. SDGs can't be achieved by mere policies and programmes and international financial aids. Human beings have to work with each other with compassion, love and sympathy. The State will have to be strict referee and call foul when it is so. Consistently high growth in GDP alone will not help achieving the SDGs in any significant way.

Goal 12

It is about ensuing sustainable consumption and production patterns. The details are almost silent on behavioural aspects of individuals. Sustainable production is all clean production and efficiency; it says nothing about scale and level. There is hardly anything to decide as it is techno-deterministic. In case of consumption the only advice is about reducing wasteful consumption and recycling materials. The SDGs promoters have practically assumed that whatever technologies develop in the developed world they are necessarily good for the humanity and therefore they should be transferred for the betterment of all humanity. This is being uncritical and lacks scrutiny in the context of cultural differences in the societies. In modern development cultural nuances are completely lost. It is here that Gandhian thought framework views production and consumption differently.

Gandhiji suggests alternative methods of production. This alternative is decentralised production for local units of human settlements taking account of the surrounding ecosystem services. It does not completely forbid regional, national and international trade and exchange of goods and services, but it definitely insists on prioritising the local level production and consumption of the goods and services.

This production has to consider the overall constraints that the local eco-systems impose on the survival of species in harmony with all other species that constitute the total eco system.

SDGs are dominated by forces that focus mainly on production. It needs to address and tackle important conceptual issues, such as “What exactly is consumption?” “Which consumer activities are most ecologically significant?” and “What strategies for changing consumer behaviour actually work?” All along from the day we have defined the mainstream economics, we have assumed that for economic analyses preferences are given and wants are unlimited. Further and more importantly, we believe that consumption is an end in itself. We forget that it is not an end in itself. The end depends upon ethics, culture and philosophy that govern a society. Gandhian thought has discussed this as its central theme. Gandhi has to his credit the famous quote which says that there is enough for everyone’s need, but there isn’t enough for even one person’s greed. Wants have to be limited and limiting wants and limiting the choices would definitely solve lot of problems that have arisen in the present day functioning of the economies. It is the determination of wants and types of preference that will support the local economies that function in the overall constraints of the local ecosystem services. SDGs should thus put consumption on its agenda, because Gandhian thought has something very original to offer to the world. Resource use is highly dependent on what is being preferred, demanded and consumed. In its present form SDG 12 is thus inherently weak and would hardly be achieved. Its weakness is recognised in the ICSU report as well, but the experts fail to shift the paradigm.

In the above context *prosperity* needs to be discussed. The UN outcome document declaring SDGs in its preamble says the following about prosperity.

We are determined to ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature.⁴⁷

The declaration document announces prosperous and fulfilling lives and adds a rider that economic, social and technological progress should be in harmony with nature. Without any express goal and target about values that needs to be followed strictly by the society prosperity and fulfilling lives remain undefined and unclear. Each country and each section of human

society is free to interpret prosperity in their own way. Similarly, harmony is ill defined too. In Gandhian framework prosperity is decent material survival with limited wants and fulfilling lives is with respect to non-material quality of life. Thus by incorporating prosperity in the SDGs declaration, UN has introduced scope for conflict.

Goals 13 to 15

In Gandhian framework one does not have to confront climate change and ecological degradation. Humanity is at peace with nature by its own regulated behaviour. It is true that during Gandhiji’s times the global population and population of India was far less than what is it today, but the approach that is suggested and the values that are promoted in the Gandhian framework support a simple lifestyle where production and consumption is restrained voluntarily. Interestingly, UN Declaration Document considers planet’s safety at the outset. It says,

We are determined to protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations.⁴⁸

It has been argued above that although UN document appears sincere in its commitment to ask the countries to take urgent action for climate change, it is non-committal about impacting consumption pattern and drastic changes in lifestyle. Gandhian approach recommends it *ab initio*.

Goals 16 and 17

On peace the UN Declaration Document says,

We are determined to foster peaceful, just and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.

On partnership it says the following.

We are determined to mobilize the means required to implement this Agenda through a revitalised Global Partnership for Sustainable Development, based on a spirit of strengthened global solidarity, focussed in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people.⁴⁹

It is presumed that global solidarity around supporting the poor and vulnerable people and countries there would be peace and prosperity. However, on peace itself, the understanding revealed via the targets do not generate hope for peace that leads to harmony among people and with nature. The UN peace discourse that unfolds through 10 targets and two strategies has focus on two main aspects. One is non-discriminatory laws and universal access to justice and second is to strengthen national level institutions with international network and support to establish rule of law around the globe to counter terrorism, and crime. The strategy critically ignores the community and local level peace initiatives. Gandhiji also was fully aware of conflicts that arise at various levels. Building a non-violence society was also visualised as a process. Economy and its structure are vital for peace and harmony, but working at community level is equally important.

Gandhiji suggested formation of *shanti senas* - peace brigades who would risk their lives during riots and other disturbances. Outlining his idea on the concept he said,

The idea was that this Brigade should substitute the police and even the military. This reads ambitious. The achievement may prove impossible. Yet, if the Congress⁵⁰ is to succeed in its non-violent struggle, it must develop the power to deal peacefully with such situations...I say this irrespective of whether there is or there is not a communal pact. It cannot be that any party seeks to force a pact by violent means. Even if such a pact were a possibility, it would not be worth the paper on which it might be written. For behind such a pact there will be no common understanding. What is more, even after a pact is arrived at, it would be too much to expect that there would never be any communal riots...⁵¹

The approach is not restricted to communal riots situations only, but in any socio-political tension peace brigade has an important role. A member of a peace brigade was to have specific attributes. The first and foremost qualification is that the member must have a living faith in non-violence. Without it he won't have the courage to die without anger, without fear and without retaliation. Secondly the member should have equal regard for all religions and faiths and opinions. The peace work has to be taken up at local level in own localities. The brigade should evolve locally and should chalk out its functions and do's and don'ts.

Elsewhere he wrote,

Ordinarily, the efficient running of a large volunteer corps based on force implies the possibility of the use of force in the event of breach of discipline. In such bodies little or no stress is laid on a man's character. Physique is the chief factor. The contrary must obtain in non-violent bodies in which character or soul force must mean everything and physique must take second place. It is difficult to find many such persons. That is why non-violent corps must be small, if they are to be efficient. Such brigades may be scattered all over; there may be one each for a village or a *mohalla* (city ward area)... If non-violent volunteer corps are formed on the above lines, they can easily stop trouble.⁵²

Gandhiji is consistent in his approach. The peace too has to be built from below. Starting from a village and an urban neighbourhood people with soul force have to work hard for peace. Their efforts will bear fruit if the economic structure is also inherently non-violent in its approach. Gandhiji also believed that peace and harmony are necessary for sound and sustainable socio-economic development. However, in his framework the socio-economic development model determined the peace and harmony content in the society. As observed in previous section, the development paradigm that evolved in modern times was according to Gandhiji by design would lead to conflicts and disharmony.

Gandhiji is also deeply concerned with people, planet, prosperity, peace and partnership as the SDGs are. But SDGs have total focus on governments, institutions, technologies and systems to guide sustainable human development. The approach ignores the individual significantly with respect to sense of duty and responsibility. The approach presumes that systems, technologies and institutions will regulate individual behaviour. This approach is not likely to lead to the full achievement of SDGs. Gandhiji's approach begins from individual. He has laid primary responsibility with the individual. The individual has to be educated around his behaviour so that she can work towards sustainable development of self, others and nature. In Indian cultural nuance to which Gandhiji referred to, the actors are *vyakti, samashti and prakrti* - Individual, society and nature. Self-regulated individuals would build sustainable practices and institutions which would help draw sustainably from nature.

In 2007 the United Nations declared October 2 as

world Non-Violence Day. The time is ripe for UN to commit itself to non-violence economy based on Gandhian framework to ensure sustainable human development. The SDGs influenced by Gandhi's thought have better scope for success.

Appendix 1

1. End extreme poverty in all forms by 2030
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3. Ensure healthy lives and promote well-being for all at all ages
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5. Achieve gender equality and empower all women and girls
6. Ensure sustainable availability and management of water and sanitation for all
7. Ensure access to affordable, reliable, sustainable and modern energy for all
8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all
9. Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
10. Reduce inequality within and among countries
11. Make cities and human settlements inclusive, safe and resilient and sustainable
12. Ensure sustainable consumption and production patterns
13. Take urgent actions to combat climate change and its impacts
14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17. Strengthen the means of implementation and revitalise the global partnership for sustainable development

Footnotes

1. Collected Works of Mahatma Gandhi Volume 13, p 311 and p 314. Navajivan Trust, Ahmedabad, November 1964.
2. Readers who wish to read more on this should read, Vinay Lal, 2000. "Gandhi and the Ecological Vision of Life: Thinking beyond Deep Ecology" in *Environmental Ethics* 22, No. 2 (Summer 2000), pp. 149-68.
3. <http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/About.htm> p 1.
4. United Nations, 2015. The Millennium Development Goals 2015. New York p 4.
5. [http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf)
6. *Ibid* p 7
7. *Ibid* p 9
8. CSO, 2015. *Millennium Development Goals: India Country Report 2015*. Central Statistical Organisation (CSO), Ministry of Statistics and Programme Implementation, Government of India, New Delhi. P 3.
9. UN Declaration Document, August 2015. P 4.
10. For details readers may refer ODI, 2015. *Projecting Progress: Reaching the SDGs by 2030*. <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9839.pdf>
11. For details readers may refer, ICSU and ISSC, 2015. *Review of Targets for the Sustainable Development Goals: The Science Perspective*. <https://www.icsu.org/cms/2017/05/SDG-Report.pdf>
12. For Goals refer to Appendix 1. We have limited listing the goals in the Appendix. For all the goals and targets one can refer to any document relating to SDGs beginning from the UN declaration document and others. https://www.un.org/pga/wp-content/uploads/sites/3/2015/08/120815_outcome-document-of-Summit-for-adoption-of-the-post-2015-development-agenda.pdf
13. ODI, 2015. *Projecting Progress: Reaching the SDGs by 2030*. *Op. cit.* p 10.
14. *Ibid* p 30
15. *Ibid* p 31
16. ICSU and ISSC, 2015. *Review of Targets for the Sustainable Development Goals: The Science Perspective*. *Op. Cit.* p 8
17. *Ibid* p 48
18. *Ibid* p 68
19. *Ibid* p 80
20. Written in a dialogical form, *hind Swaraj* is a text containing Gandhi's critic of the modern civilisation and

- an alternative world order with human being at the centre. It was written in 1909 on a ship almost in one sitting.
21. The protest that Gandhiji and others offered against unjust and inhuman immigration laws in South Africa enacted and implemented by the British came to be known as *Satyagraha*. The literal meaning of the word is insistence on one's own truth. The protest had to be necessarily non-violent and without carrying any ill will for the other to whom *Satyagraha* was offered. Since then it has developed as a science and art and huge body of literature obtains on it.
 22. *Hind Swaraj* as reproduced in Collected Works of Mahatma Gandhi CWMG Volume 10 pp 6 to 68, Navajivan Trust, Ahmedabad 1963. Quote from p 19.
 23. It is interesting that Gandhiji used Railways extensively in later years from 1915 until his demise in 1948. Sometime in 1945 in a letter to Jawaharlal Nehru
 24. *Ibid* p 20
 25. Gandhiji refers to civilisation as disease after the expression used by Edward Carpenter in his book *Civilization: Its Cause and Cure*.
 26. *Hind Swaraj* is originally written in Gujarati. He used the word *Sudharo* for civilisation meaning good way of life and the opposite of it is *Kudharo*
 27. CWMG *Op. Cit.* p 37
 28. Shah Ramesh B, 1998, (Gujarati) *Gandhian Lifestyle and Economic System*, Gujarat Vidyapith, Ahmedabad.
 29. *Ibid* p 43-44
 30. CWMG Volume 81 , Navajivan Trust, Ahmedabad, 1980. Pp 319-21
 31. *Ibid*
 32. Gandhi M.K. 1947. *India of My Dreams*. Compiled by R.K. Prabhu. Navajivan Trust Ahmedabad. Seventeenth Reprint 2014. P 71
 33. *Ibid* p 6.
 34. The quotes are from UN Declaration Document, August 2015 *op.cit.*
 35. Readers may refer to already referred ICSU Report for all goals, targets and suggestions for improvement.
 36. The exact text for all SDGs, targets and approaches may be read from the already referred UN declaration document cited above and ICSU report, p 18.
 37. A periodical run by Gandhiji in 1930s and after
 38. CWMG Volume 76, Navajivan Trust, Ahmedabad, 1979. pp 308-09
 39. M.K. Gandhi, *Village Swaraj*. Compiled by H.M. Vyas first published 1963, Navajivan Trust, Ahmedabad. October 2015 reprint p179.
 40. *India of My Dreams. Op. cit.* pp 231-2
 41. *Ibid* p 232
 42. CWMG Volume 60, Navajivan Trust, Ahmedabad, 1974. pp 190-02
 43. *Ibid*
 44. *India of My Dreams op.cit.* p173.
 45. Interested reader to refer *Village Swaraj op. cit.* pp 169-74
 46. *India of My Dreams. Op. cit.* p 67
 47. UN Declaration Document *op. cit.* p 2
 48. *Ibid*
 49. *Ibid*
 50. The then Indian National Congress which conducted the India's Freedom Movement.
 51. CWMG Volume 67. Navajivan Trust, Ahmedabad, 1976 p 125.
 52. CWMG Volume 84. Navajivan Trust, Ahmedabad, 1981 p 66-7 □

Engagement of Universities with Society to Realise SDGs

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“Nature has everything for one’s needs but not the greed”

Mahatma Gandhi ji

Nature is bestowed with all the tenets of sustainable development. If the world community leads a life in harmony with nature, then there would be no need for a special campaign for the same. However, this is not the case. All living beings lead a life in a predictable way. It is only human, which can have variations and it can go against nature. Mindless and careless depletion of nature and its resources have threatened civilization in many ways, be it environmental, societal, political, economic, etc. Hence, the need for sustainable development took center stage when the General Assembly of the United Nations (UN) took initiative to make a better planet by caring for 17 core areas of sustainable development. A 15-year target was set up in 2015, to achieve the goals by 2030. This will be a possibility when all lay their hands on making this a reality.

The 2011 Census finds 74.04% literates in India. This figure must have increased in the last decade (census of India, 2011) with an even lesser percentage of educated women. The Census of 2021 has been postponed for the outbreak of a worldwide pandemic. However, if one assumes that the literacy growth rate is at an increase of 10%, 84-85 percent of Indians would have become literates. However, there are a lot of Indians who will still be illiterates.

“There are 1043 Universities, 42343 Colleges, and 11779 Stand Alone Institutions listed on AISHE web portal. Total enrolment in higher education has been estimated to be 38.5 million with 19.6 million boys and 18.9 million females. Females constitute

49% of the total enrolment. Gross Enrolment Ratio (GER) in Higher education in India is 27.1, which is calculated for the 18-23 years of age group. The GER for the male population is 26.9 and for females, it is 27.3. For Scheduled Castes, it is 23.4 and for Scheduled Tribes, it is 18.0 as compared to the national GER of 27.1. Distance enrolment constitutes about 11.1% of the total enrolment in higher education, of which 44.5% are female students. About 79.5% of the students are enrolled in Undergraduate level programmes. 2,02,550 students are enrolled in Ph.D. which is about 0.5% of the total student enrolment. Scheduled Caste students constitute 14.7% and Scheduled Tribes students 5.6% of the total enrolment. 37% of students belong to Other Backward Classes. 5.5% of students belong to Muslim Minority and 2.3% from other Minority Communities.” (AISHE 2020).

Eligible Enrolment Ratio (EER) instead of GER has been recommended to be monitored for HEIs because enrolment in HEIs can be done only for those who are eligible to take admission. Hence, unless we check the drop-out ratio in the school education system, it would be difficult to ensure high GER in HEIs. (Mittal and Patwardhan, 2020)

The role of HEIs in bringing transformation is expected to be the most important as education must bring responsiveness and responsibility. The initiative of HEIs to augment the global initiative is pivotal. Many institutions are doing their bit as well. Some of the initiatives the Art of Living and Sri Sri University have taken are described below. It is also said that a small step of a man can lead to a big step of mankind. The article is a narration of how everyone can contribute their bit to see the global governance initiative bear fruits.

Four SDGs have been discussed in detail. Food, clothes, and shelter (Roti, Kapda, aur Makaan) are the basic human needs and every welfare state must achieve these for its citizens. Health and Education also come as the next necessity.

No Poverty (SDG 1)

The first goal of SDGs is to end poverty in all forms by 2030.

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“Poverty may be defined as the situation when a person is living under conditions where they are unable to reach the minimum internationally agreed standards in indicators of basic functionings.” Functionings are defined as “the various things a person may value doing or being.” In other words, “functionings are activities and states that make up a person’s well-being - such as being healthy and well-nourished, being safe, being educated, having a good job, and being able to visit loved ones.”

“The Global Multidimensional Poverty Index (MPI) was developed by the Oxford Poverty and Human Development Initiative (OPHI) alongside the United Nations Development Programme’s (UNDP) Human Development Report Office. It replaced the Human Poverty Index (HPI) in 2010 and has since assessed the status of multidimensional poverty across the world annually. The Global MPI for 2020 assessed multidimensional poverty for people in 107 countries with India ranking 62nd.” (Niti Aayog Report 2021)

India and the MPI

NITIAayog has been assigned “the responsibility of leveraging the monitoring mechanism of the Global Multidimensional Poverty Index to drive policy reforms and develop an action plan. This is part of the Government of India’s decision to monitor the performance of the country in 29 select global indices through an exercise known as the “Global Indices for Reforms and Growth (GIRG)”. The objective of the exercise is to fulfill the need to measure and monitor India’s performance on various important socio-economic parameters and enable the utilization of the monitoring mechanism of these

indices as a tool for self-improvement, bringing about reforms in policies and improving last-mile implementation of government schemes. The Global MPI is computed using the Demographic and Health Survey (DHS) of the respective participating countries. The DHS for India is the National Family and Health Survey (NFHS) which is undertaken by the International Institute for Population Sciences under the aegis of the Ministry of Health and Family Welfare. India was ranked 53rd out of 105 countries in 2018, 53rd out of 101 countries in 2019, and 62nd out of 107 countries in 2020 for the Global MPI computed in those respective years.” (Niti Aayog Report 2021)

“To measure India’s performance towards the Goal of No Poverty, six national-level indicators have been identified, which capture four out of the seven SDG targets for 2030 outlined under this Goal. These indicators have been selected based on the availability of data at the sub-national level and to ensure comparability across States and UTs. The following section presents the composite scores of the States and UTs on this Goal. It also shows a breakdown of the States and UTs by indicator. Goal 1 Index Score SDG Index Score for Goal 1 ranges between 32 and 86 for States and between 61 and 81 for UTs. Tamil Nadu and Delhi are the top performers among the States and the UTs, respectively. Seventeen States and seven UTs bagged a position in the category of Front Runners (score range between 65 and 99, including both). However, six States fell behind in the Aspirants category: Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Odisha, Jharkhand, and Bihar (with Index scores less than 50).” (Niti Aayog Report 2021)

GOAL 1: END POVERTY	Percentage of households living in katcha houses
Indicator Data Source	Ministry of Statistics and Programme Implementation [National Sample Survey - 76 th round - Drinking Water, Sanitation, Hygiene and Housing Condition in India]
Computation Approach	Directly from data source
Data Period (Year)	July 2018 to December 2018
Data Unit	Percentage
States/UTs Covered	37
Data Periodicity	Non-periodic
Relevant Global Target	1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
Indicator Interpretation	Higher value means lower performance (-)

Source: Niti Aayog Report 2021

PERFORMANCE BY SDG	2020	2019	Direction
SDG 1: No Poverty			
Population below poverty line (%)	8.19	8.19	–
MPI Head count ratio (%)	4.9		
Households covered by health scheme/insurance (%)	30.3	30.3	–
MGNREGA - Employment provided against demanded (%)	91.30	93.07	↓
Beneficiaries under PMMVY (%)	92.17		
Households living in katcha houses (%)	0.60	0.60	–

Source: Niti Aayog Report 2021

Zero Hunger (SDG 2)

“To measure India’s performance towards the Goal of Zero Hunger, seven national-level indicators have been identified, which capture three out of the eight SDG targets for 2030 outlined under this Goal. These indicators have been selected based on the availability of data at the sub-national level and to ensure comparability across States and UTs.” (Niti Aayog Report 2021)

Goal 2 Index Score of India

SDG Index Score for “Goal 2 ranges between 19 and 80 for States and between 27 and 97 for UTs. Kerala and Chandigarh are the top performers among the States and the UTs, respectively. Seven states and four UTs bagged a position in the category of Front

Runners (score range between 65 and 99, including both). However, eleven states and two UTs fell behind in the Aspirants category: Gujarat, West Bengal, Maharashtra, Madhya Pradesh, Odisha, Assam, Uttar Pradesh, Chhattisgarh, Meghalaya, Bihar, Jharkhand, Andaman and Nicobar Islands, Dadra and Nagar Haveli & Daman and Diu (with Index scores less than 50).” (Niti Aayog Report 2021)

Poverty alleviation schemes of the Government of India

The basic thrust of the national poverty alleviation schemes is on food and nutrition, livelihood, social security, and shelter. Free access to health and education must also be included. Every welfare state must give its citizens these basic necessities. The Reserve Bank of India

GOAL 2: NO HUNGER	Percentage of beneficiaries covered under National Food Security Act (NFSA), 2013
Indicator Data Source	Department of Food & Public Distribution, Ministry of Agriculture and Farmer’s Welfare [Sourced from the NIF Progress Report 2020 V2.1, MoSPI]
Computation Approach	Directly from data source
Data Period (Year)	2019-20
Data Unit	Percentage
States/UTs Covered	37
Data Periodicity	Annual
Relevant Global Target	2.1: By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round
Relevant NIF Indicator	2.1.2: Proportion of beneficiaries covered under National Food Security Act 2013, (in percentage)
Indicator Interpretation	Higher value means higher performance (+)

Source: Niti Aayog Report 2021

PERFORMANCE BY SDG	2020	2019	Direction
SDG 2: Zero Hunger			
Beneficiaries under NFSA (%)	100		
Children under 5 years who are underweight (%)	11	11	–
Children under 5 years who are stunted (%)	21.80	21.80	–
Pregnant women (15-49 years) who are anaemic (%)	23.60	23.60	–
Adolescents (10–19 years) who are anaemic (%)	25.80		
Rice and wheat produced annually (Kg/Ha) (2019 - rice,wheat and coarse cereals)	1842.55	Null	
GVA (constant prices) in agriculture (in Lakhs/worker)	0.95	0.79	↑

Source: Niti Aayog Report 2021

(RBI) estimated that 21.92% of Indians live below the poverty line based on MRP consumption. The partial listing of Poverty Alleviation schemes of the Government of India is as follows.

Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)

MGREGS comes into existence because of the Mahatma Gandhi National Employment Guarantee Act (MGNREGA), 2005 that was launched on 2nd February 2006 to provide at least 100 days of wage employment to rural poor in a financial year. Gradually, the government targets to achieve 150 days. Implemented under the Ministry of Rural Development (MoRD) this is meant to provide livelihood security to the rural people. According to the 2021 statistics 15.18 crore active workers participated, 269.87 crores person-days created, benefitting 6.47 crores households in 716 districts of India (MoRD, 2021).

Deendayal Antyodaya Yojana - National Rural Livelihood Mission (DAY-NRLM) & Deendayal Antyodaya Yojana - National Urban Livelihood Mission (DAY -NULM)

NRLM and DAY-NULM are meant to provide livelihood opportunities to rural and urban people to reduce poverty and vulnerability. DAY- NRLM is implemented in 1009 districts of India by MoRD with a mandate to build institutions for the poor

like SHGs, increase the capacity of the rural poor, harness their latent potential, social mobilization, financial inclusion, livelihood promotion, financial management, facilitating convergence and partnerships (DAY-NRLM,2021). Similarly, DAY-NULM is implemented by the Ministry of Housing and Urban Development, Government of India provides shelters along with essential services to the urban homeless in a phased manner, livelihood opportunities of the urban street vendors, institutional credit facility, social security, and access to emerging market opportunities (DAY-NULM, 2021).

Pradhan Mantri Awas Yojana – Gramin (PMAY-G & Pradhan Mantri Awas Yojana–Urban (PMAY-U)

PMAY-G launched in 2015 is a restricted form of the earlier scheme Indira Awas Yojana (IAY) to provide pucca households to all rural poor by 2022. This is an initiative of MoRD. The size of the house under the scheme has been raised to 25 sq. mt. from 20 sq. mt. The scheme is availed by people having no home or extremely dilapidated and lack of pucca house (PMAY-G, 2021).

PMAY-U launched in 2015 is implemented by the Ministry of Housing and Urban Affairs (MoHUA), to provide homes to the homeless to the Economically Weaker Section (EWS), Low Income Group (LIG), and Middle Income Group

(MIG) categories including the slum dwellers by providing a pucca house. by the year 2022, when the Nation celebrates the platinum jubilee of political Independence (PMAY-U, 2021).

Apart from these flagship programmes, there are many poverty alleviation schemes implemented by the state and central government to make sure that the standard of living of citizens is better in the welfare state.

The Upanishads have described '*Annam Brahmam*' (food is God). *Annamaya Kosha* (sheath) is the first of the five sheaths of our existence. The body is nourished through food and food is identified with Lord Vishnu as well. In the *Vishnu Sahashranama* (1000 names of Lord Vishnu), it is mentioned that he is the food as well as the one who consumes it (*Bhojanaya Namah* and *Bhoktaya Namah*). He is responsible for consumption, production, and distribution and maintains life. A brilliant story of Upanishad time is narrated to understand the importance of food. A young man called Shvetaketu went to the University to acquire great knowledge on Vedas, language, literature, philosophy, poetry, etc. and narrated his father Uddalaka about his academic prowess on his return. His father asked if he has read anything about the one who is all knower and all-mighty. To this question, the son replied with some chantings and knowledge that he learned in his institution. However, not satisfied with the answer, his father asked him to fast for two weeks and then to discuss knowledge. Shwetaketu started fasting and discussing knowledge to prove his intellectual capacity. However, he got tired after 3-4 days of starving. At that time, when Uddalaka asked who is almighty (Brahman) is the boy who is exhausted after so much discussion and starving that, he told at this moment, food is God and he could not think of anything else. His father replied, food is God and one should always remember the same (Inspiring stories, 2016).

Various foods contain various frequencies and energies to sustain life. Bhagawat Gita explained the process of descending to earth from heaven. Linga Deha (the subtle body) enters clouds and then rains. Then it enters the foodgrain. When living beings consume foodgrains, it enters the body. This is transferred gradually to the ovum and sperm and a new life is born. So, a new life comes to the planet through the consumption of food. Food is also the prime source of energy (Hindu Janajagruti Samiti, 2021).

Bhagawat Gita describes the three types of food, viz., Sattva, Raja, and Tama as well. Chapter 15 and text 14 of Srimad Bhagavad Gita narrates,

“Aham vaisvanaro bhutva
praninam deham asritah
pranapana-samayuktah
pachamyannam catur-vidham”

I am the digestive fire in the human body, and with the help of two *Pranas* (life force energy) out of five, I digest four types of food. Prana and Apana are two types of *Pranas*. The four kinds of food narrated in the scriptures are chewed, sucked, licked, and drunk. The ancient scriptures were so scientific and robust that one can lead a life in a seamless manner by knowing them. Food is a most ancient impression of human life along with sleep, fear, and reproduction). In all their lifetimes, living beings have done these four things and the deepest impression in the mind. Food is also responsible for body type and vice versa. According to ancient Indian health science Ayurveda, Tridosha can be balanced through a selection of food. Modern medical sciences discuss nutrition and calories and give advice accordingly as well. Food, Nutrition, and Dietrics have evolved into an important stream of education as well. Indian and International festivals are associated with food that is prescribed based on their climate and geography.

Food security is a major thrust of the state and central government in politically independent India. “Approximately, one-fourth of under-nourished people are from India and it is nearly 19.5 Crores. Nearly 4.7 Cores 40 percent of children in the country are not meeting their full human potential because of chronic undernutrition or stunting. Stunting has many consequences which include lower learning capacity, poor academic performance, reduced income, and increased risks of chronic illnesses. The impacts can be multi-generational as malnourished girls and women often give birth to low birth-weight babies. Urban India has also witnessed obese children which may lead to the occurrence of non-communicable diseases when they grow up” (United Nations in India, 2021).

With a five times increase in food grain production in 2014-15 in comparison to 1950-51, India has transformed itself from a dependent era to become an exporter of food. In 2016, the government launched several schemes to double the income of farmers by 2022. These include Rashtriya Krishi

Vikas Yojana (RKVY), National Food Security Mission, Integrated Schemes on Oilseeds, Palm oil, and Maize (ISOPOM), Pradhan Mantri Fasal Bima Yojana, e-marketplace, widespread soil, and water harvesting as well as irrigation programme with an aim of increasing the irrigated land from 90 million hectares to 103 million hectares by 2017. The Mid-Day Meal (MDM) scheme and Public Distribution System (PDS) and the National Food Security Act (NFSA), 2013 act as antidotes to achieve zero hunger in the country. NFSA was enacted to ensure legally at least 75% rural population and 50% urban population come under its ambit (Government of India, 2021). The government has provided subsidized food grain under a targeted public distribution system since 5th July 2013. Though the right to food security is not mentioned as a fundamental right, it is included under Article 21 which includes the right to life and the right to lead a life with dignity. This is a mega shift where the government's approach has shifted from welfare to right-based. More than 80 Crore Indians get benefits from the scheme. This is perhaps one of the mega Food security schemes successfully implemented in the world. Many state governments also add the initiative by providing some more essentials and cooked food to citizens. The Public Distribution System (PDS), Targeted Public Distribution System (TPDS), Revamped Public Distribution System (RPDS), Antodaya Anna Yojana (AAY) distribute food grain at an affordable price of Re. 1/- Rs.2/- and Rs.3/- per kg. Under PDS, the food grain of 25 kg per family per month was distributed which was increased to 35 kg from 1st April 2002. These efforts were to provide food to the countrymen who do not get two square meals a day. The AAY Scheme has since expanded to cover 2.50 crore poorest of the poor households (PDS, 2021).

Good Health and Well-being (SDG 3)

The World Health Organization (WHO) defines, 'Health is not mere absence of disease but a dynamic expression of life.' The ancient health science in India, Ayurveda means the science of life as well. Maintaining health, living in harmony with nature, being happy, contented are categorized as well-being. This is also a fundamental right under the right to life, liberty under Article 21 as well.

Gurudev Sri Sri Ravi Shankar has said, "A disease-free body, quiver-free breath, stress-free mind, inhibition-free intellect, obsession-free memory, an ego that includes all, and a soul which is free from

sorrow is the birthright of every human being." He is the founder of The Art of Living, an organization having a presence in 155 countries of the world that is here to make life a celebration through various ancient yet pragmatic life skills techniques designed for modern man to live a complete life of happiness.

"Good health is essential to sustainable development and the 2030 Agenda reflects the complexity and interconnectedness of the two. It takes into account widening economic and social inequalities, rapid urbanisation, threats to the climate and the environment, the continuing burden of HIV and other infectious diseases, and emerging challenges such as non-communicable diseases. It calls for a renewed focus on mental health issues as well. Universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, quality, and affordable medicines are integral to this goal." (Niti Aayog Report 2021)

SDG India Index: Goal 3

"To measure India's performance towards the Goal of Good Health and Well-Being, ten national level indicators have been identified, which capture eight out of the thirteen SDG targets for 2030 outlined under this Goal." (Niti Aayog Report 2021)

Goal 3 India Index Score

The Index Score of India for SDG Goal 3 "ranges between 59 and 86 for States and between 68 and 90 for UTs. Gujarat and Delhi are the top performers among the States and the UTs, respectively. Twenty one States and all UTs bagged a position in the category of Front Runners (score range between 65 and 99, including both). No State or UT was in the category of Aspirants (with Index score less than 50)." (Niti Aayog Report 2021)

Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) is a very promising public health insurance scheme of Rs. 5 lakh which aims to cover more than 50 Crores citizens. Implemented by National Health Authority (NHA), the scheme has benefitted more than 19 Crore people since its launch on September 23, 2018. health care scheme of the Government of India. Biju Swasthya Kalyan Yojana (BSKY) is a very promising universal health care programme in the Government of Odisha which can be a great example for other state governments to emulate. It provides quality health care facilities

GOAL 3: GOOD HEALTH AND WELL-BEING	Total case notification rate of Tuberculosis per 1,00,000 population
Indicator Data Source	Ministry of Health and Family Welfare [National Tuberculosis Elimination Program]
Computation Approach	$\frac{\text{Total TB patients notified in 2019 (Public+Private)}}{\text{Total population in 2019 (in Lakhs)}}$
Data Period (Year)	2019
Data Unit	Per 1,00,000 population per year
States/UTs Covered	37
Data Periodicity	Annual
Relevant Global Target	3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
Relevant Global Indicator	3.3.2: Tuberculosis incidence per 1,00,000 population
Relevant NIF Indicator	3.3.2: Tuberculosis incidence per 1,00,000 population
Indicator Interpretation	Higher value means higher performance (+)

Source: Niti Aayog Report 2021

GOAL 3: GOOD HEALTH AND WELL-BEING	HIV Incidence per 1,000 uninfected population
Indicator Data Source	Ministry of Health and Family Welfare [India HIV Estimations 2019 Technical Report,NACO,ICMR]
Computation Approach	Directly from data source
Data Period (Year)	2019
Data Unit	Per 1,000 uninfected population
States/UTs Covered	36
Data Periodicity	2 Years
Relevant Global Target	3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
Relevant Global Indicator	3.3.1: Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations
Relevant NIF Indicator	3.3.1: Number of new HIV infections per 1,000 uninfected population
Indicator Interpretation	Higher value means lower performance (-)

Source: Niti Aayog Report 2021

GOAL 3: GOOD HEALTH AND WELL-BEING	Suicide rate (per 1,00,000 population)
Indicator Data Source	Ministry of Home Affairs [National Crime Records Bureau - Accidental Deaths & Suicides in India 2019]
Computation Approach	Directly from data source
Data Period (Year)	2019
Data Unit	Per 1,00,000 population
States/UTs Covered	37
Data Periodicity	Annual
Relevant Global Target	3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
Relevant Global Indicator	3.4.2: Suicide mortality rate
Relevant NIF Indicator	3.4.2 Suicide mortality rate (per 1,00,000 population)
Indicator Interpretation	Higher value means lower performance (-)

Source: Niti Aayog Report 2021

GOAL 3: GOOD HEALTH AND WELL-BEING	Total physicians, nurses and midwives per 10,000 population
Indicator Data Source	Numerator: Directorate General of Health Services, Medical Council of India, Indian Nursing Council, Ministry of AYUSH [National Health Profile 2019] Denominator: Ministry of Health and Family Welfare [Population projections for India and States 2011-2036, National Commission on Population]
Computation Approach	$\frac{\text{Number of registered doctors} + \text{AYUSH Practitioners} + \text{ANM} + \text{RNM} + \text{LHV}}{\text{Mid-year projected population in 2016}} \times 10,000$
Data Period (Year)	2016-17
Data Unit	Number Per 10,000 population
States/UTs Covered	32
Data Periodicity	Annual
Relevant Global Target	3.c: Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States
Relevant Global Indicator	3.c.1: Health worker density and distribution
Relevant NIF Indicator	3.c.1: Total physicians, nurses and midwives per 10,000 population
Indicator Interpretation	Higher value means higher performance (+)

Source: Niti Aayog Report 2021

PERFORMANCE BY SDG	2020	2019	Direction
SDG 3: Good Health and Well-being			
Maternal Mortality Ratio (per 1,00,000 live births)	Null	Null	–
Under 5 mortality rate (per 1,000 live births)	Null	32	
Children (9-11 months) fully immunized (%)	62		
Notification rate of Tuberculosis per 1,00,000 population	218	221	↓
HIV incidence per 1,000 uninfected population	0.03	0.03	–
Suicide rate (per 1,00,000 population)	33.10		
Death rate due to road accidents per 1,00,000 population	12.63		
Institutional deliveries out of the total deliveries reported (%)	99.40	49.3	↑
Monthly per capita out-of-pocket expenditure on health (%)	Null		
Physicians, nurses and midwives per 10,000 population	25	24	↑

Source: Niti Aayog Report 2021

to the economically vulnerable section of society. The BSKY is launched in 2018 is extended to more and health cards are being distributed in all the 30 districts of Odisha. Through 5T (Transparency, Team Spirit, Time, and Technology leading to Transformation) and Mo Sarkar, the state is on the way to creating an unprecedented model of better public service delivery. Various states of India which are governed by regional parties have come up with innovative schemes to do sustainable development to be in power through showing better models of development.

Clean Water and Sanitation (SDG 6)

SDG 6 calls for “access to safe and affordable drinking water, sanitation facilities, and hygiene for all by 2030. Water resources are also critical for agriculture and industrial use, and therefore protecting and restoring water-related ecosystems is essential. The goal is aimed at -improving water quality by reducing pollution, substantially increasing water-use efficiency across all sectors, and strengthening the participation of local communities in improving water and sanitation management.” (Niti Aayog Report 2021)

SDG India Index: Goal 6

“To measure India’s performance towards the Goal of Clean Water and Sanitation, eight national level indicators have been identified, which capture five out of the eight SDG targets for 2030 outlined under this Goal.” (Niti Aayog Report 2021)

Goal 6 India Index Score

“SDG Index Score for Goal 6 ranges between 54 and 100 for States and between 61 and 100 for UTs. Goa and Lakshadweep are the top performers among the States and the UTs, respectively, having secured a score of 100. Twenty-five states and six UTs bagged a position in the category of Front Runners. Although no State/UT fell behind in the Aspirants category,

two States and one UT belonged in the Performers category.” (Niti Aayog Report 2021)

Swachh Bharat Mission (SBM) is a flagship programme of the Government which prompted social mobilization and convergence for getting success. More than 50 Crore toilets have been constructed under the scheme across the country. Similarly, safe drinking water is also a basic need for a decent living. Accessibility to clean water is made possible through a Governmental scheme. The Odisha Government has gone one step ahead by making the tap water drinkable in the historic city of Puri where pilgrims come from across the country for the darshan of Lord Jagannath, Balabhadra, and Subhadra.

GOAL 6: CLEAN WATER AND SANITATION	Percentage of individual household toilets constructed against target (SBM(G))
Indicator Data Source	Swachh Bharat Mission Gramin Dashboard
Computation Approach	Directly from data source
Data Period (Year)	2020
Data Unit	Percentage
States/UTs Covered	37
Data Periodicity	Annual
Relevant Global Target	6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
Relevant Global Indicator	6.2.1: Proportion of population using safely managed sanitation services
Relevant NIF Indicator	6.2.1: Proportion of households having access to toilet facility (Urban & Rural)
Indicator Interpretation	Higher value means higher performance(+)

Source: Niti Aayog Report 2021

PERFORMANCE BY SDG	2020	2019	Direction
SDG 6: Clean Water and Sanitation			
Rural population getting drinking water within premises through PWS (%)	37.42		
Rural population having improved source of drinking water (%)	100	100	–
SBM(G) - Individual household toilets constructed against target (%)	100	100	–
SBM(G) - Districts verified to be ODF (%)	100	100	–
Schools with separate toilet facility for girls (%)	99.34	97.32	↑
Industries complying with CPCB waste water treatment norms (%)	96.77	50	↑
Ground water withdrawal against availability (%)	0.06	0.06	–
Blocks/mandals/taluka over-exploited (%)	0	0	–

Source: Niti Aayog Report 2021

The Initiative by The Art of Living, Sri Sri University, and partner Organizations for improving SDG1,2,3 &6

The Art of Living was founded by the world-renowned humanitarian, spiritual leader, and messiah of peace and happiness Gurudev Sri Sri Ravi Shankar. The international center is based in Bengaluru, India. However, it has a presence in 155 countries of the world. Many developmental and humanitarian work has been undertaken by organizations across the globe to make this planet a better place to live. The partial listings of the contribution made by Sri Sri University and the partner organizations of the parent body, the Art of Living are jotted down.

Happiness Connect by Sri Sri University for the well-being

Sri Sri University has zero-tolerance for alcohol, cigarette, and drugs inside the campus with vegetarian food is considered by the students as the happiest campus in the globe. It has unique flora, fauna, and terrain as well. The students have been imparted holistic education with life skills training of the Art of Living in Yoga, service, and community singing; compassion to animals by remaining vegetarian; inculcating the attitude of empathy and values; and making life a celebration. These initiatives have been categorized under Happiness - Connect. The students also conduct various cultural, academic, and sports festivals viz., Orion, IMUN, Collympics, etc, to ensure a vibrant campus life. The students also organize blood donations among students and distribute clothes to the needy in nearby communities.

Promotion of Ayurveda and holistic health for well-being

Holistic health is also promoted in the University by creating a Faculty of Health and Wellness. Under the aegis of the same, Yoga, Naturopathy, Osteopathy, Sports Physiology, and Ayurveda have been imparted. Regular workshops to emphasize the value of holistic health are promoted by the organization.

Extension activities by Sri Sri University (SSU) -Department of Public Relations & Social Outreach:

SSU retained its employees during the COVID-19 pandemic. This shows empathy, compassion, and good organizational culture. This has helped in poverty alleviation which might have been caused

due to unemployment and retrenchment. Sri Sri University has given vocational skills training to more than 3000 school dropout youths in the area of construction skills, Solar electrification, security guards, hospitality, Ayurveda Panchakarma therapists, etc. in collaboration with companies and foundations in creating jobs for the underprivileged and orphaned youth. Through technology, at the doorstep, more than 900 women in 19 adjacent villages have been trained in sewing. Many women have started micro-entrepreneurship ventures after getting trained.

Two villages namely Bhalunka and Kalyani Nagar have been solar electrified benefitting more than 210 households.

The students and faculty of the University in collaboration with the International Women's Conference of The Art of Living have started a campaign on hygiene and facilitated the governmental scheme on the construction of Indian House Hold Latrine (IHHL) under the Swachh Bharat Mission. When the initiative started in December 2017, the toilet penetration in the Ramdaspur Panchayat was 28%. This was raised to completion of toilets in all the households in a span of two years.

'iStandWithHumanity' and Mission Zindagi by International Association for Human Values (IAHV)

The nationwide volunteer-driven COVID-19 relief efforts have been launched as iStandWithHumanity during March 2020 to help the daily wage earners. During the second wave, Mission Zindagi was launched on 13th May 2021. The seven pronged approaches to help COVID-19 patients through hospital, oxygen, doctor on call, ambulance, mental and emotional health, immunity kit, and counseling have benefitted lakhs of people in the trying time. IAHV has provided covid relief worth 100 crores. This included more than 100 Million meals and kits, 6319 oxygen concentrators, 2700 beds in six COVID-19 care centers, 711 oxygen cylinders, 100 ventilators, etc. IAHV has adopted a holistic strategy to combat the impact of the dreaded pandemic with the help of local government and corporate partners (IAHV, 2021).

Three types of free online COVID-19 care programmes have been launched to boost the immunity of people and to get relief from the pandemic. Many frontline workers have been imparted free training on Sudarshan Kriya® as well.

Sri Sri University has retained all the employees during the COVID-19 pandemic. The maintenance and support staff have been helped with food grain as well. With the collaboration of IAHV, SSU has distributed food grain, and essentials to the needy of the adjacent villages with the help of the local administration. Sri Sri College of Ayurvedic Science and Research Hospital has been made a COVID-19 care center with 50 beds by the Government of Odisha and treated patients for three months during the second wave in 2021.

River Rejuvenation

“Water is the very basis of human life. Let us renew our resolve and volunteer to purify and rejuvenate water bodies worldwide.”- Gurudev Sri Sri Ravi Shankar

47 rivers have been rejuvenated in Maharashtra, Kerala, Karnataka, and Tamilnadu. More than 22,562 recharge structures have been constructed, more than 6186 villages benefitted, and more than 7 million people benefitted in 4 states. This has resulted from more than 250 million liters of storage capacity. 512 tons of clothes, plastic, and garbage have been cleaned from the Yamuna river. 68,00,000 volunteer hours have been spent on Pampa river cleaning in Kerala. IAHV has covered 491206 sq. kilometers of the area under the river rejuvenation project (IAHV, 2021).

Home for Homeless

15 homes for the homeless and one community hall have been constructed in the Bidyadharpur and Arilo villages in two adjacent villages as a part of the Institutional social responsibility of Sri Sri University. The parent organization has been doing the same since 1997 as a part of the 5 H (Health, Hygiene, Human Values, Harmony in diversity, Home for homeless) initiative of the rural wing vertical of the Organization.

Free Education to children

Currently, the Art of Living free schools run 493 rural schools, 192 tribal schools, and 17 slum schools benefitting more than 73,600 children. 95% of students are first-generation literates, 48% girl students with 100% school results (India Impact Report, 2018-2020). Smt. Bhanumathi Narasimhan, chairperson of the Art of Living free school schools is the sister of Gurudev Sri Sri Ravi Shankar which educates these children from 22 states of the country

in more than 702 institutions. She instituted “Gift a smile – Care-for-Children” to impart value-based and holistic education to underprivileged children in the rural, tribal, and slum areas free of cost.

Catalyzing the Construction of Toilets

The Art of Living has built 16,550 toilets in India. In 2018, The International Women’s Conference has campaigned in seven states for creating awareness among rural women to facilitate the construction of the Indian House Hold Latrine (IHHL) scheme of the Government of India under the aegis of Swachh Bharat Mission- Gramin. Under the initiative, students and faculty of Sri Sri University have taken up the project of adjacent Panchayat Ramdaspur with a toilet penetration of 23%. The continuous hygiene training and awareness camps have catapulted the construction of toilets in the village. In a span of three years, every household in the village benefitted from a toilet facility with the help of the Governmental scheme.

Skilling and Entrepreneurship

Skilling, Livelihood, and entrepreneurship can play a pivotal role in eradicating poverty, hunger, and illiteracy. 307300 people have been trained in 2018-20 in various governmental programmes in skill centers and prisons, 2.2 million farmers have been trained in chemical-free farming, 234000 women have been trained in entrepreneurship and income-generating skills across the nation. The Art of Living is eligible to give the National Skill Development Corporation (NSDC) Certification of Government of India in 2000 job roles in 32 sectors. In 2018-20 the organization skilled 311,000 people in various skill development centers, prisons, government programmes, river rejuvenation projects, etc.

Sri Sri University has also participated in the global ranking on SDGs viz., UI Green Metric World University ranking on sustainability by Universitas Indonesia for 2019, 2020, 2021 and Times Higher Education Sustainable Development Goals, New York for the year 2020, 2021 respectively. The scorecard is as follows.

Recommendations

The Good Governance Matrix

The Good Governance matrix needed for sustainable development created by CMGI under the guidance of Mr. Niten Chandra, IAS, the special

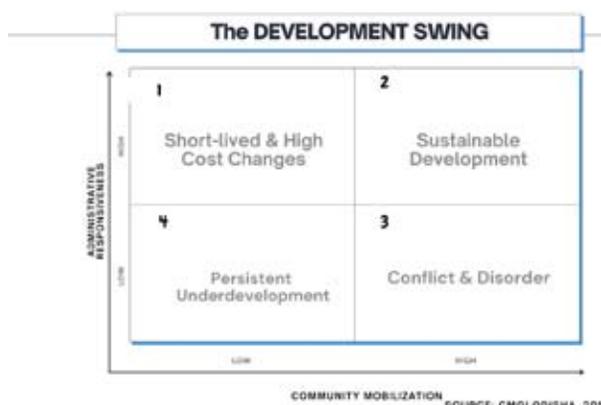
Table-1: UI Green Metric World University ranking of Sri Sri University

Year	Global ranking	Ranking in India	Ranking in Odisha
2021	248	6	1
2020	304	7	1
2019	416	12	4

Table-2: Times Higher Education Ranking on SDGs for Sri Sri University (2020)

Name of the SDG	SSU Rank	SSU Score
SDG1: No Poverty	201-300	11.3
SDG2: Zero Hunger	201-300	36
SDG 3: Good Health & Well-being	301+	15.4
SDG 6 : Clean water & Sanitation	401+	25.6

secretary, General Administration Department, Government of Odisha, and others can be taken as a development model to attain better public service delivery and to make sure that all the governmental schemes on poverty alleviation, public distribution system, health care, sanitation, etc. reach the poorest of the poor in the country. These certainly need better Citizen’ engagement in governance through social mobilization and highly responsive administration. These are quite a possibility with a heightened level of awareness, responsibility, and highly inspired citizens and government employees. The challenge is attitudinal most of the time.



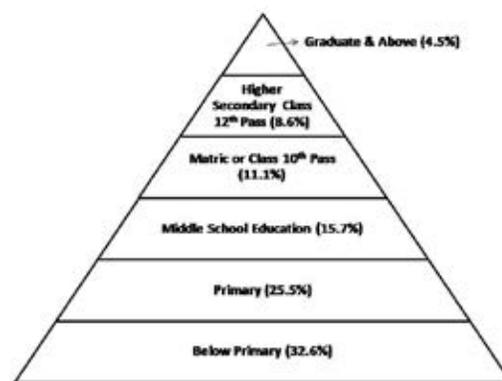
Imbibing Learn, Lead, Serve Culture for HEIs

The motto of Sri Sri University, i.e., Learn, Lead, and Serve can be a great model for HEIs to emulate. The people at the top of the pyramid with education graduation and above must feel sensible to serve the

most. This must be a culture in HEIs considering the fact that only 4.5% of Indians get higher degrees of graduation and above. The percentage of share of the literate population includes 32.6% below the primary level, 25.2% primary, 15.7% middle school, 11.1% matriculate, and 8.6% higher secondary (class 12th). The highly educated must imbibe service as an attitude for sustainable development (Jain, 2015).



INDIA'S EDUCATIONAL PYRAMID



(Source: Jain, 2015)

Matrix for High Performance of HEIs for Sustainable Development

The table shows four quadrants with decentralization at the X-axis and organizational structure at the Y-Axis. In the first quadrant, the organizational structure and functions are clearly defined but there is less decentralization, which results in a lack of research and innovation. The changes are cost-effective and the team does not own the changes. The second quadrant discusses a good amount of decentralization and clarity on organizational structure and functions. It leads to sustainable development in HEIs and realization of developmental work including SDGs are possible. Quadrant three facilitates decentralization but lacks clarity in Organizational structure and functions. It leads to chaos, confusion, attrition, and dissatisfaction. Though people like the freedom of work, they do not continue for long. The

(contd. on pg. 63)

Gandhian Approach to Education: Tool to Realise the Goals of Sustainable Development

T S N Sastry*

“Real education has to draw out the best from the boys and girls to be educated. This can never be done by packing ill-assorted and unwanted information into the heads of the pupils. It becomes a dead weight crushing all originality in them and turning them into mere automata.”

M.K. Gandhi

Prologue

Every one of us is well acquainted with the contributions of the father of the nation, Mohandas Karamchand Gandhi. But we failed to integrate his approach fully in every sector, especially in education a vital sector to realize the ideals of sustainable development. It is high time now that we have to take serious steps to reorient our education system and have to make all out efforts to revive the ideals of Gandhi and revamp our educational system fully to integrate his principles. This alone would be the befitting tribute to the greatest son of Bharat. Because his entire approach of education is based on all round development of human personality, which will play a vital role to develop a conflict ridden society to make a peaceful living, material advancement for socio-economic progress, to evolve self-sustained political institutions, build moral and ethical character of individuals, nurture values and culture where in humanity flourishes with prosperity to share love and caring for each other including the resources. It will in turn enable to build collaborative partnerships to share the resources of the world and to realize the goals of sustainable living with development.

The entire philosophy of Gandhiji revolves around his own principles of *satyagrah*, *sarvodaya*, *swaraj*, *swadeshi* and self, which are fundamental in nurturing human personality. The embodiment of his entire philosophy on education is to be self-driven with moral and ethical percepts to orient the pupil from childhood by teaching skill based knowledge with vocational training to prepare robust human personality which would develop a sense of belonging

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to him and to society than to lead a life merely earning for living. Thus, the dynamic vision of education of Gandhiji is based on activity and practical orientation. In other words, the philosophical percepts upon which the goals of sustainable development have been developed too have a similar footing to achieve them through education as an important means. In order to unravel the theoretical percepts of Gandhiji, the essay examines subtly his thoughts and the inter connectivity to achieve the goals of sustainable development through education.

Before examining the Gandhian philosophy to realize the goals of sustainable development, let me examine in brief the concept of sustainable development in international and national perspective.

Conceptual Perspectives of Sustainable Development

The concept of sustainable development is mostly linked and examined from the protection and preservation of environment even amongst academia except a few scholars well versed with its ideological perspectives. But from the prism of socio-economic and international legal perspectives, sustainable development has a wider connotation with a long drawn chequered history and consists of four important elements which are linked with growth theory. Sustainability literally means “a capacity to maintain some entity, outcome, or process over time.” Any kind of developmental activity is undertaken without forethought of sustenance doesn’t lead the resources for promoting capacity building. Since development is linked with measurement of Human Development Index, the essential components of Sustainability are mostly linked to nourishment of socio-economic, cultural, political, moral and ethical values at all levels without any compromising tendencies.

The basic factors of sustainable development are; 1) capital measured in units of consumer goods, 2) labour involving the individual skills, 3) human capital comprising education, learning, development and individual training, and 4) technological development. To focus on stimulating economic

growth, nation-states need to promote skill based vocational education, research with potential outlook for sustainable human capital with transparent administration to nurture institutions from grassroot levels, endowed with an objective to develop moral, ethical, ecological, cultural, duty based perceptions in men to realize and enjoy human rights comprehensively to utilize the resources of the earth on equitable sharing to attain development.

The theoretical base for the development and crystallization of sustainable development is traced from the middle of 18th century linked with economic theories of Adam Smith, and in the 19th century with Karl Marx and in the 20th century it could be seen from the philosophical and political ideological percepts of Gandhiji. In the international arena, sustainable development received recognition mostly in the middle of 20th century in late sixties after a group of developing and underdeveloped countries took the mantle towards their developed partners through the United Nations to share the resources equally and to extend concessions to them, especially, economic and technological front for exploitation of their resources in a totalitarian perspective during the reign of colonialism. Finally, the publication of former Secretary General of the United Nations, U Thant's report on the need to preserve the human environment to protect the depleting resources on the biosphere and to preserve their growth for future generations in 1968, followed by the 1972 UN Stockholm Declaration on Human Environment, the concept of sustainable development gained prominence and linked with realization of human rights in their entirety without any kind of discrimination in the later periods.

The history of sustainable development is divided into four phases. The first period is linked to the theoretical orientation from the middle of 18th century till the publication of the Brundtland report, which marked with the preservation of environment. The second phase is linked with the socio, economic and legal developments that took place in the aftermath of decolonization till the publication of Brundtland Report in 1987, which had put in the concept of sustainable development in its proper perspective linking with environmental management. However, in the later years after the report was adopted, the concept of sustainable development had met with criticism and encountered a number of difficulties. The adoption of Millennium

Development Goals by UN in 2000 and the steps taken for their crystallization marks the third phase. But the negative approach, other economic, legal concerns of nation-states and various other developments led the UN to reorient the Millennium Development Goals to comprehensively cover all areas of human development with a potential link to ecological sustainability and realization of human rights marks the opening of the fourth phase.

The fourth phase is the contemporary one, where in the UN Conference on Sustainable development in 2015 expanding the eight Millennium Development Goals into seventeen to be achieved by 2030 emphasizing the responsibility of nation-states to evolve effective strategies with future outlook to evolve policy formulations surmounting sustainable goals through collaborative partnerships both at national and international levels simultaneously, for the effective implementation and realization of the 17 goals. Accordingly, it is the onerous responsibility of nation-states to crystallize their internal policy formulations on mutual sharing basis of the World resources. The 17 goals of the new agenda of the UN are: Goal 1, end poverty in all its forms; Goal 2, End hunger, achieve food security and improved nutrition and promote sustainable agriculture; Goal 3. Ensure healthy lives and promote well-being for all at all ages; Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; Goal 5. Achieve gender equality and empower all women and girls; Goal 6. Ensure availability and sustainable management of water and sanitation for all; Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all; Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all; Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation' Goal 10. Reduce inequality within and among countries; Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable; Goal 12. Ensure sustainable consumption and production patterns; Goal 13. Take urgent action to combat climate change and its impacts; Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development; Goal 15. Protect, restore and promote sustainable use of terrestrial; ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss;

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels; Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development. In other words, the entire agenda aims at the development of people, planet, prosperity, peace and building partnerships.

The transformative agenda of our world adopted in 2015 by the UN General Assembly which came into existence in 2016 is to augment the goals to end the miseries of humanity. The resolution while expanding the goals with target based approach to achieve each one of them by 2030 made its tone and tenor clearly that sustainable development is central to the realization of human rights linking with the three principal components of economic, social and environment development in all respects. Amongst the 17 goals, majority of them could be seen as part and parcel of the philosophical ideals expressed by Gandhiji long back, which at the national level, we need to take stern steps to accomplish them by synchronizing the policy perspectives with the Gandhian thought, especially, through impartation of inclusive and equitable quality education including technical and vocational skills to substantially increase the potential of youth and adults at all levels from primary to university level. The UN too advocates similar approach that needs to be adopted by nation-states both at domestic and international prism through goal 4 by evolving strategies to cooperate and to share resources of the earth equally with sustained efforts to prevent their further degradation to preserve for the present and future generations to lead a life with peace.

According to Brundtland, sustainable development is a holistic concept which is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” In other words, according to a popular saying, we have borrowed this planet earth not from our forefathers but from our future generations, and have a responsibility to hand it over them in a safe and better manner; if not at least the way we received it from our forefathers. In the light of the above, the concept of sustainability mainly evolves and depends upon three important perspectives of development, such as environmental sustainability focusing on maintaining quality environment, social sustainability focuses on realization of civil, political,

socio, economic and cultural human rights extending respect to cultural, religious diversity and , economic sustainability necessary to maintain the natural, social human capital required for income to live in peace and harmony. Realization of the 17 goals as is interwoven with human development, constant sustained effectors alone could bring in the comprehensive development of sustainability of the present and future generations and of the resources.

India and Sustainable Development

The Indian philosophy from ancient to modern times has been built on the concept of *Vasudhaiva Kutumbakam* which means, the world is one family. Accordingly, the philosophical tenants of India have been greatly developed on the welfare of peoples’ needs to be promoted by state at all times with total dedication without any discrimination. The sustainable development goals (SDGs) are part and parcel of Indian culture. From ancient to modern periods, especially, the policy perspectives, the Constitution of India to a great extent have the objectives of sustainable development goals in it and the state is strenuously pursuing by adopting a number of policy perspectives to achieve them in various ways and means.

The policy formulations prioritized by the present Government of India and rightly stated by the Prime Minister of India, Mr. Narendra Modi, “These goals reflect our evolving understanding of the social, economic and environmental linkages that define our lives.” The modern development mantra of India centers round the concepts of *Swatch Bharat Abhiyaan* (clean Environment) and *Sabka Saath, Subka Vikas* (collective effort, inclusive development) are a clear indication that the SDG’s are part of India’s growth perspective and a close call to all sections of people of the polity to extend their support to the government for its commitment to adopt and to realize them by 2030. Accordingly, the government has adopted a number of policy formulations centering round the goals of SDGs for their effective promotion and realization through various sectors including the ongoing exercise of revamping of education.

Gandhiji’s Philosophy and Sustainable Development

Gandhiji’s vision for new India was not limited to release India from the colonial yoke, but to build a new society in independent India based on a

spiritual, collective oriented cultural society, where in the resources are shared equally to drive away poverty and inequality by employing sustainable exploitation methods. He laid emphasis on self sufficiency of individual from childhood which in turn makes villages as competent units of the republic to meet the socio-economic demand of the country and as well that of the international community. Gandhiji was opposed to complete mechanized industrialization and laid more emphasis on handmade labour products for sustaining self-sufficiency, which in turn help to develop a cooperative society to drive away all kinds of inequality that is structured on socio, economic, and cultural percepts and would develop the common brotherhood approach without any discrimination to race, caste, sex, religion and drive away misconceived ideals.

Mahatma Gandhi was a firm believer that earth provides for every man's needs and not for every one's greed. Basing on this protective thinking, he coined the term *Sarvodaya* which means 'universal upliftment of all.' Gandhiji developed his *sarvodaya* concept basing on the ancient Indian philosophy *sarvadharm-Sambhava*, which is closely associated with *sarvodaya*. Conceptually, the philosophy of *sarvodaya* aims at achieving the welfare of all sections of people through *gram swaraj* without concentrating power or money in the hands of a few. The concept further dwells on a number of factors such as simple living and high thinking, practice of non-violence, truth and renunciation of self, et.al.

To realize the goals of *sarvodaya*, Gandhiji had advocated a number of concepts, amongst them, the prominent one is the 'self', which he fondly advanced his thoughts on various aspects to be practiced by all with single minded devotion to overcome the perception of self. The ideal of self is mostly based on the body and mind. He explained the concept through the notions of '*atman*' and '*dehin*' which unites the ethical and spiritual world, where in an individual has to be taught through education to realize the value of rights through performing duties. He further advocates that realising self is essentially important as it shapes not only the character and personality of individuals but also teaches to regulate the desires of daily needs. The adherence to self brings in metamorphical changes in the society and drives the human mind to share the resources equally both nationally and internationally in a peaceful manner through the outlook of cooperative development.

Advancing self, linking to education Gandhiji wanted education to be imparted compulsorily to all in order to drive away completely illiteracy. His emphasis of education needs to be skill based with vocational and self-sustained skills with an outlook to employ the techniques of such skills by people for the proper utilization of resources to be shared by all to ultimately sub serve the socio, economic and cultural interests of the society in a fair means. According to him, higher education, especially the University Education and research has to reorient the thought process of knowledge to make it employable for sustained use and exploitation of resources than the present mechanical theoretical educational orientation delinking practical orientation. His total idea of education from primary to university level has to be linked with skill based vocational education. Accordingly, the higher education has to have a linkage with the primary and secondary education to unravel and expand the learned techniques of skills emphasizing on values and culturalistic perspectives to expand the horizons of knowledge that already exists in man and to meet societal needs.

The New Education Policy—2020 of India, unlike its predecessor policy formulations toed the approach of Gandhian philosophy to a maximum extent. The policy which is divided into four parts advocates, flexible, multifaceted, multilevel, vocational, skill based multi-language, adult based and with a clear focus on employable technical and higher education. It has a clear demarcation of education from childhood to university level and woven around the concepts advocated by Mahatma Gandhi. Unlike the previous policies, it has a focus on education from preprimary level to develop the foundational base of values, cultural orientation with an ease to develop personality building with a liberty to students to choose the choice of subjects as per interest without a strict demarcation. The multidisciplinary approach from early education till higher education focusing on learning for living along with the approach of exploitation of resources for sustainable use with an emphasis to evolve techniques to share and protect the depleting resources like water and deforestation, training teachers with value orientation, free exchange of ideas, employability of technology for nation building, a drive to evolve to build the *gram swaraj*, reorientation of professional education with practical perspectives are no doubt amply synchronises the thoughts of Mahatma Gandhi and that of the SDGs. The emphasis on activation

of mind and body through compulsory training in yoga, leisure for sports and games, special drive on arts and crafts certainly bring back Gandhiji's prism of human centric skill based technological knowhow than simply relying madly on industrial urbanization.

Conclusion

The Constitution of India and the policy formulations have been mostly developed in the last seven decades after independence to build a new united India basing on the cooperative prism of Gandhiji. However, we could not progress much in realising his ideals, although colonial rulers have left us long back, the shades of colonialism still has an imprint in our minds which is making us to fight on various fronts, thereby loosing the track to fully integrate to impart the Gandhian values into education.

Education being an important tool to bring in any type of changes in the transformation of society, the initiatives articulated in the New Education Policy need to be examined with a pragmatic outlook by all, especially, the leaders of political parties cutting across party lines to give serious consideration to the objectives of the policy, and, to earnestly introspect the pros and cons of each area of the draft policy before its adoption. The Union Government has an onerous responsibility to seek the views of all the stake holders apart from the public views it had already sought, especially, the states, the heads of universities and other higher educational institutions on regional basis to discuss and to evolve sustainable strategies mechanism to be adopted to remedy the existing lacunas would go a long way for the effective implementation and realization of the policy formulations.

Apart from the government, the higher educational institutions also need to engage themselves to evolve strategies for cooperative sharing of resources and facilities between them and to bring in changes in the academic and research impartation by identifying the priorities, challenges, opportunities and gaps than in piece meal efforts. In this regard, though the AIU, UGC and other higher educational bodies have taken the lead by conducting regional and national conferences of the heads of higher educational institutions to advocate the integration of SDG's in their educational policy perspectives and to evolve methods to share the

existing resources amongst themselves. However, much progress hasn't been achieved as advocated for varied reasons. To fill the gaps in the existing institutional setup, and to address the concerns of each institution, especially, the financial, curricular and sharing of human resources, they should take further lead to initiate interactive process with institutions and states at individual, regional, and national level, certainly would enable the agencies to find out the solutions to supplement the governmental discussions before adopting the policy. Such an exercise would definitely lead to Promotion of University Research and Scientific Excellence (PURSE) to develop harmonious basis for sharing the resources and to bridge the existing gaps between various disciplines and universities both nationally and internationally. In other words, it would help as rightly pointed by Jeffery D Sachs, "...to bring in real global network of universities around the World to be an active 'solutions network' to help governments, business, and civil society to chart out the pathways to successful sustainable development, and also to be the incubators for the rapid development and rapid fusion of sustainable development technologies, and universities could easily take the lead to help society to find the technical solutions to achieve the goals."

The Government of India and the regulatory bodies have to initiate the dialogue process on the suggested lines at the earliest in order to take the New Education Policy forward to realise the dreams of Gandhiji to build a new India and to discharge the commitments of the State to the international community in achieving the targets on a realistic perspective by 2030. It will further help to yield fruitful results to meet the objectives and perspective of the contemporary thought of *Sabka Saath, Subka Vikas* of the Union of India.

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(contd. from pg. 57)

fourth quadrant witnesses centralization and a lack of organizational structure and function. This leads to persistent non-performance and torpidity leading to dull HEIs. The ideal quadrant to strive for is 2nd and every organization must aspire and work towards achieving the same.

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Mainstreaming Youth Development into Educational Process

Saket Kushwaha* and Kaushalendra Pratap Singh**

“Responsibility will mellow and sober the youth and prepare them, for the burden they must discharge”

Mahatma Gandhi.

Youth development of late, has become critical to national development all over the world. This is the obvious consequence of the growing young population across the globe and it is universally acknowledged that India has been experiencing demographic dividend for the last one decade and thus has become the youngest nation. It is natural that concomitantly the population in the working age also rises with the rapidly increasing youth population. Since the perceptible demographic change impacts the policy, economy, resources and polity, it warrants an extensive and in- depth discourse on youth, their role in the developmental process and policy interventions required for their empowerment.

Youth Development

Youth development is a comprehensive idea that revolves around important variables like educational attainment, health, work participation (employment), skill development, civic participation or civic engagement, migration, consumerism, cultural participation or consumption - a subject that seldom gets its due - entrepreneurship and so on. These domains apart, youth development as a concept or a policy matter, means the preparation of the young people to face the challenges they encounter during adolescence and adulthood. It is a sustained process which permeates through time and space and helps youth undergo healthy socialization, register satisfactory school participation, develop understanding about the society, acquire knowledge about the systems, involve in civic engagement, hone skills, develop cognitive competences and make informed choices. In this process, institutions like family, school, religion, neighbourhood, peer group, civil society and governments play a vital role. The rubric of youth development also includes activism; in other words negotiating with turf realities, overcoming stress, nurturing values and respect for tangible and intangible cultural heritage and their spiritual engagement. The

contours of youth development also suggest that it is a stage during which the young are trained - both formally and informally - for shouldering some responsibilities and embark on citizenship practice. This is what the precious quote of the Father of the Nation atop implies. Youth development is, therefore both a process and a product.

For most part of history, till the post war period, youth were seen as a problem group in need of support from the family, civil society and the government. It was felt that the young had to be motivated, counselled and subjected to interventions. However of late the ‘strengths perspective’ has come to dominate the discourse on youth and youth began to be seen as change agents, innovators, civically engaged members of the society and early entrants into work participation and most importantly a potential resource or cohort. This shift in the thinking of the policy makers, educators and general public, has led to the formulation strategies to make use of their enormous potential, inevitable.

Indian Youth - Present State

According to the ‘Population Projection for India and States 2011-2036’ youth population in India in 2011 (15-29 years) was 27.5 percent of the total population. It was projected to decline slightly to 26.1 percent of the population in 2021. Twelve million young people are added every year to the working population. The median age is around 28 years which would rise to 31 years in 2031. This implies that the demographic window would gradually close down and India has to make strenuous efforts to hold on to the demographic dividend for another decade. This demographic shift or dividend has radically changed the complexion of the discourse on youth. It has introduced a variety of strands of thought on youth development and policy implications.

The profile of Indian youth, ever since the onset of economic reforms in 1991 has undergone a significant transformation in terms of numbers, aspirations, achievement - orientation, training and innovations. A pragmatic, ambitious, impatient and highly trained young person has steadily replaced a directionless, idealistic, agitating and demurring individual. Youth of both the pre and post global eras have had a brush with generational conflict but with the emergence of a small (nuclear) family, migration, regulation and

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stabilisation of family incomes and augmentation of income sources the generational conflict has given way to some kind of a 'generational consensus'. The present educational system offers a wide range of educational choices and so is the case with avenues of employment both in the organised and informal sectors, though most of the young people are absorbed in low productivity activities. New patterns in livelihoods, work culture and migration have redefined work participation. This is not to deny the existence of poverty and low levels of human capital formation that are adversely affecting the work participation of the youth. Not to be left behind the cultural consumption of the young people has also touched a new high. Thanks to the proliferation of communication networks and technologies. Music and dance have evidently grabbed a considerable space in young peoples' lives more than ever before, leading to both innovations as well as 'commodification' of culture.

Research has established that the phenomenal expansion of mass media and spurt of social media platforms have dented the civic participation of youth. Every young woman and man, irrespective of her or his financial status or educational level, is comfortably nestled in an autonomous world contrived by her or his mobile phone. The ubiquitous tool ensures a sort of strong 'connect' of its user with her or his peer group in a 'disconnected' (from immediate environment) mode. Notwithstanding their immersion in infotainment many young people are found engaged in sensitization exercises both on and offline mode. In other words their civic participation has not been hampered by the entertainment world. Philosophers, saint and educators had time and again, exhorted the youth to be socially proactive. The following is the message of Swami Vivekananda to the Indian youth.

"My hope of the future lies in the youths of character, intelligent, renouncing all for the service of others, and obedient and good to themselves and the country at large"

National Youth Policy

The first national youth policy was introduced in 1988. In the same year the minimum age to vote was reduced from 21 to 18 years of age thus enabling millions of young people to exercise their franchise in the eighth general election in 1989. The enactment of the policy was prompted by the growing youth population. It described all those people in the age group of 15-24 years of age as youth in line with the UN definition of youth. The document is compact and announces the government's commitment towards youth

development. It calls for a multi- sectoral approach and fostering of scientific temper among the youth. The second national youth policy was formulated in 2003. The second policy came at a time when India's tryst with globalization was more than a decade old and the state of youth underwent a sea change compared to that which was prevalent before 1988. The document is lengthy and more detailed. It placed all the persons in the age group of 13 to 35 years of age as youth. This classification created a large cohort of young people. The policy dealt with key indicators like health, education and employment in a comprehensive manner. The Ministry of Youth Affairs and Sports, which was created in the year 2000, monitored the consultation meetings preceding the drafting of the policy and the process of drafting of the same.

The third and most recent policy was introduced in 2014. The policy deliberated upon a range of issues that have a bearing on young peoples' lives. It had devoted a substantial part to skill development. The policy acknowledged the importance of 'skill development' and its role in alleviating poverty. It listed out the efforts of the government in ensuring health of the young people; especially girl child. It has also mentioned about youth programmes like the National Service Scheme (NSS), Nehru Yuva Kendra Sanghatan (NYKS) and laid down plans for more meaningful participation of the youth. Dwelling on the all round development of youth the policy document made clear its resolve to empower the underprivileged youth. The Ministry of Youth Affairs and Sports, Government of India has prepared the draft of the fourth NYP (2020-21) and placed it in the public domain for discussion and inviting of suggestions.

In consonance with the stated objectives of the successive national youth policies the present government under the leadership of Prime Minister Narendra Modi had launched two flagship programmes in 'skill development'. They are Deen Dayal Upadhyay, National Urban Livelihoods Mission (DAY NULM) and Pradhan Manthri Kaushal Vikas Yojana (PMKVY). Millions of youth are trained in different trades including IT under these two programmes. The Ministry of Skill Development, Government of India designs and monitors the training and this is the biggest 'skilling' exercise undertaken in any country so far. The training has eased millions of youth into job market and also helped them set up their own start ups or micro enterprises.

Youth Studies Programme

'Youth studies' is a distinct and multi-disciplinary

academic field which encompasses all the aspects of youth development and captures the intersection of a range of social sciences. It seeks to critically examine youth transitions in several societal contexts and from the prism of community concerns. The discipline focuses on the changing temporal structures of work participation and cultural context. A number of universities in USA, Canada, Europe, Australia and a few in South East Asia are offering post graduate and under graduate programmes in youth development. Some of those universities/institutes are University of South Wales, University of East London, Brock University, University of Glasgow, Melbourne University, to name a few. In most of these universities the departments of education offer youth related programmes. The research output accrued from these institutes/universities is helping policy formulation in a big way. In India, except the Rajiv Gandhi National Institute of Youth Development, no other university is offering youth centric post graduate programmes. Till a few decades ago the Tata Institute of Social Sciences (TISS) was offering a course on Child and Youth development and now hardly any university has a similar programme on its agenda.

According to the 'Youth in India Report (2017)' education, employment, civic engagement and migration are the key issues to be addressed in the context of youth development. These issues assume greater degree of complexity in a complex society like that of India. Hence, they need a nuanced understanding studded with new pathways and informed by inclusive research. It is time youth inclusive research with emphasis on discussion about unequal power relations between the young and the adults, devising new knowledge systems and reconfiguration of priorities, choices and participation modes, is initiated in Indian universities.

With the centrality of youth in the developmental process in view, the Rajiv Gandhi University, Arunachal Pradesh has established 'Centre for Youth Development and Leadership Studies' to organize training for youth and engage in research on youth issues and activities that include civic engagement of youth, building awareness about substance abuse, prevention of suicides among youth and involving youth in peace building initiatives. The Rajiv Gandhi University is also collaborating with the Rajiv Gandhi National Institute of Youth Development (RGNIYD) in empowering the youth of North Eastern region through an array of outreach and training programmes and multi-disciplinary research. This collaboration

hopefully will transform the young people of NER into catalysts of peace and inclusion.

The policy in India needs to be supported by research inputs in order to be able to effectively delineate relationships, roles and responsibilities of the youth. Therefore the need to have more departments devoting to the study and research in thematic areas related to youth, their socio economic contexts and transitions, have to be started. The programmes shall critique the dominant paradigms and stereo types about youth and offer fresh perspectives. They would also create a critical mass of literature on youth issues ranging from work participation to engaging in community building and from sub-cultures and counter- culture to citizenship practice. In addition a university with a department or school exclusively catering to youth development and research would ensure that the vital dimension of 'character building' gets adequate attention. It would function in line with Sarvepalli Radhakrishnan's observation... "the main function of a university is not to grant degrees and diplomas but to develop the university spirit and advance learning. The former is impossible without corporate life, the latter without honours and post graduate". In this regard it would be appropriate to quote Pandit Madan Mohan Malaviya. He remarked,

"A teaching university would half perform its function if it does not seek to develop the heart power of its scholars with the same solitude with which it develops their brain power. Hence it is that the proposed university has placed formation of character in youth as one of its principal objectives."

The university system with a holistic course on youth development or youth work shall certainly translate the vision of great souls into concrete action with huge gains. The article, therefore, suggests that the University Grants Commission (UGC) and the Ministry of Education, Government of India consider the idea of establishing departments of youth development to offer courses and research programmes in the area. The need to mainstream 'youth development' into the educational process is more strongly felt than ever before.

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Realizing Sustainable Development Goals for Securing Well-Being

Upinder Dhar* and Santosh Dhar**

It has been estimated that more than 700 million people, or 11 percent of the World population, still live in extreme poverty and is struggling to fulfil the most basic needs like health, education, and access to water and sanitation, to name a few. The overwhelming majority of people living on less than \$1.90 a day live in Southern Asia and Sub-Saharan Africa and they account for about 70 percent of the global total of extremely poor people.

In 2017, economic losses attributed to natural disasters were estimated at over \$300 billion. However, this issue also affects developed countries. Right now there are 30 million children growing up poor in the world's richest countries. Poverty has many dimensions, but its causes include unemployment, social exclusion, and high vulnerability of certain population to disasters, diseases and other phenomena which prevent them from being productive.

There are many reasons, but as human beings, our well-being is linked to each other. Growing inequality is detrimental to economic growth which undermines social cohesion, increases political and social tensions and, in some circumstances, drives instability and conflicts. To end extreme poverty worldwide by 2030, the total cost per year would be about \$175 billion. This represents less than one percent of the combined income of the richest countries in the world. Governments can help create an enabling environment to generate productive employment and job opportunities for the poor and the marginalized. Policymakers can formulate strategies and fiscal policies that stimulate pro-poor growth, and reduce poverty.

The private sector, as an engine of economic growth, has a major role to play in determining whether the growth it precipitated is inclusive and hence contributes to poverty reduction. It can promote economic opportunities for the poor, focusing on segments of the economy where most of the poor are active, namely on micro and small enterprises

and those operating in the informal sector. Higher education institutions have a major role in increasing the awareness about the impact of poverty. Science provides the foundation for new and sustainable approaches, solutions and technologies to tackle the challenges of reducing poverty and achieving sustainable development. The contribution of science to end poverty has been significant. For example, it has enabled access to safe drinking water, reduced deaths caused by water-borne diseases, and improved hygiene to reduce health risks related to unsafe drinking water and lack of sanitation.

Transforming the World

With the 2030 Agenda for Sustainable Development, the United Nations member-states have committed to a comprehensive, integrated and universal transformation. The Agenda is people-centered and based on human rights and social justice. Achieving the Sustainable Development Goals cannot happen without ending hunger and malnutrition and without having sustainable and resilient, climate-compatible agriculture and food systems that deliver for people and planet. This requires comprehensive efforts to ensure that every man, woman and child enjoy their Right to Adequate Food.

Experience has shown that, with the right mix of policies and political leadership, and with all those who can contribute playing their role, ending hunger and malnutrition is possible. The Zero Hunger vision reflects five elements from within the SDGs, which taken together, can end hunger, eliminate all forms of malnutrition, and build inclusive and sustainable food systems. A lasting end to hunger and malnutrition cannot be achieved in isolation; achieving Zero Hunger calls for realizing the totality of the 2030 Agenda in the ways that benefit everyone, everywhere.

Progress but Differences Remain

The overall health SDG is "Ensure healthy lives and promote well-being for all at all ages." WHO is using life expectancy and healthy life expectancy as reasonable over-arching indicators, because these are affected not only by targets under SDG3 but also by progress on targets in other goals. They therefore reflect the multi-sectoral nature of health. Life expectancy

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continues to rise in the South-East Asia Region. It is now 68.9 years. WHO estimates that there has been an average gain of 3.5 years in life expectancy per decade since the year 2000. Global life expectancy in 2015 was 71.4 years. Differences remain across countries. In 2015, there was an estimated 12-year difference in life expectancy across South-East Asia Region Member States, from 66 years to 78 years.

Healthy life expectancy provides an indication of years of life lived in full health. For South-East Asia Region, healthy life expectancy is on average 8 percent shorter than life expectancy, but with a range across countries from 4 percent to almost 15 percent. Altogether, the overall picture in terms of achieving improved health, progress towards universal health coverage, and more equitable improvements in health and health care that emerges is:

- There has been continuing, gradual improvement in overall health across countries in the Region;
- Countries are at different stages of progress towards Universal Health Coverage, and attention is needed both on access to care and financial protection;
- There is a need to go beyond average estimates for health care coverage: Given the SDG Commitment to ‘leave no-one behind’, there remains much to do to address inequities and exclusion.

Water and Sanitation for All

The monitoring of progress towards SDG 6 is a means to successfully achieving all eight SDG 6 targets. Credible and timely water and sanitation data provide numerous social, economic, and environmental benefits in both public and private sectors, such as stronger political accountability and commitment, as well as public and private investments. It also enables evidence-based policy-making, regulations, planning and investments at all levels, to ensure the most effective deployment of resources.

It has been observed that 17 Goals with 169 Targets and 232 Indicators are interlinked global goals designed to be a “blueprint to achieve a better and more sustainable future for all – people and the world by 2030.” Each goal typically has 8-12 targets, and each target has between 1 and 4 *indicators* used to measure progress toward reaching the targets. *Goal 1* : End poverty in all its forms everywhere. The goal has *seven* targets and *13* indicators to measure progress. *Goal*

2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture. The goal has eight targets and *14* indicators to measure progress. *Goal 3*: Ensure healthy lives and promote well-being for all at all ages. It has *13* targets and *28* indicators to measure progress toward targets. *Goal 6*: Ensure availability and sustainable management of water and sanitation for all. The *eight* targets are measured by *11* indicators. The links between the various sustainable development goals and public health are numerous and well established.

- Living below the poverty line is attributed to poorer health outcomes and can be even worse for persons living in developing countries where extreme poverty is more common. A child born into poverty is *twice* as likely to die before the age of five compared to a child from a wealthier family.
- The detrimental effects of hunger and malnutrition that can arise from systemic challenges with food security are enormous. The WHO estimates that 12.9 percent of the population in developing countries is under-nourished.
- Health challenges in the developing world are enormous with only half of the women in developing nations receiving the recommended amount of health care they need.
- Basic sanitation resources and access to clean sources of water are a basic human right.

However, 1.8 billion people globally use a source of drinking water that is contaminated by faeces, and 2.4 billion people lack access to basic sanitation facilities like toilets or pit latrines. A lack of these resources is what causes approximately 1000 children a day to die from diarrheal diseases that could have been prevented from better water and sanitation infrastructure. Attempt needs to be made to understand how higher education institutions can contribute in achieving the SDGs besides generating awareness and preparing human resources for the times to come. HEIs have certainly a significant role in facilitating the achievement of Sustainable Development Goals in next eight years. There are, of course, so many challenges but with an integrated approach we should be able to face them successfully.

Note: The Authors duly acknowledge the sources of the material used in this paper, particularly the website of The United Nations. □

Managing Distress and Disruptions in Higher Education: An Optimistic Approach to Sustainable Teaching & Learning in India

Raj Singh*, Payel Sen**

“In a world of change, learners shall inherit the earth. While the learned shall find themselves perfectly equipped to deal with a world that no longer exists.”

Eric Hoffman

In an age of disruptions ambiguity is an ever-present reality reflecting the polyvalence of human social existence. While humanitarian endeavours are inherently characterized by a continual drive for certainty, digital inter connectedness has rendered the geological space increasingly complex, reflexive and risk-prone. More recently, the COVID-19 outbreak, in a major way, has revealed the inevitability of the tension of indeterminacy with its tentacles fast spreading in to almost every aspect of our existential realities. In the wake of the global pandemic education sector, in particular, has been severely hit as examinations were affected causing disruption to students' learning trajectories and progression. Abrupt interruption of physical connection accelerated our dependence on virtual connections overnight. The crisis has unveiled several inadequacies and inequities circumscribing our education systems which relate to digital divide and internet inaccess, infrastructure gaps, needs-resource mismatch, and the like. Furthermore, public announcement of lockdowns and campus closures meant a sudden shift to remote learning with an immediate collapse of learners' networking and social opportunities. With countries shutting the borders there was little clarity on on-campus safety and legal status of the international students in the host country. Availing the alternative learning opportunities in the wake of the sudden switch over from physical in-person to online teaching has meant students' greater reliance on their own resources to ensure continuity. Also, for want of adequate professional development training in usage of Information and Communication Technologies (ICT), educators' preparedness to support digital learning and adaptation to new

pedagogies and modes of content-delivery have been rather quick and forceful; thus half-hearted. The share of discontinuities and disappointments notwithstanding, Higher Education's (HE) response to the pandemic has sown the seeds for long-lasting change on campuses.

The new developments in learning have brought global educational systems at critical crossroads by questioning the value proposition of the universities in an all-virtual environment. Students bereft of their social life on campus, are now less likely to invest a big slice of time or finances for consumption of online content. The world today is, therefore, compelled to reflect, rethink and articulate the 'new' normal of education sector and its academic underpinnings. In heading towards COVID-19 recovery phase the need for deeper reflection on the role of educational systems to foster societal resilience stands critical. For the economy to evolve in strength and remain guarded against unforeseen adversities there must be contemplative rethinking on drawing the contours of education, training and skills required to support it. Strategies have to be designed for reinventing the learning environment in a way that digitization expands and complements, yet does not replace, the much cherished teacher-taught bonding or peer relationships. Connectivity is no longer to be imagined as a mere technological goal but as a societal mission to bridge the gaps between students, faculty, staff and the larger community. The ongoing educational transition to a rapidly changing virtual environment makes it an institutional imperative to develop a higher tolerance for ambiguity thereby creating a culture of learning in chaos. For institutions to survive and thrive unbroken in the new climate it is important that they continue to innovate even after emerging from the grips of the pandemic.

Embracing an altogether new and reformed approach to education, therefore, is an urgent need of the hour to keep the students engaged, enrolled and on track. The paper, divided into four parts, envisions the notion of sustainable education and learning as the desired alternative. By way of addressing the

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major weaknesses of the Indian HE ecosystem, the present article attempts to offer a blueprint of action for the future.

Living with Ambiguity: Need for Sustainable Learning

The indispensability of sustainable development for safeguarding world's future cannot be undermined. And, education being a critical factor for human development, its goal needs an invariable shift to the notion of sustainability. It is the duty of educators and other major stakeholders in HE to propagate new ways of thinking, encourage human development, collaborate ideas for sustainable development, stimulate value education for addressing public needs by integrating social, economic, ecological and other concerns.

Educational institutions help students develop the spirit of scientific inquiry, curiosity and entrepreneurship needed to produce concrete and innovative solutions to tackle the intensifying ecological damage and manifold planetary crisis in the 21st century. Creation of SDG-compliant green and socially conscious campuses is an essential precondition to secure environmental protection and preservation besides ensuring restoration of our planetary health and safety.

In a transient world riddled with risks and uncertainties learners need new and plural perspectives to be able to engage collectively with their diverse contexts and to discern the rapidly changing environmental realities. In our quest for inclusive academic excellence we must approach the unknown and the ambiguous in more realistic ways by developing a culture of competency-based and inquiry-driven learning that lends priority to good questions over easy answers. Sustainable learning, as an emerging educational philosophy, offers a new and reformist approach to education aiming to educate students as active and responsible global citizens capable of building a more sustainable world. It stands as a key enabler for the realization of all the laudable UN Sustainable Development Goals (SDGs).

Put simply, the evolving discourse of sustainable learning refers to the creation of learning that lasts. In this sense, it is akin to life-long learning wherein the learner continually builds and rebuilds his/her knowledge and skills base in alignment with the changing circumstances. On the conceptual plane the idea of sustainable learning stretches beyond

education for/about sustainability. It intends to instill in people necessary knowledge, skill-sets, values, competencies and dispositions to thrive in complicated and challenging circumstances and contribute meaningfully to making the world a better place. Learning thus becomes ongoing, purposeful, responsive and proactive (Branden: 2012). The process of 'learning to learn' thus stands critical to retention of learning following initial exposure to it. Sustainable education aims at empowering and eventually liberating learners who by virtue of acquiring appropriate knowledge, skills, values and attitudes are able to engage with informed decision-making and responsible actions that go on to promote environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity (UNESCO: 2014). Founded on a steady commitment to the sustainability principle the distinctiveness of the sustainable learning model fundamentally lies in its focus on self-reliance and consciousness- in design, delivery and outcome. As a lifelong learning process it is considered to be an integral part of quality education which enhances the cognitive, social and emotional and behavioral dimensions of learning. In approach it is holistic and transformational, and encompasses learning content and outcomes, pedagogy and the learning environment itself (UNESCO: 2014). In this framework the entire teaching-learning process is geared to imparting knowledge and know-how necessary for retention of learning in varied situations (normalcy or crisis), during life transitions (from university to workforce), and across different domains (Eliyahu: 2021).

Conceptually speaking, sustainable teaching and learning model seeks to apply the principles of sustainability to the learning process per se. It moves beyond the confines of a content-specific approach of integrating sustainability issues into the curriculum to reorienting the focus on sustainable learning methods and delivery mechanisms aided by pedagogies which are interactive, learner-centred and action-oriented. The world, in all its complexity and fuzziness, makes richer sense only when reality is viewed with the help of a sustainable interdisciplinary lens drawing on insights from multiple disciplines. In the new paradigm 'learning' as a major resource is resilient and responsive to global changes. Durable learning skills and strategies empower the learner to seek and generate new ideas, new forms of thinking, behaving, and emotional coping in the face of life transitions and

crises. This, in turn, enables learners to focus on ways to maintain and renew resources as a way of life by adopting healthy strategies and behaviors. In course of implementing these strategies individually and collaboratively in groups and their eventual transfer across domains or situations, global sustainability is promoted by educating responsible thinkers and reflective citizens (Eliyahu: 2021).

Addressing Sustainability Imperative for Higher Learning in India: The NEP-2020 Perspective

Sustainability is more a journey than a destination which at every step of its progress questions prevailing worldviews, paradigms, structures as well as predominant practices across social sectors including that of higher education. The concept, when applied to HE, signifies a quest for inter-disciplinarity, interactive pedagogies, 'real world' (cross-departmental/faculty) research and diffused institutional boundaries. By challenging the existence of university silos and power corridors sustainable learning presupposes democratic decision-making and participatory processes of change. In meaningfully transforming itself towards sustainable learning the HEIs require a thorough realignment of all its activities within a critically reflective paradigm to construct optimal and student-friendly learning environments. Resources and attention need to be directed to uncover new conceptual and practical spaces for academically and socially impactful research. Funding sources must encourage collaborative research engagements between colleagues sharing similar interests but differing methodologies and/or perspectives. While merely weaving new and specialized courses into our mainstream education programmes may at best help build sustainability literacy or capacitate career aspirants in this area, reorientation of academic offerings towards more sustainable future and forms of living calls for unveiling established status quoist assumptions deeply embedded in our HE knowledge systems and relationships which contribute to unsustainable learning. For the purpose learning efforts need to be redesigned through appropriate curricular and pedagogic transformations in a manner that teachers and students may sustain each other's learning. Changes of the kind do not happen; they are to be initiated and led. In academic institutions change management emerges as profoundly challenging responsibility entailing much more than knowledge of, or commitment to, the principles of sustainability.

It calls for developing systemic readiness in terms of supportive institutional structures and practices for dealing with complexity, uncertainty, multiple stakeholders, as well as ambiguous policy regulations besides making amenable adjustments to academic priorities, organizational structures, financial and audit systems. HE managers of today, to remain educationally effective, need to give way to sustainability innovations in their respective institutions (Tilbury: 2011)

However, within India's remarkably vast and rapidly expanding HE sector the efforts to integrate sustainable learning within the operations of HEIs have remained rather weak with little or no recognition of the possible contribution of HEIs in favour of achieving SDGs by either the national associations of HE or even the National Institution for Transforming India (NITI) Aayog. Long caught in the throes of a range of unique challenges and contradictions the tertiary education sector in India has fared poorly in terms of engaging with sustainability particularly in teaching and research activities at HEIs. Every discipline is governed by a rigidly defined framework of rules to which approvals of the curriculum and course designs are subjected. Over decades strict adherence to tightly specified teaching content and uniquely regulated pedagogies and research methodologies, (both at the under graduate and post graduate levels) along with frameworks of professional education as established and monitored by their respective councils and regulatory bodies severely limit the scope for experimentation by individual teachers thereby rendering it difficult to cross disciplinary boundaries to generate multi-disciplinary teaching and cooperative research teams. Since sustainable learning comes to make sense in multi-disciplinary frameworks, the existence of a rigid disciplinary architecture has remained a major hurdle (Tandon: 2019). Visibly starved of resource commitment, basic infrastructural support (physical and intellectual), professional outlook and research culture our universities stand crippled, disengaged and bereft of global presence and competitive pressures. Bureaucratic dictums and political manipulation have gone to the extent of reducing the high-end refined cerebral spaces into rugged sites of political recruitment, expanding patronage and opportunism. Instances of campus exclusion thus stretch beyond alienation of communities to disengaged syllabus, pedagogies, contexts, knowledge systems, cultures, livelihood choices, values, beliefs, perspectives

and practices thereby exemplifying a deep divide between policies for higher education expansion and institutional capacity to respond to growing student diversity. With pedagogic deficiencies and declining research standards preventing realization of higher order learning outcomes, one clearly witnesses steady erosion in credibility of courses/degrees. As an obvious consequence supply constraint, growing skill gaps and low graduate employability continue to remain haunting concerns. In the bargain, our mainstream educational institutions have fast lost ground to coaching centres giving a big jolt to the country's HE scenario.

Within the crises-ridden HE sector the announcement of the pack of reform initiatives unleashed by NEP-2020 resound a clarion call for learning transition towards sustainability in its attempt to interlink expansion, equity and excellence. Founded on the pillars of access, equity, quality, affordability and accountability the National Education Policy (NEP)-2020 comes in close alignment with the notion of sustainable learning. It aims to nurture our youth with global outlook, local sensibility and an array of capabilities that may help them meet the futuristic social, economic and environmental commitments and aspirations. The laudable policy document seeks to reconfigure India's educational realities by offering inclusive and equitable education and assuring lifelong learning opportunities for everyone.

NEP-2020, by laying out a phased action plan with milestones, envisages a holistic and multidisciplinary educational ecosystem by integrating environmental awareness and socio-cultural sensitivity. The NEP guidelines usher in some fundamental reforms to the current system which relate to curricular revamping, pedagogic innovations and interventions, evaluation reforms emphasizing consistent formative assessments and enhanced experiential learning opportunities. By prioritizing problem-solving (drawing on diverse perspectives) and critical thinking skills NEP-2020 sets out to facilitate learners to 'prepare for life' and to navigate uncertain future. In an era of rapid knowledge generation and technological change the new paradigm rightly advocates the significance of infusing rational and critical thinking abilities, empathy, compassion, courage, resilience, ethical values and productivity into young minds for their eventual blossoming into 'good human beings'. It envisages greater flexibility for students in terms of course choices and pace of study. The creation of

Academic Bank of Credits as a digital storehouse of earned credits is designed to enable easy credit transfer, self-paced study and future verification by third parties (such as employers).

The proposal for institutional restructuring and consolidation aims at putting an end to the long-drawn saga of fragmentation of Indian HE by transforming HEIs into large multidisciplinary structures for creating well-rounded and innovative individuals with ethical and moral values, social sensibilities and professional competence to meaningfully contribute as active members of an equitable, inclusive and plural society. Holistic and multidisciplinary education is evocatively prescribed for securing balanced and integrated improvement of all human capacities-mental, cultural, social, physical, emotional, and moral.

Measures towards realizing 'light but tight regulations' through creation of a single regulatory body is likely to expand academic autonomy by reducing the administrative burden of HEIs in dealing with multiple regulators. Furthermore, boost for internationalization of higher education may go a long way in ensuring quality, reputation and credibility for Indian HEIs. Enhanced scope of mobility for students and faculty across countries is expected to promote research collaborations, faculty and student exchanges between Indian institutions and global institutions.

Towards a Sandbox Approach to 'Sustainable' Academics in India: Articulating the SEIZ Model for HEIs

At a time when the education sector in India has been experiencing massive and dramatic transformation on account of job market fluctuations, technological disruptions and paradigmatic shift towards NEP implementation, the global pandemic shuddered shocks across the system inducing forced shutdowns and sudden transition to online teaching-learning. Rising instances of drop-outs, learning losses and yawning digital divide, as triggered by COVID-19 outbreak, called into question our systemic readiness to sustain the grave crisis. However, just as every cloud glimmers a silver lining, the present crisis too is impregnated with hidden opportunities to paint the new normal with new strokes and shades. In this sense it may be said that COVID-19 has also acted as a catalyst for digital adaptation and innovation across institutions. The change, although abruptly initiated,

signals an urgent institutional imperative to adopt a futuristic approach towards building a resilient system capable of withstanding any future shocks and shimmers. While the host of initiatives/guidelines inspired by the NEP-2020 policy directives, namely, multiple entry and exit system, Academic Bank of Credits, Choice-Based Credit system, etc offer a ready blueprint for transformation, the worthiness of such measures will rest on the approach, promptness and eventual mode of execution. With the onset of the recovery phase as HEIs reopen and NEP prepares to roll out country-wide, the entire ecosystem must be geared to take up several preparatory and progressive steps that will keep them ahead in the journey.

In transitioning to the culture of online instruction in a virtual environment the academic institutions need to converge and explore avenues for sharing resources and expertise to postulate a future wherein students can be digitally supported without compromising on academic quality, equitable access and curricular standards. The complexities notwithstanding, the HE sector must focus on excellence and employability as its core concerns. Smooth transitioning to the new normal necessitates erection of a robust system which is learner-centric, research-led and quality-conscious. In the post COVID world 'technology will be the lungs and pedagogy will be oxygen'. To meet the needs of a growing economy like ours innovation and technology as key drivers of change must enable students' attainment of competency-based learning outcomes. The Outcome Based Education framework strikes deep normative roots in Sen's capability approach to measuring well-being which recognizes innately diverse capabilities in individuals and the need for enhancing opportunities to unleash power of human agency and freedom.

The future of Indian education system needs to be conceived in a 'sandbox' approach which is founded on an integrated understanding of C.K. Prahalad's unclouded understanding of the 'bottom of pyramid' (comprising micro consumers and producers living below the poverty line) as engine of innovation, vitality and growth on one hand and Mohammad Yunus' enlightened advocacy for sound governance practices and social business strategies to tap the entrepreneurial spirit of the poor. As a site of playful experimentation a sandbox refers to a small and contained space to test with a proposed intervention. It allows us to safely learn

and wisely adapt in a controlled space before rolling out promising ideas and interventions on a larger scale. When applied to the education sector sandbox learning goes on to create a class of next generation professionals who are proficient in their ability to experiment, to stretch potentials and respond to feedback. It lets learners to journey independently through the ongoing process of self-education by training them (or, retraining) in their ability to be self-taught. In this continual process of learning and improvement students are imparted with the knowledge of how to learn on their own without being spoon-fed with any readymade and pre-packaged knowledge/information beforehand. Innovation sandboxes may help our hitherto formal and highly structured learning environments in academic institutions to evolve as informal breeding ground for skills, entrepreneurship and innovations capable of generating social value particularly touching upon lives of those at the bottom of the pyramid. As job creators institutions of higher education may help alleviate poverty and unemployment which today stands vital to recreating India's image as a self-reliant nation.

Alignment with the sandbox approach calls for a fundamental shift in institutional face and leadership focus along the following broad areas:

1. *Technology mediated learning:* As part of the new normal blended or hybrid learning combining in-person and online instruction must increasingly complement conventional approaches to face-to-face teaching in higher education (HE). Integration of ICTs and rich multimedia delivery mechanisms in blended learning offers more options for providing *inclusive* education by promoting independent study, self-paced learning, student creativity and pedagogic innovations. For the purpose robust technology platforms for knowledge dissemination must be developed by HEIs in addition to devising appropriate online teaching, evaluation and examination methods. The use of Artificial Intelligence, augmented and virtual reality like technologies will have to be used to impart meaningful education.
2. *Out-of-classroom learning:* The pandemic by pushing learning out of walled classrooms into the real world out there strengthens the case for introducing application-based education. Research-driven and project-based learning is the need of the hour to promote innovation on

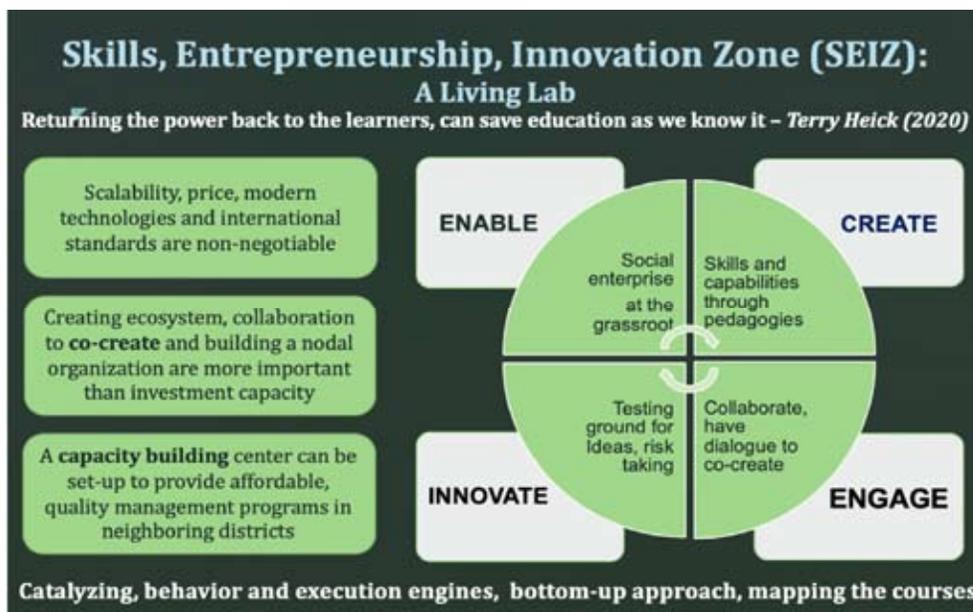
one hand and to reduce dependency on physical classroom interactions.

3. *Adopting Common Core State Standard (CCSS):* In a sandbox approach, new ideas will have to be tested so as to create central facilities and resources to be made available to expedite the adoption of the new normal. Although in India, all regulatory bodies have in the past prescribed minimum norms and standards, such fixation soon lifts itself off the floor to be identified as the ceiling. The Common Core approach may instead offer a better alternative wherein the state-defined core makes enough room for institutional flexibility to make innovations.
4. *Pedagogic Innovations:* Pedagogy as the soul of an education system receives renewed emphasis as the world moved to online system of delivery during the new normal. Moving to Field and Social Projects-based Learning will be the key and also be more feasible as compared to sitting physically inside crowded classrooms. These learning formats besides inspiring collective team work would enable flexible, multi-dimensional learning marked stimulated by open-mindedness, inquiry, knowledge co-creation and renewal. Learning by doing both at individual level as well in small groups should be made mandatory. Each topic across disciplines need to be mapped to such out-of-class activities, new assessment methods based on rubrics to be developed and individual styles

of learning (as advocated in Howard Gardner's theory of multiple intelligence) to be accepted and implemented. Book reviews and real-life problem solving leading to implementations, portfolio development, designing and working on thinking-based assignments, social service, volunteering activities with well-defined learning outcomes will have to be used. Online discussion forums can be an excellent way to substitute face-to-face group discussions. Such forums have often been used for online surveys and opinion-mining.

5. *Evaluation and Examination Reforms:* All the reforms in academic process should be supported by an evaluation system that is Fair, Learner-friendly, Intelligible, Relevant and Transparent (FLIRT). Multiple evaluation tools will have to developed and put to use considering the purpose, nature of data, the domain to be tested, standards or the learning outcome to be tested and whether it is to evaluated in direct or indirect ways. In addition to traditional tools like class tests, quizzes, and home assignments, continuous formative assessments need to be undertaken relying on open book/notes exams, self-tests, writing articles/essays/research papers, book reviews, review articles, writing reflective essays and practice diaries, real-life projects, case analyses, role-plays and simulation exercises, data analysis exercises, scholarly writings and so on.

Figure 1: SEIZ- Diagrammatic Depiction



6. *Creating Entrepreneurs* – For learning to be sustainable innovation is a must. It is the inherent potential for creativity and innovation alone that contributes to survival and adaptation of complex systems (Hays & Reinders: 2020). Hence, we head towards rebuilding a self-reliant India establishment of Skill, Entrepreneurship and Innovation Zones (SEIZs) is a powerful tool towards attainment of this end. The universities should come forward to develop on-campus SEIZs in collaboration with the local industry which will take the lead in organizing socially relevant network of activities involving individuals, groups, civil society, large organizations for the purpose of developing technology-based applications and processes.

Although the initial funding for the whole exercise may come from government schemes and large organizations but alternative funds should be mobilized at an appropriate later stage in order to create profitable and sustainable social businesses. It is recommended that the government should announce establishment of 1000 such SEIZs across the country. All universities may be encouraged to have at least one SEIZ.

Concluding

In sum it may be said that the mandate of sustainable learning as an engine of continuous innovation and progress stretches wide and deep. And, in complex adaptive ecosystems like ours it unravels itself equally as both an opportunity and threat at the same time. The low resource settings of today demand serious rethinking on ways in which growth is to be perceived which, in turn, calls for fundamental mindset shifts at different levels. Indeed, the NEP, with its integrated yet flexible approach to education, has drawn up a detailed roadmap for transforming India into a vibrant knowledge society. The coherent policy framework clearly delineates skills and strategies to sustain learning in the face of changing and challenging situations. Rooted in the principle of sustainability its inherent concerns for quality, accessibility and enhanced opportunities for life-long learning stand critical to environmental resilience and planetary well-being. However,

working towards instituting a culture of sustainable learning on the ground will demand synergistic systemic reform at the institutional level to ensure that education can provide optimal services to the current and next generation of learners allowing them to derive personal and social reward drawing upon their learning resources and experiences. The current and future potential of sustainable learning can be harnessed only by reshaping the culture of education in more socially constructive and learner-centered directions.

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A Sustainable Pathway of Biodiversity and Livelihoods

Chittaranjan Sarangi*

Our planet's essential goods and services depend on the variety and variability of genes, species, populations, and ecosystems. Biological resources feed as well as clothe us; provide housing, medicines, and spiritual nourishment. The natural ecosystems of forests, pastures and rangelands, deserts, rivers, lakes, and seas contain most of the Earth's biodiversity. Farmers' fields and gardens are also of great importance as repositories, while gene banks, botanical gardens, zoos, and other germplasm repositories make a small but significant contribution.

A social perspective on the environment, as opposed to one based purely on ecology or technology, shows that the issues of resource degradation and regeneration are intimately linked to questions of power, institutions, livelihood, and culture. The social and ecological consequences of dominant patterns of global and national development raise fundamental questions about the meaning and content of development. They reinforce and add new dimensions to the critiques of processes and patterns of growth, driven by profit oriented markets with a disregard for their impact on livelihood security, social relations and local institutions.

The current decline in biodiversity is largely the result of human activity and represents a serious threat to human development. The support of local communities is essential to the success of an integrated approach to conserve and promote biodiversity. Recent advances in biotechnology are people – friendly, and have the potential to solve problems related to agriculture, health, and forests in an decentralized manner. This is the most peaceful and participatory way to harness Mother Nature's blessings.

A magnificent space that our motherland is India is one of the 12 countries in the world with rich biodiversity covering 8% of the world's biodiversity on the 2% of the Earth's surface. This diversity can be attributed to the vast variety of landforms and climates resulting in habitats ranging from tropical to temperate and from alpine to desert. Adding to

this is a very high diversity of human-influenced ecosystems, including agricultural and pasture lands, and an impressive range of domesticated plants and animals.

Being a predominantly agriculture-based country, India also has a mixture of wild and cultivated habitats giving rise to very specialized biodiversity which is specific to the confluence of two or more habitats. The thickly populated middle India is rich in biodiversity. Out of six broad types of biomes distinguished in Country, this area covers tropical dry forests/woodlands over most of the Gangetic Plains and the peninsula category. Evolution has produced an amazing variety of plants; animals; micro-organisms and the ecosystems. The survival of human societies and cultures is dependent on biological diversity. It provides essential ecosystem services including hydrological and geochemical cycles, and climatic regulation that has blessed human survival.

Biodiversity is the very basis for the continuous evolution of species and ecosystems. Two critically dependent aspects are ecological safety and livelihood security, which need to be addressed for the conservation and sustenance of biodiversity.

The ecological safety refers to the maintenance of the diversity of ecosystems and habitats, populations and communities, and biological productivity. The livelihood security refers to the security of human communities and individuals critically dependent on biological resources.

We Erred in Respecting our Legacy

Nature is rarely visualized as the foundation of human civilization, and natural resources as the unending treasure of wealth for the sustenance of livelihood. In 1955, Tom Dale and Vernon Gill Carter, both highly experienced ecologists, published a book called 'Topsoil and Civilization'. They wrote, "Civilized man was nearly always able to become master of his environment temporarily. His chief troubles came from his delusions that his temporary ownership was permanent. He thought of himself as 'master of the world', while failing to understand fully the laws of nature".

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Man, whether civilized or savage, is a child of Nature - he is definitely not the master of nature. His actions must conform to certain natural laws if he is to maintain his dominance over his environment. When he tries to circumvent the laws of nature, he usually destroys the natural environment that sustains him, and when his environment deteriorates rapidly, his civilization declines.

E.F. Schumacher wrote, "Civilized man has marched across the face of the Earth and left a desert in his footprints". This statement demands introspection from us. We, the civilized people, have despoiled most of the lands on which we have lived for long.

This is the main reason why our successive civilizations have moved from place to place. It has been the chief cause of the decline of his civilizations in the older settled regions. It has been the dominant factor in determining all trends of history.

How did civilized man despoil this favourable environment? He did it mainly by depleting or destroying natural resources. He cut down or burned most of the usable timber from forested hillsides and valleys. He let the grasslands overgrazed and denuded for his livestock. He killed most of the wildlife and much of the fish and other water life. He permitted erosion to rob his farmland of its productive topsoil. He allowed eroded soil to clog the streams and fill his reservoirs, irrigation canals, and harbours with silt. In many cases, he used and wasted most of the easily mined metals or other needed minerals.

His civilization declined amidst the despoliation of his creation or he moved to a new land. There have been from ten to thirty different civilizations that have followed this road to ruin.

The Crisis is deep-rooted

Listening to the rhythm of nature, its whisperings and moods have been the way of wholesome human life. Environmental mis-happenings have forced us to listen to Mother Nature. This time it is more her groaning than her whisperings.

The experience of the past few decades had led us to take up the question of Nature as a planetary ethos. This new ethos, however, needs to be developed from the perspective of the weak and the marginalized who have been most affected by

the afflictions of Mother Earth. Now, the groaning of nature and the cries of the marginalized are fused into one. Any serious-minded ecological approach today must reckon with the question of the survival of the weakest in the human family.

The ecological crisis, in a way, is the mirror of our world. In it are reflected the bewildering complexity of problems afflicting our world from one end to the other as well as the hopes for a new and different world. In the ecological question emerge, with a sharper focus, the imbalances of our world. The ecological problem is the symbol of the struggles of the marginalized for regaining - their lost lands, resources along with dignity, and food along with freedom.

The eruption of ecological concerns into the consciousness of humanity at the beginning of the twenty-first century represents a powerful source of regeneration both of Nature and the human community. However, it is not devoid of ambiguities. Very much like human rights, the environmental issue is today being subordinated for political purposes, to force people and nations to toe a certain line. Besides, while the marginalized of our Earth pinned their hope on this issue to challenge the dominant paradigm of development, ironically, the language of ecology was snatched away from these victims and turned into a powerful instrument by their oppressors (both at the macro and micro levels), who suddenly turned into Green Messiahs, only to forge ahead with the old paradigm of development with some cosmetic changes.

It is essential now that we count the indigenous community as part of the biodiversity like flora and fauna and not alien to it. This will abruptly stop the unnecessary mock fight going on between the so-called advocates of environment and self-styled champions of the indigenous community. It is only benefiting them, and both the community and the environment are losers. A change in the policy framing will make both the parasites redundant and jobless.

The National Forest Policy 1988 speaks of involving people through massive people's movement but nowhere has it acknowledged community ownership or stakeholdership. The statement "Secure participation of all stakeholders including local people, NGOs, industry, and others in

the conservation and sustainable use of biodiversity” (National Policy and Macro-level Strategy and Action Plan on Biodiversity, 2000) does not address the basic problem of deforestation i.e. mistrust and huge gap increasing between the community and the Government. The latter draws on British colonial attitude of looking down upon the community as a labourer and does not recognize the self - esteem, the dignity of a community. Once that is recognized and appreciated, community can takeover better responsibility for conservation than the paid employees who have hardly any commitment to Mother Nature.

Our Oppressive, Unjust and Cruel Approach Triggered the Ecological Imbalance

Throughout history, the competition for natural resources has provided a fertile ground for violent conflicts. Groups, classes, and nations have fought one another for the possession of forests, agricultural, and mineral land; access to water, river, and marine resources. Nature-based conflicts have increased in frequency and intensity in India. They revolve around competing claims over forests, land, water & fisheries and have generated a new movement to ensure legitimate rights of the victims of ecological degradation. The environmental movement added a new dimension to the Indian Democracy and civil society. It also posed an ideological challenge to the dominant notions of prosperity. Development has often been perceived as a benign process contributing to distributive justice, better education, and nutrition. Facts however indicate to increasing inequalities and even the absolute impoverishment of some sections of the population. These contradictory effects are often attributed to growing landlessness brought about by population expansion and to rising unemployment. From an environmental and social perspective, ‘development’ is resulting not only in ecological devastation but also in violation of property rights, displacement of people and loss of means of livelihood.

Forests: Age Old Homes to Tribals and How they Protected them

The tribal people never acknowledged the authority of exotic centers of power including the authority which the British established, notwithstanding the records which the latter had created, as per their perception and practice in the form of promulgations, regulations, etc. The

Paharias of Rajmahal put up the toughest fight followed by Kollhas, Santals, Mundas in the eastern sector; Kolam, Kandha, Koyas, Irravalam, Irrular in the South; and Koli, Rabari, Vil, Villala in West to protect valiantly their respective territories that were lost due to the promulgations and regulations. The British Raj, unprepared to face confrontations, took recourse to other devious ways and made its presence felt like a center of power that could not be ignored. In this process, a policy of gradual exclusion, in place of absolute exclusion, was implemented.

The first regulation was promulgated in the wake of the revolt of Paharias of Rajmahal Hills in 1796. The suppression of Koiyas insurrection in 1831-32 was followed by the declaration of the Chotanagpur as a non-regulated area in 1833 (Regulation XIII of 1833). The resistance of Koyas in the South took the form of guerrilla warfare, uprisings (1803 onwards) and armed insurrection (1862). These revolts were mercilessly crushed, and ‘suitable’ changes in the administrative system followed. A separate act was passed next for the districts of Ganjam and Vishakapatnam in 1839. Later, a general Scheduled Districts Act was passed in 1874 declaring the two districts as Scheduled Districts. A new nomenclature was adopted for these areas, namely, ‘Wholly Excluded Areas’ and ‘Area of Modified Exclusion’ under the Government of India Act, 1919.

The anti-imperialist struggle of Adivasis forms a glorious chapter in the history of Odisha. In the year 1805 the tribals of Nayagarh, Daspara, Boudh, Banapur and Ghumusar struggled against the British to establish their own right on forest. Then in the year 1817 tribals of Khurda under the leadership of Buxi Jagabandhu and in Ghumsar belt under the leadership of Chakara Bisoi fought valiantly to protect their territories. Under unprecedented repression the movement sporadically continued from 1837 to 1875. The western Odisha movement continued from 1827 to 1884 under the Sambalpur regime led by Vir Surendra Sai. Under the leadership of Birsa Munda, the Resistance Movement spread along the Odisha - Jharkhand border areas in later part of 19th century. In the year 1891 Dharanidhar Bhuyan led the ‘Juango’ Adivasis in Keonjhar district belt. The Parajas, Sabars and Kondhas were organized in Koraput district by the legendary leader Laxman Nayak against British domination. The movement continued even after Laxman Nayak was hanged to death by the British in 1942. At the Andhra Pradesh - Odisha border, under

the leadership of Aluri Sitarama Raju, the Adivasis continued their struggle in the same period and created history.

Various aspects of administering the forests were examined in detail for the first time by the Indian Statutory Commission (Simon Commission). On its suggestion, a new scheme was adopted for the administration of 'excluded' and 'partially excluded' areas in the Government of India Act 1935 assigning extensive power to the Governor, for making regulations for 'peace and good governance' in the said areas. However, this Act did not become fully operational at any time after its enactment because of the advent of the National movement led by Mahatma Gandhi & the Indian National Congress. Unfortunately, the fate of toiling people and their natural sources of livelihood remained unchanged even after Independence. Their sacrifices had gone in vain. The Forest Acts formulated in British India were maintained as they were and all the power was vested with the Government with no recognition of community contribution in environment management.

Tribals Taught us Democratic ways

The Commissioner for Scheduled Castes and Scheduled Tribes during 1986-91 in his report (28th) to the President of India wrote, "The quintessence of the Pre-independence tribal scene can be said to comprise three basic elements:

- A system of self-governance guided by the traditions and customs of the people with almost no exotic intervention
- Considered intervention at the highest level in matters concerning the System and the legal frame
- Realization of the need for protection against the articulate neighbours and even the functionaries of the State exemplified the 'excluded area' approach, and even total ban on entry into the same through stringent inner line regulations."

After a decade of independence, the Dhebar Commission for scheduled Areas and Scheduled Tribes stated in its report, "The decision of their (people's) councils is the law to the tribals. The sanction behind it is both necessity and faith; necessity because in far-flung areas social equilibrium and stability have to be maintained by some responsible agency, and the council is that agency, where they

have faith because with the tribals their social customs and religious rites are the essences of their existence."

In the first Constituent Assembly in 1949, Jaipal Singh declared, "You cannot teach democracy to the tribal people, you have to learn democratic ways from them. They are the most democratic people on Earth." The same sentiment was echoed by another great leader, Syed Mohammad Sadaula who said that their native chiefs are elected by all people in their territory by the adult franchise and could be removed as well by the people.

A Holistic Perspective: Land, Economics and Law

मनुष्यवती भूमिरर्थः अर्थस्य भूम्याः
लाभ पालनोपायः शास्त्रम अर्थशास्त्रं

Kautilya in his treatise 'Arthshastra' defines Economics in a holistic and profound way The land, where human beings lead their lives, is called 'Arth'. The study of all the actions/solutions that are beneficial to this land is called Arthshastra.

Interestingly the English term 'Economics' is derived from the Greek word 'Oikonomia'. Its meaning is 'household management'. If we take a collective space as Kutumb, then the people, biodiversity, land and water resources, all form a Kutumb (family), whose management is Economics. All the deeds that are beneficial to this space is Arthshastra.

The relationship between the government and the people acquires a refreshing dimension with this understanding. The Constitution too comes to rescue whenever a conflict arises.

The Indian Constitution has comprehensive provisions for the protection of the forest, land, water and, the people living in it under 5th, 6th and the 11th schedules. To quote the Supreme Court in Samatha versus the State of Andhra Pradesh, and Others, (1997-98 cases No. 191) - "The Fifth Schedule constitutes an integral scheme of the Constitution with direction, philosophy, and anxiety to protect the tribes from expropriation. Its objective is to preserve tribal autonomy, their culture, and economic empowerment to ensure social, economic and political justice for the preservation of peace and good governance in the Scheduled Areas."

Besides the constitutional commitment, the

Government of India is also a signatory to the International Labour Conference Convention No. 107, 40th session on 5th June 1957 concerning the protection and integration of indigenous tribal and semi tribal population in the Independent countries and Convention no 169, 76th session on 7th June 1989.

The former recognizes the right of ownership, collective or individual of the members of the populations concerned over the lands which these populations traditionally occupy (article 11) and the later convention declares (article 7): "The people concerned shall have the right to decide their priorities for the process of development as it affects their lives, beliefs, institutions and spiritual wellbeing, and lands they occupy and otherwise use, and to exercise control, to the extent possible, over their own economic, social and cultural development. Besides, they shall participate in the formulation, implementation, and evaluation of plans and programmes for national and regional development, which may affect them directly. Again, in part II (article 13) it clarifies:

1. In applying the provisions of this part of the Convention, governments shall respect the special importance for the cultures and spiritual values of the people concerned, of their relationship with the lands or territories, or both as applicable, which they occupy or otherwise use, and in particular the collective aspects of this relationship.
2. The use of the term "Lands" in Article 15 and 16 shall include the concept of territories, which covers the total environments of the areas which the people concerned occupy or otherwise use. Article 15 says "The right of the peoples concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the right of these peoples to participate in the use, management and conservation of these resources."

It is worth noting here about the UN Declaration on Right to Development adopted by the General Assembly resolution 41/128 of 4th Dec 1986. Interestingly the Supreme Court takes note of it in Civil Appeal No. 4601-02 of 1997 case No. 191 and taking cognizance of the violation of this declaration by the Government of Andhra Pradesh warns not to disturb the traditional relationship between forest and the indigenous people living in

it. Article 2 (1) provides that "the human person is the central subject of development and should be the active participant and beneficiary of the right to development." The same year Andhra Pradesh High Court giving Judgment on contempt case No. 1381 makes an eye-opening statement on the functioning process of the Government officials "the experience of this court is that as and when there is some trouble in the agency area, the officials concerned will pass some orders without looking into the record and without giving any opportunity to the non-tribals to put forth their cases."

These orders naturally resulted in a plethora of appeals. With the outcome, the symbolic acts done by the officials implementing the regulations did not yield results and in fact, these regulations in the statute book are staring in the face of civilized society. The court have noticed time and again that these Special Duty Collectors (Tribal Welfare) who are entrusted with the duty to enquire into the claims of the tribals, were passing orders which have naturally resulted in appeals to the Agent, who normally sits over the appeals till another unrest arises in the area. When the situation is again goes out of control, the agent without bothering whether notices are served or not, whether advocates are present or not, passes some order and washes off his hands. The matter, thereafter, comes to the Secretariat by way of a Revision and again the concerned Secretary having entertained the revision thinks that his duty is over by staying the operation of the orders of the Agent till the next unrest takes place."

The honourable High Court made serious remarks on members of the Legislative Assembly, "If the Tribals Advisory Council is really functioning, it is not known how such pathetic conditions in the tribal area are continuing even after 50 years of Independence. Perhaps, this question can be answered by the so-called representatives of tribals themselves than any others. Time has come to question their inner hearts what they are doing for the people, who sent them to the Legislative Assembly."

History took a turn when the Government of India first recognized the Autonomy of Village Republics through the 74th the constitutional Amendment on 24.12.96 in which the power of Gram Sabhas for self-Governance was recognized.

The provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996 (PESA) is noteworthy

in this context. The Act applies to the areas covered under the fifth schedule of the Constitution of India. The Act prohibits the state to make any law which would not be in consonance “with the customary law, social and religious practices and traditional management practices of community resources”. But to an unsympathetic administration, it leaves scope for manipulation. In the first-place customary laws, social and religious practices and traditional management practices of community resources are not codified. Except for the occasional judicial pronouncement, there is hardly anything authentic in writing to go by regarding the customary and traditional practices and laws of different groups of tribals.

Now that a central piece of legislation has given legal recognition to such customary laws and traditional practices, it is time to have authoritative writings on such issues. This is a difficult task, since customs and traditional practices vary from tribe to tribe, from place to place. Nevertheless, these must be captured, documented and disseminated through community-based processes to ensure that tribals can seize the rights that have been provided to them by the law.

Successful Tribal Movement for land Rights and Minor Forest Produce

From the British time gradually tribals were alienated from their land rights in forest villages, resulting in torture and exploitation by lower forest officials all over the region. The author was a catalyst to collectively raise the voice for the tribals of Indore division in 1986. The Forest Department of Madhya Pradesh accepted the demand and gave 30 years lease to the residents. This victory was the first of its kind in the country. But later the department stopped tribals to collect cow dung claiming it to be the property of the forest department. A PIL (public interest litigation) was filed against it in 1987 in the High court of Indore. In between mounting resistance by the tribals, High court gave a historical judgment “Minor Forest Produce (cow dung) henceforth will be counted as properties of the forest dwellers and Forest department can purchase it from them at reasonable market price.” The success of both the movements held the morale of tribals high. In 2006 Ministry of Environment and Forest, Government of India included land and Minor Forest Produce (MFP) as rights of the tribals.

Redefining Identity as One’s Relationship with Land

Just as trees get nourishment from their roots, gain strength to withstand floods and storms, communities too get stability, tenacity and shock absorption capacity from deep belongingness. Their relationship with land and Mother Nature gets reflected in laws, and policy documents.

Constitutional directions, UN resolutions, ILO declaration, verdicts of Supreme Court and High Courts and above all rules and regulations of Government, become essential to bridge the gap between the community and the government. The linkages and relationship among various departments of the Government and various institutions to ensure community-based land, water, forest management for poverty alleviation can address the realities listed below:

1. What happened in the last two hundred years ever more aggressively is the divesting of people of their modes of production. This has been forcibly supplanted by other ways and means of production, which neither benefited the local communities nor protected their environment. Therefore, the ecological community found themselves bereft of the economic system corresponding to their environmental midline and nurturing their culture and its various manifestations.
2. If there is no serious will to halt the globally escalating consumerism, all talk about environmental ethics will become ineffective. Transformation of consciousness can be realized if idolaters of planetary consumerism across national borders listen attentively to the sane local voices of the victims who pay for this way of life and suffer the burden and consequences of it. It is they who can testify what *vairagya* or *alpacheta* means: It is freedom from enslavement, from greed, from getting addicted to and enslaved by the consumerist idols.
3. Today any serious ecological ethic should address the central issue of justice and equity. It definitely goes beyond an ethic oriented conservation and drives home the reality that future survival is bound up with the present question of access and equitable sharing of the natural resources.
4. Income inequality in India has increased at an alarming rate in the last three decades. A January 2020 study suggests that India’s richest 1 per cent

held more than four-times the wealth held by 953 million people who make up for the bottom 70 per cent of the country's population. The top 10% of the Indian population held 77% of the total national wealth. The saga has now acquired frightening dimensions. Indian billionaires increased their wealth by 35% during the lockdown to 3 trillion. A survey across five States said that close to 40 % of teachers in government schools feared that the prolonged school closure might lead to a third of the students not returning once schools reopened. It was estimated that out of school rates would double in a year. (Source: Oxfam India and its 'Inequality Virus Report' released on 25 January 2021)

5. The land is the principal source of livelihood for millions of people. Its development is linked with the development of indigenous communities. Many resourceful immigrants have fraudulently alienated large areas of locals, who are ignorant and helpless. Persons belonging to the affluent and powerful sections, to obtain sales or mortgages either for nominal consideration or for no consideration at all, have exploited scheduled tribes grantees and the latter have become the victims of circumstances.
6. There is serious negligence in technology transfer to tribal communities through appropriate extension education and developing market linkages to protect and promote growers' and gatherers' interest.

Why are Communities Important to Restore Ecological Balance?

To speak meaningfully of a planetary and ecological ethos, we need to put the victims, the poor and the marginalized at the heart of the planetary discourse. Hence, to ensure ecological self-governance through communities of people situated in the particular environmental context, to stop violent disruption of the community and people from their most immediate habitat and their environment with all its diversity and richness, the indigenous communities should be facilitated to rediscover their lost identity and self-image in the context of their natural milieu which is the chief source for the formation of their culture. Because, once the culture of the local communities with its economic basis has been destabilized, people are rendered rootless and could be tossed around in a

global economic game in which they have no part. They must face the challenge from the imperialistic vision, the present model of development, and incongruent science and technology. Communities must now make a paradigm shift to an appropriate, genuinely humanizing vision.

To develop ecological ethos through the promotion of justice and equity by deeply entering the human experience untrammelled by parochialism should be the mission. To fulfill this mission, we should have the following objectives:

- To highlight the indigenous wisdom about Nature - it's working, its rhythm, modes, ecological and environmental management; ingenious ways and means to benefit from natural resources, and to renew and regenerate them
- To empower local communities, particularly weaker sections, SC & ST women for assuming leadership in ecological conservation measures, participation in government programmes aimed at enhancing livelihood security for self-determination & self-employment so that vested interests from wanton destabilization can be prevented from disturbing the harmonious relationship between Nature and community in the resource-rich ecological niches
- To spearhead a movement of students and youth for tending their local environment through participatory community action research and study about the adverse effects of development ventures like open cast mines- particularly bauxites and graphite, industrial pollution, intensive prawn cultivation, application of pesticides and insecticides, etc. on the fragile ecosystem
- Integration of and synergy between regulatory, promotional, academic and research institutions and enterprises to ensure poverty alleviation through the involvement of the community
- Capacity building of the rural workers, artisans, and fishermen for value-added products and to create better infrastructure and human resources for conservation and sustainable utilization of Jal, Jangal, Jamin, Jan, Jantu i.e., water, forest, land, human and animals by the community. Application of scientific knowledge, appropriate technology for harvesting, value addition, marketing and involvement of co-operatives in creation, innovation, production and marketing

of agricultural, horticultural, agro forestry and medicinal plant products.

- Completing the disjointed ‘field to laboratories’ and ‘laboratories to field’ loops of interaction into an effective circle of collaboration for the mutual benefit of the user and researchers.

Where did we falter?

The social equilibrium is preserved through flexible and equitable access to resources brought about by rules on inheritance and on an exchange of rights to use resources. This mechanism is buckling under pressure from commercialized resource exploitation at a massive scale. The concern with environmental deterioration has stimulated widespread efforts at conservation and enhancement of natural resources. Official programmes have been driven to attract foreign funds or to preserve scenic beauty along with flora and fauna. Although it is not always possible to demarcate them neatly, it is useful to distinguish between three categories of conservation initiatives.

The first category comprises official programmes: first, those which seek to preserve forests, parks, and animal and plant species for the benefit of present and future generation. The second category comprises of efforts to rehabilitate and improve degraded resources to meet the subsistence needs of farmers, herders, and foragers. The third category consists of resource improvement efforts undertaken at the initiative of local communities and grass-roots organizations, with varying degrees of support from activists and voluntary development bodies, state agencies, and foreign donors.

The three categories of conservation programmes and the policies that underline them are to be analysed from a socio-political-economic perspective. The record of official conservation programmes is somewhat dismal.

The first category has suffered because they have largely ignored the needs of the inhabitants, and the communities in the neighbourhood of parks and protected areas. In many cases latter were deprived of means of subsistence through explosion or restriction on their access to land, forests, fisheries, and grazing. It is so foolishly ironical that the conservation of Nature should destroy means of subsistence of the people.

The second category of conservation efforts has the explicit purpose of improving degraded resources

to enhance the living standards of the improvised peasants, herders and the landless. Although there have been some notable successes, the great majority of these conservation programmes have failed to achieve their objectives. The most important reason for this is that such activities have not been embedded in the socio-economic and political context of the region. They have been devised and implemented as top down technical and administrative exercises.

The third category of conservation initiatives has perhaps a better record of success because participation by local communities ensures that the programmes and projects address the real needs and priority concerns of the local people. However, in most cases, their success depends critically on material and political support from empathetic individuals and organizations.

It is noteworthy what the then Prime Minister Pundit Nehru expressed in his famous Panchsheel Policy:

- People should develop along the lines of their genius and we should avoid imposing anything on them. We should try to encourage in every way their traditional arts and culture.
- Tribal rights in land and forests should be respected.
- We should try to train and build up a team of their people to do the work of administration and development. Some technical personnel from outside are needed, especially in the beginning. But we should avoid introducing too many outsiders into tribal territory.
- We should not over-administer these areas or overwhelm them with a multiplicity of schemes. We should rather work through and not in rivalry to, their own social and cultural institutions
- We should judge results, not by statistics or the amount of money spent, but by the quality of human character that is evolved.

A Collective Action Plan to Revive the Ecology and the Economy

Taking the dire ecological and human reality in the proposed intervention areas, we need to take conservation efforts to redress the desperate reality. The optimistic people-oriented dynamic processes crystallized in the Panchsheel policy can pave

way to strengthen Community Mass Mobilization Perspective in the following ways:

- Socio-political-economic empowerment
- Weaving indigenous wisdom and technical capacity building
- Evolving a culture of conservation and fostering a grass-roots environmental movement

What is required is the sublimation of consciousness, which goes far beyond the precincts of ethics. Seen in this perspective, the ecological question to be addressed is not just a transition from an Anthropocentric to Cosmo centric, but from antihuman to authentic human which includes in its purview nurturing and fostering nature and its immense biodiversity. The evolution of a planetary ecological ethos must be synergistic with the socio-cultural-religious possibilities. We can collectively harness them to sustain the indigenous people's approach to Nature.

A socio-political-economic analysis of the environment points to the need for major reforms in development; conservation programmes and policies. Programmes for environmental protection must become integral parts of overall development strategies. Thus, conservation schemes should enhance the livelihood security of local communities, inter alia, through recognition of their customary rights over natural resources.

The success of such efforts is critically dependent upon their ability to strengthen the technical, organizational and managerial capabilities of rural communities and organizations. The importance of drawing upon and reinforcing local knowledge and innovative capacity must be highlighted.

Such reforms in development and conservation policies cannot appear without concomitant changes in the constellation of social and political forces. This is a long, slow and cumulative process. The mobilization of local communities and other groups to resolve conflicts over the environment, and the growth of organizations from the local level to state levels committed to conservation programmes linked to poverty eradication and community empowerment, have an important role to play in this process.

Forests: The Eternal Source of Livelihoods

There are different dimensions of rural

livelihood conditions relating to the forest. Forest promotes rural livelihood conditions in several ways such as: (i) increased income, (ii) increased wellbeing, (iii) reduced vulnerability and, (iv) more sustainable use of the natural resource base. However, the extent to which these livelihood conditions materialize in practice varies from situation to situation, among households in a situation and across a time span. The above said contributions of forests, again, depend on several factors such as (i) availability of alternative sources of income, (ii) access to forests, (iii) marketing facility of the available forest products and, (iv) the institutions involved in the management of forests.

The forest-related rural livelihood scenario has been divided into five categories such as: (i) forests continue to be central to livelihood systems, (ii) products from forests play an import and supplementary and/or safety net role, (iii) forest product activity opportunities are increasingly based on agro forest sources, (iv) opportunities exist to expand artisan and small enterprise forest product activities, and (v) people need to move out of declining forest product activities. All the above scenarios need careful intervention at both the policy level and implementation level. Particularly in the emerging market economy, the right to own the forest resources is not yet ensured. In India, forest dwellers depend on forest for their livelihood for (i) NTFP (non-timber forest produce), (ii) hunting wild animals, (iii) cultivation of forest land, settled cultivation at some places and shifting cultivation at other, (iv) food items, (v) medicinal and herbal plants, and (vi) wage labour in logging or other, forest activities, legally or illegally. But gradually their dependence on the forest is declining due to deforestation.

The livelihood of forest dwellers including both tribals and non-tribals living close to the forest has been severely affected due to massive deforestation. Relentless efforts made by the Government, non-government organizations and other functionaries could not better the situation. Forest management policies of the Government must be so guided that conservation of forest and livelihood of the forest dwellers should go together, one should not be at the cost of the other.

Many forest dwellers particularly, tribals and other marginalized sections, depend on forest

particularly on NTFP for their survival. But the policies regarding the collection, sale, and processing of NTFP are going against the livelihood of forest dwellers. Thus, deforestation coupled with myopic Government policies in the past has gone against the interest of the livelihood of the forest dwellers. With the Present Tribal Policy in effect there is growing fear of Mafia Raj in Forest due to innocence & Ignorance of the Forest dwellers.

Our immediate concerns

- Ineffective Management of Natural and Human Resources
- The laws of Nature and the symbiotic relationship between indigenous communities, plants, and animals while designing forest development plan is not properly taken note of by Development planners
- Community is taken as beneficiaries and not as Stakeholders in the whole development paradigm
- Cultural values and traditions of the Community inadequately addressed in development initiatives
- The resultant increasing gap between the community and Government in the development process
- Inadequate infrastructure, organizational interaction and institutional access at the grass-root level
- Lack of convergence of various development programs for holistic development
- Lack of monitoring during the execution of development programs resulting in poor implementation
- Lack of inter-sectoral coordination among various stakeholders like Government Departments, Academic and Research Institutions, Social and Business Organizations
- Sustainability and replicability within the implementation mechanism are poor resulting in erosion of community ownership and non-institutionalization of resource management
- The community has hence developed an antagonistic or at the minimum an apathetic attitude towards Governmental/Corporate/ NGO initiatives for development leading to serious law and order problems

- Several-fold increase in market demand of forest products leading to its exploitation from their wild habitats
- Unhealthy competition for forest products due to entry of non-traditional new players, with a limited idea for conservation and knowledge of sustainable utilization, has led to livelihood insecurity of the traditional dwellers of these niches.

It has forced them to abandon their age-old traditional conservation practices for immediate survival needs, and migrate in painful circumstances. These pressures result in their numbers to dwindle rapidly.

- The human community is the ultimate loser in this struggle due to the degradation in the rich genetic diversity of the human population
- Irrespective of a rise in productivity and growth in the Economy, the Human Development Index shows a definite decline in tribal belts raising fundamental questions to policy planning

The Government of India, Ministry of Tribal Affairs Taskforce for empowering the tribal (ST) population has attributed this failure to 'straight-jacketed schemes', 'lack of perception of local needs' and 'top-down approach'. Distribution of funds has been wrongly emphasized instead of focusing on community empowerment and infrastructure development.

Road to sustainable development

Experience with Watershed Development and Environmental and Social Assessment Studies indicate the following constraints to the sustainable development of Integrated Watershed and Natural Resource Management Sector:

- Poverty amidst plenty aggravating due to lack of courage, inadequate information, weak network among the community; dearth of vision and faith among the leadership
- Insufficient capacity building of the participating stakeholders (Panchayati Raj Institutions/ NGOs and village communities) in both technical and non-technical areas; Participatory Rural Appraisal methods; community organization, and accounting procedures
- Inadequate beneficiary and stakeholder involvement in planning and implementation of

programs with a tendency towards a top - down approach resulting in unsustainable project outcomes

- Even after 73rd and 74th constitutional amendments, there is a weak linkage with the Panchayati Raj Institutions and no recognition of the authority of the Gram Sabha in practice by the authorities
- Poor cost recovery in many cases and inadequately defined benefit/cost-sharing arrangements
- Lack of appropriate technical recommendations and norms for rain-fed agriculture in different agro-climatic zones and plantation of medicinal plant species
- Inadequate emphasis on equity aspects of watershed development with little focus on income generation activities for the vulnerable, marginalized or disadvantaged groups
- The narrow focus in the design of the Government project components; need to include crop demonstrations, horticulture, and livestock improvement; water management
- Limited focus on Integrated Pest Management, soil nutrient management aspects resulting from the intensification of agriculture and horticulture. No official effort yet to promote organic production, certification, and marketing
- No environmental or social aspects management related to watershed, soil & forest conservation
- Inadequate monitoring and evaluation of physical and financial performance indicators

The situation demands consolidation, modification & focus of endeavours to arrive at a logical solution.

A – J steps needed

Advocacy for a shared vision for a complete change in attitudes of community and Government Building Partnerships and Stakeholderships among various providers and beneficiaries Comprehensive Capacity Development of selected members of SHGs, youths, peasants & others Decentralized Planning, Execution, and Management through committees at three levels Effective Communication for Behaviour Change among various players Fostering an Enabling Environment for Progress of the locality and equitable

sharing of earnings Growth in livelihood, life expectancy, Quality of Life through modification in the operation mechanism Habitations promoted as centres of learning & practice and reflection & actions Integration of and synergy between regulatory, promotional, academic and research institutions Joint effort to be done by multi-stakeholders with a convergence of various development initiatives

In the Field: taking a Bottom-up Approach

Village resource mapping and preparation of micro-plan for integrated development It should be designed with a clear mention of the contribution of village communities. It should be consolidated to form a local sub-plan incorporating:

- Infrastructural development like water conservation, land reclamation, afforestation, storage and access to market
- Human Resource Development through training on technical skill, entrepreneurship, and social empowerment
- Cooperative initiative for Natural Resource Management (NRM), and marketing
- Community needs sustainable education process on:
- Enhancement of technical skills with appropriate modernization
- Promotion of managerial skills to undertake sustainable management and harvesting of natural and human resources so that they are no more victims of the situation but emerge as masters
- Develop the entrepreneurial skills to market the products and self - sustain themselves

Conservation of soil, water, and vegetation

- Integrated Soil fertility management (SOM= N, S, Z, C2)
- Integrated Nutrient Management (FYM, compost, bio fertilizer)
- Monitor water, soil & plants quality, sustain the source of streams
- Permanent vegetative cover through alternate land use
- Environmental modification of habitations and behaviour with a focus on community sanitation

Improvement in Human Development Index among Tribal Peasants & Labourers

- Promotion of sustainable cultivation and entrepreneurship in an organized way
- Enhanced knowledge on Government programmes and market dynamics will reduce vulnerability
- Involvement of the tribal community in development programs, keeping intact the good in them, will increase the quality of life

Developing Marketing Linkages

Measures to ensure quality will ensure the marketability of the products, as there is a serious dearth of good quality material in Non-Wood Forest Produce (NWFP). Routine buyer-seller meetings should be held for market linkage. Mass cultivation can be done after ensuring the demand for the product. An Internet kiosk can be established to provide updated market information and linkage on different products, so that fair price can be ensured to collectors/cultivators.

Paving way for Infrastructure Development

The community should be mobilized to take responsibility for the creation of check-dams, cross bond, water harvesting structures, watershed management to conserve and proper use of surface water for irrigation and drinking water purposes. Models can be created for recycling and roof-top water harvesting. Minimum dependence on underground water needs to be ensured. Land reclamation and afforestation will also constitute a part of the infrastructural development that will be necessary to enhance the productivity and employment possibility in the NRM sector.

Planning the Action

The action plan can be designed in a way that a willing organization shall act as a catalyst in the community. The limited resource invested in the area can thus be multiplied through community mobilization. Participation in the physical and financial responsibilities to the best of their capacity would be a proof of their stakeholdership.

Community Convergent Action (CCA) and Complete Change in Attitude is the way forward for identifying and eliminating the pressure on Mother Nature. This only can ensure harmonious cohabitation of plants, animals and the community. Tools for Micro Plan would be Productive Learning

and Action (PLA), and Indigenous Resource Mapping (IRM).

The way ahead: micro-planning

For the development of shared vision and rapid capacity building, advocacy would consist of:

- Assessment of strength and weakness of the village
- Mapping and quantification of resource needs
- Analysis of gaps in physical and resource needs
- Prioritization of interventions incorporating development support from Government and NGO sources
- Skill building and resource mobilization strategies including community contribution
- Integration with the NRM; livelihood promotion; disaster mitigation, and sustainable development plans
- A mechanism for community budgeting of land, water & forest
- Rainwater harvesting, wastewater recycling, waste processing, and utilization
- Clear monitoring and evaluation linkages between inputs, throughputs, outputs, and outcomes
- High school activities - plants, soil and water quality monitoring, sentinel children surveillance and community response system linked to the local committees and concerned departments
- Linkages with high - level quality monitoring, and disease control mechanisms through traditional health practitioners and public system accountable committees
- Strengthening the Community Based Organizations like Van Suraksha Samiti (VSS), Village Forest Committee (VFC), Self-Help Groups (SHG), Youth Clubs etc.
- Training, research, technology development and demonstration to sow the seed of 'village as collage'
- Development of model cottage industries and distribution systems
- Availing subsidy, micro-credit, and entrepreneurial opportunities

Resolutions of Gram Sabhas and regulations/recommendations of the Government should be

Hope Amidst Darkness

The channel of agricultural, horticultural and Non-wood Forest Products (NWFP) is riddled with challenges. There have been inadequate efforts in the past on systematization of the collection, processing, and marketing sector. As a result, income generation activities, supposed to benefit a large number of the rural population in general and tribals in particular, have been jeopardized. Owing to unscientific and unskilled harvesting, many species are now threatened.

Ineffective marketing, on the other hand, has resulted not only in deterioration of quality and drop in earning but also in exploitation of the primary gatherers by the middlemen and contractors. Several constraints exist due to illiteracy and inadequate awareness amongst the primary gatherers, producers' inadequate investment in research and development, lack of quality and standardization norms, non - availability of adequate marketing and trade information, and their accessibility to the common people.

Marketing is still inefficient, informal, secretive and opportunistic. Whatever raw materials are harvested, these are stored haphazardly for a long period under unsuitable conditions.

All this results in deterioration of quality, and such materials are therefore not acceptable to the importer and standard manufacturing units. As a result, the raw material supply situation is shaky, unsustainable and exploitative.

This also results in depletion of the resource base, exploitation of rural and tribal people. It is necessary to formalize and organize the collection, processing, and marketing of these species and integrate the development of NWFP, agro and horticultural products from production to consumption.

The trade of NWFP is highly complex as it involves different individuals at different levels in the marketing channel. For example, these include primary gatherers, private dealers, agencies, Government controlled organizations, petty shops, industries, etc.

A typical chain of such transactions starts with a collection of these plant materials in the wild through tribals and villagers (including women and children) followed by a local level consolidation of this collection by a network of local traders/handlers, and finally delivery at roadside centres. These collected materials then flow down to local and regional wholesale markets, the latter generally located in bigger towns and cities.

Such a process involves many collectors, processors, handlers, commission agents, middlemen, and carriers. The interplay of these middlemen in trade acts as impenetrable shields, blocking the vital communication between the primary collectors and their consuming centres.

The contractors and agents often procure the collection at a very low price or follow the barter system exchanging these raw drugs for consumer items. The limited access to market and dependence on intermediaries has a direct effect on the prices. Government support for the supervision of NWFP development is often weak. Important issues which are of primary concern are:

1. Ineffective regulatory bodies
2. Lack of information on grading specification with insufficient initiatives on value addition studies/ activities on quality parameters
3. Lack of standardization
4. Information on the market size and market sites doesn't have proper data on
 - (i) demand and supply
 - (ii) prices of unprocessed plants during peak and lean collection periods with comparative studies of price structure
 - (iii) prices in different time series

taken into consideration to cater to the specific needs through focused initiatives like water conservation for agricultural/ horticultural cultivation, collection, and marketing of NWFP and others.

How to do watershed development?

The key objective is to improve the productive potential of selected landmass through watersheds and their associated natural resource base, and to strengthen community and institutional arrangements for natural resource management. The poverty focus is also to be ensured by selecting blocks with a relatively high poverty incidence, fertile land, degraded forest, low water availability, and a preponderance of small and marginal farmers. The selection of villages/land is to be done using a set of robust poverty and watershed/natural resource base degradation indicators.

An associated objective is to strengthen the capacity of communities for participatory involvement in planning, implementation, social and environmental management, maintenance of assets emanating from local level development programs, and to have the implementing agency operate in a more socially inclusive manner, within the framework of a convergent watershed development plan. This will be achieved through having the community groups implement with collaborative approach, capacity building initiatives and policy agreements with the Government. The performance indicators would be as follows:

- Household income increased:
 - The overall income of various stakeholder groups at the village level increased
 - The agricultural income per hectare increased
- Crop yields increased
- Groundwater recharged- Cropping intensity on rain fed areas improved
 - % of the irrigated area increased
 - Drinking water availability improved with many wells recharged
- Soil erosion reduced
- Cropping pattern diversified to high-value crops like medicinal plants and horticulture
- Milk, fish, meat, fuelwood, fodder production increased
- The productivity of non-arable lands improved with increased outputs, forest cover, forest produce increased.

Conclusion

A systems approach is badly needed to cover the entire value chain associated with management and marketing. It'll start from a survey of the land, water, forest and end up with local value addition to make products for the end-use. The holistic development of Nature and Community must precede market dynamics. □

Let the Universities Go Green

S Rama Devi Pani*

*At the start of creation, there was dark without origin
At the breaking of creation, there is fire without end*

Tagore

The beautiful blue-green planet Earth which is our home now started its journey 17 billion years ago out of void, i.e. nothingness, *ex nihilo* (Bhattacharya 1999). As per the scientists revelation at different fora, they came to this conclusion after the calculation of quantum electrodynamics, the branch of science originated from combining the Albert Einstein's theory of Relativity and Max Plank's Quantum Mechanics which have taken us back to 10^{-43} second from the beginning of time which is known as Plank Time. It is at this time that Universe had come into existence by a tiny fluctuation of vacuum (Hugh 1991). The Nascent Universe had a dimension of 10^{-35} mm and the temperature of 10^{32} Degree Kelvin. It had the component of creation as well as destruction playing in it simultaneously just like the *Tandava* Dance of lord Shiva. The Universe thus formed started expanding and increasing the size and within next millionth of a second the size of the new born Universe became 10^{50} times to about 10cm and also created all the matter that universe would ultimately contain --- quarks, antiquarks, leptons, and gluons boiling at the temperature of 10^{27} degrees Kelvin forming a cosmic fireball. Then came the existence of Space and Time dimensions. Here it is also befitting to mention the Laws of Conservation of Matter and Energy on the basis of which all the calculations are done. According to the Laws of Conservation, the matter and energy once formed remain constant and they only change their form.

Then occurred the momentous Big Bang – the forceful explosion of fire ball of Universe which scattered all the particles of matter in it--- the seeds of Stars, Galaxies and every thing which we find now in the whole world. Almost about 10 billion years after the beginning, the Universe was scattered in a vast area with millions of galaxies and one milky way. Over a period of millions of years triggered by supernova explosion the solar system was

formed. 12.4 million years after the big bang and 150 kilometers from the youthful sun a large dense embryo planet was born which ultimately became our Mother Earth(www.ac. Wikipaedia).

Initially, the atmosphere of the Earth was stormy and turbulent with sulphurus and metallic vapours. Beneath this metallic vapours heavy molten elements like iron and nickel were swirling in whirlpools which later on sunk towards the centre core. Around the core the lighter rocks like granite and basalt rich in oxygen, silicon, aluminum, gold etc accreted. For millions of years it was absolutely dark as all the sunlight was obscured by the continuous downpour of dust and rock particles on its surface from space. Slowly the colour changed to orange and then in next few million years it became clear losing half of its mass. For several billion years it was filled with enough hydrogen. After over millions of years of turbulence with volcanic eruptions, the Earth started cooling and new showers of rain trickled on it. Then began the journey of life and the impact of climate and climate change on it. This fascinating journey of the Earth was well narrated by Govind Bhattacharya in his book Origin and Evolution (1999).

Climate is a very general term that we often use. It usually refers to the average, or typical, weather conditions observed over a long period of time for a given area (www.weatherquestions.com). Climate change is the statistical distribution of weather from place to place and time to time--- year to year, decade to decade, century to century, or any longer time scale. In the present times Climate Change is also being referred to as Global Warming. According to reports of Inter-Governmental Panel on Climate Change (IPCC) the temperature of the Earth has risen by $0.6\pm 0.2^{\circ}\text{C}$ over the 20th century and is expected to rise to 1.1 to 6.4°C in 21st century. And sea level is expected to rise to 38cm by the midst of 21st Century. Some of the predicted consequences of this Global Warming are arctic sea melting, glaciers and permafrost melting, sea surface temperature warming, heavy rainfall and flood in many areas, extreme drought, ecosystem changing, frequent hurricanes, acidic rains, seawater becoming acidic etc. etc. Some scientists forecast that the Earth could be drastically altered. It might even come to resemble

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the steamy planet that was ruled by the dinosaurs! All this shows that there is a great threat to life on the Earth including the human population and civilization. What is absolutely real is the Greenhouse Effect of the atmosphere, which is formed of water vapor, CO₂, CH₄ and a few other trace level Green House gases in the atmosphere and not O₂ and N₂, which form the bulk of the atmosphere and absorb portions of the black body radiation emitted by the surface of the Earth (usually in the infrared wavelengths), and thus partially trap the heat, which, in turn, increases the surface temperature. What isn't 100% solid is "climate sensitivity", i.e. exactly by how much the temperature stands to increase per a given factor of increase in the atmospheric CO₂ concentration. That uncertainty is due to the fact that the earth's climate system has many complex interconnected (and random) components in it, which are not all easy to capture in the current mathematical models. In particular, the role clouds play is poorly understood at this time. But, given what we do understand, it can be concluded with a high degree of confidence that CO₂ from human sources is causing some warming. Given the potential for grave harm to millions and millions of people, it is better to be safe than sorry. If this gives impetus to highly efficient and renewable energy usage, that's good by itself, as it would help conserve our planet's limited resources and save them for renewable use by our future generations.

Higher temperatures over the coming decades are expected to cause more smoggy days and heat waves contributing to a greater number of illnesses and deaths according to international climate scientists. In general, climate change will perturb world's various aspects of physical and biological systems, which in turn influence human health. Rainfall anomaly and heat wave conditions play an important role in causing ill health in various ways. India will also be greatly affected by climate change. The effect will be experienced in the reduction of the snow-cap size in the Himalayas, retreat of glaciers that feed the rivers, an increased flooding of the snow-fed rivers initially and then partial drying up of the rivers, and formation of new lakes and flooded lakes at upper altitudes.

Global warming poses a unique political challenge for two reasons. First, the effect is non-localised for example, the CO₂ emissions from Britain may not have more effect there than they do in Australia, and vice versa. That means any credible

regime whereby the polluter pays has to be broadly international. Secondly, the consequences of climate change will be predominantly felt more than 50 years from now. It is probably not going to produce disasters in the next 10 or 20 years, so it is an investment in the interest of the next generation.

The human family faces the imminent collapse of the biosphere – the thin layer of life organized into ecosystems, upon an otherwise lifeless planet – that makes Earth habitable. Marshes and rivers and forests and fish are far more than resources – they and all natural ecosystems provide for humanity's habitat and existence upon Earth. A few centuries of unprecedented explosion in human numbers and surging inequitable consumption are needlessly destroying being for all living things. Climate change is real and individualist cultures are stealing from unborn generations, including their own, to satisfy their unending lust for consumerism.

If we go back to the journey of evolution of earth, we can see that climate change is not a new thing. The Earth's climate has changed throughout history. From glacial periods (or "ice ages") where ice covered significant portions of the Earth to interglacial periods where ice retreated to the poles or melted entirely - the climate has continuously changed. Many life forms While abrupt climate changes have occurred throughout the Earth's history, human civilization arose during a period of relative climate stability. www.epa.gov/climatechange/science/pastcc.html

Scientists have been able to piece together a picture of the Earth's climate dating back decades to millions of years ago by analyzing a number of surrogates, or measures of climate such as tree rings, glacier lengths, pollen remains, and ocean sediments, and by studying changes in the Earth's orbit around the sun. The Climate of the Earth which enabled the existence and progression of living beings formed after the initial spell of life formation.

The life on the earth started as single celled organisms from compounds which are rich in DNA after two billion years of existence. Then formed the Blue green algae which brought momentous changes in the atmosphere. The seas were full of blue green algae which originated the process of photosynthesis and released oxygen to the atmosphere. It created ozone layer to shield ultraviolet rays harmful to

life. This is how the climate was formed which was conducive for growth and development of living organisms. These blue green algae have slowly evolved to lush green plants and then started the evolution of higher order organisms. Since then several species originated and vanished due to climate change and extreme climatic conditions. In the process only those species survived which could adapt themselves to the extreme and intolerable climatic conditions. Charles Darwin called this as struggle for existence and survival of the fittest. In this process the living organisms took several forms and with each new form, the process of evolution progressed till the present homo sapiens. The evolution and extinction of each species is again a very interesting and fascinating story which spanned over billion and trillion of years.

The planet Earth which was full of greenery once upon a time is undergoing several major environmental disruptions due to interferences, of man with it obstructing its natural flow. We have been exploiting the environment for thousands of years and our life style has become more materialistic and consumerist than naturalistic and humanistic. Once when anybody comes across the enthralling story of formation of earth and the life on it, involuntarily one gets nostalgic about it. Only then one will be in a position to understand and critically analyze the role of human beings in accelerating this process of global warming. Nature works on the principle of harmonious existence. The idea of harmony and beauty in the universe fascinated Kepler. In his book 'The Harmonies of the World he observed that among the celestial movements there is full nature of harmony'. This is what we have to understand and make everybody understand. Here lies the role and challenges for the universities.

Advancement of Agriculture, Science and Technology, Industry, Information and Communication Technology are adding to environmental issues in their own ways. The stark reality is that the resource intensity of global production and consumption has gone far beyond sustainable levels. Indian population at present is 1.39 billion and still growing. It took over 2 million years of history for the world's population to reach 1 billion and only 2000 years more to grow to 8 billion. World's Population as per data now is 7.9 billion. This has caused tremendous pressure on our natural resources. For example, every day on earth, we lose over 100 square miles of forest and

about 70 square miles of productive land, and at the same time, we add quarter of a million people to the world population. Land mismanagement and habitat destruction has caused extinction of about 70-100 plant and animal species (GEO, UNEP, 2019). Habitat loss is perhaps the greatest threat to organisms and biodiversity. Published in time for the Fourth United Nations Environmental Assembly, UN Environment's sixth Global Environment Outlook (2019) calls on decision makers to take immediate action to address pressing environmental issues to achieve the Sustainable Development Goals as well as other Internationally Agreed Environment Goals, such as the Paris Agreement. It warns that the overall environmental situation globally is deteriorating and the window for action is closing.

20th and 21st centuries are marked for the advancement of science and technology, industries, business, and economy. The pace of life became too fast. As W.H. Davies wrote:

*WHAT is this life if, full of care,
We have no time to stand and stare.
No time to stand beneath the boughs
And stare as long as sheep or cows.
No time to see, when woods we pass,
Where squirrels hide their nuts in grass.
No time to see, in broad daylight,
Streams full of stars, like skies at night.
No time to turn at Beauty's glance,
And watch her feet, how they can dance.
No time to wait till her mouth can
Enrich that smile her eyes began.
A poor life this if, full of care,
We have no time to stand and stare.*

It is really a challenge for the Universities at this juncture to make the students *stand and stare the nature*. And unless the universities do not meet this challenge of making students appreciate nature it is not possible for them to rescue the Earth from the manmade causes of climate change. Some of the measures which universities should take in this regard are:

- Increase the components of the affective domain and aesthetic values in the curriculum of various courses. Also organize extra curricular activities in a large scale to inculcate and nurture the aesthetic values in students. Increase recreational activities like picnics and excursions to places where the

students can come closer to the natural environment and become sensitive towards it.

- Instead of threatening about the forthcoming disasters, the universities should adopt positive methods of sensitizing the students towards environmental problems. The present syllabi overloaded with modern topics like ICT, Biotechnology etc hardly find place for historical and social and aesthetic aspects. It will not be exaggeration if it is said that many young Indian students may not be aware in detail about the freedom movement of our country which took place just recently. So it is unrealistic on our part to expect them to know about the evolution of Earth which started billions of years ago, unless we make efforts to tell them. We should revert back to the departed traditional knowledge which is rich in contents of nature.
- Because of the glamour created by the media and multinational companies large number of rural youth is migrating to urban areas in search of jobs. This is causing damage to the environment in two ways firstly the rural youth who were close the natural environment are moving away from it and secondly, overcrowding of population in urban areas is adding to the environmental degradation. So the universities should open equal avenues for the rural as well as urban youth without displacing from their places. Implementing PURA, NREGA and Bharat Nirman may solve this problem to some extent.
- Agricultural universities should find lucrative and interesting opportunities for rural youth in the field of agriculture which may prevent the migration of rural youth to urban areas.
- In India, vocational courses still are holding backseats and secondary positions preventing a large number of talented youth from opting for these courses. The universities should select the students scoring high percentages in vocational courses so that a trend is set. This will help in attainment of dignity of labour which will solve many of the Nation's problems. *A good Plumber can contribute much more in prevention of environmental degradation much more than any graduate with white collared job in an air conditioned office.* It is really disgusting when there is a stinking smell of gutters when we visit some of the posh localities of the country. We are

in a fix whether to admire the modernity of the construction or lament on the state of pollution. India is a young nation with a majority youth population. The universities have to channelize the potentialities of the youth in a constructive direction.

- Teaching, Research and Extension/ Field Outreach are the three dimensions of University Education but in India University Education is always skewed towards teaching making Research and Extension/ Field Outreach secondary priorities. It emphasizes much more on teaching, placing research at a secondary position and Extension/ Field Outreach at tertiary position. For creating sensitivity in the students towards social and natural aspects, the universities should practice these dimensions in priority. Extension/ Field Outreach should be given utmost importance, research should also be emphasized to a great extent. Though science research helps us to find solution for many scientific problems, social science research helps us find solutions for behavior of human beings and molding them towards positive and constructive attitude towards nature. Social Science subjects and social science Research should be given impetus.
- Teaching aspect can be moderate. Rather teaching should not be for cramming and passing the examinations and getting degrees and later on jobs with little relevance to practical life.
- Last but most important is universities should work towards producing the students with sound knowledge base and moral character. As Mahatma Gandhi said, "the earth has enough to satisfy people's need but will never have enough to serve their greed" the nature has enough to fulfill the need and not the greed. High aspiration levels being created by universities is leading towards greed in people to acquire high posts and positions of power by all corrupt means. Due to this the positions which can really bring change in the system vis a vis society are being occupied by inefficient and insensitive people weakening the base of our system.
- The universities need to take sustainability initiatives, including research and student activism as well as campus facilities-related efforts. Environmental conservation programs on campus may include alternative transportation,

energy audits of and improvements to campus buildings, green purchasing, use of renewable energy, a robust recycling program, and sustainable building standards.

- The guaranteed way to make ending global warming happen is to switch to biofuels for transport and nuclear energy for industrial power that ends carbon dioxide entering the atmosphere. It should be followed by increasing the humus content of our soils by changing to organic type agriculture as soil building process extracts the excess carbon dioxide from the air. In all this, people would be the losers, and our universities ought to create awareness on this to the students as well as general community.

Climate change is a reality, a continuous process that needs to be taken seriously, even though there are large uncertainties in its spatial and temporal distribution. Many evidences have been gathered to depict that climate change is taking place. Over the past 100 years, the global average temperature has increased by approximately 0.6°C and is projected to rise at a rapid rate. The anticipated rise in sea level due to global warming will magnify coastal hazards: submergence of low-lying areas and wetlands, damaging storm surges, increased beach erosion, and more frequent disruption of transportation corridors. Although several species have responded to climatic changes throughout their evolutionary history, there is concern as to how different ecosystems and populations will respond to this rapid rate of change. The great power race is a clean energy competition that hopes to take ideas out of the lab and into practice. Being key countries on the global front and comprising a large population of youngsters, participation in the event is mostly centered on the US, China and India. Let the universities generate a momentum and help a lot in controlling the human intrusion in causing climate change and global warming.

Humanity's mission on the globe is to steward the use of earth's resources in a manner that protects natural ecosystems, supports local industry, improves public health and educates *today, tomorrow and forever*, for aiming to be at the forefront of sustainability by way of adopting integrated approaches to sustainable development. By adopting measures of sustainable development, we have to protect the Planet Earth which took several billions of years to come to the present form where we are standing now.

Acknowledging change is the key to understanding the harmony of never ending change.

Acknowledging change within the Infinite potential of which every creature is a manifestation, unique, yet bound to all things in disintegration, gives one a perspective regarding life.

Possessing perspective, one becomes impartial, openhearted, tolerant, compassionate and indifferent to judging others.

These are foundations of harmony.

Going back to one's destiny is eternal law,

To know eternal law is enlightenment.

Tao

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Sustainable Development Goals-4: Through Teacher Education Programmes in India

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Teacher Education Programmes of any country play an important role for achieving the global education development agenda reflected in the Sustainable Development Goal 4 (SDG4). There are total 17 goals which are designed to achieve a better and more sustainable future for all by 2030. India is also signatory to the Agenda for Sustainable Development Goals adopted in 2015. Though all the 17 goals are inter connected but goal 4 is most important as it help in the achievement of other goals. Goal 4 states to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' by 2030. We all know that the quality of education depends on the quality of teachers. Teachers truly shape the future of our children - and, therefore, the future of our nation. The quality of teachers in turn depend on the quality of teacher education. Though teacher education programmes address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice, however by integrating its concerns in different teacher education programmes more emphatically will help the country in achieving the SDG-4 by 2030. At present, our country is having teacher education programmes from pre-primary to secondary stages in more than 16000 institutions including universities and colleges.

About Sustainable Development Goals (SDGs)

The scope of Millennium Development Goals (MDGs) was enlarged and the United Nations Conference on Sustainable Development held in Rio de Janeiro in 2012 set 17 universal goals namely no poverty, zero hunger; good health and well-being; quality education; gender equality; clean water and sanitation; affordable and clean energy; decent work and economic growth; industry innovation and infrastructure; reduced inequalities; sustainable cities and communities; responsible consumption and production; climate action; life below water; life and land; peace, justice and strong institutions and partnership for the goals. These Goals were adopted as a universal call to protect the planet and ensure that

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all people of the planet enjoy peace and prosperity by 2030. As these 17 SDGs are interrelated, action in one area will affect outcomes in others. As per the pledge of SDGs "Leave No One Behind". This means all countries have to progress and help the poorest countries to come at the forefront. That is why the purpose of achieving SDGs are to bring the world to several life-changing 'zeros', including zero poverty, zero hunger and no discrimination against women and girls. For this, all countries are needed to use creativity, know how, technology and financial resources in an efficient manner including everyone to reach these ambitious targets.

Various concerted efforts have been made towards building an inclusive resilient future for people of the planet. Some countries have made more progress than others. This is evident from different countries ranking in Sustainable Development report-2020. Sweden was number one with 84.72 scores out of 100, Denmark was second with 84.56 and Finland was third with 83.77 scores. India's position was 117 with 61.92 score among 157 countries. NITI Aayoghas also released the Sustainable Development Goals (SDGs) Index for the year 2019-20 showing the ranking status of different states of our country. As per NITI Aayog SDG index, Kerala was number one followed by Andhra Pradesh, Tamil Nadu and Telangana. Bihar was the lowest in the achieving the SDG goals.

Teacher Education Programmes in India at a Glance

Teacher education is meant for preparing professional teachers through pre service and in-service education programmes.

Pre-Service Teacher Education

We have seventeen thousand teacher education including university departments, District Institutions & Education Training (DIETs), Colleges of Teachers Education (CTEs) and Institutions of Advanced Studies in Education (IASEs). For improving the quality of teachers, no doubt, various efforts were made from time to time by Government of India particularly after independence. The Government of India set up National Council of Teacher Education (NCTE) as statutory body in 1993 by the Act of Parliament for maintaining

norms and standards of teacher education programmes. NCTE revised and notified regulations, norms and standards of fifteen teacher education programmes in 2014. These were as follows:

Diploma in Preschool Education (DPSE.), Diploma in Elementary Education (D.El.Ed.), Diploma in Physical Education (D.P.Ed.), Diploma in Elementary Education Through ODL, Diploma in Arts Education (Visual Arts), Diploma in Arts Education (Performing Arts), Bachelor of Education (B.Ed.), Bachelor of Physical Education (B.P.Ed.), Bachelor of Education through ODL, Bachelor of Education programme 3 year (Part Time), Master of Education (M.Ed.), Master of Physical Education (M.P.Ed.), Bachelor of Elementary Education (B.El.Ed.), B.Ed.M.Ed (Integrated 3-Years Course) and B.A.B.Ed/B.Sc.B.Ed (4-Years Integrated). NCTE again revised and notified four year integrated programme at primary and secondary stages in arts and science stream on 29th March, 2019. In pre-service teacher education programme, there are four important components namely, theory courses, pedagogic studies, school internship and field engagement programmes. Strengthening all the components of teacher education, will support in the realizing the Sustainable Development Goal 4.

In-service Education

Institutions like CRC/BRC, DIETs, CTEs, IASEs, SCERT and NCERT, NIEPA and universities are organizing professional development courses for teachers and teacher educators for updating their knowledge and skills on different emerging areas. The Government of India launched Pandit Madan Mohan Malviya National Mission on teachers and teaching during 2014-15 which addressed comprehensively all issues related to teachers, teaching, teacher preparation and professional development and different cultural sensibilities. These institutions and programmes are also working towards achieving various targets of SDG 4.

Role of Teacher Education Programmes for SDG4-Quality Education

Teachers role is important for achieving the global education development agenda reflected in the Goal 4 of the 2030 for Sustainable Development. Therefore, there is an urgent need to prepare quality teachers for various stages of school education through teacher education programmes. In preparing quality teachers, the student teachers are provided different

type of exposure and experiences in teacher education programmes. Necessary knowledge, skills, attitudes and values are provided to them for improving quality of education. Such teachers will not only provide quality education but also enable schools and society to deal with all issues and challenges related to quality education. Besides this, they will also help in meeting the targets of other remaining sixteen goals of sustainable development. The role of teacher education for achieving the quality of education related to all seven targets have been mentioned below.

Target 4.1. Universal Primary and Secondary Education

Target 4.1 states “By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.” For achieving this target, our country has made several efforts through teacher education programmes. We have teacher education programmes at primary and secondary levels. In these programmes all issues related to primary and secondary education are included. For example how to provide inclusive, equitable and quality primary and secondary education? Different flagship schemes of Government of India such as *Samagra Shiksha Abhiyanare* part of teacher education programmes. Other important programmes and policies namely Bharat National Programme National Programme for Girls at Elementary level (NPEGEL), *Kasturba Gandhi Balika Vidyalaya (KGBV) Mahila Samakhya Beti Padhao*, Mid day meal scheme etc., are also included in teacher education courses. The issues related to functioning of primary and secondary schools including residential are part of these programmes so that teachers can meet all type of emerging issues of future and improve the performance and learning outcome of boys and girls students at primary and secondary levels.

Target 4.2 Equal Access to Quality Pre-primary Education

The second target of goal 4 is that by ‘2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education’.

Our country has programme of teacher education namely Diploma in Pre-school Education (DPSE.) for preparing teachers at pre-primary stage. The course

curriculum include all the Govt. of India initiatives like Integrated Childhood Development Services NIPUN Bharat, National Health Mission, National Children Fund, Mid-day meal scheme ,National crèche scheme etc. which are helping for school readiness programme. The student teachers are provided all latest methodology and pedagogy in this course to improve the quality of pre-primary stage. Due to these schemes the reading and numeracy skills at primary level increased. Presently, quality ECCE is not available to crores of young children, particularly children from socio-economically disadvantaged backgrounds. Therefore Teachers training programme should be strengthened and better budgetary allocations need to be made to strengthen the public teachers training institutes.

National Education Policy (NEP)-2020 recommended three years of pre-primary before class one at the age of 3 years. As per NEP 2020 'For universal access to ECCE, AnganwadiCentres will be strengthened with high-quality infrastructure, play equipment, and well-trained Anganwadi workers/teachers'. These centres have to create enriched learning environment and organize activity based tours. In order to have smooth transition from Anganwadi Centres to primary schools, children from these centres need to visit local primary schools at regular intervals. Anganwari workers be trained about the Framework to be prepared by NCERT. To have quality pre-school, there is need to have train worker/ teachers . The NEP 20 has suggested that those with 10+2 & above be given 6-month certificate programme in ECCE and who are having lower qualification be given one year Diploma Programme covering early literacy, numeracy of ECCE. These training will be provided through digital/distance mode and mentored by Cluster Resources Center. The provision of at least one year of free and compulsory quality pre-primary education is encouraged and delivered by well-trained educators as well as that of early childhood development and care. Diploma in Pre-school Education (DPSE.) should also cater these emerging needs.

Target 4.3 Equal Success to Affordable Technical, Vocational and Higher Education

To meet the target-3, various short term and long term professional courses namely Faculty Induction Programmes, Research methodology course, Orientation and refresher courses are organized for the professional development of faculty working in different universities and vocational institutions.

Programmes and policies of the Government of India like *Rashtriya Uchchatar Shiksha Abhiyan* and Pandit Madan Mohan Malviya National Mission on Teacher and Teaching tried to integrate latest pedagogy for teaching and use of information and technology. There is equal opportunity and access to all women and men to participate in these courses.

At present our country is having about 15697 Industrial Training Institutes, 2128 Polytechnic institutions, 4000 Engineering Colleges and 23 IITs. We have also more than 1000 universities. About fifty thousands colleges are also providing tertiary education. All these institutions are engaged in professional development. Lifelong learning opportunities for youth and adults are provided in these institutions.

As stated in NEP-2020, In India at present we have only 5% (12th five year plan) formal Vocational Education whereas in other countries, for example USA (52%), Germany (75%), South Korea (96%). the percentage of these institutions is quite large. NEP-2020 recommended to continue National Skill Qualification Framework and mentioned that by 2025, fifty percent learners will increase in these institutions. Four year multidisciplinary Bachelor programme will also focus on vocational skills. However there is need to have more job related courses, institutions and universities for meeting realizing the target of SDG4

Target 4.4 Increase the Number of People with Relevant Skills for Financial Success and Relevant Skills for Decent Work

In our country, as stated above, all the technical and vocational institutions are providing different training modalities, work-specific skills such as problem solving, critical thinking, creativity, teamwork, communication skills and conflict resolution through theory and practical activities to the student and faculty. They are also provided relevant technical and vocational skills for employment to them. All the programmes of Ministry of Skill Development and Entrepreneurship of Government of India are also included in course curriculum of these courses. Many Skill University like Shri Vishwakarma Skill University (SVSU), Gurgaon, Rajasthan ILD Skills University (RISU), Bhartiya Skill Development University (BSDU) Jaipur are running many courses on skill for youth and students. These

Skills Universities are offering certificate, diploma and degree programmes directly related to the job roles in demand.

NEP-2020 states that vocational course/craft be initiated from 6th to -8th grade with internship. Practice based curriculum for grade 6-8 will be designed by NCERT. All students will have 10 day bag less period during internship with local experts. At the same time vocational and academic programmes need to be integrated and upward linking with these courses be established. Therefore, there is a need to come out with detailed guidelines, materials and more skill based capacity building programmes.

Target 4.5 Eliminate all Discrimination in Education

In our country, different programmes on teacher education and vocational courses are being run by many institutions and universities. All the boys and girls have equal access and opportunity to enjoy educational facilities. There is no gender disparities in education and ensure equal access to all levels of education and vocational training for the persons with disabilities and vulnerable children. In all the teacher education courses prescribed by NCTE, gender and inclusive education have been integrated. In these courses, biases and stereotypes material have been removed. This effort will help the would be teacher in advance to sensitize themselves and there by the student community to develop positive attitudes to deal with these issues. NEP-2020 also reaffirms that bridging the social category gaps in access, participation, and learning outcomes in school education will continue to be one of the major goals of all education sector development programs.

Target 4.6 Universal Literacy and Numeracy, Universal Youth Literacy

Our country is having largest youth population in the world consisting of 600 million under the age of 25. About 28 percent of the population is less than 14 years of age. 65% Youth below the age of 35 years. 50 % youth below the age of 25 years. Adolescents in the age group 10-19 is 25 crores. 19% Indian population in the age group 15-24 years. As we all studied that demographic change could be a powerful engine of economic growth and development. It is possible only when the country is able to provide quality education and skills to its youth. Though we have many teacher education

institutions and universities which are providing literacy and numeracy to youth through different types of activities and course curriculum but it is not enough. This is possible when more trained and skillful teachers educator and teachers are prepared by various teacher education programmes to achieve this objective

Target 4.7 Education for Sustainable Development and Global Citizenship

In teacher education programmes, necessary knowledge and skills are provided to student teachers to promote sustainable development, sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity through course curriculum. Such knowledge, skills, values and attitudes among student teachers will help them to lead productive lives, make informed decisions and assume active roles locally and globally in facing and resolving global challenges.

From the above , it appears that many efforts have made to achieve all the seven targets of SDG-4 by 2030. But still there is an urgent need to have more focused efforts to attract students towards teacher education programmes so that quality teachers can be prepared both for schools and higher education There is need to relook the existing teacher education programmes run in different universities and institutions in the light of suggestions made in NEP-2020 for improving the quality of education.

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Managing Sustainable Change in Higher Education Institutions: Towards *Phronetic* Vision Development

Shiv K Tripathi *

The transition from Millennium Development Goals (UN, 2015 a) to Sustainable Development Goals (UN, 2015 b) created a world-wide change wave in the development priorities. Post introduction of Sustainable Development Goals (SDGs), there have been numerous initiatives at different levels ranging from new development framework by international development agencies to country level policy reforms and changes; all with the broader objective of setting the development direction and pace to achieve 17 SDGs (UN, 2015 b, *ibid.*). The review of most of the country level policy changes across countries and continents show the prioritization of SDGs through policy reforms.

In Indian context too, most of the post 2015 policy reform initiatives across different sectors have focused on embedding the SDG Goals and specific targets through proposed sector specific changes. For example, two important national policies in health and education sector in India i.e. National Health Policy 2017 (MHFW, 2017) and National Education Policy (NEP) 2020 (MHRD, 2020) respectively, both show the direction of the policy reforms are guided largely by the broader objective of accomplishing the SDGs. In order to effectively realize the policy level changes on ground, the changes in regulations, systems, structures, processes and culture are the essential requirements. Such a mega level change management requires strong multi-stakeholder collaboration and collective action at all levels.

In context of Indian Higher Education Institutions (HEIs), the NEP-2020 guided new implementation frameworks have already been started to be introduced by the apex regulatory body University Grants Commission (UGC). Other sector or purpose specific apex coordinating agencies like All India Council for Technical Education (AICTE), National Council for Technical Education (NCTE) and National Assessment and Accreditation Council (NAAC) are also in process of rolling-out new frameworks, guidelines and supporting policies to ensure 360-degree changes in the HEIs in the larger spirit of NEP-2020.

Most of the proposed, suggested or desired policy changes will require, unconditional and significant, changes at the institutional level, particularly in terms of the way the HEIs plan and deliver the higher education and related services. While the initial coordination at apex level looks quite promising in terms of the seriousness to drive the changes, the implementation at HEI level is essential to translate the attempted 'mega changes' to realized 'mega impact'. At level of HEI, the issue can be considered as a perfect case of 'strategic change' triggered by the national education policy reforms (Figure 1.0).

All the policy changes need to be realized through (and at) HEIs, which is the main actor for driving the change. HEIs are autonomous strategic actors, which largely function following 'open-system' organization approach (Scott and Davis, 2007; Scott, 2013). This implies that most of the organizational level change management must be managed by (and at) HEIs. The effective management of organizational change require planning for the 'desired strategic change.'

Developing the 'new' vision for the change is one of the fundamental requirements for effective organizational change management. The article explores further the central issue of 'vision development' in context of desired changes, triggered by the NEP-2022.

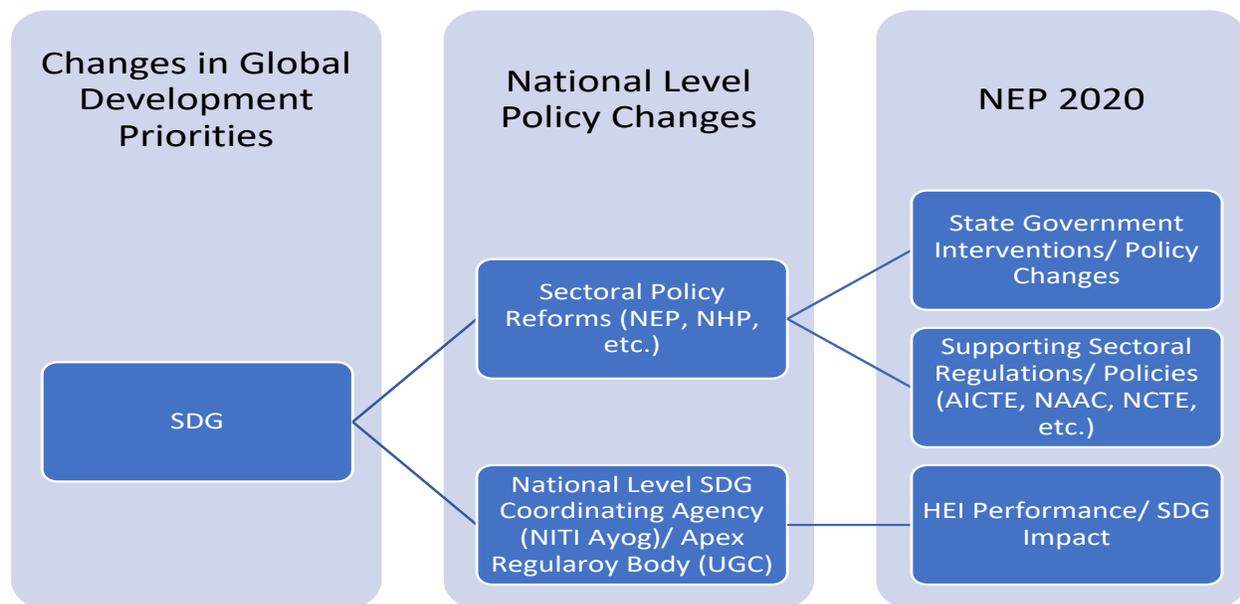
Objectives and Emerging Questions

The focus of the article is to explore the systematic vision development process framework in HEIs, particularly in reference to managing the 'strategic change'. More specifically, the article aims to:

- a. Identify the essential requirements of developing an effective vision for the desired changes;
- b. Trace the latest conceptual and theoretical innovations in context of organizational vision development; and
- c. Propose a conceptual solution for HEI vision development process to management strategic change.

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Figure 1.0: The Web of Policy Reforms for SDGs



While exploring the above objectives, we attempt to answer the following questions:

- What factors help in developing the effective institutional vision for managing the strategic changes?
- What are some important theoretical insights for developing institutional vision from change management perspective?
- What are the latest theoretical and conceptual suggestions which can be considered for designing the change management vision at institutional level? and
- What steps should be followed to arrive at an effective vision that will help in driving the change at institutional level?

Institutional Vision: Purpose and Reality

Practice of writing the formal vision statement has evolved from corporate organizations and now it is widely adopted in different types of organizations including HEIs. Although there is no general agreement on the definition of vision statement, the vision in a broader sense is the idealistic future what an organization might be and might achieve with well-defined roots and ground realities (Bratanu and Balanescu, 2008).

Vision Statement, despite its' great importance in shaping the institutional strategic plans, sometimes, may not be developed and pursued in the way it ought

to be. For example, it has been observed that often the considerations in plan development is rooted in the immediate short-term or mid-term results instead of integrating and aligning it with the institutional vision. The question here is how to take the vision statement out of its' limited decorative role on websites, display boards and promotional brochures to make it work for the institution. This triggers thinking about another important issue of the 'vision development process'. It is implied that if the vision statement is developed following systematic approach, its' impact and contribution can be much more in realizing it on ground.

Study shows (Amann and Tripathi, 2020) that stakeholders often ignore the vision statement because they fail to own to or relate to it. Again, this raises a question about the process of how the vision is written or developed. Amann and Tripathi (2020, *ibid.*) note four more common practices in institutional vision development:

- Evolved vision i.e. vision as an outcome of an ongoing evolutionary process over a period of time which is inclusive and participative.
- Adopted vision i.e. finding the best short-cut fit while benchmarking with some of other institutions and simply modifying the phrases.
- Imposed Vision i.e. based on pressing external requirements, competitive, regulatory or otherwise, institutions quickly add few catchy key words in the vision. For example, sustainability-focused,

technology-driven, industry-ready, world-class, excellence-driven, etc. are some words which can be often found in the statements, without any linkages to institutional plans.

- d. 3rd party vision i.e. some hired external consultants after analysis (or without due analysis) craft beautiful phrases for the institution.

Before looking into the issues of right process of defining and developing vision, we must understand the essential characteristics of a strong, realistic and sound vision statement. Clayton (1997) suggested six main attributes for developing an effective vision statement:

- i. Powerful expression linking current and future in clear terms;
- ii. Reflection of overall purpose and core values of the organization;
- iii. Self-determining instead of making it relative to other forces of the environment;
- iv. Concrete in terms of clarity towards the desired future;
- v. Multi-faced, reflecting the different aspects including personal, organizational and altruistic facets; and
- vi. Have strength to emotionally connect the different stakeholders.

Based on the ground realities of the institution, the vision must reflect the clear future shape in terms of its' broader aspiration. A university focusing on research-driven knowledge dissemination would have different vision as compared to a highly specialized vocational university. In view of the NEP 2020 proposing the different categories of institutions like Teaching University, Research University and Autonomous HEIs, it is important that the choice of vision should be realistic, evidence-based and in line with what institution is capable of achieving.

Important Considerations in Institutional Vision Development

The vision statement reflects the overall direction, purpose and inspiration of an institution. Two important in developing an effective vision statement can be summarised as under:

- a. How to set right institutional purpose? Vision statement communicates and reinforces the institutional ambition. As the vision statement also gives reflects an overall positioning of the institution one of the important ethical

consideration is balancing the purpose in terms of 'how we want others to perceive' with 'how internally it inspires and informs the internal stakeholders to perform'. For example, if a great sounding vision statement, which is not close to reality, is developed to attract students and employers, it may create more stress for internal stakeholders, it may be just ending up as effective communication and branding tool rather contributing to its' true purpose.

- b. What process should be followed for vision development? When the consideration is to balance the all stakeholder views instead of only presenting the inside-out view of from the lens of some powerful and influential internal stakeholders, the role of process becomes quite important. The more participative and process is, more inclusive and realistic the vision statement is likely to be.

In order to ensure transparent and inclusive vision statement both the purpose and process issues need careful planning. In order to ensure a systematic vision development process, a checklist (**Exhibit 1.0**), which is based on Amann and Tripathi (2020, op. cit.) is proposed.

Exhibit 1.0: Check-List for Effective HEI Vision Development

- i. Are we using tools to capture realistic view of institutional capabilities?
- ii. Have we included analytical methods to identify major contextual forces?
- iii. Do we have unbiased method for stakeholder inclusion?
- iv. Have we selected participants in the development process objectively and transparently?
- v. Have we transparently recorded the opinion of others in developing the statements?
- vi. Are we documenting the process for development of the statement?
- vii. Have we transparently debated the content of the statement before agreeing on it?
- viii. Have we shared the draft for review with different sections of stakeholders?
- ix. Have we checked if the statement to ensure it is not over-promising?
- x. Do we have guideline regarding the responsible communication of Vision?

The purpose of the proposed checklist is to develop vision statement, which is effective and purposeful in driving the desired institutional change. However, the experience shows that despite theoretically following some (or most) of the suggested check-points, due to one or other reasons, the conventional approaches and methodologies, sometimes, are constrained by some limitations in ensuring transparency and objectivity. Therefore, there appears to be need for process innovation by applying some of the latest conceptual developments in knowledge field of 'practical wisdom' or Phronesis.

Phronetic Planning: Foundation to Effective Vision Development

Phronesis, as explained by Aristotle, is an intellectual virtue, which helps one to logically decide and act on the things good or bad for human. Flyvbjerg (2004) explains that Phronesis concerns values and interests and goes beyond analytical scientific knowledge (episteme) and technical know-how (techne). It is the art of judgment, which is also referred as practical wisdom or prudence. It is important to note that the vision development involves the planning process, which is based on decision-making about what is good or bad in the given situation over a period of time. When we say deciding the 'desired future state of institution', it is not simply what we want to accomplish rather it is a collective decision and judgment about 'what we ought to achieve as in institution' for producing the common-good. Therefore, this judgment requires something more than the pure scientific analysis in terms of reasoning, interpretation and understanding. This makes a perfect case for Phronetic vision development.

Bent Flyvbjerg, in his pioneering work in applying phronesis to study social science problems (Flyvbjerg, 2001) explains that the current research methodology used in social sciences is based on assumptions and principles of knowledge creation based on episteme and thus, missing the desired reasoning which is required to produce the wisdom-based solutions. Realizing the gap, Flyvbjerg (2004) proposed Phronetic Planning Research, which provides insights on how Phronesis can be applied to planning, decision-making and management. Building on the Flyvbjerg (2001, 2004), Amann et al. (2017) proposed framework for Phronetic Management

Research. Extending the work in higher education management context, Amann and Tripathi (2020) proposed the application of Phronesis in developing ethical statement of organizational purpose and direction including vision, mission and core values.

Flyvbjerg (2004) suggests three major changes in planning research: first, replacing the rational planning paradigm to the knowledge/action theory of planning to the communicative paradigm; second, the problem-solving should aim at needs of the people who are going to be affected with the planning outcome; and third, the transparency should be ensured in communicating the results with the stakeholders. Flyvbjerg (ibid.) explains that those following Phronetic approach in research-based solution building, are highly aware of their contextual reality by constantly looking into the four fundamental questions:

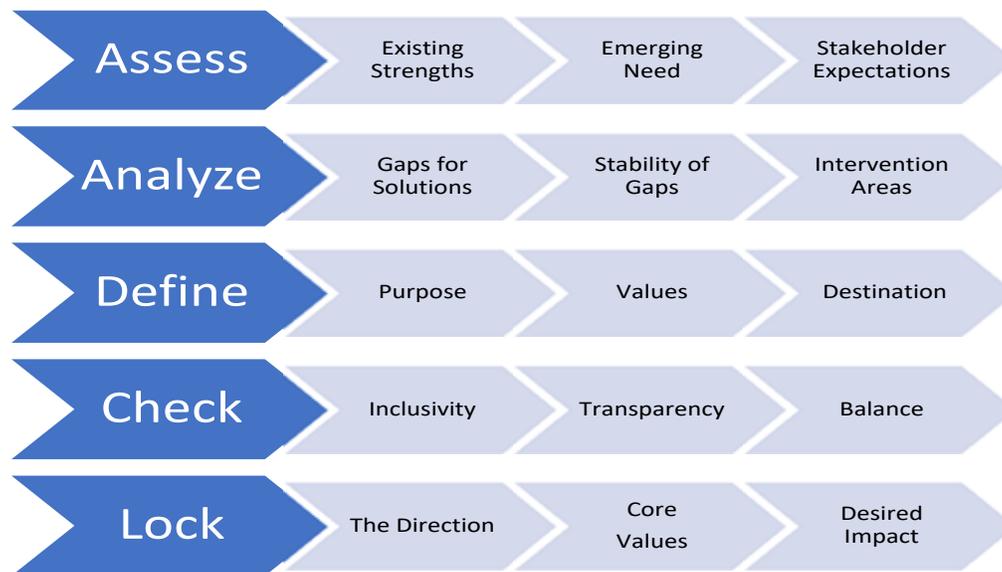
- i. Where are we going?
- ii. Who gains and who loses, and by which mechanisms of power?
- iii. Is this development desirable?
- iv. What, if anything, should we do about it?

The above questions serve as basic tenets of the Phronetic vision development. For HEIs, which are largely impacting the societies and communities in a number of ways, the effective and accountable vision development become essential not only for institutional performance but also for producing overall sustainable impact over a period of time. Based on the previous research in *Phronesis* application to planning and management, a new approach to institutional vision development can be adapted.

Phronetic Vision Development (PVD) Framework in HEI Context

In India, we have witnessed sharp increase in number of HEIs but at the same time, we have also witnessed increasing trend of 'vacant seats' in a number of institutions even institutional closure in certain cases. In terms of infrastructure, our institutions have made great progress, however, often we ignore that 'capacity utilization' is also an important parameter of sustainability else even the best-in-class infrastructure may turn into 'non-performing asset'. Careful and evidence-based planning appears to be a key for transforming the HEIs under newly introduced policy in the country.

Figure 2.0: Phronetic Vision Development (PVD) Process Framework for HEIs



Adapting a transparent and wisdom-based method for vision statement development can be helpful for HEIs in India in many ways: first, it can reduce the uncertainties introduced in the system due to imbalance in incorporating stakeholder voice; second, it can make institutions more inclusive and thus, helping in winning the trust from wider sections of stakeholders; third, it can provide a systematic and evidence-based roadmap of institutional growth; fourth, it can significantly help in producing the benefits for multiple stakeholders at a time and thus, contributing to sustainable institutional growth eco-system; and fifth, it can help in enhancing the sustainability impact of the institutions through enhanced institutional sustainability with-in.

Phronetic Vision Development (PVD) involves introducing, developing and maintaining a systematic process for inclusive and participative vision setting. The PVD can be integrated and aligned to the larger strategic planning system of the institution to make it a continuous interactive process. Although, by its basic nature, the vision does not change frequently, however, it makes sense to align it to fast-changing factors in the institutional environment and accordingly fine-tune it.

The proposed PVD process (Figure 2.0) is generic in nature and institutions can adapt it flexibly while developing a vision statement. The process starts with mapping of the stakeholder expectations,

existing institutional strengths as well as the emerging need areas which can be addressed based on the institutional existing strength.

At the next level, the analysis of gaps as well as how sustainable the gaps are i.e. short-term and long-term to be done. The final intervention areas need to be decided in terms of institutional strengths as well as the gap sustainability. At the next level, the alternative combinations of the purpose, value and institutional destination (where we want to be) defined.

Inclusivity, transparency and balance in presentation/ communication (outside-in and inside-out) must be checked and vetted through a participative process. The checklist (Exhibit 1.0) can be used at this stage to ensure that the entire process is capturing the wisdom of all who are important both within and outside the institution. Based on the consultative process, wherever possible using the technology with transparency, the final statement of vision can be agreed and locked.

Applying the following (Flyvbjerg, 2004, p. 495) nine steps, particularly at the time of analyzing, defining and checking, can make it more phronetic and wisdom-focused:

- i. Focus on values
- ii. Place power at the core of analysis
- iii. Get close to reality
- iv. Emphasize “little things”

- v. Look at practice before discourse
- vi. Study cases and contexts
- vii. Ask “How?”, do narrative
- viii. Move beyond agency and structure
- ix. Do dialog with a polyphony of voices

The PVD framework is flexible and attempts to provide a guideline in shaping the transparent and purposeful vision statement for HEIs. The *phronetic* vision can be helpful not only in preparing the realistic growth-map for the institutions but will also be an essential part of institutions identity and uniqueness. The process can be used for scientific vision development but at the same time with the practical wisdom.

Conclusions

The implementation of SDGs has triggered sectoral level policy reforms in India. NEP 2020, which offers a broader policy framework for transforming education, requires implementation of desired changes at institutional level. In context of HEIs, the changes introduced by NEP 2020 needs careful and planned ‘strategic change management.’ The vision setting is foundation to planned change management at institutional level. Review of the existing vision development practices indicate at many significant gaps and thus, limiting the potential of vision to contribute in overall planning and management of the institution. Based on the work in *Phronetic Planning Research*, article proposes a five-stage framework for Phronetic Vision Development (PVD), which can be helpful in effective and inclusive change management at institutional level. The framework is generic in nature and can be adapted/ aligned as per the institutional context.

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Quality in Higher Education

Hema Raghavan*

When we talk about higher education, the buzzword associated with it is 'quality'. It is not used just today, but it has been the prefix for education in general and higher education in particular all through many millennia. I have used the term 'buzzword' with great care, because by definition, buzzword is an important-sounding word, meant chiefly to sound impressive but meaning little. Hence we have any number of seminars and webinars on quality in Higher education where one listens to high falutin language expressed in hyped tone and elaborated by artificial or empty means. Quality is given the pride of place in every college and University prospectus as its Vision and Mission though no mention is ever made as to what quality is and how to calibrate it.

If quality is the *raison d'être* for education, it signifies three cardinal aspects in respect of higher education-(1) This amounts to an open acknowledgement something is wrong with our state of education and needs to be addressed (2) as a corollary, it begs the question if so much discussions are taking place on an almost daily basis about quality in Higher education, why has education still not reached its excellence? And (3) a question mark on the definition of quality. Once there is clarity on all these issues, it will help us to formulate learning-teaching strategies to raise the quality in our Universities and colleges.

The first is a rhetorical question which by definition is meant to make a point rather than to get an answer. The point is we can no longer hum and haw about decline in quality in higher education. It is to be remembered, admitting it is not a sign of weakness, but a sign of maturity. One must be bold enough to admit that there is a decline in our educational standards, smart enough to profit from them, and strong enough to correct them. This courageous admission in itself is the first and the most important step to galvanize teachers, educationists and policy makers to work on corrective measures to restore quality so that it measures up to the requirements of the 21st Century.

The corollary to be inferred from acceptance of the downward slide is to find evidential support

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to make such a negative assessment. A majority of students with a graduate degree have limited understanding and knowledge of the world around and their role as citizens, do not possess adequate linguistic proficiency to articulate and communicate, have poor if not negligible competence and suitability for jobs and no awareness of their social and familial responsibility. On a scale of 1-10, their scores may not go past 4. Hence there is an urgent need for remedial measures that can raise their score at least twice to 8. In the present world dominated by geopolitics, where among many other factors, the climate change, environmental destruction, the sharp polarization between developed countries and the rest, the ascent of autocracy in many parts of the world along with the corresponding descent of liberal democracy and the recent economic and psychological havoc wreaked by COVID-19 have resulted in a unprecedented global crisis. The survival of humanity is at grave risk. To avert this higher education institutions have to educate the youth and open their minds to be aware of and understand the grave possibility of total extinction of their own homo-sapiens race and all other species off the face of planet Earth. The existence both of future humans and non-humans hinges upon training our youth to cultivate humanity and become responsible citizens of the world. The acknowledgement of quality decline in higher education serves as a wake-up call to take action to transform a graduate into a responsible global citizen.

This leads us to the third question -what is quality in respect of education. The perception about quality varies from sector to sector-from manufacturing to management, corporate governance to bureaucratic governance, business to education, depending on the outcome or the product and customers/users of the product. In the case of universities and colleges the product is education imparted by the institutions and the customers are the students, parents, society and the future employers of the students. It is an accepted fact that quality of education aims at developing the youth through the combined effect of knowledge, application of knowledge to work and life, and wisdom to discern what serves the larger interest of the largest numbers. Overarching knowledge, application and wisdom is development of character, inhering in honesty, integrity, altruism, and individual potential to work alone and

also to work with others as a team player. So quality in education is defined as the wholesome development of an individual on all the essential parameters- the mental, moral, ethical and spiritual dimensions.

How do we assess quality? Presently for assessing quality, we have UGC established set ups-NAAC and NIRF where Quality is quantitatively determined by marshalling data on (1)the number of faculty-with Ph.D, without Ph.D, (2) faculty with an impressive set of degrees and years of experience,(3) pass percentage and university rank holders, (4) placement statistics, (5) number of books and journals in the library,(6) state-of -art laboratories and class rooms, (6) campus facilities (including ramps, rails, special toilets for the physically challenged) and (7) other matters related to infrastructure, financial resources through alumni funding, endowments, etc., The Institution is required to send a self-assessment report and documents prepared by the college faculty of different departments. This way of determining does not take into account the competencies students develop through the courses offered. It is an exercise undertaken once in five years.

NAAC was established in 1994 by the UGC for evaluating the performance of the Universities and Colleges in the Country. The latest entrant into assessment is NIFR, established in 2015 to rank institutions across the country. This makes it 28 years for NAAC and 7 years for NIFR and the fact we are debating about quality after all these years suggests that the proof of quality does not lie only on the peripheral but more importantly on the substantial assessment of students' competencies.

How to assess competencies? To assess every student in terms of his or her know-how or attainment of a minimal level of proficiency is an impossible task. But what is possible and what is achievable is to find out the purpose behind such an assessment. Is it for Institutional ranking or for improving the quality of teaching-learning process? For the former, peripheral data is just adequate. For the second, an assessment of students' quality of learning is essential. This quality experience is something shared both by the teacher and the learner. Quality experience that will stand in good stead to help the students meet the challenges of life-(that they were not able to do before)- is primarily related to joy of learning.

If the aim of Higher Educational Institutions is quality, the policy makers can adopt the following practices to raise quality experience to be jointly shared by the teacher and the learner:

1. The best incentive to learning is to make it an enjoyable experience and teachers have to strategize towards making studies a pleasurable experience for the students. The joy of teachers and students working together makes the teaching-learning process a memorable experience. Having been a teacher for four decades, from personal experience, I know that students enjoy studies if they are encouraged to adopt self learning. The current practice of 15-18 lectures per week for teachers neither leaves them with motivation or time for self study. This schedule has to be changed and replaced by just 2 lectures each of 90 minutes duration per week per teacher. The lectures should be in the form of capsule summaries, small and compact, short and concise; brief and summarized and carry the essence of the topics under discussion. Teachers should give a comprehensive reading list, give assignments for term papers and schedule deadlines for submission. The assignments should test the critical thinking rather than text book centred. Periods for Tutorials and seminars must be scheduled where the number of students must be limited to between six and eight per class. For a class of 40, there should be at least five groups to meet every week for every paper. These classes are to be discussion classes and for the analysis of the students' term papers. These discussion classes will add value and enrichment to the lectures. This format will give free time to students to work on their own, to absorb what they read, and articulate their ideas with improved writing skills. The self belief and self-esteem that accrue as the student completes his/her assignment on the strength of his self learning is at the core of pleasurable experience in learning. Unless the young minds are challenged, the teaching-learning process will remain pedestrian and insipid. Give the students responsibility for their own development and we can see the difference.
2. Yet another important requirement for quality improvement is for the teacher to assess the quality of his /her teaching. Student evaluation of the faculty is a reform overdue. This is an evaluation for the teacher's self improvement and it is not meant for the higher authority to take punitive action. The evaluation will benefit the teacher if he takes cognizance of the students assessment of his teaching potential. A sample evaluation form can be as given below and I repeat it is

a form exchanged between the teacher and the student.

This will be of help to the teacher to modify his/her lecture and is meant only for self improvement.

No Signature is Required

3. The ground covered in lectures and the readings handed out to the students must have relevance to their lives and work. The faculty has to meet once a week to assess the submitted assignments and discuss ways of improving critical thinking in the students if there is a lack of it. What this implies is the evaluation of students' assignments and progress is not done by a single teacher; it is a collective endeavour to assess students' progress which, in turn promotes team work. What is missing and is the absence of responsibility—individual as well as collective in assessing student's progress. The faculty should review and consider steps to encourage greater student effort. To improve quality learning, institutions

should give greater attention to tutorials and seminars as these provide the teachers sufficient time for personal and individual attention to the students. Better feedback on student papers and exams will be even more important in order to give undergraduates a more accurate sense of how much progress they've made and what more they need to accomplish before they graduate. I prefer the word 'teacher' to 'lecturer' because 'a lecturer' by definition lectures-gives an organized talk and makes presentations. On the other hand the first requisite qualification for a teacher is to be a good listener. To teach, one must first listen-listen to the needs of the student, listen and notice his/her way of learning and choose teaching methods and pace that would make it easy for the student to comprehend. Teaching-learning is a two-way process. Teachers play a crucial role in shaping the lives of young people and act as role models, mentors, advisers and caregivers.

Teacher Evaluation Form:		
Paper Title:		
Name of the Faculty Member:		
Instruction: Kindly circle the evaluation which indicates your impression of the session with your teacher:		
1. <i>My understanding of the topic (subject) has</i>	Increased substantially	Increased Moderately
		No Change
2. <i>Teachers' Method of Presentation was</i>	Very Effective	Moderately Effective
		Not Effective
3. <i>The teacher's understanding of the needs of the student</i>	Very Accurate	Moderately Accurate
		Not at all Accurate
4. <i>The Reading Material, Reading List and Hand-outs</i>	Outstanding	Average
		Poor
5. <i>Teacher's Punctuality</i>	Very Punctual	Average
		Never Punctual
6. <i>Amount of time devoted to a topic should be</i>	Increased	Remain the Same
		Decreased
7. <i>To what extent the lectures are useful to you in your academic work and personal enrichment</i>	Very Useful	Useful
		Not at all Useful
8. <i>Accessibility of the Teacher outside of class hours</i>	Always accessible	Only at fixed time
		Never accessible

4. There must be greater emphasis on inter-disciplinary courses. Here caution is to be exercised so that these courses are not opportunities merely to earn credits. Faculties should mentor students and guide them to make the right choice of courses that would benefit them. The only mandatory course should be limited to the choice of language course apart from English that can help them if they wish to do higher studies and research in foreign universities. It does not do justice to learning by mixing physics with anthropology or Fine Arts with Political Philosophy. Students should choose courses which open up their minds and recognize the link between the courses that could enrich their knowledge of the chosen main discipline. The present system of choosing courses at random to garner extra credits does not meet the objective of enhancing students' knowledge.
5. General lectures open to all should be organized everyday at a specified hour and delivered by specialists and experts in different disciplines. These can be on History of Painting, History of Art, Environmental Science related to society, Literary classics etc. The objective is to give students the understanding about the seamless Web of Knowledge and make them relate academic learning to life. I have had the benefit of attending these lectures in my student days when academic credits were never heard of. These lectures should be on Great Books that have shaped human minds where the lectures motivate students to recognize the value of reading books that have helped Man to progress mentally, morally and ethically. The aim of the institution does not stop with buying books for the library and thereof telling NAAC that it has stacked the library with new or the latest published books and put to good use the annual funds received by the library. If the students don't use the library it is analogous to taking a horse to the water trough but cannot make it drink. Cluster Colleges within a short radius can pool their resources and arrange lectures inviting students from other colleges. Similar series at an advanced level can be organized under Faculty Improvement Programmes. Quality in Higher education is not an experience only for students. It blesses him/her who teaches and him/her who receives learning.
6. These lectures are to promote the concept of Colleges without borders. Faculty and students from different colleges meet, interact and exchange ideas which will make colleges and universities the gateway to idea generation. Instead of colleges remaining exclusive and stand-alone types, they should bring the students together and provide avenues for free exchange of ideas. It is worth while looking at the announcement from University of Exeter (UK) about Education without borders,. "...as the world becomes smaller and more connected, it has been even more important to us to give students exposure to a global perspective, building on cultural understanding, communication skills and awareness of the wider world. Our education initiatives are providing the opportunity for students to explore the implications of multidisciplinary perspectives in addressing global issues and challenges.' Among the many initiatives started by the university, the first is to forge educational partnerships between some of the worlds' leading universities and global organizations, thereby connecting the brightest minds on the planet to the most complex challenges in the world. Then there is connected classrooms, where courses can be taught and learned simultaneously and collaboratively in virtually connected classroom Our Universities should start similar initiatives to facilitate inclusive engaging learning experiences in collaboration with other universities. Learning has to be re-imagined and collaboration is the key to transform our youth to Global citizens to empower and enable the next generation of students to answer the questions that will shape today, tomorrow and the future for us all. □

Education for Gender Equality

M Sen Gupta*

Education is one of the most important tools for achieving social justice and equality for women. Educational development of girls works as a potent liberating force for half of the nation's population. It is crucial not only in elevating their status but also for accelerating economic development and social transformation. The National Education Policy 2020 "recognizes the special and critical role that women play in society and in shaping social mores - not only in their own generation but in the next one; therefore, providing a quality education to girls is the best way to increase the education levels for these Socially and Economically Disadvantaged Groups (SEDGs) not just in the present but also in future generations." 'Education for women' incidentally also was one of the thrust areas in the National Policy on Education, 1986.

Education for women in the country today suffers from both quantitative as well as qualitative shortcomings especially in the rural areas. Education for women obviously includes education for girls, both in general as well as in vocational or professional fields. Statistics show that girls comprise the major chunk of the non-enrolled and drop out child population in the age group of 6-14 years.

A similar dismal situation prevails in the area of vocational education for girls as well. Their participation in vocational education is low. The range of vocational courses generally offered to them is relatively limited. A traditional gender-bias dominates the vocational field too. Access of girls to many non-traditional vocational courses is inhibited in a very subtle manner. Although there are sporadic examples of breaking the shackles by girls but the tradition bound society does not offer these courses to girls. Girls too do not generally opt for them due to ignorance or lack of encouragement especially in tradition bound societies. Studies show that most of the co-educational or girls institutions deliberately follow a restrictive policy in allocating vocational or technical courses to girls.

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An unbiased analysis of the Gender situation will lead us to the question of specific needs, interests and aptitudes of the boys and girls on the one hand and requirements of the society on the other. We cannot deny the fact that boys and girls differ from each other not only in their physical appearance but also in their thinking, temperament and physical as well as their mental abilities. There are certain personality traits which are more pronounced in boys than girls and vice-versa. A close look at their biological, intellectual and personality qualities will indicate that boys and girls or *purush and prakriti* have been conceived by nature as complementary to each other. Each is incomplete without the other.

If *purush* has been identified with *pourush* or *parakram*, the *prakriti* has been conceived of as the mother earth or *Shakti*. Both have their specific roles to play in life and society. Therefore, all facilities should be provided to both at home and in school to help them actualize their inherent potentialities which are at times markedly different. Here comes the role of education. Its objective is not to iron out these specialties from their personalities and mould them into replicas of each other; but to provide both an environment conducive for unfolding of their unique talents.

There are many aspects of life especially the finer ones in which girls can excel given the opportunity. Experience shows that jobs requiring endurance, sensitivity, compassion, understanding of human nature and realities, accurate and critical judgment, freshness in thinking, calculated and cool handling of certain types of situation, aesthetic appreciation and practical solutions, empathetic human relations, deciding of strategies especially in adversities are aptly handled by the female. If opportunities are made available to girls for training them in such intellectual and vocational pursuits which bring in the interplay of the above personality factors, the education system can produce an independent workforce which instead of jamming the same frequency as those of boys will carve out a frequency band of its own which will be much more efficacious and conducive to social harmony.

It is generally observed that only soft options or the so called "feminine" courses are earmarked

for girls. Another disturbing trend being perpetuated is that as a rule only those courses are considered “suitable” for women which fall within the purview of home science. Curiously enough although the best chefs and dressmakers the world over happen to be males; boys are neither offered nor they opt for home science courses in schools. Unfortunately this deeply enshrined “home science syndrome” virtually cuts off all other options for girls/women. At the same time instances are also not rare to find women preferring, whatever may be the reason, only the time tested traditional vocational courses such as tailoring, knitting and embroidery, cooking, secretarial practice, teaching, etc. even if non-traditional courses particularly from the areas of engineering, agriculture or para-medical are made open to them. This preference for home or office based courses prevails among girls probably due to the conservative outlook of parents, shortage of trained women teachers and other socio-cultural realities.

In order to promote women’s participation in non-traditional occupations, as well as in existing and emergent technologies they would require easy access to modern occupational information, vocational guidance services specially designed for women, encouragement to entrepreneurial initiatives by women and diversified training facilities. There is an urgent need to neutralize the accumulated distortions of the past and move forward by positive interventions like redesigned curricula, textbooks, training and orientation of women teachers / entrepreneurs, sensitization of decision-makers and administrators to foster the development of new values.

Courses such as audio-visual technology, ophthalmic technology, photography, textile printing, accountancy and taxation, teaching and training, research and development, nursing, hospital administration, institutional housekeeping, interior decoration, food preservation and processing and a host of other vocations do not require strenuous physical work. Finger dexterity, understanding of the application processes and a rational insight into the practical subject matter are the main requirements for success in these broad areas. In addition to these wage employment oriented vocational courses, women can be offered many self-employment based courses as well. The latter would not only challenge the entrepreneurial abilities among them but would

also be useful to women in rural areas where opportunities for wage employment are limited. Encouraging Group entrepreneurial projects would also greatly help women.

Often women after marriage are not in a position to take up full-time vocations outside their homes. However, they may be willing to take up some form of productive work at home to attain total or partial economic independence or even to supplement their family income. Part-time or online self employment of this nature will surely have a positive bearing on the self confidence and social status of women.

Thus, job opportunities in the context of women employment may be seen from three angles. The first relates to wage employment opportunities in the production and service sectors, second to self employment as an entrepreneur and the third to home based part time or online self employment. Hence, special entrepreneurship development programmes should form an integral part of the curriculum of all vocational courses for women.

Efforts will also have to be made simultaneously to create a climate conducive to encourage more girls and women to take up new fields. They should be motivated to come forward and join vocational courses spread over a variety of areas. Establishment of model vocational schools for women in select districts in every State would ensure enrolment in good measure.

These schools having residential facilities and well equipped laboratories, workshop and libraries should be run exclusively for women. It will be desirable to establish such vocational centres with comprehensive offering in the vicinity of industries and advanced training institutions. If need be provision should also be made for incentives in the form of stipends or scholarship. In order to encourage self employment these centres should have special cells offering consultancy services, technical and financial assistance to the needy women.

Multiple strategies will have to be adopted to empower women particularly the poor, destitute, divorcees, single mother and the like. These would include motivational campaigns, consultancy services, establishment of special institutions, development of entrepreneurship and support for self employment. In addition to formal courses leading to self and wage employment, non-formal vocational courses specifically tailor made for women will go a

long way in elevating their status and making them equal partners in the overall economic development of the country.

But this is possible only when a girl is taken as an independent or individual personality with its specific needs and not always placed as an opponent of a boy or just an equivalent. Educationists concerned with women's education should search for a viable educational and vocational model for girls which neither simply apes the West nor dogmatically sticks to traditional concept of *abla nari*. It will then require a thorough analysis of the constraints being faced by women in contemporary Indian society, vital security and support needs of women and economic independence coupled with the present day social and economic values and beliefs.

Such a need based and culturally oriented educational model will not be based on a 'Confrontation model' vis a vis boys. Instead it will be a combination of 'Complementary or supplementary model' and a 'Self-reliant one' based on self respect and dignity of both boys and girls. In the spectrum of the models there will be invisible threads of cohesion between man and woman retaining at the same time distinct bands of self-reliance and respectable personalities. The model of women's education must provide for the full flowering of their unique talents and personal qualities.

While there is no denying the fact that education for women is of paramount importance for a progressive society, it is the working out of the Indian model, having its roots in Indian socio-economic culture which requires to be seriously debated upon. As in many other fields this area of education has also been dominated by disgruntled elements echoing western style of women's liberation mainly based on freedom from tradition and culture.

In recent years there has been a spurt in women's organizations and women's forums particularly in the country's urban belt. Their declared policy is to voice the 'deplorable' plight of women in society and to fight for equal rights in all walks of life and work. Apparently there is nothing wrong in these ideals. But distortion takes place when these are applied to education and employment without taking into consideration the social, economic, cultural and traditional realities of our society.

It is often argued that since boys and girls are equal in the eyes of law, no subjects in the school curriculum should be earmarked for girls alone. Instead every effort should be made to wean them away from traditional subjects like home science, tailoring and embroidery and encouraged to go in for those courses like engineering or commerce and business which are generally opted by boys. The goal of the enthusiasts is that no subject or job should be the sole prerogative of boys, and that girls must penetrate into all the citadels of men. This has resulted in an unhealthy competition between men and women for the same jobs.

Often men grumble that while a boy getting a job means bread for a whole family, a woman barring those who are genuinely needy, spends her pay packet on cosmetics, luxury items or entertainment. Women on the other hand profess that they do not want to beg from men for petty items of their own requirements. While there may be some element of truth in the allegations of both, the problem to ponder is what is the real concept of equality? Does equality mean that both boys and girls should be given equal opportunities of education and training and facilitate the development of their unique potentials to the optimum at all stages of education or does it mean that boys and girls in exactly equal numbers should jostle with each other to capture the same seats, occupy the male dominated vocations or positions and challenge boys in every field to get 'social' recognition?

In order to come to a reasonable conclusion we probably require an impartial view. The main contention here is to ensure independence, equality, dignity, livelihood and avenues for expression of unique talents by women. This is possible without confrontation or unnecessarily competing with boys. Rather it should be a cooperative, complementary and supportive role on the part of both to enable men and women to stand on their own, utilize their distinct talents and lead a creatively satisfying life.

With a view to availing equal opportunity boys and girls should have undifferentiated curriculum at all levels. The system has to be made inclusive so that there is no gender stereotyping either in general education or vocational education. In Indian society husband and wife have been termed as the two wheels of a cart. In this analogy no wheel of the cart vies with the other to go faster; nor do they cross each other's way. They move freely on their own paths

(contd. on pg. 119)

United Nations Sustainable Development Goals : A Foundation for Reimagining Indian Universities

Mercia Selva Malar*

United Nations' Sustainable Development Goals are very important for every nation aspiring to become developed nation in its complete sense. India has been aspiring to become a super power of the world. UN SDGs is an opportunity for India to achieve the status of super power as UN SDGs are holistic – all encompassing. There is no aspect of life of individuals or communities or countries that is not covered under UN SDGs. Apart from the 17 goals, there are totally 169 targets under the 17 goals. Targets specify the goals and Indicators represent the metrics by which the world aims to track whether these Targets are achieved. Also UN SDGs speak of 'leaving none behind' - which indicates that no individual will be left out of the goals. The seventeen UN SDGs are as below:

The article is an attempt to establish possibility of UN SDGs providing a strong foundation for the reimagining of Indian universities. It is important that India works towards a goal that would grant it a super power position in the globe. India has the potential and the power it needs to become a super power of the world. India has the demographic advantage of having a majority population as youth. Indian universities need to be transformed to be sources of transformation of the social and economic conditions of the nation. Indian universities register approximately 30.6 million students every year and that amounts to approximately 100 million students in the university system including the undergraduate, post-graduate and research students. Involving the students in attaining the UN SDGs is a smart and intelligent way. This would ensure that India becomes a super power in the near future. It is the responsibility of every citizen to work for the betterment of the nation. It is all the more important for the educated and elite to work for the advancement of the nation. The current population of India is 1,373,159,089 as of Monday, December 30, 2019, based on Worldometers elaboration of the latest United Nations data. The proportion of university students to the population of

India is 1: 14. If every student can work on 13 people to orient them and work with them to achieve the UN SDGs – India will surely become a super power without any doubt. The leadership in achieving the UN SDGs is to be given to university students. Thus the universities become power houses of national transformation to achieve UN SDGs and make India super power. In reimagining the Indian universities with UN SDGs as the foundation there is great benefit for the universities and the nation.

The article is presented under the 17 UN SDGs as to how the re-imagination can be transforming Indian universities in terms of their roles and responsibilities. Indian universities are currently focused on teaching, learning and research. Many of the Indian universities are not even fully focused on quality teaching, learning and researching. To transform the Indian universities to a higher level of significance, reimagining the roles and responsibilities of Indian universities based on the foundation of UN SDGs can be productive and promising. Indian universities need to assume greater responsibilities and roles. There are nations that compel students to enter university system only after serving the nation for specific number of years through the armed forces of the nation. India need not follow that method yet Indian universities can make National Service Scheme (NSS) and National Cadet Corps (NCC) compulsory for all students enrolled in universities, colleges and all higher education institutions. NSS and NCC must not be just annual camp events for the students rather both must have a specified hour for students to work during the regular work days. These regular work hours can be streamlined to work on the UN SDGs, with seventeen teams working on the seventeen goals all through the week.

GOAL 1: No Poverty

The UN has defined 7 Targets and 14 Indicators for SDG 1. Poverty is defined as less than \$1.9 per day income. Goal 1 aims at eliminating extreme poverty and also to reduce poverty in proportion of sex, age, employment and geographic location. Indian

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Table No.1: UN SDGs, Targets and Indicators

UN SDGs	No. of Targets	No. of Indicators
GOAL 1: No Poverty	7	14
GOAL 2: Zero Hunger	8	13
GOAL 3: Good Health and Well-being	13	28
GOAL 4: Quality Education	10	11
GOAL 5: Gender Equality	9	14
GOAL 6: Clean Water and Sanitation	8	11
GOAL 7: Affordable and Clean Energy	5	6
GOAL 8: Decent Work and Economic Growth	12	17
GOAL 9: Industry, Innovation and Infrastructure	8	12
GOAL 10: Reduced Inequality	10	11
GOAL 11: Sustainable Cities and Communities	10	15
GOAL 12: Responsible Consumption and Production	11	13
GOAL 13: Climate Action	5	8
GOAL 14: Life Below Water	7	10
GOAL 15: Life on Land	9	12
GOAL 16: Peace and Justice Strong Institutions	10	21
GOAL 17: Partnerships to achieve the Goal	17	21

Source:

universities can be reimagined as poverty eliminators of the country. All students can be engaged in poverty elimination projects. Universities can take up projects of poverty removal and engage students for specific hours in poverty alleviation programs. Indian universities can work to make the Mahatma Gandhi National Rural Employment Guarantee Scheme and National Social Assistance Scheme more effective and productive.

GOAL 2: Zero Hunger

The UN has defined 8 Targets and 13 Indicators for SDG 2. Ending hunger is defined as eliminating undernourishment for all. Ending hunger also means ending moderate and severe food insecurity for all. Ending hunger further indicates ending all forms of malnutrition. The goal aims to double the productivity of all food producers. Indian universities must reimagine their roles and responsibilities by engaging the faculty members and students of all departments. Every student under the guidance of the faculty members must involve in the total elimination of hunger. Indian universities can collaborate with National Nutrition Mission, Rashtriya Krishi Vikas Yojana, National Mission on Sustainable Agriculture, etc.

GOAL 3: Good Health and Well-being

The UN has defined 13 Targets and 28 Indicators for SDG 3. Good health and well-being is seen as reducing maternal mortality rate. It also aims ending infant mortality rate. Further ending the mortality from communicable and non-communicable diseases and improving mental health is part of Goal 3. Apart from all these, preventing and treating substance abuse, reducing road injuries and deaths, access to sexual health and reproductive health, achieving universal health coverage, etc. are considered part of Goal 3. Indian universities can involve and engage in Goal 3 by orienting and teaching the rural communities on health and hygiene, teaching and coaching youth to avoid substance abuse, unsafe sex, road accidents, etc. Faculty and students on a daily basis can be engaged in the immediate environment to orient, train, coach and teach the illiterate and rural population to live a healthy, hygienic life. Thus, the Indian universities can be reimagining their roles and responsibilities towards the complete, perfect, overall health of the Indian population.

GOAL 4: Quality Education

The UN has defined 10 Targets and 11 Indicators

for SDG 4. Goal 4 focuses that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes. Further it aims at equal access to affordable technical, vocational and higher education and increase the number of people with relevant skills for financial success. Ultimately it aims to eliminate all discrimination in education, provide universal literacy and numeracy, promote education for sustainable development and global citizenship and to build and upgrade inclusive and safe schools. Indian universities are more than qualified to engage in the provision of quality education to the nation. Every faculty member and student can spare time to personally teach the younger ones of the nation of both gender quality lessons in all subjects. This is possible for Indian universities and this certainly helps Indian universities in reimagining themselves.

GOAL 5: Gender Equality

The UN has defined 9 Targets and 14 Indicators for SDG 5. Goal 5 aims at ending all forms of discrimination against all women and girls everywhere. It also focuses to end all violence against and exploitation of women and girls, eliminate forced marriages and genital mutilation, value unpaid care and promote shared domestic responsibilities, ensure full participation of women in leadership and decision-making, provide universal access to reproductive rights and health, provide women equal rights to economic resources, property ownership and financial services and promote empowerment of women through technology. Indian universities can reimagine themselves as transformers of the society by teaching their own students to practice gender equality. Further, faculty and students should be ambassadors of the idea of gender equality. Faculty and students should visit villages, schools and communities to promote gender equality.

GOAL 6: Clean Water and Sanitation

The UN has defined 8 Targets and 11 Indicators for SDG 6. The goal aims at providing safe and affordable drinking water for all, ending open defecation and provide access to sanitation and hygiene, improving water quality, wastewater treatment and safe reuse and increasing water use efficiency and ensure freshwater supplies. In addition, the goal looks at implementation of integrated water resources management, protect and restore water-related ecosystems, expand water and sanitation

support to developing countries and support local engagement in water and sanitation management. Indian universities reimagining themselves must first work towards rain water harvesting which is a huge source for fresh water. Apart from harvesting the water, the Indian universities must also work towards recharging ground water with the rain water by ensuring that rain water does not get wasted by running into gutter and sewages. In creating an open defecation free (ODF) environment and hygienic conditions Indian universities should engage their students in orientation, training and transforming people in rural areas and in slums. There is a need for behavior transformation in people to embrace hygienic practices, which can be initiated by students and faculty members of Indian universities. Indian universities with physical & natural sciences and engineering departments must work towards developing integrated water resource management, protection & restoration of water related eco systems, coordinate the water and sanitation management of local governments, engaging their post-graduate and research students under the able guidance of faculty teams.

GOAL 7: Affordable and Clean Energy

The UN has defined 5 Targets and 6 Indicators for SDG 7. Goal 7 targets to ensure universal access to affordable, reliable and modern energy services, increase substantially the share of renewable energy in the global energy mix, double the improvement in energy efficiency, promote access, technology and investments in clean energy and expand and upgrade energy services for developing countries. Indian universities in reimagining themselves can become great contributors to this goal by engaging a majority of their post-graduate students and research scholars in researches and projects towards this end. With just ten years left to achieve this goal, even with four of five years of intense and fast-track research, Indian universities can come up with more practical solutions and innovations for developing nations and thereby influencing achievement of the goal across the globe. Five years of implementation can surely transform the world. Indian universities must reimagine themselves as the providers of the affordable and clean energy through effective and excellent research towards this goal.

GOAL 8: Decent Work and Economic Growth

The UN has defined 12 Targets and 17 Indicators

for SDG 8. The goal works with the objective of minimum 7 percent GDP growth, diversify, innovate and upgrade for economic productivity, promote policies to support job creation and growing enterprises, improve resource efficiency in consumption and production, full employment and decent work with equal pay, promote youth employment, education and training, end modern slavery, trafficking, and child labor, Protect labor rights and promote safe working environments, promote beneficial and sustainable tourism, provide universal access to banking, insurance and financial services, increase aid for trade support, develop a global youth employment strategy. Decent work and economic growth can be a game changer for Indian universities in reimagining themselves. Indian universities can support local economies with local ethnic products and agricultural produces. Business Management and Economics departments of Indian universities and colleges can strengthen and promote the local businesses, arts & crafts, ethnic food, ethnic clothes, ethnic furniture & life styles and ethnic living spaces. They can also engage in marketing the local specialties across the globe using the technology. This can benefit the students in learning Management, Economics and Trade from practical perspectives and also help the communities to contribute to nation GDP, Forex earnings, employment, etc. Indian universities can run employment centres that would not only upskill and reskill students for the Industry 4.0 but also will train and orient students on the local economic activities and provide the youth not into the university system with skills and economic functions that can provide them decent livelihood. Indian universities while engaging themselves in employment oriented economic activities should ensure that they protect and nurture the environment. Massive afforestation, apiculture, sericulture, horticulture, floriculture, etc. in most ecofriendly methods can also be carried out by universities, engaging the local unemployed youth.

GOAL 9: Industry, Innovation and Infrastructure

The UN has defined 8 Targets and 12 Indicators for SDG 9. The goal intends to develop sustainable, resilient and inclusive infrastructures, promote inclusive and sustainable industrialization, increase access to financial services and markets, upgrade all industries and infrastructures for sustainability, enhance research and upgrade industrial technologies, facilitate sustainable infrastructure development for developing countries, support domestic technology development and industrial diversification and

universal access to information and communications technology. Goal 9 opens up a wonderful opportunity for Indian universities to be world class through research and innovation. In order to provide resilient and inclusive infrastructure, promote inclusive and sustainable industrialization, upgrade industrial technologies, support domestic technology, facilitate sustainable infrastructure, etc. Indian universities must engage in quality research. In order to increase access to financial service and market access, promote industrial diversification and provide universal access to information and communication technologies Indian universities must work consistently and urgently on improving the creative, innovative and entrepreneurial spirit of Indian youth. Indian universities can reimagine themselves as hubs of research, creativity, innovation and entrepreneurial ventures as they work on Goal 9.

GOAL 10: Reduced Inequality

The UN has defined 10 Targets and 11 Indicators for SDG 10. This goal focuses on reducing income inequalities, empowering and promoting the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status, ensuring equal opportunities and end discrimination, adopting fiscal and social policies that promotes equality, improving regulation of global financial markets and institutions, Enhanced representation for developing countries in financial institutions, establishing responsible and well-managed migration policies, developing and promoting special and differential treatment for developing countries in WTO agreements, encouraging development assistance and investment in least developed countries and reducing transaction costs for migrant remittances. The goal demands Indian universities reimagining their Commerce, Economics, Management and Political Science departments and courses oriented towards ethical leadership. To reduce inequality across the globe we need ethical leaders in the domains of Commerce, Economics, Management and Political Science specifically and in all other domains generally. Indian universities need to become ethics focused to deliver equality across all sectors of the society. Ethics education need to become the thrust of Indian universities and Indian universities should fix ethical standards for graduates to obtain degrees. Unless students achieve the ethical standards they must not be given the degree. Ethical standards must be assessed based on the daily behaviour, conduct, practices, contribution of the students in terms of their ethics.

GOAL 11: Sustainable Cities and Communities

The UN has defined 10 Targets and 15 Indicators for SDG 11. The goal is directed towards safe and affordable housing, affordable and sustainable transport systems, inclusive and sustainable urbanization, protection of the world's cultural and natural heritage, reduce the adverse effects of natural disasters, reduce the environmental impacts of cities, provide access to safe and inclusive green and public spaces, establish strong national and regional development planning and support least developed countries in sustainable and resilient building. The goal demands involvement of engineering and technology domains to develop and maintain sustainable cities and communities. The engineering departments of universities can intensify their research, innovation, orientation, training and development, towards sustainable cities and communities. Departments of Humanities can get engaged in identifying and promoting the sustainable practices of ethnic communities and traditional knowledge of local communities for sustainability. Thus Indian universities can reimagine themselves as developers of new knowledge, implementers of the new knowledge developed, identifiers of the existing age-old sustainability practices and promoting them in ensuring sustainability of cities and communities. This knowledge development, identification, promotion and implementation can help India achieve this goal as well as other developing countries.

GOAL 12: Responsible Consumption and Production

The UN has defined 11 Targets and 13 Indicators for SDG 12. The goal works towards implementation of the 10-year sustainable consumption and production framework, ensuring sustainable management and use of natural resources, halve global per capita food waste, assure responsible management of chemicals and waste, substantial reduction in waste generation, encouragement of companies to adopt sustainable practices and sustainability reporting, promoting sustainable public procurement practices, promoting universal understanding of sustainable lifestyles, supporting developing countries' scientific and technological capacity for sustainable consumption and production, developing and implementing tools to monitor sustainable tourism and removal of market distortions that encourage wasteful consumption. Indian universities in reimagining themselves have an important and crucial role to play by educating,

coaching, training, orienting, transforming and changing behavior of all graduates, post-graduates and research scholars to be responsible in consumption and production. By doing this, Indian universities will influence homes and institutions across the country to become more responsible in consumption and production. Indian universities will also be training leaders of corporates and other institutions working in this direction. Apart from working on the students to make them totally transformed and behavior changed for responsible consumption and production, Indian universities also can make it a part of their agenda to orient school students, village and city women folks, corporate workers and managers through street play and presentations. This can assure of a country totally oriented towards responsible consumption and production. The agenda must be so closely followed that it becomes a way of life at Indian homes, Indian class-rooms and Indian institutions.

GOAL 13: Climate Action

The UN has defined 5 Targets and 8 Indicators for SDG 13. The goal strives for strengthening resilience and adaptive capacity to climate-related disasters, integrating climate change measures into policy and planning, building knowledge and capacity to meet climate change, implementing the UN Framework Convention on Climate Change and promoting mechanisms to raise capacity for planning and management. Indian universities have a prominent space to play its role in climate action. Every day Indian universities can work on planting trees. With 30.6 million students registering into the university system there are about 75 million to 100 million students in the university system each year. If each one of them is involved in planting and nurturing a tree each week we will have approximately 5 billion trees in a year. In five-year time India will have 25 billion trees growing and providing oxygen, serving as carbon sinks. This will be a huge service Indian universities can do to the country and thereby to every citizen of the nation. Indian universities can also get involved in building knowledge and capacity to meet climate change. They must get involved in serious sensitization efforts of the general public to get involved in climate change combating initiatives. Indian universities can train the students and the general public to be adaptive to climate change disasters as part of the university curriculum.

GOAL 14: Life Below Water

The UN has defined 10 Targets and 10 Indicators for SDG 14. The goal is pointed towards reducing

marine pollution, protecting and restoring ecosystems, reducing ocean acidification, sustainable fishing, conserve coastal and marine areas, ending subsidies contributing to over fishing, increasing the economic benefits from sustainable use of marine resources, increasing scientific knowledge, research and technology for ocean health, supporting small scale fishers, implement and enforce international sea law. Indian universities in the effort to reimagine themselves based on the foundation of SDG 14 can work towards the betterment of life below water. Indian universities should orient students and transform them to treat life under water with due respect. Students of Indian universities must be taught and trained to prevent marine pollution and protecting & restoring ecosystems. Some of the efforts can be from the research departments of Biological and Marine Sciences to enrich and better the life below water, with serious quality research and knowledge propagation through scientific and popular writing. The Political Science and Law departments of the Indian universities also can show their leadership in training their students to fight for policies protecting and nurturing life below water. The goal of life below water can be approached from various dimensions from Indian universities as they reimagine themselves.

GOAL 15: Life on Land

The UN has defined 12 Targets and 14 Indicators for SDG 15. This goal strives for conserving and restoring terrestrial and freshwater ecosystems, ending deforestation and restore degraded forests, ending desertification and restoring degraded land, ensuring conservation of mountain ecosystems, protecting biodiversity and natural habitats, protecting access to genetic resources and fair sharing of the benefits, eliminating poaching and trafficking of protected species, preventing invasive alien species on land and in water ecosystems, integrating ecosystem and biodiversity in governmental planning, increasing financial resources to conserve and sustainably use ecosystem and biodiversity, financing and incentivizing sustainable forest management and combating global poaching and trafficking. The role of Indian universities can be restricted to orienting students towards the need to protect and nurture life on land. Students must be thoroughly oriented and trained that they can orient and train others in this direction. The Biological Sciences and other technology oriented departments can come out with solutions to improve bio diversity in the respective ecosystems and protecting natural habitats. Indian universities must think of creating dense forests

around the universities and nurturing biodiversity in such dense forests. Indian universities should also work towards creating biodiversity parks. They can also focus on project that would nurture endangered species of trees, plants, birds, animals, reptiles, etc. Indian universities can support NGOs focused on protecting and preserving life on land. Through NGOs policies of the government can be influenced and corporates can be involved in protecting, nurturing and preserving life on land.

GOAL 16: Peace and Justice Strong Institutions

The UN has defined 12 Targets and 23 Indicators for SDG 16. The goal pursues targets as reducing violence everywhere, protecting children from abuse, exploitation, trafficking and violence, promoting the rule of law and ensure equal access to justice, combating organized crime and illicit financial and arms flows, reducing substantially corruption and bribery, developing effective, accountable and transparent institutions, ensuring responsive, inclusive and representative decision-making, strengthening the participation in global governance, providing universal legal identity, ensuring public access to information and protect fundamental freedoms, strengthening national institutions to prevent violence and combat crime and terrorism and also promoting and enforcing non-discriminatory laws and policies. Can Indian universities reimagine themselves in building peace and justice strong institutions in India and across the globe? The first step of Indian universities will be to implement a strong and powerful ethical education system with stringent standards of ethical behavior cultivated in students. A very strong foundation of ethics and a very powerful conscience for ethics in society would drive Indian universities to be deliverers of peace and justice across all institutions of the nation and even globally. If Indian universities are transformed with ethical focus and ethical orientation of faculty and students that will disseminate into the community and bring about a total transformation in the society spreading peace and justice across the country and the globe.

GOAL 17: Partnerships

The UN has defined 19 Targets and 25 Indicators for SDG 17. This goal is designed to reach targets as mobilizing resources to improve domestic revenue collection, implementing all development assistance commitments, mobilizing financial resources for developing countries, assisting developing countries in attaining debt sustainability, investing in least-developed

countries, knowledge sharing and cooperation for access to science, technology and innovation, promoting sustainable technologies to developing countries, strengthening the science, technology and innovation capacity for least-developed countries, enhancing SDG capacity in developing countries, promoting a universal trading system under the WTO, increasing the exports of developing countries, removing trade barriers for least-developed countries, enhancing global macroeconomic stability, enhancing policy coherence for sustainable development, respecting national leadership to implement policies for the sustainable development goals, enhancing the global partnership for sustainable development, encouraging effective partnerships, enhancing availability of reliable data and developing measurements of progress. Indian universities can reimagine themselves by partnering with NGOs, Corporates, Local Governments, National and International universities in achieving the UN SDGs. Goal 17 provides a wonderful opportunity to transform Indian universities as partners for good for the nation and the globe.

Conclusion

Indian universities have a golden opportunity to reimagine themselves and become globally renowned, popular and productive through the foundation of UN SDGs. By orienting, teaching, training and equipping students and faculty on UN SDGs, their targets and indicators, Indian universities can take a different shape. Projecting UN SDGs, the targets and the indicators all across the campuses, involving students in the achievement oriented activities, in propagating the UN SDGs, in providing strong ethical education, etc. Indian universities get transformed with a re-imagination. Indian universities by genuinely getting involved in serious and quality research for promoting, propagating and finding solutions to achieve UN SDGs, can create a totally world-class image for themselves. Involving students, faculty team and neighborhood community in UN SDGs achievement oriented activities will totally transform Indian universities and give them a global image.

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(contd. from pg. 112)

keeping pace with each other and taking the cart forward in a rhythmic movement to its destination. The attainment of this rhythmic combination of man and woman in life should be the aim of women's education. This will, of course, not exclude boys who should also be positively educated regarding the contributions that women can make to society, their needs, interests, abilities and special qualities. The boys need to realize and positively appreciate the girl's personality better thereby instilling in them respect for women and to ensure their specific identity in the society.

Conclusion

Arguments presented so far can take the shape of a balanced view towards gender equality by the teachers only when they are duly sensitized

through in-service and pre-service teacher training programmes regarding specific aptitudes of boys and girls leaving aside few exceptions of course. Accordingly both should be given appropriate opportunities and additional educational/vocational inputs in addition to the core curriculum so that they feel free to optimize their specific talents and innate capabilities. The National Education Policy has rightly directed that "Teachers will aim to encourage students with singular interests and/or talents in the classroom by giving them supplementary enrichment material and guidance and encouragement and will help them to organise such Topic-centered Clubs and Circles through specific funding allocated for this purpose, and will recommend them to appropriate summer programmes."

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Good Health and Well Being

K N Guruprasad*

Good Health and Well Being is listed as the 3rd goal in the 2015 year UN Charter of SDG's. The recent pandemic of COVID-19 has accentuated the need for health of the population as the primary requirement for development of any nation. The pandemic has also revealed the wide economic gap in dealing with the health of the community and has brought into focus the requirement of global health for the welfare of the whole of humanity. Health of the population of any country is the priority for sustainable development. Although the life expectancy has improved compared to the last decades owing to better nutrition and medical care, there is a wide gap within the country and between the countries depending on the social and economic inequalities. According to UN, there is a 31 year gap between the countries with the shortest and longest life expectancies. Lack of basic health services, communicable diseases (like AIDS), non communicable diseases (like diabetes, cancer, cardiovascular diseases and respiratory diseases), air pollution and atrocities against women have been listed as the main causes of physical and mental health and well being by the UN. Many global targets have been set by the UN for improving health and well being by 2030; prominent amongst these goals are:

- reduction in maternal mortality and child mortality.
- prevention of drug abuse
- prevention of road accidents
- reduction of pre mature mortality from non-communicable diseases
- prevention of epidemics of AIDS, tuberculosis and malaria
- prevention of illness and death due to pollutants in air, water and soil.
- control on the use of tobacco
- promotion of research and development in medical sciences and development of health workforce.

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In the context of India where one sixth of the global population lives, the health and well being of the population becomes all the more important. With the prevalent social and economic gap in India, it is a challenge to attain the sustainability goals with inclusiveness. Government of India has incorporated the sustainable development goals in the basic policies with the aim of 'Sab ka Saath, Sab ka Vikas' or 'development with all and for all'. The task of attaining the sustainable development goals has been assigned to NITI Ayog, the Government of India's premier think tank.

Many initiatives have been taken by the government for addressing the health and well being. The Ministry of Women and Child Development has formed a 'National Council on India's Nutritional Challenges'. This body formulates overall policies and guidelines and monitors all nutrition based schemes.

The National Council is strengthening the infrastructure of primary health care centers and also tracking and identifying children with severe, acute malnutrition. The council is also promoting kitchen gardens at the grass root level. The council is mobilizing NGO's and CSO's for participation in these programs.

Promotion of health and well being requires prevention of diseases. In India only 60% of the total expenditure on public health is spent on preventive care – while 51% of the expenditure is on curing people (National Health Accounts 2014-15, MOHFN). Although India has 18% of the global population, 34% of global Tuberculosis and 26% of pre-mature mortality due to diarrhoea and lower respiratory and other infections are recorded in India – (Global Burden of Disease 2016, Institute of Health Metrics and Evaluation). 55% of morbidity and premature mortality is due to non-communicable diseases (cardiovascular conditions, diabetes, respiratory diseases, cancer and mental health conditions). These major issues of health in the country are being addressed by the government through their programs of Indradhanush and Ayush mission. However prevention of disease requires public participation as it is dependent on the life

style of the community, that requires people trained in public health. Public health, prevention of diseases in particular, is linked to nutrition, environment, water and sanitation. In India malnutrition has been listed as the greatest risk factor to the preventable diseases as its contribution is 14.6% (India : Health of the Nation's States : 2017).

The strategies which have been developed for improving public health include several measures to be taken by the governments and the citizens. The following programs have been envisaged by the government:

- Enhancement of public funding on health to 2.5%
- Increase in taxes on tobacco, alcohol and unhealthy foods
- Strengthening community health services by Ayush services
- Strengthening village health sanitation and nutrition day programs
- Trained workforce for public health management

On part of the citizens and educational institutions, the public health can be improved by awareness campaigns. Recognition of preventive health care can be propagated by preparing communication materials with suggestive behavioral changes.

Educational Institutes can also design courses that can create career opportunities in public healthcare and demography; social behavior and epidemiology have to be important components of such courses.

The government is also contemplating to establish a National Centre for Disease Control. This centre in collaboration with other local organizations may be able to do disease surveillance and enforce public health regulations.

Under 'Swasth Bharat Jan Andolan' the government is planning to scale-up comprehensive primary health care across the country on the platform of Health and Wellness Centres (HWC's). The healthcare centres currently operating are focused on reproductive, maternal and child health care. They have some programs on communicable diseases also like malaria. Since primary health care centre can deliver better health outcomes at lower

costs by early detection of the diseases, the National Health Policy (2017) is now more focused on Health and Wellness Centres (HWC's). Health and Wellness Centres are being upgraded to include screening and management of non-communicable diseases; screening and basic management of mental health ailments; care for common ophthalmic and ENT problems; basic dental health care; geriatric and palliative health care and trauma care and emergency care.

There is also a requirement of establishing Urban primary health care centres. Use of Information and Communication Technology (ICT) by digitalization of family records and the information of the community may help in making comprehensive strategies for improving public health. Digitalization of real time data will help planning implementation and monitoring of public health policies. It is also envisaged to mobilize Corporate Social Responsibility (CSR) and Non-Resident Indians for funding the up gradation of Health and Wellness Centres. There may also be a need for mobile HWC in remote rural areas. The educational institutes can contribute towards effective scaling up of primary health care by undertaking research programs for finding out the best pathways.

The current human resource for management of health in India is inadequate. At present the doctor – population ratio is 1:1613 and nurse - population ratio is 1:588. WHO norms for doctor – population ratio is 1:1000 and nurse – population ratio is 1:400. Under the National Health Policy the government is now planning to raise the doctor – population ration to 1:1400 and nurse – population ration to 1:500 in India.

The distribution of doctors and nurses is also uneven in India with four times more number of doctors and three times more number of nurses to urban areas. Similarly the laboratory technicians are more in urban areas compared to rural areas.

The government envisages to reconstruct the governance of medical, nursing, dentistry and pharmacy education. Improving the standard of medical education and starting nursing colleges in every district are some of the suggested measures to improve human resources for health management. Besides conventional courses there is a plan to

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Life Skills Training for Undergraduate Students to Achieve Sustainable Development Goals

Prerna* and Anjali Bajpai**

Life Skills can be conceptualized as a set of Psychological, Social and Cognitive competence that can be developed through training. It converts knowledge, attitude and values into positive behavior to deal efficiently with the demands and challenges of daily life. WHO (1997) suggested ten core life skills for all such as Self awareness, empathy, critical thinking, creative thinking, problem solving, decision making, interpersonal relationships, coping with stress and coping with emotions. Besides these there are many more life skills and their importance varies according to person and situation. Development of these skills set empowers young minds for survival in personal, professional and social life which ultimately contributes to development of nation and the world we live in. A Sanskrit phrase 'Vasudhaiva Kutumbkam' which means the world is one family taken from Maha Upanisad, indicates core value of our culture, which inspires us to walk on the path of development together with the world. Therefore, contributing to solve the worlds' problem, which are addressed as Sustainable Development Goals. Sustainable Development Goals (SDGs) were set up in 2015 at United Nation General Assembly and targeted to achieve by 2030. SDG is extension of Millennium development goals (MDG) which has been started in September 2000 and targeted to achieve by 2015. There are eight goals listed under MDG such as eradicate extreme poverty and hunger, achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria and other diseases, ensure environmental sustainability and develop a global partnership for development.

According to Brundtland Commission (1987), Sustainable development aims to maintain economic advancement and progress while protecting the long term values of environment, it provides framework for the integration of environmental policies and development strategies.

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SDGs are people centered and planet sensitive agenda which provide comprehensive vision for all. The aim of SDG is to balance economic, environmental and social needs allowing prosperity for now and future generations. Gandhi ji had said that one day need of world would shift from consumer society to conservation society (Hind Swaraj, 1910). SDG is collection of seventeen global goals such as eradicate poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequality, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, partnerships to achieve the goal. These goals can be organized in clusters by looking into the main components under the theme of people, planet, prosperity, peace, partnership and dignity. These goals have been decided after looking into common problems of the world. These are interrelated goals and achievement of one positively affects achievement of other. Education plays major role in achievement of all other goals. Education has always been advocated as the ultimate tool that can emancipate the world from the shackles of ignorance, poverty, in equality and under development. (Pereush, 1998). Curriculum plays important role in achievement of educational goals. According to Cunningham Curriculum is a tool in the hands of artist to mould his material according to his ideals in his studio. Curriculum planning is based on the values, dreams and desires of nation to create link between knowledge and work place. Content of curriculum constitute knowledge, attitude, values and skills which society intends to impart to the citizen through the school and socializing agents. According to Tanner (1975), wealth and poverty of nation depends on the content of curriculum. Therefore, modern education demands skill based curriculum for every grade of students. University Grant commission has taken initiatives to develop a life skill based curriculum for graduates to guide them to unlock their true potential and make them socially responsive or valued citizen. Life skills suggested by UGC for graduates are:

- Communication skills can be defined as the ability to share ideas and feelings effectively. The ways of communication include skill of listening, speaking, reading and writing, digital literacy, effective use of social media and non verbal communication.
- Professional skill refers to the ability helpful in workplace. It includes career skills and team skills.
- Leadership skills required engaging with people and convincing them to accept vision or goals and Management skills are required to manage people and resources.
- Universal human values are practice of love, truth, non-violence, righteous conduct, renunciation, compassion and service are commonly accepted universal human values.

These skills development is suggested in graduate curriculum with the objective to make them competent and responsive citizen to contribute to the development of nation and globe as well. Nair, P.K. & Fahimirad, M. (2019) in their study had aimed to identify students' perceptions and competencies after completing life skills modules and also elaborated importance of life skill for work place. They suggested that embedding the life-skills program in the university curriculum plays a key role in shaping students' personal, social, professional and interpersonal skills such as: team work, communication, leadership, time management, decision making and problem-solving. Prajapati, R. & Sharma, B. & Sharma, D. (2017). studied the significance of Life skill Education. Their study aimed on the importance of life skills education and the advantages of imparting life skill education in our curriculum. They suggested that proper implementation of life skills education is needed and it is helpful for overall development of students. Shakya, V.K. (2016) in her study titled Developing life skills education for sustainable development of students, conducted on 200 randomly selected students from 5 schools of Panchkula, to analyses the development of a life skill in students' through education, and suggested that life skills education can be beneficial in targeting negative behaviors in children as well as encouraging sound values and actions. Various studies and their findings indicate the link between Life skills training and SDGs. They suggest that inculcation of life skills in an

individual results in acquiring better personal, social and economic development as well as becoming sensitive to the planet Earth and its' resources.

Constitutional Provisions in India to Achieve Sustainable Development Goals

Various provisions are accorded in the constitution of India, which seems relevant in the achievement of SDGs. Some of them are mentioned here, Article 45 and Article 21 A were inserted during 82nd amendment of constitution, talks about education of students. Scheduled caste, scheduled tribes women and minorities have been focused under article 46, 15(1), (3), 29 & 30. The Constitution of India grants equality to women and also allows the state to adopt measures of positive discrimination in favor of women. Under the Articles 14, 15, 15(3), 16, 39 and 42 of the Constitution equal protection of law; prohibits discrimination against any citizen on the grounds of religion, race, caste, sex or birth place and guarantees equality of opportunity to all citizens in matters relating to employment are mentioned. Although Right to Health is not included as an explicit fundamental right in the Indian constitution but most provisions related to health are mentioned under the Directive Principles. Some fundamental duties under part 4A were added by the 42nd amendment in the constitution for the protection of environment and national development. Article 51 A (g) and Article 51 A (j) are important in this regard.

Policy Initiatives in India to Achieve Sustainable Development Goals

The entire world is bonding together to solve global problems. India is committed to reaching the SDGs, which is reflected in their national development goals. Various schemes have been introduced by the government of India to eliminate poverty, promote gender equality, and address environmental protection and climate change. The government of India runs anti-poverty programmes to assist the poor, such as the Pradhan Mantri Jan Dhan Yojna (2014), which is a financial inclusion programme for the economically disadvantaged. Widows, older people, and the handicapped are provided with pension plans. Providing employment opportunities to the underprivileged sections of society under MGNREGA (2005). The National Livelihood Mission (NRLM) was launched by MoRD in (June 2011) which has been renamed as

Deen Dayal Antyodaya Yojna (2015) is initiated to provide skill training for the poor to make them employable. Some other programmes have been running side by side to provide nutrition and food security to the needy sections of society. The Midday Meal (1995) is one of them. It aims to provide meal to the students' of government primary schools. The government also provides food grains to the poor on a monthly basis at low cost. Various measures have been taken by the government of India to promote gender equality, such as the Beti Bachao Beti Padhao scheme (2015) to make girls socially and financially independent and create awareness to balance the sex ratio. The government providing loans (10 lakhs to 1 Crore) to atleast one women and/or one SC/ STs per bank branch for green field enterprise under Stand up India scheme (2016) and launched an online marketing platform E-Haat (2016) for the women to buy and sell their products to make them financially independent. Make in India (2014) are other scheme to promote economic growth through business set up. Other than this, some programmes has been running to ensure environmental sustainability, such as the Blue Revolution (1985-1990), the Namami Gange Programme (2014), and the Swachh Bharat Abhiyan (2014). The country has established a goal of generating 175 gigawatts (GW) of electricity from renewable sources by the end of 2022 and 450 GW by 2030, in order to lessen its reliance on exhaustible resources and meet the demand of its people.

Current status of India

According to the report presented by NITI Aayog in year 2020-2021, The country's overall SDG score improved by 6 points from 60 in 2019 to 66 in 2020-21. The SDG India Index computes goal-wise scores for each State and Union Territory. These scores range between 0-100. The higher the score of a State/UT, the greater the target achieved. If a State/UT achieves a score of 100, it indicates

that it has achieved the 2030 targets. Based on their SDG India Index score States and Union Territories are classified as: Aspirant: 0-49, Performer: 50-64, Front-Runner: 65-99, Achiever: 100 (NITI Aayog, SDG Index 2020-2021)

The status of different states and UTS' has been shown below on the basis of their efforts made to achieve SDGs.

Challenges in the way

In spite of the fact that the country is assuming public liability to accomplish the SDGs, there are many challenges in the way. The major challenge for India is to devise suitable indicators to effectively assess the progress of the SDGs. Regardless of India's earnest attempts to make poverty alleviation a priority after freedom, India has the biggest number of individuals living below the neediness line. Due to a lack of optimized funds, the advancement of achieving SDGs is hindered. Although NITI Aayog is relied upon to assume a significant part in taking responsibility for the execution process, the individuals from the Aayog have communicated their interests consistently about the restricted labor they need to deal with tasks. Incomplete coverage of data is one more element that has hampered the estimation of the progress of SDGs.

Fig-1 Ref: NITI Aayog SDG Index Annual Report (2020-221)



Fig2: SDG Score and Literacy rate of Top Five and Bottom Five States

Top 5	State	Score	Literacy Rate
	Kerala	75	96.2%
	Himachal, Tamilnadu	74	86.6%, 80.1%
	Goa, Uttarakhand, Karnataka	72	88.70%, 87.6%, 77.02%
	Sikkim	71	81.42%
	Maharashtra	70	88.38%
Bottom 5	Chhatisgarh, Nagaland, Odisha	61	70.28%, 66.59%, 72.9%
	Arunachal Pradesh, Rajsthan, Meghalaya, Uttarpradesh	60	65.38%, 66.11%, 74.4%, 67.68%
	Assam	57	72.19%
	Jharkhand	56	66.41%
	Bihar	52	69.83%

Pedagogical Practices for Education for Sustainable Development

Traditional approach of teaching focuses on rote memory and transfer of knowledge through chalk and talk where learner acts as passive participants. In modern era demand has shifted towards active learning and skill development of an individual which requires independent environment for dialogue and practice. Global action program on education for sustainable development have been initiated in 2009 in joint partnership of Germany, India, Mexico and South Africa. It aims to integrate principles, values and practice of sustainable development into all levels and types of education. Education for Sustainable development is systematic, problem solving, future and action oriented approach to social change for more sustainable world. Suggested approaches to education for sustainable development under GAP are:

- Learning using value based indicators are problem centered, inside-out approach. Aim of this approach is to remove value action gap.
- Active learning using images and objects are experiential learning approach which encourages collaborative learning and critical thinking.
- Learning through social innovations are enquiry based learning which allows exploration of immediate community.

These are suggestive but not absolute practices. Country has adopted different pedagogical practices according to their need, although these are almost similar. In Indian context UGC has suggested to adopt blended or hybrid learning approach to develop skills

which will help in creating awareness in graduates for the problems to make them competent enough to act as partner to solve global issues.

This includes the following:

- **Project based learning-** This is student centered approach in which student acquires deeper understanding through active exploration.
- **Demonstration-**It is activity centered approach which allows connect theory with practical for better understanding.
- **Group discussion-** It is child centered approach where group of students share their ideas on a problem
- **Case Study-**It is intensive and systematic investigation of an individual, group or events.
- **Use of ICT-** integration of ICT with lesson makes learning more enjoyable and students remain more engaged in the process.

These practices should be integrated in all undergraduate curriculum as a part of value added essential credit papers.

Conclusion

The goal of education must change according to the need of the world. Now we need to think beyond literacy and numeracy skills. Education should focus on learning to live on a planet. Education for sustainable living aims to provide knowledge, skills, attitudes, and values to become productive members of society. Demand of society and the workplace has been shifted towards skill development. These issues necessitate education that will enable individuals to be competent or

skilled. Skill-based education allows individuals to make informed decisions, access better employment opportunities, increase their purchasing power for food, clothing, access to better health care, gender sensitive, positive participation in solving social issues and develop values of respect for the resources and living beings available on the earth. The development of skills in graduates will aid in the achievement of the SDGs because they are the actual people who go to the job market and contribute to the social and economic development of the nation. Incorporating life skills into university curricula is one way to meet the demands of the workplace. Our Indian constitution has also played a vital role, as it has made several provisions for the protection of people and the planet that are jointly addressed in the SDGs. Various programs have been initiated by the government of India to achieve these goals. Besides all these efforts, India's performance is not up to the mark. NITI Aayog is entrusted with the task of coordinating SDGs in India. According to the annual report released in 2020–2021, the literacy rate of bottom five states are lesser than the national average literacy rate (74.04%) except Andhra Pradesh and the literacy rate of the states which are in the top five category is higher than the average national literacy rate. Therefore, we can conclude that education may be the reason behind it. On this ground, it is suggested that there is an extreme need to equip graduate students' with quality education so that they can contribute to maintaining social, economic, and environmental sustainability and work for the betterment of the Earth in the future.

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Rethinking Management Education for Sustainable Happiness and Wellbeing: Interview with Dr Saamdu Chetri

Ayatakshee Sarkar*

Dr Saamdu Chetri is one of the principal architects of Bhutan's Gross National Happiness (GNH) Center. While he served in the cabinet of the then Prime Minister of Bhutan, Jigmi Y Thinley, as the Head of Good Governance, he was instrumental in institutionalising the Centre in his country, Bhutan, soon after the prime minister introduced the idea of GNH to the UN General Assembly. He believes himself as one of the vehicles to bring the GNH to the world. He instituted this Centre under the Patronage of Her Royal Highness Kezang Choden Wangchuk.

He propagated the idea of GNH philosophy through several professional and academic forums in which he was invited as a speaker. To name a few, universities such as Columbia University, King's College London, University College of London, London School of Economics, several colleges and universities in India, Copenhagen University, Technical University in Zurich, WITS University in South Africa, Universities in the Philippines, Hong Kong, Singapore, are examples in which he gave talks and also keynote speeches delivering the idea and the philosophy of GNH. He delivered talks within different sects of the population, including the House of Commons in the British Parliament and the Senate in the Philippines. Globally, many people were trained in GNH. Also, there are many GNH Centres worldwide, such as in Thailand, Vietnam, Spain, Sweden, Switzerland, Germany, France, USA and others.

He strongly supports equality, gender alliance, and women empowerment. He helped the national projects' formulation in the country through Swiss support in training, infrastructure, services. He had interviews with BBC, ABC, ABS-CBN, CNN, and various other TVs, including interviews in Radios and podcasts. There are -three books to his credit'

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Money and Microenterprises in Bhutan: The Land of Zorig Chug Sum Thirteen Arts and Crafts,' 'Far Apart and Close Together,' which he wrote for Swiss Bhutan Friendship Society, and 'Tashi: A GNH Journey,' and several contributions for many books.

Besides, he served as a visiting professor for the Earth University, Navdanya, Dehradun and now serves as a visiting professor at the Rekhi Centre of Excellence for the Science of Happiness at the Indian Institute of Technology (IIT), Kharagpur, India. This article is based on the interview with Dr Saamdu Chetri on vital issues like GNH.

Interviewer Profile and Purpose

The interviewer, Ms Ayatakshee Sarkar, is an Assistant Professor in HR and OB working in CHRIST (Deemed to be University), Bangalore. For the last six years, she has researched the practical aspects of principled nonviolence, happiness, wellbeing. In the current article, she gathers some practical wisdom through the interview with Dr Saamdu Chetri, a chief architect of the Happiness Index. We learn how happiness curricula play a significant role in Indian management education through this interview.

The Interview

Where is the Convergence between the two opposing fields of 'Commerce' and 'Happiness'?

Commerce drives you to the material side of the world without giving adequate importance to resource preservation and sustainability. The motive is only to generate profit. The science of business transients to sensitise consumers to get them to their clutches, and they study consumer happiness to 'consume the customers'. Consumers are happy because of greed, pride, jealousy to get more material benefit without realising how the earth is getting destroyed – the only home we have.

Advertisements send subtle messages, sensitising people to buy products even if they do not

need them. There is no advertisement and billboards in Bhutan because we do not want to sensitise human beings and reorient their decisions. We want them to choose from their own needs through their perspectives arising from their inner self. So, commerce deals with everything that starts with raw materials and ends with consumers. Commerce does not say we should stop mining oil underground to prevent global warming.

GNH is not against development; instead, we abhor development that causes harm to society and nature. Two things are essential in GNH, Environment and Society. Thus, if these two things are taken care of, GNH does not mind any development. Commerce does not study or concern human happiness. It only creates greed that brings momentary joy like selling alcohol, cigarettes, junk food, branded cheap products, drugs, and many others. So, commerce eliminates the capacity to choose to be happy by sensitising us to believe in advertisements and take wrong turns in life.

In 2013, when I came to speak at Aligarh Muslim University, I realised India spent 412-billion-dollar equivalent money on advertisements of various kinds. If this money was divided, it came to approximately ₹ 20,000 per capita. They would have enough money to buy essentials in a poor joint family. GNH wishes people to nourish their minds and perspectives through the eyes of truth and reality and not through sensitisation. GNH is a journey inwards, connecting yourself with yourself and nature. On the other hand, commerce is more driven by consumerism, where it does not create value for human life.

Commerce can be nourished by bringing good governance and values of equity, kindness and humanity in any organisation. Our King, His Majesty Jigme Khesar Namgyel Wangchuck, signified GNH (on which all development plans are based today) by saying “GNH is Development with values” and bridged it with kindness, equity and humanity. By following this, it would only enhance itself toward the concept of GNH. I am grateful to our Fourth King, His Majesty Jigme Singye Wangchuck, who planted the seed of GNH by propounding, “Gross National Happiness is more important than Gross National Product.” Today, it has taken wings globally, and I think this is the right approach to development.

What do you think is the Pressing Challenge in Management Education during the Present Time?

The pressing challenge in many management education systems is making a human product ready for the marketplace. A product is not based on humanity instead on profit motive (and service attached in a few cases). The students coming out of management institutions are very innovative products but at the same time ‘self-oriented’. The times have changed now. Higher education needs to produce ‘happy human.’

I firmly believe that in doing so, the institutions must have the curriculum of mindfulness throughout their two years journey. They must conduct courses for self-realisation that can produce self-disciplined, self-realised, proactive, and visionary leaders. Further, they must be taught, create and maintain a deep and lasting relationship. Also, the course must be content through the concept of GNH, such as what is development with value, understanding the self, happiness as a concept and meditations. They must be taught how to realise physical, social, emotional, spiritual intelligence. Once these bits of intelligence are in a place, s/he will be able to live healthy with discipline, be passionate and love everything and everyone, be a learner with vision, be conscious and leave a legacy behind.

Should there be a Happiness Curriculum in Management Education?

The curricula should be driven by happiness. Whatever they learn in MBA in terms of softer skills is a question. It only gives you knowledge. However, if lessons on happiness were embedded in all the subjects, they would learn the trait of happiness connected through subjects. If a future leader does not know happiness, his leadership will only push towards productivity. The person will then be least bothered about the employees and follow only beaten track rules and regulations. If the leader does not know the inner qualities of human beings and is programmed to make the best use of every company’s individual, not realising their happiness, then everyone suffers. That is why you see a very high degree of stress and depression in companies because of no concept of employee’s wellbeing.

Of course, every company has a certain kind of wellbeing program, but it is hardly applied. Some companies have spaces with gyms and other indoor sports and activities. They also have spaces for children for working mothers. They have also created greenery, so people feel good with waterways and plants around them. However, spaces mean nothing if they are unhappy beings there. Such spaces will become meaningful only when happiness is in employees.

Therefore, humanity is an area that needs to be brought in the leadership framework. Of course, the MBA, that I know, they teach you how to manage, critically think, how to work on adversaries, including production services, how to look after finances so that they do not fall in crisis, how to react to the public scandals to fine-tune the health of a company, to regulate how you can compete with others, and how to bring down other companies as there is no concept of collaboration. It is all about separation, working on a win and lose situation all the time.

So, every MBA course, the language they use should be very positive, including the feedback. Instead of saying to your subordinate, this is not a good report. You could say, I appreciate you have put hard work, if you improved in this area in this form, it would come out great. Suppose the subordinate is not able to comply in time. In that case, you could say, you were supposed to provide the report yesterday, is there anything I can do to help you complete it by today? Instead of saying you did this job poorly, you could say, you can do it better, shall we try again. Such language motivates an employee and also feels belonged in the company.

As nature and environment are very important, if Management education or commerce takes care of nature, it will help society pursue happiness. Human beings will be happier when nature is in abundance. The more plundering of nature, the closer we get to extinction. We continue the extraction from the earth unabatedly for the greed and profitability of few.

So, MBA students must know, who are we and where do we come from? What legacy should we leave behind so that our generations must live happily? If these concepts are embedded in the MBA

curricula, then I see it becomes a fertile ground to learn from and save the future for humanity. I think MBA is one area where it tries to go deeper into the minds and make you more creative. Thus, using the potentials for a future generation for sustainability and equity will become utmost. And this can happen only when we practice compassion.

According to you, what are some of the things that must be part of the happiness curricula in management education?

- Nature and environment consciousness, as already explained above.
- Human science- how do human beings sustain their happiness. The study of the human mind, psychological wellbeing.
- Community and culture: -In an org, there will be people from different culture, one must celebrate the diverse culture and value the differences. Understanding various people and their culture, they will learn who they are serving? They will learn to realise that they are not working for the owner to mint money but for the benefit of the larger good. It is for the community and nature. The ultimate product is for the community, and for the community, they are working.
- Self-governance-To be responsible socially, emotionally, physically, and mentally. Where are the MBA students in these areas? Self-governance becomes as well as essential. Learning to manage oneself in all kinds of situations.
- Managing time- It is like after every two hours sitting on a chair, going out, breathing in, doing some mindfulness practice, and taking a quick nap for 20 mins after the meal. It may seem to slow down, but you will be doing much more than usual.

If you have happy people in the company, the outcome or product will be much more in amount and of higher quality. The relationship with customers will be exceptional.

This is a journey that we must all take. People will become better, responsible, and reliable and better in society.

What Management Education can Learn from Bhutan's GNH model?

There are four pillars under which are nine

domains supported by thirty-three indicators. The domain Psychological Wellbeing as a part of Cultural Preservation and Promotion is about negative and positive emotions. Both emotions come to us through epigenesis, and the negative one works faster than the other. It is the reptilian brain...because we are protective ourselves negatively. However, positive emotions can always be nurtured and nourished with practices of spirituality (meaning serving others and being compassionate), meditation practices, contentment, serving others, living in harmony with nature, realising one innate potential and values. This includes prayers, chanting, yoga, and others.

The good governance pillar and a domain by itself cut across all others is an essential one. It helps us understand our connection with the organisation, people in it, their rights, their problems, their values, their confusions and conflicts, their passion, and so on. Also, how rules and regulations affect their daily work, including environment, and working conditions. This, however, can be nourished only when the leader becomes self-aware, is in self-control, has social skills and is socially aware, and is motivated to help others.

Time use is another domain which is essential to help balance work-life balance. A company which honours human being does take care of the time use. They will not keep a married person engaged beyond their time because it directly relates to their happiness in life. A wise leader will rather give people a job where they will be engaged for all their eight hours in the office and not impose – so job design is an vital and essential part. A story here. A colleague of our famous Scientist President Shri Abdul Kalam was so engaged in the research that he forgot to go for his wife's birthday. This was known to Shri Kalam. Research is such a work when you do not reach a point you do not and should not leave. So, Sri Kalam went to celebrate her birthday at his house. This is the trait of a leader.

Time management should be the prime responsibility in the organisation of a leader. As proven by research, we need eight hours to sleep; otherwise, our telomere gets cancerous and shorten, and we age and pass away faster. The second eight hours is for working. If the job is constantly sitting in these eight hours, the employee must get up every

two hours and do a mindful movement and at least three minutes of meditation. S/he will be doing more work with this practice. The third eight hours must be for the person of her/his chores, exercise, nature walk, family time and/or following her/his passion.

Environment preservation and protection is another pillar and a domain by itself. How much the leader knows about nature. Which materials are harming ecology? How are safety measures in place for environment preservation? Materials used in the office how are they disposed of, are they reused, recycled or reduced? How is the solid waste managed in her/his working environment? Are their work in the organisation environment friendly? Are they supporting the cause of nature? How aligned are they with nature and its ways? Do they know if they waste they harm nature, buying more clothes, moving in singular cars, eating junk food, smoking, drinking sweetened drinks, all contribute to global warming?

The living standard is a part of equitable and sustainable socio-economic development. It helps us to look in the absolute terms, realising what is enough. If we become comparative, then nothing is enough, greed sets in, and we continue to go for more and more. Thus, a leader should bring in the culture of fair share...equity, humanity, and kindness must play a role to provide the right income so that they are looked after. There could be small funds for such support contributed by the ones who have more. A sweeper may support three schoolchildren and his wife. Is his salary enough to pull their hardship... malnourishment, fees, clothes...how can a leader help such a person in an organisation so that his living standard is just right?

Education, as the domain of the above pillar, is essential for the leaders to consider. This domain is developing skills and values. Skills to make the company one family, helping them develop their skills in their respective works. Also, human values of not lying, stealing, eating meat (supports killing), deep listening and loving speech, and the right nourishment to the mind and body, bullying, sexual misconducts, regarding someone lowly, shoutings, scolding, providing bad feedbacks, abusive language, etc. for which right values need to be learnt, developed and nurtured in the organisation.

Health domain under the above pillar is essential. The body and mind are the production capabilities. If we do not learn to nurture them, we will never be happy, and if we are unhappy, our outcome will be less. Allow naps of twenty minutes, and every two hours make them get out of their chairs and exercise and meditate. Never allow them to eat junk which is either factory-prepared or from quick food outlets. Also, ask them to avoid eating meat and sweetened drinks. Prolonged use of junk food and sweetened drink is diabetic and cancerous as well. There has been enough research that meat and dairy products are highly harmful to health in being diabetic, cancerous, and developing heart problems. Meat and dairy industries take away eighty per cent of arable land contributing more of global warming...let us turn them to the forest again for humanity and their survival. See how closely our health is related to nature. The abundance of ecology brings happiness and wellbeing.

The domain community vitality, as a part of the pillar of cultural promotion and preservation like psychological wellbeing, is very essential to build trust in the organisation. For this, there must often be get-togethers, celebrations of difference, values building, relationship building, etc. This domain can be developed if we make love as 'living on values every day,' on which rests four pillars,

called the RICH, relationship, integrity, compassion and humanity...such an organisation will be very high in its delivery and customer care. Thus, the trust will naturally be there, and feeling of safety and belonging will arise that cannot be measured by money.

Finally, cultural diversity and resilience belong to the same pillar as above needs a close look in individual family background. Their happiness in and with their families is productive for the organisation. The boss must visit them in their houses for a cup of tea and sound grateful for the employee that s/he is doing a good job. Lower cadre employees are suffers in many organisations. Helping them to build their family relationship is so very important as it will serve the company better. Encourage them to speak their language, share meals, bring cultural programs to share... create an avenue of helping hands plus a space to showcase their talents. Try not to judge anything in culture but see things as they are. Appreciate, simple words like thank you and sorry. They are ,potent tools to make people belonged. Forgive always....and ask others to do so.

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Realizing Sustainable Development Goals through Higher Education Institutions for Promoting Industrialization, Employment: The Need for Entrepreneurs to Meet the Goals

Pradip Himmatrao Barad*, Sunita Kalakhe**

According to UNESCO, education for sustainable development “empowers people to change the way they think and work towards a sustainable future”. It therefore involves making access to good-quality education available at every stage of life. More specifically, it involves educating students on the necessity of sustainable development by integrating sustainable development issues into all aspects of teaching, research and service. Initiatives of higher education institutes to develop industries by developing special skills in students and thereby create employment. Sustainable development can be achieved through the collaboration of industry and higher education institutions.

India’s gross enrollment ratio in higher education up to 2010 and GDP studies show that it is almost the same. In short, the more a country progresses in higher education, the more jobs it creates and develops. In the 2006 National Knowledge Commission report, the Sam Pitroda Committee had proposed 1000 universities for sustainable development of the country. The increase in the number of universities today shows an increase in the gross enrollment ratio with the increase in higher and technical education. With higher and skilled education, the problem of employment does not remain. A graduate is seen to be doing an excellent job in any field, not just a job. For this, it is necessary to develop entrepreneurship from within through skill development and skill development through education. Entrepreneurship in education needs to be developed in order to develop useful tools and techniques for the benefit of the general public by transforming innovation and new ideas in students into research and transforming research into industry.

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The first Prime Minister of India Pandit Jawaharlal Nehru and the Minister of Agriculture of India Dr. Punjabrao Deshmukh established the College of Agriculture and Agricultural Engineering and the University of Agriculture for the education of Indian students in the field of agriculture. A number of grassroots researchers from across the country came forward to interact with the scientists of Shetkari Krishi Vidyapeeth to provide opportunities for the youth of the country to innovate and research the rural hardworking farmers. It is worth noting that the inventions created out of necessity and the surplus labor of other peasant laborers and the employment created out of it. Dr. Punjabrao Deshmukh developed a link between technological discovery and agriculture by hosting international agricultural exhibitions in India on the lines of Paris. From agri-agri-entrepreneur to India, the problem of food and hunger was completely eradicated. Agri-entrepreneurs helped in reducing the problem of unemployment from there. In order to increase agri-entrepreneurship today, agri-entrepreneurship should be introduced in every college along with agri-colleges for the use and development of agri-technology skills in higher education as well. India is a largely agriculturally dependent society. Agribusiness is critical to the sustainable development of success and colleges should take initiatives to develop agri-entrepreneurship.

The key role of decent work for all in achieving sustainable development is highlighted by Sustainable Development Goal 8 which aims to “promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”. Decent work, employment creation, social protection, rights at work and social dialogue represent integral elements of the new 2030 Agenda for Sustainable Development. Furthermore, crucial aspects of decent work are broadly rooted in the targets of many of the other 16 goals.¹

Objective of Papers

1. To know sustainable development goal.

2. To study role of higher education institution in sustainable development
3. To define entrepreneurship for promoting research, industrialization, employment.
4. To discuss role of agricultural and research entrepreneurship for economic, social development.

What are the Sustainable Development Goals?

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The 17 SDGs are integrated—they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability. Countries have committed to prioritize progress for those who're furthest behind. The SDGs are designed to end poverty, hunger, AIDS, and discrimination against women and girls. The creativity, knowhow, technology and financial resources from all of society is necessary to achieve the SDGs in every context.²

Higher Education and the Sustainable Development Goal

UNESCO Target 4.3 of Sustainable Development Goal (SDG) 4 addresses specifically equity in higher education, aiming by 2030, to “ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.”

Higher education also forms an important part of other goals related to poverty (SDG1); health and well-being (SDG3); gender equality (SDG5) governance; decent work and economic growth (SDG8); responsible consumption and production (SDG12); climate change (SDG13); and peace, justice and strong institutions (SDG16).

Higher education has changed dramatically over the past decades, whether in terms of increasing enrolment, student mobility, diversity of provision, research dynamics or technology. Some 220 million students are enrolled in universities around the world – a number that has risen by 89% in the last 15 years and is set to expand. At the same time, higher education institutions are increasingly called on to

prepare graduates to contribute to the Sustainable Development Goals. Higher education institutions have a major role in contributing to the SDGs by preparing lifelong learners for the challenges of the 21st century. More than ever, collaborative research and open science are needed to contribute to the recovery and resilience of societies, connecting education to other sectors, such as health, employment or the environment³

UNESCO Goal No. 8 : Decent Work and Economic Growth

Over the past 25 years the number of workers living in extreme poverty has declined dramatically, despite the lasting impact of the 2008 economic crisis and global recession. In developing countries, the middle class now makes up more than 34 percent of total employment – a number that has almost tripled between 1991 and 2015. Over the past 25 years the number of workers living in extreme poverty has declined dramatically, despite the lasting impact of the 2008 economic crisis and global recession. In developing countries, the middle class now makes up more than 34 percent of total employment – a number that has almost tripled between 1991 and 2015.

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However, as the global economy continues to recover we are seeing slower growth, widening inequalities, and not enough jobs to keep up with a growing labour force. According to the International Labour Organization, more than 204 million people were unemployed in 2015.

The SDGs promote sustained economic growth, higher levels of productivity and technological

innovation. Encouraging entrepreneurship and job creation are key to this, as are effective measures to eradicate forced labour, slavery and human trafficking. With these targets in mind, the goal is to achieve full and productive employment, and decent work, for all women and men by 2030.⁴

Highlight

48 percent Women's participation in the labour force stood at 48 per cent in 2018, compared with 75 per cent for men. Around 3 in 5 of the 3.5 billion people in the labour force in 2018 were men.

2 billion Overall, 2 billion workers were in informal employment in 2016, accounting for 61 per cent the world's workforce.

85 million Many more women than men are underutilized in the labour force-85 million compared to 55 million.

5 per cent an estimated 172 million people worldwide were without work in 2018-an unemployment rate of 5 per cent

1 million As a result of an expanding labour force, the number of unemployed is projected to increase by 1 million every year and reach 174 million by 2020

700 million Some 700 million workers lived in extreme or moderate poverty in 2018, with less than US\$3.20 per day.

Goal Targets

- Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries.
- Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.
- Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.
- Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from

environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead.

- By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
- By 2020, substantially reduce the proportion of youth not in employment, education or training.
- Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms.
- Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.
- By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.
- Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.
- Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries.
- By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization.⁵

Research Entrepreneurship and Dr. Anil Kakodkar's Vision on Sustainable Development through Higher Education

Senior scientist and former Chairman, Atomic Energy Commission of India, Padma Vibhushan Dr. Anil Kakodkar said in convocation address "We need to enhance our research excellence and also bridge the research entrepreneurship gaps on one side while we shape our young people with right capability and mindset on the other. Our institutions

have been both knowledge creators as well as value creators as well as value creators between 2008-2018, India's Publication of science and engineering articles increased from 48,998 to 1,35,788, an average annual growth rate of 10.73 per cent. The country now accounts for 5.31 percent of the total world publication in science and engineering and stands at the third position behind China and USA. We are well on our way to become world class knowledge creators. However, in the context of value creation, India ranks 40th on International Intellectual Property Index and stands at 20th spot among the top 100 countries that have been ranked in the Global Start up Ecosystem Index 2021 by the start-up blink. While innovation does spur economic growth, we need innovation in high-tech space to be globally competitive. Also Dr. Kakodkar suggests for increase economic growth and employment need develop model of rural development for sustainable development. He said, "We need to be also aware of bridging the urban rural gaps which seem to be growing. Rural development in India in fact needs a special focus. Two third of India lives in villages with less than half per capita income as compared to urban areas. Bridging the urban rural divide at least in terms of livelihood opportunities is thus a matter of urgent necessity in our country. The emerging era of knowledge driven economy that facilitates democratization and decentralization of economic activities is thus a great opportunity for transformation of rural horizon. This however would involve capacity building of local people in dealing with emerging technologies and also ability to internalize technologies and build on them including solving problem during their implementation."⁶

Higher Education Institutions for Promoting Industrialization, Employment through Agricultural Entrepreneurship programme

The first agriculture minister of independent India, Dr. Punjabrao Deshmukh marked the beginning of progress in the field of agriculture for making India self-sufficient in food grains and for India's economic development. In the field of agriculture, land reform, construction of canals and dams. Irrigation facilities were constructed by constructing large dams, factories for production of seed fertilizers and pesticides were set up, agricultural colleges and universities were set up across the country to place more emphasis on agricultural training and research, modern laboratories were set up for research. He had

set up the Agricultural Produce Market Committee (APMC) to ensure that farmers' goods get a fair market price. The use of modern technology in agriculture to create agri-entrepreneurs, by organizing agricultural demonstrations of new technologies, machinery, livestock, etc., by showing the general farmers the idea of new experiments, shows that the agricultural sector and farmers have been greatly developed. It is because of their work at the country and state level that agriculture has developed today. The country has become self-sufficient in food grains and fruits, vegetables and milk products are being exported in large quantities. This is the work of the late Dr. Punjabrao Alias Bhausaheb Deshmukh. As part of their work, the training program is aimed at developing entrepreneurship among students and farmers, interviewing agri-entrepreneurs who are making progress by setting up agro-based industries at the local level and imparting guidance to others. Former Minister of Agriculture and Tourism of the State of Maharashtra and President of Shri Shivaji Education Society, Amravati, Hon'ble Shri. Harshwardhan Pratapsinh Deshmukh came up with the concept. The following training programs will be conducted for the fulfillment goal of sustainable development.⁷

Objectives of Entrepreneurship Development Course (EDC)

This programme aims to help, guide, support selected generation entrepreneurs to:

1. To Search noble farmers who have developed entrepreneurship in Agriculture.
2. To know local people can get awards in Agricultural sector.
3. To avoid farmer suicide, Strengthen their entrepreneurial abilities / motivation.
4. Understand the process & procedure of setting up of small / medium agricultural related industry / business.
5. Acquire the management skills to manage the unit.
6. To try to fulfill the dream of 1st Agricultural Minister Dr. Punjabrao Deshmukh and Member of Parliament Shri. Pandharinath Patil of agriculture and social development by creating entrepreneurship in agriculture.
7. Through the agri-entrepreneur program, education is for social development.

8. To fulfill the goal of this Shri Shivaji Education Society Amravati. Outcomes of Entrepreneurship Programme in Higher Education Institute

Agri-Entrepreneurship Program was conducted at Shri. Shivaji College, Chikhali. affiliated to Sant Gadge Baba Amravati University Amravati. And it associated to Shri Shivaji Education Society Amravati which largets 2nd number in Maharashtra state, followed by Rayat Education society Satara. Agri-Entrepreneurship Program was conducted by the department of Economics. In this, twenty consecutive agricultural experts were enlightened through demonstrations and actual field meetings in twenty days. Agricultural Engineering, Nursery, Horticulture, Floriculture and Medicinal Farming, Vegetable Cultivation, Hybrid Seed Production, Dairying, Goat and Sheep Breeding, Grain Processing, Seed Production Projects, Agricultural Tools Manufacturing, Agri-Tourism, Agricultural Processing and Export, Distribution of Agricultural Commodities And packaging etc. training was imparted to the students through actual agri-entrepreneurship programs. The program has benefited the students immensely and created awareness among the students pursuing higher education to start small and medium enterprises. Some of the students also made guidelines for the project. Data is everywhere today. But by converting that data into information, there is a need to create knowledge from information and wisdom from knowledge itself. It is seen that the agri-entrepreneurship training has been successful by some of the students in the training of vegetable cultivation, floriculture, dairy business. At the same time, it has been seen that agri-tourism has started in Chikhali taluka due to such training. If entrepreneurship is developed in education, then education research will not take long for rural development. According to UNESCO, for sustainable development, if not only agri-entrepreneurship but also entrepreneurship is introduced in many fields, the problem of employment will be completely eradicated and it will accelerate our path towards developed nation building. Agricultural Science Centers and Dr. Punjabrao Deshmukh Krishi Vidyapeeth, Krishi Mahavidyalaya of the area and specialty Maharashtra has provided invaluable assistance for this training. The achievement of this training is that the state level national level winning entrepreneurs visited the students on the occasion of the event and went on a study tour to their industry.

It is clear that this will lead to real sustainable development.

Conclusion

Awareness and training of students in college education is essential for sustainable development. If any subject is infiltrated in higher education, it reaches the society, this is the experience till date. Today, the gross enrollment ratio of higher education is steadily increasing. That's the decent thing to do, and it should end there. Awareness about copyright, patents, trademarks, and digital rights management is growing today through higher education institutions. The protection of intellectual property and awareness in that regard is on the rise to promote student innovation and non-initiative. The use of intellectual property for commercial gain is on the rise. Such an environment of creativity has given research a momentum and a great deal of value. Entrepreneurship not only leads to business but also lays the foundation for big business from small business. Heavy and large scale industries are emerging from the development of cottage industries, small scale industries and small scale industries. With the introduction of Choice Best Credit System in education and learning in terms of sustainable development, art students will also be able to choose the subject if they are interested in agriculture and engineering. The evolving policy of education will see the positive adoption of higher education as the specialty new education policy is actually adopted. The purpose of education is not only to create employment but also to create many entrepreneurs through education. The progress of any country depends on the quality of the university providing higher education in that country. In our country too, we see that world-renowned universities existed during the time of Emperor Ashoka and during the Vedic period. The world is still looking to our country in the hope of helping the human labor of higher education and technical education. There is no other country in the world that has so much youth power. This young force will not survive without leading the world towards the goal of sustainable development by creating industries through higher education. Education technology is going to be used extensively for peace as higher education youth in India have a conscience with education. And from that, the goal of sustainable development will be achieved through the work of India. The next generation will use technology for peace and for the

welfare and service of human beings on the strength of the traditions inherited from our tradition. There is no doubt that the credit for this goes to higher education institutions in India.

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(contd. from pg. 121)

develop skilled health workers who can manage health and wellness centres to meet the growing demand for health care workers.

Health and wellness requires funding and in India about 1.3 percent of GDP is currently being spent on public health. Because of this 62% of the expenditure on health services is met by the public that puts quite a burden on the population. Introduction of Universal Health Coverage through Ayushman Bharat is largely addressing this problem. The program aims to cover 10.24 crore families by providing an annual health insurance of 5 lakh INR for secondary and tertiary care hospitalization. Measures have also been taken to reduce the prices of medicines – by capping the prices of 958 drugs along with Cardiac Stents and Knee Implants. According to Central Drug and Standards Control Organization around 84 percent of the Active Pharmaceutical Ingredients (API's) for drugs manufactured in India are imported. The government has recommended to set up API intermediate clusters to boost the production of API's. Some of the states like Tamil Nadu and Rajasthan have adopted the policy of

bulk procurement of drugs to reduce the prices of the drugs. There is a need to establish rural health research centres and also promote research areas in traditional medicine by facilitating collaborative research with modern systems of medicine.

Along with management of health systems, nutrition is another important aspect since 40% of under five child deaths are due to under nutrition. The program of 'Poshan Abhiyaan' is envisaged to improve the nutritional status of children.

Good health and well being has many dimensions and involves several sectors responsible for maintaining hygienic conditions like improving nutritional sectors and promoting affordable health services.

Active participation of the private sectors and the citizens may go a long way in realizing the objectives of the programs initiated by the central and state governments for achieving the Sustainable Development Goal of Health and Well Being. □

The Road Ahead for Higher Education Institutions in India towards the 2030 Agenda for Sustainable Development Goals Amidst the COVID-19 Pandemic

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The member states of the United Nations General Assembly at their 70th Session in September 2015, adopted a new global development agenda that aims to transform the world for the betterment of people and the planet. It was termed as the ‘Sustainable Development Goals- the 2030 agenda’. The concept of sustainable development was defined in Brundtland Commission Report in 1987 as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. After the first Earth Summit in 1992 focusing on rights rather than needs, the chief line of enquiry was linked to the 1990s neo-liberal economic agendas and the growth of interest in human security, environment, social and natural capital as well as the intellectual property rights (Redclift, M. 2005).

Sustainable Development Goals (SDGs) - 2030 is a universal agenda having a collection of 17 interlinked global goals to achieve a better and sustainable future for all. Education as Goal 4 in SDG 2030 focuses on universal education and commits countries to ensure inclusive and equitable quality of education and promote life-long learning opportunities for all. UNESCO conceptualized lifelong learning as the “all learning activities undertaken throughout life with the aim of improving knowledge, skills and competencies, within personal, civic, social and employment related perspectives” (UIL, 2015). The 2030 development agenda not only perceives the lifelong learning as a process that originates at birth and lingers throughout all stages of life but this approach incorporates multiple and flexible learning pathways, entry and re-entry points at all ages, and strengthened links between formal and non-formal structures (Owens, TL. 2017).

By 2030, the Goal 4 on Education targets to ensure equal accessibility for all women and men to affordable, quality technical, vocational and tertiary

education including university. It assures that all learners acquire the knowledge and skills needed through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity. It also calls for building and upgrading educational facilities that are child, disability and gender sensitive to provide safe, nonviolent, inclusive and effective learning environments for all. With the assurance to increase in the supply of qualified teachers, Goal 4 on Education targets to substantially expand scholarships available to developing countries for enrollment in higher education including vocational training programmes, information and communication technology, technical, engineering and scientific programmes.

The present paper is written with an aim of exploring the way ahead for the Higher Education Institutions in India to reach the SDG 2030 agenda on education amidst the pandemics. The framework of the paper was presented under the objectives that includes a. The social demands for higher education in India, b. National Education Policy [NEP] 2020- and Higher Education Institutions (HEI) in India, c. The COVID-19 pandemic effects on higher education in India, d. The evolving technological platforms for higher education during COVID-19, e. The recent trends in higher education post COVID-19. The reports of national and international agencies on SDG 2030, Education 4.0, study articles pertinent to the impacts of COVID-19 on higher education in India and abroad are referred to narrate the objectives set for the paper.

The Social Demands for Higher Education in India

In the rapidly changing, increasingly complex and competitive world, higher education in India plays an important role in socio-economic growth and development of the country by preparing graduates to meet vocational needs and demands. In one side the

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educated unemployment has been steadily increasing due to the mismatch between the aspirations of graduates and employment opportunities available to them (Tiwari P, et al., 2011), yet the demand for higher education goes on increasing due to political pressure and this excessive demand has led to its unplanned expansion (Dhesi A, 1998).

Similarly to explore social demand we have to identify the determinants of individuals' expectations and choices at the micro-level in the present socio-economic context, more particularly prioritizing the public spending in the education sector as the National Education Policy 2020 recommends for 6% of India's Gross domestic product (GDP) against the current spending of 3.1% in 2019-20 (Economic Survey 2022). Individual perceptions of opportunities and the capacity to pursue them vastly differs and broadly relates to their socio-economic background and schooling. For sustainability amidst the over dependence on government funding and unplanned expansion across its demographics, higher education in India calls for quality attainment at all levels. The discrimination seen in labor market also influences the demand wherein the investment in education from the disadvantage groups are less in contrast with the favored groups who are more in advantages position. The evidence suggests that various religious-caste categories in India face unequal opportunities in education and in labor market (Dhesi A, 1998).

University Grants Commission in its report on Higher Education in India (2008), identified issues related to expansion, inclusiveness, quality and finance had stated that the prevailing challenges before the policy makers is that of the equitable access to social, religious, occupational and economic groups living in rural and urban areas to educational opportunities in higher education. It also identifies the gender inequality that has remained noticeable as women in each category of population continue to be trailing significantly in comparison to their male counterparts (Sachindanand S & Srivastava RS, 2008). Therefore, heavy task lies before the policy makers to create conditions that enables the historically deprived social groups, religious and linguistic minorities, landless and poor wage earners could be brought within the ambit of higher education, which may singularly create a resilient bases for socio-economic change and upward mobility. To enable inclusiveness in the process of socio-economic and political development, it is highly important to apply

the principles and instruments of equity, which could benefit various groups especially the disadvantage who are so far either remained untouched or excluded in the developmental processes (UGC, 2008).

National Education Policy–2020 and Higher Education Institutions in India

Based on the foundation pillars such as access, equity, quality, affordability and accountability, the National Education Policy–2020 (NEP) seems to have aligned to the SDG 2030 agenda for sustainable development. The new paradigm of NEP—2020 is seen as ‘revision and revamping’ of educational structures in the country including its governance and regulation to create a system that is holistically associated with 21st century aspired educational goals stressing more on individual's creative potential. Due to the Global impact of Information and Communication Technology [ICT] in the new millennium, India has witnessed massive progression towards becoming more oriented and artificial intelligent-dependent society. While more jobs being created as the result of this digital transformation where viable options and growing investments are attracted, on the other hand emerging challenges due to pandemics, climate change, inequalities calls for demands on jobs in the field of life sciences and social sciences as well as reiterating the need for multi-disciplinarily in teaching and learning process. It is prudent to make sure that the education 4.0 should be less ‘content’ and more ‘thought’ driven with analytical skills and problem solving approach. The higher education should focus on the learners' ability and make them more innovative, adaptive and multi-disciplinary thinker thus expanding their horizon of knowledge to see the society in an objective and holistic way and start contributing solutions to the societal problems. Apart from vocational training for the learners, NEP 2020 through its Education 4.0 calls to build character, ethical values, and empathetic skills in the learners and at the same time prepare them for gainful and fulfilling employment.

NEP–2020 aims in developing individuals to specialize in one or more areas in-depth and inculcate values like intellectual curiosity, ethics and morality, social commitment along with scientific temperament. Recommending increase in budget and appropriate fund allocation in infrastructure development, NEP–2020 sought to create more universities and colleges that can offer multidisciplinary courses in regional and

other languages thus removing rigid barriers across streams and specializations. It proposes to increase Gross Enrollment Ratio (GER) from 26.3% (2018) to 50% (2035). NEP-2020 encourages public and private universities while more emphasis given on public universities. It initiates the idea of Research-Intensive Universities (RIU) and Teaching-Intensive Universities (TIU) and give equal importance for the both. For promoting holistic and multidisciplinary education, even a purely technical discipline such as engineering shall offer arts, humanities and soft skills and with these idea the NEP-2020 intends to form Multi-disciplinary Educational and Research Universities (MERUs) at par with Indian Institute of Technology (IIT) and Indian Institute of Management (IIM). For creating optimal learning environment to support students, NEP 2020 suggests HEIs to review and reinvent its Curriculum Based Credit System (CBCS) with a criterion based grading system emphasizing on the continuous and comprehensive evaluation. It recommends financial assistance for the students especially belonging to Scheduled Caste and Scheduled Tribe community and others through scholarships and sponsorships. It also tries to earmark HEIs in promising districts to create special education zones. While focus on vocational education, NEP-2020 recommends to constitute National Committee for Integration of Vocational Education under the Ministry of Human Resource and Development (MHRD). To curb education becoming more commercial, all the educational establishments both private and public to be audited in a standard set by the Higher Education Commission of India (HECI) and direct them to transparently disclose their educational fees and charges to check any arbitrary increase of fees during admission.

The COVID-19 Pandemic Effects on Higher Education in India

The COVID-19 pandemic has drastically changed the sphere of education disrupting every aspects of teaching and learning process creating an unprecedented test on education on the whole while unforeseen challenges in the higher education stands in the way to meet the Education 4.0 goals. UNESCO informed 68% of student population in the world reportedly affected by the pandemic as early in the first week of June 2020 and the figure raised to nearly 1.2 billion students across the globe was affected due to the closure of schools and colleges. The efforts were made to lessen the impact of the

educational institutions by resuming it online using digital means but vulnerable and disadvantage communities were far behind in its reach to education. The pandemic steered the education sector forward with technological innovations but had significantly interrupted the higher education. Even though India adapted quickly to the new-age learning with its technological advancement, but still it is observed that only 45 crore people of our total population have access to the internet/e-learning. The students residing in rural areas are much deprived of the technologies and therefore making them inaccessible to the online education while it was truly difficult for both students and teachers to adapt to new teaching methodology that is delivered through online (Mishra, L et al., 2020). The rapid changes in the system have led to decline in the well-being of both students and teachers (Sahu, P 2020).

Some of the major effects of the pandemic on higher education includes, destabilization of all educational activities, mixed impact on academic research and development, affected educational assessment system and reduced employment opportunities (Jena P K, 2020). The methodological gap was innate due to the lack of transparency that the face-to-face lectures could bring, as opposed to the devastating effect in terms of traceability that the online education brings (Garcia-Penalvo et al., 2021). In the initial phases of the pandemic the goal was making all the learners to finish the academic course 2019-2020, including the assessment while not disturbing their future plans and career. Thereafter the cancellation of board examinations, postponement of external assessments had a direct impact on the educational and occupational future of the students' life (Jena P K, 2020).

The Evolving Technological Platforms for Higher Education during COVID-19

The HEIs have responded positively to the emerging challenges of the pandemic in the crisis situation. The Ministry of Human Resource Development (MHRD) and the University Grants Commission have made necessary arrangements by launching many virtual platforms with online depositories and educational channels for student learning. The digital initiatives taken by the Government of India includes, e-Pathya- similar to e-PG Pathshala, a software driven course package that facilitates students to pursue higher education

in distant learning mode; Swayam- Massive Open Online Courses (MOOCs) where 140 universities have approved credit transfer feature; Gyandhara- an internet audio counselling services by Indra Gandhi National Open University (IGNOU); e-GyanKosh- a National digital repository to store and share digital learning resources; e- Adhyayan- providing 700 plus Post Graduate e-books; National Digital Library of India (NDLI)- a repository of e-contents on various disciplines benefiting all kinds of learners across streams including differently-able users and other lifelong learners; Gyandarshan- a web based Television channel dedicated to educational and developmental needs of the country; FOSSEE- Free and Open Source Software for Education; Shodhganga- a platform for research scholars to deposit their Ph.D. thesis; e-ShodhSindhu- a collection of e-journal articles and e-books; SAKSHAT- a one stop educational portal that aims to address the educational and learning needs of the students, faculty members, research scholars and lifelong learners; National Educational Alliance for Technology (NEAT)- an initiative for capacity building of the learners in latest technologies and VIDWAN- a premier database and national research network that has the profiles of the scientists/ researchers in academic, research institutions in India.

The Recent trends in Higher Education post COVID-19

The lesson from the pandemic is that learning cannot be confined to classroom boundary or to any other specific boundaries and students will tend to develop virtual learning skills continuously using the technological resources that are available and hence learning is going to become more personalized in future at least in higher education. New trends will develop as the technology grows, but the pillar around which it will advance would be customized learning, accessibility, engagement and user-centric learning (Mathivanan, S.K. et al., 2021). Due to restricted movements, national and international student movement for pursuing education may be diminished for a while till the pandemic settles down. Assessment system may be reviewed and changed if necessary and Artificial Intelligence system may be utilized to help the teachers in evaluating their students. To meet the educational challenges of the country, more demand for Open and Distance Learning (ODL) and online education will prevail. The blended learning can combine face-to-face and online method which may get transform into a new

structure. There is a considerable rise in collaborative work in the domains of teaching wherein academic conferences, workshops and meetings are held online and faculties across the globe participate in teaching learning process benefitting the students, academia and industry. It also has become financially viable and cost cutting in terms of hosting and organizing. The collaborative work also calls for trans-disciplinary approach to education and research by integrating various disciplines.

Recommendations

The disruption caused by COVID 19 in education delivery and in attaining Education 4.0 prompts the policy makers to improve participation from the learning community and maintain affordable e-learning strategies while addressing the digital divide of the country. To build a resilient education system in India for its overall progress, a multi-pronged strategy is required in handling the vast challenges and the following recommendations can be considered with a view of sustainable development,

1. The HEIs to recognize ‘social pandemics’ like poverty, gender inequality, social discrimination among others that are not widely recognized. HEIs can play a crucial role in addressing it by building knowledge and strategies that are useful for policy makers. Similarly HEIs can also work in tandem with the Government machineries to play a supportive role in eradicating the social pandemics.
2. Governments should ensure adequate resources are allocated to the HEIs to meet its needs particularly investing in human capital to improve the quality of education.
3. Focus should be widen to include social sciences and humanities among other disciplines and more funds need to be allocated for its development.
4. The technological means to deliver the educational needs of the country across its socio-demographics will be successful only if the digital divide is bridged. Similarly, HEIs should ensure ‘Education for all’ and efforts must be taken for inclusive learning focusing on the vulnerable and marginalized communities.
5. Need to devise strategies that are envisioned to make higher education system competent to cater the worldwide growing demand and supply. Immediate measures are needed to alleviate the impact of the pandemic on employment

opportunities so that the demand-supply dynamics are maintained.

6. It is time to redesign, reinvent pedagogical practices in higher education by exploring combinations with traditional classroom learning with e-learning modes to make a unified learning system. Monitoring the quality of the learning courses and its outcome has to be ensured by the appropriate bodies that is envisaged in NEP 2020.
7. To transfer traditional knowledge in the area of health and well-being, ethics and morality to the learners especially in the higher education, an interdisciplinary approach to learning will ensure all round development of the learners in contributing to sustainable development.
8. It is time to create opportunities to integrate environment and health courses in the higher education curriculum as a value added course so that learners can be environmentally literate for social action. Steps to be taken to remove barriers to the teachers such as the time constraints, imposed guidelines pressures, and lack of learning materials focusing on environmental literacy among others (Keselman, A et al., 2011).
9. HEIs should strengthen policies on hygiene practices among its teaching learning community. The learners should be taught not only to gain knowledge and behavior practices on the prevention of communicable diseases, but also the institutions should devise health management tools that enables them to practice health and well-being protocols until physical and mental hygiene becomes a cultural norm.
10. Need to strengthen research efforts and evidence-based best practices. The researchers, faculty members and professionals of higher education need to engage in trans-disciplinary research studies constantly, to improve student learning actives amidst the pandemic situation.

Conclusion

The effects of COVID-19 is bound to stay sometime and learning from it seems more important so that future steps can be taken with the wisdom gained. To realizing the Education 4.0 in SDG 2030, governments has to weigh the opportunities and challenges pertains to education more holistically and

devise measures that are equitable and acceptable by its population based on the educational needs. Though technology is utilized widely in promoting and continuing the education, it is still unreached many especially the marginalized and disadvantage groups. HEIs should take cognizance the social pandemics and work on quality education that envisages in NEP 2020 for a sustainable growth and development of the country. Addressing the gaps aforementioned in this paper while highlighting the challenges and available opportunities, can potentially lead India towards achieving SDG 2030 if not atleast to its close quarters.

Conflict of Interest

The authors declare no conflict of interest.

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Role of Spiritual Factors in World Happiness Index

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Happiness is a feeling and its measurement in units is in fact a Himalayan task. Focus of all activities of human beings, good or bad, has always been on increasing their happiness level. It shows that happiness is the most preferred, valuable and pleasing value of all human beings. Realizing its extreme importance the United Nations had rightly prepared and introduced a quantifiable Happiness Index in 2012 and presented the first World Happiness Report (WHR) covering 156 countries⁽¹⁾. Intension of the WHR may be to motivate the different countries to learn and get benefited from the experiences of the other countries having higher Happiness index while framing welfare policies. It is a well known fact that the WHR of United Nations depends only on physical key explanatory variables of happiness like Gross Domestic Product (GDP) per capita, social support, healthy life expectations, freedom of life choice, generosity and corruption etc.⁽²⁾ but ignores entirely the role of conscient or spiritual functional variables (SFVs). It is being felt that SFVs may be equally significant in the determination of happiness of human beings across countries. The present study therefore is an attempt to identify and highlight such SFVs which may contribute to the happiness index of different countries and to provide ample justification for their incorporation while preparing World Happiness Report.

The word 'human being' as per the Latin language is made up of 'humus' which means mud and 'being' which means consciousness. Consciousness or soul is a conscient energy which uses body as a physical means to perform its different activities to get happiness. To be pin pointed we measure actually the happiness level or index of souls residing in their bodies and bodies are distinctly material and insensitive without them. So the consideration of the consciousness or the being becomes unavoidable, because it being conscient solely feels the changes in happiness or unhappiness level due to variations in its functional variables, which may be physical as well as conscient.

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A wealthy person may be having a sound mind and healthy body yet he/she may be unhappy within. For instance, a healthy and wealthy person who is honest and generous, instantly comes to know that he and his all family members are suffering from bone cancer except his blind grand girl child. In another case suppose a person finds that his only daughter-in-law is very egoistic and inflicts insult on each and every step or occasion on him and on her mother-in-law. He loves and is very much attached to his son and does not like to be separated. In both types of cases no amount of increase in physical functional variables may address to their sufferings and restore their happiness. This apart inner ailments of the beings may be caused by hurting of their sentiments due to bad neighbourhood, negative and toxic thoughts like revenge, insecurity, anxiety, fear followed by wrong decisions and bad deeds of the people like theft, scandles, rape and murders etc. To all aforesaid sufferings, spiritual knowledge and the company of spiritually uplifted people alone may provide solace and bring back or restore their happiness.

Since everywhere such micro cases are so common that they may account for macro decisions, because almost every person to-day is suffering from one or the other type conscient or inner ailments. Increase in the physical explanatory variables of World Happiness Index alone may fail to or hardly raise their happiness levels because they are suffering from within. The saying of Guru Nanak Dev - '*Nanak Dukhiya Sab Sansar*'⁽³⁾ indicates towards all sufferings caused by deficiencies of physical/ spiritual functional variables of happiness.

The present situation reminds us of two great English Poets, viz. W. Wordsworth and John Milton. Wordsworth said that beauty of the nature (a physical functional variable in the present context) increases the happiness of human beings.⁽⁴⁾ John Milton contradicted Wordsworth asserting that nature increases the happiness of people only when they are already happy within.⁽⁵⁾ He further added that if their life is full of agonies and pains then the beauty of the nature cannot increase their happiness. He went on to say that to such persons the dew drops on the grass in the morning cannot look like pearls but will appear to them as the drops of tears rolling down the cheeks of

their beloved. Therefore, the inner happiness of the beings has to be taken into account while preparing the WHR. So, it is necessary to identify the Spiritual Functional Variables which may ensure not only the threshold level of spiritual happiness but may also boost the overall happiness level when used in combination with the physical functional variables. Threshold level of spiritual happiness may be defined as an acquisition of minimum spiritual standing where an agonised person may give solace to himself/ herself e.g. by developing such thinking like 'as one sows, so shall he/she reaps' is a natural universal phenomenon and he/she may realise that the present suffering may be due to some wrong deed done on his/her part in the past.

In view of the aforesaid significant role of spiritual factors in happiness of the people, its spiritual functional variables at world level may be surveyed and examined as under:

Spiritual Functional Variables of Happiness

We need to search such spiritual functional variables which may alter the happiness level of the people and at the same time they should be easily measurable. There may be seven generally accepted innate values of all the human consciousness or souls viz; spiritual knowledge, purity, peace, love, contentment, bliss and might which may be sole determinants of spiritual happiness. A soul which is full of these seven values may be said to be perfectly happy. But decline in these values in the present era, perhaps to the lowest level, has given rise to widespread violence, riots, rapes, murders, adulteration, favouritism, injustice, intolerance, terrorism, ill health, insecurity etc, though varying from country to country. These evils have brought down the happiness of human beings at the lowest level. In order to raise their spiritual happiness level, we are required to measure and develop these values, for which there appears to be ample space.

But to measure and raise these aforesaid spiritual values, at micro and macro level, is a very difficult task. This difficulty may be set aside by searching their representative Spiritual Functional variables, which may be controllable and measurable, as depicted below.

Values

It may be a universal fact that people possessing these aforesaid seven innate values not only remain happy themselves but they may extend happiness to

others also. But how to calculate and compare the extent and depth of these values possessed by people across the countries? This may easily be done by surveying how far these values have been embodied in the courses of studies at school, college and university levels nationally and internationally. Then we may assess and compare the contribution of this functional variable to the happiness level or index of the people accordingly across countries on the basis of some devised formula by the committee appointed for this task.

Performance of Duty

People equipped with spiritual values may perform their duties towards their families, jobs and society better, because such persons consider the non performance of duty as a sin. Hence, due to good performance of duties on their part they may be more contented, satisfied and happy as compared to the non-spiritual persons. So, higher the ratio of the people with better performance of duties, comparatively higher would be its contribution to the happiness index. Further, their happiness level may also be higher across countries because better performance of duties also leads to rise in productivity, a physical functional variable of happiness. Level of performance of duties may be ascertained by consulting the heads of various sectors, departments and branches on the basis of a set proforma across countries and its contribution to happiness level may also be assessed according to a set procedure.

Spiritual Health

Recent researches in medical science reflect that majority of the diseases are psychosomatic and they have shown an increasing trend. Prof. R. Sagar (2020)⁽⁶⁾ reported, "The proportional contribution of mental disorders to the total disease burden has doubled since 1990". This shows decline in spiritual and mental health. Heart ailments, tension, depression, blood pressure, mental diseases etc. are caused by over and negative thinking. It is a spiritual defect, because the roots of thoughts, reside in consciousness and to treat them doctors recommend meditation to such patients. Choksi M. Patil B. Khama (2016)⁽⁷⁾ have stated, "Mental health is being recognised as one of the priority areas in health policies around the world^(8,9,10) and has also been included in the Sustainable Goals"^(11,12) Hence, spiritual health of the people of a country may be deemed better if the number of patients suffering from psychosomatic diseases are lesser. Naturally,

its people may be happier, other things remaining the same, as compared to the people of other countries, who are suffering more from such diseases.

Philosophy of Karma

The proverbs: As you sow so shall you reap, Do Good Have Good etc. have been accepted widely or universally by the people. Since this spiritual philosophy is of the opinion that action and reaction of the people are always equal and opposite sooner or later, the scientists may also tend to believe it as an eternal natural phenomenon. However if more people of a country know, believe and act according to this philosophy they may do more good deeds and therefore, they may be found more happy as compared to the people of other countries. It may be searched through surveying different groups of the people across countries whether they believe or deny this philosophy and accordingly this may be adjusted in the happiness index.

Donations

Spiritual people consider donation and help to the needy as a noble deed (punay). They derive happiness by doing such acts. The people of countries which are more generous in donation they may be said to be more spiritual and happy. For instance, people of Myanmar are Buddhist and they are stated to be the most generous in the world in the act of donations for the well being of their people.(L.N.Dahiya)⁽¹³⁾This may be because they are more spiritual and therefore they appear to be more happier. Hence, donations may be considered as one of the Representative Spiritual Functional Variables (RSFV) which may be easily measurable by visiting the institutions being run by charity and donations etc.

Meditation/contemplation on the self

Meditation practice is a means to acquire the spiritual and other values or qualities by linking the self with the deity of ones choice or with the God. It also amounts or leads to contemplation on the self where in the people may remove their own bad values/ disqualities gradually. People of all religions may practice it without being biased because these values are found common in all religions. People doing so may ensure happiness for themselves as well as for others. Even the scientists have been found of the opinion that the regular practice of meditation increases the grey matter of brain which is responsible for happiness, love, positivity etc.⁽¹⁴⁾ The percentage

of people doing meditation or self contemplation regularly and the number of spiritual or meditation programmes arranged by different companies for their workers during a year may be calculated cuntrywise. Sample surveys may be conducted by electronic means across countries and it may also be adjusted while preparing the happiness index.

Policy Implications

1. More emphasis on spiritual values and ignoring of materialistic values may prove counterproductive. One of the causes of poverty for country like India often quoted is that India has been a land of religion and spirituality. So, a balanced growth of spiritual and material values may prove worthwhile.
2. For the promotion of RSFV the governments of different countries are required to include them in their welfare programs.⁽¹⁵⁾ They may encourage and aid the institutions like Annamalai University to spread the spiritual values more and more.
3. To promote the RSFV all extravagent expenditure by the government on M.Ps., ministers, bureaucrats, political agendas, unnecessary subsidies etc. have to be curtailed and such funds may be diverted to the spread of spiritual values.
4. To assess the contribution of the various RSFV to the happiness index of the country a co-ordination committee comprising of some spiritual persons, heads or the representatives of various departments, companies, branches and some computer experts etc. may be constituted by the government under the welfare program. It invites sincere efforts of welfare departments of different countries not only to incur the required expenditure but also to raise public consciousness and awareness about the significant role of spiritual values in happiness.

Conclusion

Some level of happiness at conscious level is essential to ensure the realisation of happiness generated by the increase in physical functional variables. The study finds that spiritual values expressed here for practical purposes in the form of Representative Spiritual Functional Variables (RSFV) like values, performance of duty, spiritual health, philosophy of karma, donation, meditation etc. affect the happiness of the people around the globe. The RSFV of happiness may easily be measured, controlled and increased

by some committee and the government agencies of different countries as a part of their welfare and sustainable development programmes. If the World Happiness Index report includes the contribution of the RSFV towards happiness of the people then only it may be called a sound, complete and realistic report.

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Universal Education is the Necessity of Self-sufficient and Self-sustaining Nation

Ajay Kumar (IAS), Defence Secretary, Ministry of Defence, Government of India delivered the Convocation Address at the 40th Convocation Ceremony of the Dayalbagh Educational Institution on February 12, 2022. He said, "Find discipline and remain dedicated towards your end goal. There will be moments of despair and panic. These are moments that you need to overcome. And nothing and no one can stop you from scaling most arduous heights. Go and embrace the challenges and take a leap forward. Swami Vivekanand said that the aim of education is to manifest in our lives the perfection which is already there in us. This perfection is the realization of the infinite power in our inner self. Let me exhort you what he said, "Arise, Awake, Stop Not Till the Goal is Reached." Be clear about the goal which should always be dictated by the ethos of 'Service to the Humanity and Nation First'." Excerpts

I am truly delighted to be amongst all of you today. 12 Feb 2022 adds a glorious chapter in the rich history and traditions of Dayalbagh Educational Institute as you all graduate today, defying the odds posed by the global pandemic of COVID-19. My heartiest congratulations and best wishes to you all on your graduation day. As I stand on this podium, I see in front of me multitudes of faces all bright and eager, full of hope, energy and optimism. I see a wave of nervous energy just waiting to be unleashed. From here on you all will move into various fields. Some may go for management, some for higher studies, some will opt for going in for jobs while some may choose public service. Whichever field you choose to go into, remember one thing: Don't walk the road charted out by someone else, make your own road. Dare to dream and dare to follow your passion.

My heartfelt felicitations to the faculty, administrative and support staff who are tirelessly serving for the organisational cause. It's also time that we all thank those illustrious senior members of Dayalbagh family who have retired or may not present amidst us. People who have served in the years gone by to transform this University from a fledgling institution in the 80s, to a formidable force today. The force that has grown in size and stature, keeping pace with the contemporary educational challenges and training environment of modern India, a unique blend of "Tradition and Technology". Being amidst you today has also made me reminiscently revisit my alma-mater IIT Kanpur, a land that not only gave me nostalgic memories of life time but also made me what I

am today. I have learnt that one would never be capable enough to repay for the gratitude one owes to his school, college or country. The Chetwode Motto at Indian Military Academy, Dehradun is "The Honour, Safety and Welfare of your country come first always and every time." I think every institution and every person could be guided by this motto.

It has been a time of great churning and flux and it has indeed been a year which has tested all of us at unprecedented levels. Often stretching us to breaking points and yet as a country and as a people who are born into glorious uncertainties, we have emerged stronger, more resilient. As some of you may well know in May 2020, I also tested positive for COVID-19. I had followed all the precautions, maintained distance, worn a mask, sanitized at regular intervals, had shown up for work every single day because the enemy doesn't go on sick leave you see. Covid was a time of reflection for me. I have been a marathon runner. To be a successful marathon runner in addition to putting on your running shoes and simply hitting the tarmac, it is important to focus on discipline both of the mind and the body. Running a marathon is not about speed. It is about reaching a challenging goal. You go through panic, disillusionment, rock-bottom feelings before seeing the silver lining. Mental fortitude, focus and resilience are qualities which hold a marathon runner in good stead. I have learnt that not giving up at a time of despair and persisting with discipline even in darkest moments will invariably lead you successfully to your goals.

I have learnt to question status quo if it is not correct. We need not be afraid of change or a contrarian viewpoint. I want you to dream big, invert the pyramid, question status quo, ask for your rightful place under the sun because if not now then when? The synchronisation of *Mansaa*, *Vachaa*, *Karmanaa* (the mind, the speech and the action) guide us if things are correct or not. When these are synchronized life becomes a symphony and a joy. On the contrary, we will come across a number of situations where these are at variance. We say one thing and do totally different. We say we are now independent India. But our minds are still ruled by the British, even after 75 years of independence. Did you notice something new in this year's "Beating the Retreat" ceremony of Delhi on January 29. Will you believe that till last year we were still playing tunes which had British/Scottish legacy? All the tunes played by the military bands this year were Indian tunes. A small step in nation's journey but a leap in unshackling the fetters of colonial legacy. We see incongruence in *Mansaa*, *Vachaa*, *Karmanaa* all the time. Strive for consistency among them and you will find answers to difficult problems. You will find new innovating remedies where old cures were not working. Do not be afraid of giving up stereotypes and dogmas which have outlived their relevance.

I have learnt that innovation is ingrained in India. I am reminded of the time when the Tsunami hit the coastal regions. We gave GPS to fishermen to be able to safely find their way back. In under a week they started using GPSs to track where the maximum catch of fish was. There's ingenuity and innovation in the way we live, breathe and work. We live in a country of over a 1.4 billion people when every opportunity is fought for, when you're taught the value of frugality and innovation right from the day you are born, when you understand privilege, you truly also know how to make the most of every opportunity. I admire how we have been able to deal with scale. In IT we learnt that with increasing scale, the complexity of problem increases not linearly but exponentially. So is true in real-life. When we first conceived of Aadhaar, the world scoffed at us. We built world's largest biometric ID database at lowest cost. And the world is asking how? Today the world is adopting the Open architecture based India Stack whether it is digital ID system or digital payment system or Cowin architecture. Covid has

shown how innovation oozes in our society. From a country which did not even have testing labs or PPE kit making, in real time, we made ventilators, testing kits, COVID drugs, multiple vaccines. Many of you would have seen the now famous *Drone Show* which was held at Delhi on 29 January last month during 'Beating the Retreat'

Ceremony near Rashtrapati Bhawan at Delhi. It is a bunch of innovative youngsters like you who made this swarm of 1000 drones and made India only the 4th nation in the world over to be able to manage a swarm of 1000 Drones. When I gave them this challenge three months back, they were only able to fly 100 drones. The scale and speed confirms that innovation and ingenuity is embedded in us and we only need to uncover it.

Last year we saw 44 unicorns in India, the largest in any country of the world. For all I know, I have a unicorn in the making in the audience!!! All you need is to remember to build for scale and rise for the future, my friends. And do not forget when you build for scale, you build in India not only for India but for the world!

As a career bureaucrat who has been in the middle of unpredictability and uncertainty I have to always be prepared for the unexpected. Therefore, it matters to me immensely how to deal with problems in real time. And I have learnt that the only way to address a problem is to just do it. The story goes, a famous trapeze artist was instructing his students on how to complete a performance on the high bar. After finishing his talk, he asked his students to demonstrate what they had learned. One of his students stood looking up at his precarious perch, pictured himself falling, and become completely frozen in fear. "I can't do it. I can't do it." he gasped. The instructor put his hand on his shoulder and said: "Throw your heart over the bar and your body will follow." I am an engineer by training and Engineers are the doers by profession. And possibly that is where I realised the importance of just doing it. There will be times when you will feel overwhelmed with multiple challenges with limited time and resources to deal with them. The trick is to take the first step. It takes you one step closer to the destination. When there is a big problem, dealing with it one at a time keeps reducing the size of the problem. Brick by brick and you can build a tower.

I have learnt that it is not the information but what you derive from that information that makes all the difference. The world of today which you enter into is very different from when I was a student. The skill set that you require has changed dramatically over the years and even more dramatically during the Covid period. In a post Covid world you inherit a world where technology has been truly democratized. That means that each one of you has the ability to create an impact in the world. You have more access to information than we could've ever imagined. What I'd like you now focus on therefore is making meaning. How do you make sense of this information? You need to guard against fake news and propaganda. Avoid unverified perceptions. To sift through this the loads of information, you need to experience India, understand what makes it work. At DEI you have been blessed with a tradition of preserving the environment, you have learnt coexistence in harmony with nature and also making a useful contribution towards societal responsibilities. If you do are successful here, you can make it work anywhere in the world. The kind of impact that you can create today in India is an opportunity that a select few get even across 50 or 100 years.

I have learnt the importance of collaborations in the new world. The First Industrial Revolution used water and steam power to mechanize production. The Second used electric power to create mass production. The Third used electronics and information technology to automate production. Now this Fourth Industrial Revolution is building on the Third. While the digital revolution that has been occurring since the middle of the last century, what is special is that this revolution is characterized by a fusion of domains and technologies that is blurring the lines between the physical, digital, and biological spheres. In this fusion of domains we need to enhance collaborations, we need to learn to engage with stakeholders who have a different point of view; People who challenge us, people who question us. Apple, a company which is well loved and often a dream destination for a lot of young hopefuls, prioritised not just its processing power but also aesthetics, fonts and its user interface. Imagine selling a way of life based on design and fonts. We have long been accused of working in silos. Engineers treat humanities and liberal arts

as add-on. I hope to see Quantum physics meeting English Literature and creative arts and there is no reason why we will not have an Apple from India.

I have learnt that life is not a sprint. It is a marathon. Unlike sprint where you're counting on bursts and peaking in a limited time, life is like a Marathon. It is about testing your body to its limit and pushing both the human mind beyond pain towards endurance and stamina and a lot of it is about sustained sessions of practice, of repeatedly doing what is boring, of ensuring you find a rhythm. Find discipline and remain dedicated towards your end goal. There will be moments of despair and panic. These are moments that you need to overcome. And nothing and no one can stop you from scaling most arduous heights.

I have learnt to admire the confidence of New India. Just look around. When the pandemic hit the world, the world wrote us off. But it is India which is today acclaimed for not emerging victorious but also saving other countries and populations across the world. India is among the countries that are at the forefront of creating future-oriented technology policies and is demonstrating innovative ways to harness the power of technology. It is India which is bold, confident and second to none. It is an India which believes it can be Vishwa Guru. The New India believes that we are entering Amrit Kaal. We are a nation whose time has come and no one can stop us. Neeraj Chopra made history when he won the first ever track and field Gold Medal for India in Tokyo Olympics and the message to New India is "*Fenk Jahan Tak Bhala Jaaye, Dono Taraf Likha Ho Bharat Sikka Vahi Uchhala Jaye.....*" Global power structures have shifted. There is no single big super power. Things were changing even before the pandemic but because of the pandemic today India has the ability to take the lead. When I grew up there was the glitter of The American Dream and a gold rush to the US from India. Things have changed. Today it is the time of The Indian Dream. This is therefore your time to shine. We have much to celebrate and lots to achieve and this is the best time to be in an India of today. The global future will be shaped by you living your Indian dream, you owning your agenda and writing a new chapter in this new epoch of India.

Let me conclude. It is really an exciting phase of life for you all. Stepping from the secure world of college campus to the real world full of unlimited possibilities and vista of opportunities. The words of Hon'ble Prime Minister which he said last week seem relevant to sum up what I have tried to share. The Prime Minister said and I quote, "There is a possibility of a new world order post COVID-19. Today the world's perspective of looking at India has changed. The world wants to see a stronger India. It is imperative for us to take the country forward at a rapid pace.It is very important for us to make a Self-Reliant and Modern India. You all are the bravest, brightest and blessed to have defeated the pandemic to come out with flying colours. Go and embrace the challenges and take a leap forward. Swami Vivekanand said that the aim of education is to manifest in our lives the perfection which is already there in us. This perfection is the realization of the infinite power in our inner self. Let me exhort you what he said "Arise, Awake, Stop Not Till the Goal is Reached". Be clear about the goal which should always be dictated by ethos of "Service to the Humanity and Nation First".

Mark my words that this century belongs to India. I see that India is on cusp of achieving the greatness. Changes are coming in slowly but surely, and these changes are being brought about ...Not by people of my generation ...but *You*.....yes , by the bright , brave new generation that *You* represent... my young friends .I see amongst you Entrepreneurs, Scientists, Researchers, Public servants and Industry Leaders. And I see the Future of India in you. I see that *YOUR* ideas, *YOUR* hard work and *YOUR* enthusiasm is what will rewrite the destiny of this great nation. It is *YOUR* energy that will drive the changes which are coming to this Country in this century. With these I would now bid adieu to you, my dear friends. I exhort you to go forth and grab your destiny as it awaits you.

Thank you Management, the Faculty and each one of you for giving me this opportunity to be with you all this afternoon. It has really been stimulating. These treasured moments and lifelong memories may inspire you in your bright future. My heartfelt gratitude to the entire DEI family. All the best. God Speed.

JAI HIND

AIU Publication

on

REIMAGINING INDIAN UNIVERSITIES

'Reimagining Indian Universities' edited by Dr. (Mrs) Pankaj Mittal and Dr S Rama Devi Pani is a collection of essays by some of the greatest thinkers in the field of Indian higher education. Each essay in the book examines one or more of the critical topics and provides solutions and methods to overcome the issues involved in them. It provides new solutions and methods in the form of reforms and innovations to elevate Indian universities to world-class top-ranking levels. The book aims at providing a roadmap to government as well as the universities to gear themselves towards becoming more responsive to the present and future demands of higher education. Generating a corpus of new ideas that are significant for reimagining, reforming and rejuvenating Indian higher education system, Book is 'must read' for all those who are interested in reforming Indian Higher Education System.

The release of the book in the Annual Meet of Vice Chancellors 2020, coincides with the launch of New Education Policy. The Foreword for the Book was written by the then Minister of Education Shri Ramesh Pokhriyal 'Nishank'.

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Capacity Building Workshop on Accreditation

One-week Online Capacity Building Workshop on 'Accreditation: Different Aspects and Key Points' was organised by the Internal Quality Assurance Cell, Hindu Kanya College, Kapurthala, Punjab, recently. During Inaugural Function, in his Keynote Address, Prof. M M Goel, former Vice Chancellor, Professor and Needonomist from Kurukshetra expressed that all have to develop the power of observation as art by devoting time on what, why, when, where for whom to work without worries and take small but significant steps instead of big-bang approach for NAAC accreditation. The SWOT analysis of an institution with best practices adopted can help to know the performance level, said Prof. Goel. We need to change our perception in the society as teachers called national assets on two days only including Teachers' Day and National Education Day and opined that continuous introspection on the role of teachers in the society throughout the year, believed Prof. Goel. He stressed on the use of Google form for data collection for feedback from the stakeholders including students and teachers with alertness, awakening, and awareness of the misuses of artificial intelligence.

Dr B Anirudhan, Principal, Nehru Arts and Science College, Coimbatore, Tamil Nadu spoke on the Scope of Curricular Aspects in Accreditation and how to score maximum in this by affiliated colleges. Dr Anirudhan cited the need of bringing transparency and clarity in handling the curriculum aspects of the colleges. "It is the sole criteria which can help to score 90% weightage to most of the colleges. NAAC only expect proper documentation of the claims made by colleges and uploading of relevant information on the websites," he said. Dr . Anirudhan also cited the importance of Energy Audit, Green Audit and Hygiene Audit for colleges. It can certainly acclaim applauds and good scores from assessors, he said. He also cited the need of daily updates on college's website. He also encouraged teachers to offer value added courses relating to their subject to students in consultation with market experts.

Prof. Ujjwal K Chowdhury, Pro-Vice Chancellor, ADMAS University, Kolkata stated that pandemic

has created many learning opportunities for teaching community of the country. "The days of traditional teaching methods are over now. In future, it is going to be digitised teaching or blending teaching and for that teachers have to be verse with technology and various software applications," he said. He also gave tips and techniques to all participants to make their teaching more effective and innovative. Making emotional as well as professional connect with the students, who are more or less not worried about their future, is the biggest challenge for all teaches, he added. Prof. Chowdhury also put light on the different techniques of evaluation that can be used by educational institutions to adjudge and check students. He expressed concern over non-seriousness of different governments in allocating budget for education. "It is on their least priority and a common man should raise this issue with their leaders at different platforms," he said. Dr B K Virk, Principal, MR Government College, Fazilka stated the need and importance of SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis for every institution. Addressing the gathering he said, strengths and weaknesses are internal to any organisation but threats and opportunities are external. Every institution should invest in conducting effective SWOT analysis to survive in the market. Dr. Singh cited the examples of Nokia and Motorola, who were once market leaders in mobile phone market. After the arrival of smartphones, these brands failed to survive, he said, adding that, effective and unbiased SWOT analysis can help institutions to cope up with the market changes. Dr. Virk also suggested that SWOT analysis should be a regular feature for organisations and managements should take the help of expertise from the markets to make it more effective and purposeful. He also discussed the methodology, key-factors to be kept in mind while doing SWOT analysis and dos and don'ts with all participants.

Dr Ajay Lakhanpal, Former Principal, PSR Government College, Baijnath, Kangra, Himachal Pradesh highlighted the need and importance of budgetary provisions for research and extension in colleges. It shows research culture of the college, he said "Colleges should come forward with incentives to promote research and extension activities. Whatever

colleges do in extension activities should be community oriented and must have benefits for society,” he said.

Dr Lakhanpal also suggested colleges to note down every small effort for records and try to bring improvements in these efforts with pass of time. He also answered queries raised by participants relating to research, innovation and extension activities.

Prof. Yogender Verma, Pro-Vice Chancellor, Central University of Himachal Pradesh, in his address, cited the need of sustainable quality and how it can be achieved. “Only quality can bring distinctiveness to any educational institute for achieving quality, one has to put on consistent efforts,” he said. Prof. Verma put light on different issues relating to seventh criteria of NAAC Self Study Report for affiliated colleges and highlighted the key points which can help to bring good weightage.

He also appealed all colleges to adopt for Green Auditing, Energy Auditing, Rain Water harvesting, E-waste Management and generating energy through alternative resources. NAAC has chalked out parameters so intelligently that nobody can fake the data and activities now, he said adding that, one has to generate proper evidences to substantiate their claims.

On the concluding day, Principal of Hindu Kanya College, the host college, Dr Archana Garg, said that all colleges are required to setup effective support services and systems for benefits of the students. “These are the real backbone of colleges and if maintained and documented effectively, can attract more students as well as good score from ranking agencies,” she said. In her address, Dr. Garg suggested the colleges to make their services related systems more transparent and accessible through portals. If done so, students can be benefitted in large numbers from these services, she further said, “Every college should have proper track of all those who have been educated from the college. Constant touch with them can help effective and beneficial contribution from alumni for working and finance of college.”

Dr. Garg also gave tips on different key points relating to Criteria-5 of the Self Study Report to be submitted by colleges to NAAC for accreditation. Proceedings of each day of the workshop, started with a different musical prayer, prepared by students, faculty members and alumni member. Through each prayer, it was prayed to keep people healthy, safe and cheerful in the stressful times of pandemic.

Online Academic Conclave on In Search of Alternatives to Board and University Examination

One-day Online Academic Conclave on ‘In Search of Alternatives to Board and University Examination’ was organized by the Educational Technology and Management Academy, Gurgaon, Haryana on June 26, 2021. About sixty four scholars from various parts of India, Canada, Sweden, and Bangladesh participated in the Conclave.

After a formal exchange of greetings, Chairperson of the Session, Prof Madhu Parhar, Head, Educational Survey Division, The National Council of Educational Research and Training (NCERT), New Delhi briefly introduced the invited speakers of the panel namely Shri Pramod Tripathi, Director (Academics), Global India International Schools, Singapore, Prof M M Pant also a Member of ETMA Council was introduced as a distinguished information scientist, former Pro Vice Chancellor of IGNOU, and an unconventional thinker. Prof. Parhar also mentioned one of the tweets posted on 17th June, 2021 by Prof M M Pant (<https://mmpant.com/2021/06/17/educating-oneself-for-an-unknown-and-uncertain-world/>).

Prof Indrani Bhaduri mentioned that the total focus should have been on the learning loss during the pandemic lockdown. Should educational scientists find out alternates to learning? Prof Bhaduri questioned. Learning algorithms will lead to strategies for assessment. Learning and assessment go together. NCERT has been talking throughout about these school-based assessments. We need to explore more evidence-centred and teacher-relying assessment procedures. Prof Bhaduri said that there should not be any trust deficit between educational planners and the soldiers on the ground, teachers. In the assessment system, objectivity is ideal, but subjectivity is equally important. The assessors also need to understand that assessment has not only to be limited to the curriculum alone. Other inherent competencies have also to be taken into consideration. The same stands true for non-academic subjects such as foods or any others. So, holistic assessment should of the students needs to be carried out. We have the national achievement survey as well as international achievement surveys. We have the TIMSS, the PISA and so on. We need to understand the basic difference between the two; when I’m talking about the assessment of the

mechanism, we are trying to understand the system. The methodologies that are used for large-scale studies cannot be used for a single student. As there are many ways of learning, so there are many ways of assessment. That is why the paper-pencil test is not the only source of assessment. Assessment is putting the child in different challenging situations. I'm using this platform to promote foundational learning and foundational assessment as well. All in all, the tests and assessment procedures should help the child to learn, Prof. Bhaduri concluded.

Prof Pant started his presentation with the story of Einstein. According to him, in the changed circumstances, the questions which boggle the mind are---What do we teach? How do we teach? How do we assess? Where do we assess? Einstein mentioned in 1905 or 1906 while he wrote four papers. One of the papers was on the Brownian movement; another paper was on the theory of special relativity, the photoelectric effect. He got the Nobel prize, and still, another was on the famous equation of mass and energy that is $E=MC^2$. The question is--why did he write these papers: other great scholars- researchers like Max Bond, Max Planck who interpreted physics in a rigid situation. Einstein changed the laws of physics. A pretty similar situation is about the present assessment system.

All said and done, the Board exam results should come with a statutory warning that the given scores do not correlate with the skills and abilities of the candidate. Reasons being that research says that the answer to a question may vary from person to person and time to time. Marks of the same answer may vary enormously depending on the examiner, even in moralistic subjects like Mathematics and Science. Prof Pant elaborated that every judgment is written based on the available facts and circumstances of the case. Prof Pant quoted a book, 'The fourth education Revolution' by Anthony Seldon. He also talked about Seldon's career, Buckingham University and Wellington College. He also shared his rich experience as a member of the board of management of IIT Delhi. He said that a student could answer all the questions (5 or 6 questions) wonderfully well. But there is no guarantee that student knows anything. That is why we need to have a comprehensive examination. In this age of artificial intelligence, one can say what is written in the book without looking at the book because they

can ask Alexa, Google, etc. So higher level of effects is important. We should go for higher-level analysis, synthesis and creativity. Prof. Pant gave an example of the language learning free App 'Duolingo'. The App started at Carnegie Mellon University (CMU) in Pittsburgh, Pennsylvania, USA. He also talked about Reliance affordable smart phones, which will have all the features like augmented reality, artificial intelligence, camera, text to speech, speech to text, translation, etc. Can't we have a similar assessment to reach Bloom's Mastery learning. He said that pandemic had allowed us to do something new, think anew, change, and move forward. So, let's not think of going back to normal. Let's think of going to the future where we can address the challenge of numbers, the challenge of assessing the quality, the challenge of relevance. Against a question on school education, Prof Pant said that the school education is not preparing students for the University; it prepares the person to lead a life as an adult, without entering the university.

A threadbare discussion by the participants followed Prof Indrani Bhaduri and Prof Madan Mohan Pant's presentations. Ms Nirmala Thakur appreciated the thought of Prof. Indrani regarding the Trust factor between the Planners and Soldiers (Teachers) on the ground. Prof. Sudesh Mukhopadhyay, while appreciating the ideas of the presenters, said that the time has come when we should discard the Normal Probability Bell-shaped curve of normal distribution of abilities in the students. She also advised thinking about recording what all a person can do and potential areas of growth and development. Some schools have such records even 15 years back, but there are now too many centralised orders and regulations. Ms Nirmala Thakur brought home the point that a comprehensive document of a student's learning journey needs to be prepared. Dr Shivananda emphasised Prof Pant's contention that the disclaimer in the report card needs serious consideration. Mr Salil Adak asked how much does an exam help the students in learning? While highlighting the involvement of parents, he pointed out that the teachers and the parents must be exposed to lessons in child psychology, developmental psychology, etc. to change their mindset on evaluation, especially score-based assessment. He added that the parents are not empathetic to their children in most cases, keeping in mind unidirectional development. Ms Sushma Sardana said that as teachers, we should prepare

students for the Board examination and the whole life with relevant skills and values. We, as members of society will have to bring the change slowly and surely by talking about it to all around us. Dr Som Krishan and Dr Mrinal Mukherjee emphasised that the learners and parents must be taken into confidence. He further asked, “What should be the nature of the format of the entrance test?” That is how such selection criteria may be reframed and realigned with transversal competencies. Sushma Sardana pointed out that the entrance exams and public/board exams nowadays have some common components others who actively participated in the discussion were Ms Shalini Agarwal, Dr Sanjay Kumar Yada, Prof. Debasri Banerjee, Dr Tripti Bej, and Dr M N Baidya. Prof. Madhu Parhar concluded with remarks that COVID-19 has made the education scientist to realise that the conventional system of assessment and evaluation is no more relevant than the true evaluation of learning and skills. The alternate to the existing system of evaluation and assessment is most desired. It should be done at the earliest to save the blooming skills and abilities from the stranglehold percentage scores.

Virtual International Conference on Innovation and Research in Science and Technology for Sustainable Development

A two-day Virtual International Conference on ‘Innovation and Research in Science and Technology for Sustainable Development’ is being organised by the School of Science, OP Jindal University, Raigarh, Chhattisgarh on May 27-28, 2022.

Frontiers of knowledge are expanding very fast. Science and technologies are no exception. They are dynamic, expanding body of knowledge, and covering ever-new domains of experience. In such a progressive society, science can play a truly liberating role, helping people escape from the vicious cycle of poverty, ignorance and superstition. The conference themed around the numerous outstanding results and new difficulties in the applied sciences and technology as well as management and humanities sectors. This event aims at bringing researchers, specialists, designers, and students from all fields of applied sciences and technology and provides a global panel for the dissemination of primary study conclusions, new approaches, and developmental practices that focus on both principles and application. The Conference aims at providing a premier interdisciplinary platform

to present and discuss the most recent sustainable innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the field of Science and Technology. Distinguished speakers from academia and industries will deliver keynote speeches on Applied Sciences, Recent Technologies, Disaster Management and other fields related to Management and Humanities, etc. This two days’ event will include keynote sessions, plenary sessions, paper presentations and technical sessions by expert. Accepted papers will be published in Conference Proceeding/ UGC Care list journal. The Tracks of the programme are :

Applied Sciences

- Chemistry.
- Physics.
- Geological Sciences.
- Ecology and Management.
- Microbiology.
- Mathematics.
- Biology.
- Biotechnology.
- Material sciences.
- Environmental Science.
- Air Pollution.
- Water Pollution.
- Effects On Global Flora and Fauna.
- Global Warming.
- Greenhouse Gases.
- Renewable sciences.

Engineering and Technology

- Electrical Engineering.
- Computer Engineering.
- Mechanical Engineering.
- Industrial Engineering.
- Process Engineering.
- Structural Engineering.
- Nano engineering.
- Manufacturing Engineering.
- Materials Engineering.
- Electronic Engineering.
- Energy Engineering.
- Environmental Engineering.

Disaster Management

- Climate Change.
- Environment and Ecosystems.
- Food security and Agriculture, Water.
- Capacity Development
- Community-based DRR.
- Gender, Human Mobility.
- Disaster Analysis.
- Disaster Monitoring and Mitigation.
- Emergency Preparedness.
- Risk Mitigation.
- Community Recovery and Resilience.
- Socio-economic Issues.
- Public Health Risk.

Other Themes

- Recent Trends in Science Innovation and Research.
- Scientific Knowledge and Skill Development.
- ICT for Quality Science Education.
- Language and Science Education.
- Resources for Science Education.
- Knowledge Management.
- Innovative Pedagogies for Effective Teaching-Learning of Science.
- Alternative Frameworks in Science.
- Advancement in Science and its Utility.
- Ancient Indian Scientific Knowledge and its Relevance in Modern Time.
- Science Curriculum for Life-Long Learning and Value Development.
- Science Education for Sustainable Development.
- Status of Science Education in India and other Countries.
- Science, Technology and Society Perspectives.
- Educational Leadership, Management and Emerging Technologies.
- Learning Management Systems.

For further details, contact Convener, Dr Ankur Rastogi, Associate Professor (Chemistry), School of Science, OP Jindal University, OP Jindal Knowledge Park, Punjipathra Raigarh, Chhattisgarh-496109,

Mobile No: 9755927688, E-mail: ankur.rastogi@opju.ac.in. For updates, log on to: [www. https://jgu.edu.in/](http://www.https://jgu.edu.in/)

International Conference on Innovations in Modern / Traditional Health Sciences and Medical Technology

Atwo-day Paramedic on International Conference on 'Innovations in Modern/Traditional Health Sciences and Medical Technology' is being organized by Pharmacy (Ay.) Course, Faculty of Ayurveda, Institute of Medical Sciences and Medical Laboratory Technology Course, DDU, Kaushal Kendra, Rajiv Gandhi South Campus, Barkachha, Mirzapur, Banaras Hindu University, Varanasi, Uttar Pradesh to celebrate the World Health Day on April 07-08, 2022 through hybrid mode. The primary goal of Paramedic on is to promote research and developmental activities in Medical Technology, Health Sciences, Biological and Pharmaceutical Sciences. The academicians, scientists, researchers, small entrepreneurs and students of undergraduate and postgraduate may participate in the event to discuss critical issues and concerns to advanced and innovative technologies applied in Medical Technology, Health Sciences, Biological and Pharmaceutical Sciences.

Health Care Sector mainly depends on two segments. Segment first is Medical Technology that occupies a large proportion applied to diagnose, cure, treat or prevent disease. Segment second is Pharmaceutical which develops drugs. Pharmaceutical organizations that produce generic and branded drugs are subjected to various laws and regulations dealing with patenting, testing, safety, efficacy, and marketing.

Growth in Health Care Sector market is mainly driven by the rising prevalence of chronic diseases, growth in the biologics market, technological advancements and new product launches. In addition, due to the Corona virus outbreak globally, there is a sudden rise in the demand for pharmaceutical drugs, primarily in infectious application with the enhancement of Medical Technology and engineered instruments, novel diagnostic methods and health care procedures.

Medical Laboratory Technology and Pharmacy (Ay) are considered together with paramedical science. Paramedical science is an interdisciplinary medical subject that is becoming enormously important

in health care systems. In recent years, there has been a growing need for qualified and well trained paramedical personnel. To meet the great demand for qualified trained paramedical, it is necessary to impart the training to the eligible and interested candidates. The areas of discussion are:

Pharmacy

- Research in New Drug Delivery: Pharmaceutical nanotechnology, biopharmaceutical drug discovery and development, novel drug delivery systems, drug targeting and design, targeted drug delivery system, gene therapy and tissue engineering, major challenges in drug delivery and formulation developed by traditional methods.
- Research in natural products and Ayurveda: Preclinical and clinical studies on new natural products and ayurvedic formulation, quality control and standardization of crude drugs, nutraceuticals and ayurvedic formulations, Isolation and structural elucidation of natural moiety. Cultivation, conservation and sustainable use of medicinal plants.
- Newer therapeutic approaches in metabolic disorders and neurodegenerative diseases.
- Scope and challenges in pharmaceutical industry: Pharmaceutical regulatory affairs and IPR, marketing and management of pharmaceutical and medicinal plants, impact of biomedical and

pharmaceutical waste on environment

Medical Technology

- Research in advances in medical sciences, diagnostic methods based on biosensor, biomarkers, histodiagnosics, immunodiagnosics, molecular diagnostics.
- Research in health statistics and implication in diagnostics and health education.
- Research in epigenetic of various diseases, advance therapy and health care, phage therapy and its implication, gene, genomics prospects of health, therapy for infectious and microbial problem, method based on biotechnology and its application.
- Research in biomedical engineering, biomaterials, bioinstrumentation, medical informatics, biological system analysis and control, bio-transport process, biomedical signal and image processing, effects of radiation and biomedical applications of radiation.

For further details, contact Conference Secretariat, Coordinator office, Pharmacy (Ay.), Administrative Building, Rajiv Gandhi South Campus, Barkachha, Banaras Hindu University, Varanasi-221005 (Uttar Pradesh), mobile Numbers: 07376356174; 07379427311; 09415447658; 09793758564; and 08318322379, E-mail: parmedicon@gmail.com. For updates log on to: www.bhu.ac.in

□

THESES OF THE MONTH

HUMANITIES

A List of doctoral theses accepted by Indian Universities (Notifications received in AIU during the month of January-February, 2022)

History

1. Islary, Eliah. **Post colonial Bodo society with reference to the status of the women.** (Dr. Oinam Ranjit Singh), Department of History, Bodoland University, Kokrajhar.
2. Kasotiya, Pradeep Kumar. **Mugalkaal mein vidroh ka swarup evam uska prabhav (1605-1707 isvi).** (Dr. Tej Kumar Mathur), Department of History, Bhagwant University, Ajmer.
3. Sandhya, P.A. **Land, power and social order in 18th century Malabar.** (Dr. Susan Thomas), Department of History, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.
4. Tripathi, Harish. **Rajasthan kee Marwari sanskriti ka samajik, rajnaitik aur aitihasik adhyayan.** (Dr. Dinesh Mandot), Department of History, Bhagwant University, Ajmer.

Languages & Literature

Assamese

1. Narzary, Maina. **Morphological aspects of Bodo and Hajong: A comparative study.** (Dr. Navajyoti Sarmah), Department of Assamese, Bodoland University, Kokrajhar.

Bodo

1. Basumatary, Bina. **A study of the social cultural aspects reflected in Bodo folk songs.** (Dr. Ismail Hussian), Department of Bodo, Bodoland University, Kokrajhar.
2. Basumatary, Kanery. **Aspects of rituals philosophy and oral literature of the Bathou religion.** (Dr. Bhoumik Ch Baro), Department of Bodo, Bodoland University, Kokrajhar.
3. Khakhalary, Champabati. **Bodo folk songs with special reference to Goalpara District in Assam, India.** (Dr. Bhoumik Chandra), Department of Bodo, Bodoland University, Kokrajhar.

English

1. Aleena, S. **The virtual politics of gender: Rethinking female identity in select cyberculture**

discourses. (Dr. N Prasanthakumar), Department of English, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

2. Deepa, K K. **Genre, gender and sexuality: A study of the novels of Gloria Naylor.** (Dr R Bindu), Department of English, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

3. Hima, K R. **Gendering dalit: A critique of Tamil dalit women's fiction.** (Dr. Ajay S Sekhar), Department of English, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

4. Hussian, Noor. **Acquiescence and resistance in the fiction of Nadine Gordimer.** (Prof. Pradip Kr Patra), Department of English, Bodoland University, Kokrajhar.

5. Manjusha, K.G. **Narrating gendered subaltern: A study of selected dalit women life narratives.** (Dr. Ajay S Sekhar), Department of English, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

6. Mathew, Suja. **Constructing heterotopias: A spatial critique of Laszlo Krasznahorkai's select fiction.** (Dr. Babu Rajan PP), Department of English, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

7. Raj, Renu. **Constructing female identity in select African-American dalit feminist writings.** (Dr. Bindu R), Department of English, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

Hindi

1. Ahirwar, Dinesh Kumar. **20 vi sadi ke antim dashak kee Hindi kahaniyoan mein manav mulye.** (Dr. Sandhya Tikekar), Department of Hindi, Maharaja Chhatrasal Bundelkhand Vishwavidyalaya, Chhatarpur.

2. Alungal, Mohamed Ashraf. **Uday Prakash kee rachannavom ka samajik sarokar: Ek adhyayan.** (Dr. Moossa M), Department of Hindi, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

3. Chauhan, Hetalbaben Raosing. **Sathotari Hindi upanyasoan mein istri aur purash kee badalti hui vaicharika ka vishleshnatamak adhyayan (1980-2015) tak.** (Dr. Ranjana Argade), Department of Hindi, Gujarat University, Ahmedabad.

4. John, Jeena. **Adhunik Hindi aur Malayalam dalit Kahani: Ek tulnatamak adhyayan.** (Dr. P H Ibrahimkutti), Department of Hindi, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

5. Santosh Kumar. **Bhojpuri sahitye mein dalit chetna ke swar (1950 se 2010).** (Prof. Shatrughna Kumar), School of Humanities, Indira Gandhi National Open University, New Delhi.

Linguistics

1. Naik, Korra Balu. **Socio-cultural perspective of Lambada language in Telangana.** (Prof. G S Gabriel), Department of Linguistic, Potti Sreeramulu Telugu University, Hyderabad.

Sanskrit

1. Anu, K S. **Advaita as interpreted in vivaranopanyasa.** (Dr. G Narayanan), Department of Sanskrit Vedanta, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

2. Arya, Abha. **A Philosophical Study of Yogatattva by Maharshi Dayananda.** (Dr. Ramakant Mishra), Department of Sanskrit, Central Sanskrit University, New Delhi.

3. Arya, Abhishek. **Jyotishshastre mein karak grehoan ke avdharna evam unka kishoravastha mein prabhav: Ek sarvekshan.** (Dr. Nandannadan Pandey), Department of Sanskrit, Maharshi Panini Sanskrit evam Vedic Vishwavidyalaya, Ujjain.

4. Bhartiya, Ram Chandra. **Muktichintamanih iti Bhaktikavyasya samikshaatmakam sampadanam.** (Prof. Shailakumari Mishra), Department of Sanskrit, Central Sanskrit University, New Delhi.

5. Bhaskar, S. **Developing reading and writing skills among the second year intermediate Telugu medium students of Mahabub Nagar District in Telangana: Problems and prospects.** (Prof. Pretti R Kumar), Centre for Languages & Translation Studies, Potti Sreeramulu Telugu University, Hyderabad.

6. Dey, Priti. **A comparative study on Vedic Samskara with Samskara's of Dharmashastra.** (Prof. Atul Kumar Nanda), Department of Sanskrit, Central Sanskrit University, New Delhi.

7. Dharmendra Kumar. **Smretigrantheshu Narinamadikarah varthman sandarbhe upadeytha cha.** (Prof. Ramkrishna Pandey Paramhans), Department of Sanskrit, Central Sanskrit University, New Delhi.

8. Dubey, Praveeksha. **Ahutih swatantryayagye iti mahakavyasya sahityika samikshanam.** (Dr. Mala

Chandra), Department of Sanskrit, Central Sanskrit University, New Delhi.

9. Dwivedi, Amit Kumar. **Lucknowjanpadasya ucchamadhyamikgramya- Nagarchhatreshu Nai tikmulyabodham ajivikancha prati jagruktah tulnatamaka vimarsh.** (Prof. Devi Prasad Dwivedi), Department of Sanskrit, Central Sanskrit University, New Delhi.

10. Meena, Bolati Ram. **A study of effectiveness of family and job environment on the personality and spiritual intelligence of Sanskrit teachers.** (Prof. Leena Sakkarwal), Department of Sanskrit, Central Sanskrit University, New Delhi.

11. Midhun, P. **Sankarabhasyasahitasrivisnusa-hasranamastotre Paniniyasutrasamanvayah.** (Dr. C H Satyanarayana), Department of Sanskrit, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

12. Muralikrishnan, M V. **Critical edition and study of Matrsadbhava.** (Dr. K Muthulekshmi), Department of Sanskrit Vedanta, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

13. Namboodiri, PK Vasudevan. **Prakriyasasarvasve taddhitakhandah-samiksatmakamadhyayanam.** (Dr. K Vishnu Namboodiri), Department of Sanskrit Vyakarana, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

14. Neethu, V S. **Pancalisvayamvaracampu of Melputtur Narayanabhata: A grammatical study with English translation.** (Dr. S Vijayakumari), Department of Sanskrit, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

15. Panda, Narasingha. **Yogachikichha Vijnana Varnarsh.** (Dr. Mahesh Jha), Department of Sanskrit, Central Sanskrit University, New Delhi.

16. Penkra, Govind Singh. **Shrimad Bhagavad Gitah vyakaranshastriymadhyayanam.** (Dr. Manvi Sharan Tripathi), Department of Ved Vedang evam Sahitya, Maharshi Panini Sanskrit evam Vedic Vishwavidyalaya, Ujjain.

17. Renumol, E R. **Brahmasutrasankarabhasye Vyakaranasastrasya Prabhavah (Prathamodhyayah).** (Dr. P Radhakrishnan), Department of Sanskrit Vyakarana, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

18. Richhariya, Brijesh Kumar. **Acharya Radha Vallabh Tripathi praneettandavopan yasasya samikshanatamakmadhanayam.** (Dr. Dharmendra Kumar

Singhdeo), Department of Sanskrit, Central Sanskrit University, New Delhi.

19. Sachis, M S. **A Critical Edition of Smrititattvasara by Mahamahopadhyaya Buddhinath Jha.** (Prof. Khageshwar Mishra), Department of Sanskrit, Central Sanskrit University, New Delhi.

20. Sahoo, Pramod Kumar. **A Comparative study on Brahmacharidharama of Gautama and Apastamba.** (Prof. Lalit Kumar Sahoo), Department of Sanskrit, Central Sanskrit University, New Delhi.

21. Samsrutha Devi, A. **Carakabhimatagul-macikitsabhagasya Vyakaranatmakamadhyayanam.** (Dr. P Radhakrishnan), Department of Sanskrit Vyakarna, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

22. Sarannya, V. **Annadatrcarita: A critical study.** (Dr. P V Rajee), Department of Sanskrit Sahitya, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

23. Sharma, Radha. **Critical analysis of words which indicate jati-guna kriya sankhya in Sutras of Panini.** (Dr. Madhukeshwar Bhat), Department of Sanskrit, Central Sanskrit University, New Delhi.

24. Shukla, Sarvesh. **Shikshayah Bhartiya karne Pandit Madanmohanmalviyamahodayasya Madha vsadashivarao-Golvalkarmahodayasya cha shaikshikavicharanam tulnatmakamadhyayanam.** (Prof. Kuldeep Sharma), Department of Sanskrit, Central Sanskrit University, New Delhi.

25. Singh, Hari Mohan. **A Critical Study on Anandaswarupa Vichara in Upanishads.** (Prof. Gaurpriya Dash), Department of Sanskrit, Central Sanskrit University, New Delhi.

26. Soumya, A. **Murals of Krsna episodes in Kerala.** (Dr. Ambika K R), Department of Sanskrit Sahitya, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

27. Tijare, Aaryaa. **20vi shatabdi ke sanskrit sahi-tye mein yugbodh.** (Dr. Jitendra Tiwari), Department of Sanskrit, S.N.D.T. Women's University, Mumbai.

28. Upadhyay, Namrata. **Bhudevshuklavirachit dharmavijaynatakasya kavyashastrī yanushilnam.**

(Dr. Kripashankar Sharma), Department of Sanskrit, Central Sanskrit University, New Delhi.

29. Verma, Chaudhary Kamal Keshar. **Baudhasanskritstotranam samikshanatamakmadhayanam.** (Prof. Vijay Kumar Jain), Department of Sanskrit, Central Sanskrit University, New Delhi.

Performing Arts

Fine Arts

1. Gumber, Sugandha. **A comparative analysis of advertainment and traditional advertisement.** (Prof. Sunil Kumar), School of Performing and Visual Arts, Indira Gandhi National Open University, New Delhi.

2. Srikanth, G. **Textiles and cultural identity: A critical analysis of the role of Kasavu Sari.** (Prof. Sunil Kumar), School of Performing and Visual Arts, Indira Gandhi National Open University, New Delhi.

3. Sunil Kumar. **Bhartiye adhunik chitrekala (1860-2015) mein poranik tatvo ke pryog ka udeshey va akritiyoan ka rupantaran: Ek adhyayan.** (Prof. Sunil Kumar), School of Performing and Visual Arts, Indira Gandhi National Open University, New Delhi.

Music

1. Pavgi, Shreyasi. **Abhijat sangeet ka samuhik shikshan sulabh karane mein P.V. Na Bhatkhandeji kee rachnaon ka yogdan.** (Dr. Sheetal More), Department of Music, S.N.D.T. Women's University, Mumbai.

2. Sangeetha, K S. **Status and problems of music education in Kerala at school level.** (Dr. Preethy K), Department of Music, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam.

3. Vaishnav, Sant Das Sri. **Vidhyalayoan (Sarkari evam aur gair sarkari) mein sangeet kee isthithi: Uttar Pradesh Purvanchal ke sandarbh mein.** (Dr. Mrityunjay Kumar Mishra), Department of Music, T M Bhagalpur University, Bhagalpur.

Philosophy

1. Shimi, C M. **Exploring nonlocal nature of consciousness: Revisiting synthetic model consciousness in Indian philosophy.** (Prof. Sreekala M Nair), Department of Philosophy, Sree Sankaracharya University of Sanskrit, Kalady, District Ernakulam. □



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Employment Notification No. 27
(For Statutory Posts)

Applications through online mode are invited from the eligible candidates possessing prescribed qualifications and age for tenure posts of **Registrar, Finance Officer & Librarian** as detailed below. Online Portal for submission of applications will remain open from 23.03.2022 to 16.04.2022 at University website www.cujammu.ac.in.

Sl. No	Name of the Post	Pay Scale (as per 7 th CPC)	No. of Posts
1.	Registrar (Tenure post for a period of 5 years)	Rs.144200 – 218200, (Level-14)	UR - 01
2.	Finance Officer (Tenure post for a period of 3 years)	Rs.144200 – 218200, (Level-14)	UR - 01
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Sl. No	Position/Subject	Open	Community	PwD
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3.	Physics	1	1	
4.	Chemistry	1	2	
5.	Botany	1	1	
6.	Zoology	0	1	
7.	Home Science	2	0	
8.	Economics			1
9.	Commerce		1	
10.	LD Clerk	1		
11.	LD Computer Assistant	1		

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Application for the position of Vice-Chancellor

Applications are invited for the position of Vice Chancellor from candidates who are Indian Nationals and who fulfil the required qualification & experience as per UGC norms. For application form, other information, terms & conditions, please visit www.cottonuniversity.ac.in

Last date of submission of filled application form is **20th April, 2022.**

Advt. No: - Recruitment/CU/2022/04

Registrar

Kaivalyadhama Yoga Institute, Lonavla invites Applications for following posts:

Post: Research Officer, Scientific Research Department	<ol style="list-style-type: none">1. Qualification: M.Phil. or PhD in either Bio-chemistry /Physiology / Psychology.2. Experience: 3-5 years experience in applied research.3. Essential: Background of Yoga Education, Strong presentation & analytical skills.4. Salary : Commensurate with the qualification & experience.
Principal, GS College of Yoga	<ol style="list-style-type: none">1. Qualification: Ph.D. in Yoga / Sanskrit or in the allied sciences with relevant qualification in Yoga.2. Experience: 8 years' experience in teaching / research /administration3. Essential: Background of Yoga is essential4. Salary: Rs. PB-3 (Rs. 15,600-39,100). Salary will commensurate with the experience and competence.

Send your CV to: hr@kdham.com

Website: www.kdham.com

Last date of application – 5th April, 2022



ASSAM UNIVERSITY: SILCHAR

[A Central University]

Employment Notification No.1/2022 Dated 23rd February, 2022

Special Recruitment Drive for Filling Up of Backlog Reserved Vacancies (SC/ST/OBC-NCL/PWD/EWS) of Faculty

Online applications are invited from the eligible Indian Citizens and Overseas Citizens of India (OCIs) for various Teaching positions of this university at its HQ: Silchar & Diphu Campus as stated below:

Silchar: HQ

- A. Professor:** Bengali (1SC), English (1ST), Education (2-1SC,1OBC), Hindi (1SC), Life Science & Bio informatics (1SC), Mathematics (1SC), Mass Communication (1ST), Netaji Subhash Centre (1OBC-PWD-LV), Political Science (1OBC), Sanskrit (1EWS), Visual Arts(1EWS), Women Study Centre (1OBC).
- B. Associate Professor:** Arabic (1EWS), Agricultural Engineering (1PWD-OH), Bengali (1ST), Business Administration (1ST), Commerce (1OBC), English (1SC), Education(1ST), Electronics & Communication Engineering (1OBC), Foreign Language-French (1SC), History (1SC), Life Science & Bio-informatics (1OBC), Mathematics (1ST), Political Science (1SC), Physics (1ST).
- C. Assistant Professor:** Agricultural Engineering (2OBC), Computer Science (2SC), Computer Science & Engineering (1EWS), Life Science & Bio-informatics (1-PWD-OH), Law (1ST), Law-Non Law Subjects [Economics 1ST, Mass Communication (1PWD-VH)], Pharmaceutical Science (2-1OBC,1EWS), Social Work (1OBC), Urdu (1PWD-OH), Visual Arts (1SC).

Diphu Campus:

A. Professor: Political Science (1 OBC)

The Minimum Qualification, Experience, Specialization, Service Conditions, Age of Superannuation etc. are as prescribed by the University/UGC/ respective regulatory body like AICTE/NCTE/PCI and the Pay matrix and Academic level of pay is admissible along with DA and other allowances as per MoE, Government of India rules. The general instructions and other details are available at www.aus.ac.in and <http://assamu1.ucanapply.com>. All eligibility criteria will be reckoned on the closing date of submission of online application. **The closing date of submission of online application is 11th April, 2022 at 5.00pm.**

Registrar



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- BRS** (Bachelor of Rural Studies)

POST GRADUATE COURSES- 2 Years

- MSc** Clinical Psychology / Human Consciousness & Yogic Science / Applied Yoga and Human Excellence / Applied Medicinal & Aromatic Plants Sciences / Yogic Science
- MA** Clinical Psychology / Human Consciousness & Yogic Science / Applied Yoga and Human Excellence / Applied Education / Journalism & Communication Studies / History & Indian Culture / Sanskrit/Hindi / Music-Vocal / Music-Tabla, Pakhaawaj
- MCA** Master of Computer Application
- MBA** Tourism & Travel Management

DIPLOMA COURSES-1 Year

- Diploma in Visual Effects: Compositing
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- P. G. Diploma in Theology & Psychological Counseling

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WANTED

Application are invited for the post of Principal to be filled in **Smt. Indira Gandhi College of Education, Vasarni, Tq. & Dist. Nanded** (Permanent Non-Granted) run by **Jawaharlal Nehru Institute of Education, Science and Technological Research Trust, Nanded, Tq. & Dist. Nanded (Maharashtra)**. Eligible Candidates should submit their application along with all necessary document **within Fifteen Days** from the date of the publication of advertisement by Registered post only.

Sr. No.	Name of Post	Number of Post	Reservation
01	Principal	01	Open (Unreserved)

A. Educational Qualification:

The faculty shall possess the following qualification:

- Postgraduate Degree in Arts/Science/Social Science/ Humanities/ Commerce with minimum 55% marks .
- M.Ed. with minimum 55% marks.
- Ph.D. in Education or in any pedagogic subject offered in institution.
- Ten year of teaching experience in secondary Teacher Education Institution.

Desirable: Diploma/Degree in Education Administration or Educational Leadership.

Salary & Allowances Pay:-

Pay Scales as per the U.G.C., State Government & Swami Ramanand Teerth Marathwada University's rules from time to time.

Note:

- Prescribed application form is available on the University **Website (www.srtmunac.in)**.
- No T.A./D.A. will be paid to attend interview.
- Eligible candidate those who are already in service should submit their application through proper channel.
- All attested Xerox copies of certificates, other relevant document should be attached to the application form.

Address of Correspondence:-

Principal

Smt. Indira Gandhi Adhyapak Mahavidyalaya

Laturphata, Vasarni, New Nanded-431603 (Mob : 8308353875)

WANTED

Application are invited for that post of **Principal** to be filled in **Pu. Ahilyadevi B.Ed College, Sangvi (Su), Tq. Ahmedpur, Dist. Latur** ran by **Shree Ganesh Shikshan Prasarak Mandal, Mandurki, Tq. Chakur, Dist. Latur** (Permanent Non-Granted). Eligible candidates should submit their application along with all necessary documents **within fifteen days** from the date of publication of the Advertisement by Registered Post only.

Sr. No	Name of the post	Post	Reservation
01	Principal	01	Unreserved

Educational Qualification:

The Faculty shall possess the following qualification:

- Postgraduate Degree in Arts/Sciences/Social Sciences/Humanities/Commerce with minimum 55%marks and
- M.Ed with minimum 55% marks and
- Ph.D in Education or in any pedagogic subject offered in the institution and
- Ten years of Teaching experience in a secondary Teacher Education Institution.

Desirable: Diploma /Degree in Educational Administration or Education Leadership.

Salary & Allowance Pay :- Scales as per the UGC, State Government & Swami Ramanand Teerth Marathwada University's Rules from time to time.

Note:-

- Prescribed application form is available on the university **Website (www.srtmunac.in)**.
- No T.A. /D.A. will be paid to attend interview.
- Eligible candidates those who are already in service should submit their application through proper channel.
- All attested Xerox Copies of certificates, other relevant document should be attached to the application form.

Address for correspondence

Pu. Ahilyadevi B.Ed College, Sangvi (Su), Tq. Ahmedpur, Dist. Latur, Pin Code-413515

Email : ahilyadevibed2006@gmail.com

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APPOINTMENTS

Advt. No. SES/SRIEIT/APPT/01/22

Applications are invited from the eligible candidates in the prescribed form available on Institute's website www.ritgoa.ac.in for the following positions to be filled on Regular basis.

Position & Pay band	Electronics & Telecom. Engg.	Computer Engineering	Information Technology	Mechanical Engineering	Engg. Science & Humanities			
					Maths	Physics	Tech. English	Chemistry
Principal (37400-67000 AGP 10000)	01							
Professor (37400-67000 AGP 10000)	01	--	01	01	--	--	--	--
Associate Professor (37400-67000 AGP 9000)	02	02	02	02	01	--	--	--
Assistant Professor (15600-39100 AGP 6000)	02	01	04	05	02	01	01	01
College Director of Physical Education (15600-39100 AGP 6000)	01							

ESSENTIAL REQUIREMENTS FOR ALL POSITIONS :

1. Minimum of 15 years of residence in Goa. 2. Knowledge of Konkani.

Eligibility & Qualifications:

- A. Essential Qualification & Experience for appointment of Principal/Professor(s) / Associate Professor(s)/ Assistant Professor(s)/ College Director of Physical Education must be as per the AICTE and Goa University Norms.
- B. A minimum score as stipulated in the Academic Performance Indicator (API) based on Performance Based Appraisal System (PBAS), set out for recruitment of Professor and Associate Professor by Goa University.

In the event of candidates for the post of Professor and Associate Professor are not available and/or not found suitable, the advertised posts shall be filled at level of Assistant Professor on contract basis.

Detailed information about eligibility, qualification, experience, terms & conditions is available in college website: www.ritgoa.ac.in. Candidate may download Application Form and General Instructions from college website. Filled application along with attested copies of testimonials, certificates should reach to the Administrative Office of the Institute or email soft copies of filled applications with enclosures to recruitments@ritgoa.ac.in within 14 days from the date of publication of this advertisement. Incomplete Application and/or application without enclosures will not be accepted and rejected without giving any notice.



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FACULTY RECRUITMENT

Shri Mata Vaishno Devi University (SMVDU) invites applications from well qualified and experienced candidates for the **faculty positions at the level of Professor, Associate Professor and Assistant Professor** in various Schools.

Eligibility criteria: As per relevant regulatory bodies, i.e., UGC/AICTE/CoA. For **detailed advertisement, General Conditions, application form and API Format**, please visit **www.smvdu.ac.in**. Application forms duly filled accompanied with self-attested copies of Date of birth, qualification / experience certificates issued by the Competent Authority, one self-addressed envelope, requisite fee (DD of Rs.1000/- drawn in the name of Registrar, SMVDU payable at Katra/Jammu) and API format [if applicable] should be submitted to the office of **The Registrar, Shri Mata Vaishno Devi University, Kakryal, Katra-182 320 (J&K)** to be sent by Registered / Speed Post only and not through courier service. The envelope containing the application form should be super-scribed with Name of the Post Applied For; Name of the School; and Advertisement No. & date.

Last date for receiving applications complete in all respects is one month from the date of issuance of the advertisement.

No. SMVDU/Adm/Estt.-FA/826
Dated: 16/03/2022

Sd/-
Registrar

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Programmes offered

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	Lateral Entry to B.Tech.	One Year Diploma
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	Diploma Engineering	
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	Lateral Entry to Diploma Engineering	
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<ol style="list-style-type: none"> 1. Integrated MCA (5 Years) 		
Ph.D. Programme		
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For admission and inquiries visit: www.bgsbu.ac.in

Contact details:

1. Mr. Mohd Ishaq: Registrar- Mob: (9419172620) ; Email: registrar@bgsbu.ac.in
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Overall Category [2021]	22	-
Research Category [2021]	23	
Times Higher Education World University Rankings [2021]	19	801-1000
Times Higher Education ASIA University Rankings [2021]	-	251 – 300
Times Higher Education World Emerging Economies University Rankings [2021]	-	251 – 300
Times Higher Education World Young Universities [2021]	-	201 - 250

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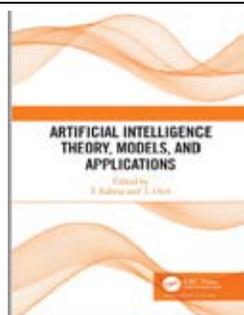
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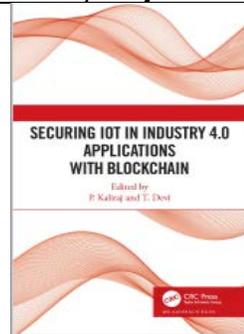
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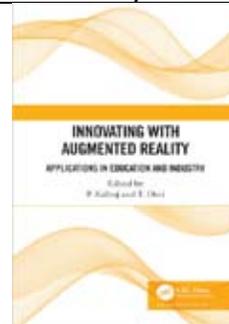
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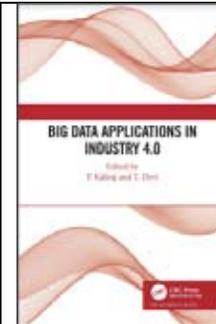
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INTEGRATED PROGRAMME (FOUR YEARS) <ol style="list-style-type: none"> 1. B.Sc.B.Ed. (Mathematics) 	
PG DIPLOMA PROGRAMME (One Year) <ol style="list-style-type: none"> 1. P.G Diploma In Chemical Lab Technician 	
B.Sc. (Three Years) & MBA (Two Years) PROGRAMMES AT SVPISTM, COIMBATORE <ol style="list-style-type: none"> 1. B.Sc. Textiles 2. B.Sc. Technical Textiles 3. BBA Textile Business Analytics 4. MBA (Textile) 5. MBA (Apparel) 6. MBA (Retail Management) 7. MBA (Technical Textile Management) 	
Ph.D PROGRAMMES	
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13. M.Sc. Applied Mathematics (EM)
14. M.Sc. Botany (EM)
15. M.Sc. Chemistry (EM)
16. M.Sc. Environmental Science (EM)
17. M.Sc. Physics (EM)
18. M.Sc. Zoology (EM)
19. M.Com. (EM)

(C) Post Graduate Diploma Programmes

1. P.G. Diploma in Marketing Management (EM)
2. P.G. Diploma in Business Finance (EM)
3. P.G. Diploma in Writing for Mass Media in Telugu
4. P.G. Diploma in Environmental Studies (EM)
5. P.G. Diploma in Human Rights (EM)
6. P.G. Diploma in Women's Studies (EM)
7. P.G. Diploma in Culture & Heritage Tourism (EM)

(D) Professional Programmes (Post Bachelor's Level)

1. Master's Degree in Business Administration (EM)
2. Master's Degree in Business Administration (Hospital and Health Care Management) (EM)
3. Master's Degree in Library & Information Science (EM)
4. Bachelor's Degree in Library & Information Science (EM/TM)
5. Bachelor's Degree in Education (TM)
6. Bachelor's Degree in Education (Special Education) (EM/TM)

(E) Bachelor's Degree Programmes

1. Bachelor of Arts (EM/TM/UM)
2. Bachelor of Commerce (EM/TM)
3. Bachelor of Science (EM/TM/UM)

(F) Certificate Programmes

1. Certificate Programme in Food and Nutrition (TM)
2. Certificate Programme in Literacy and Community Development (TM)
3. Certificate Programme in N.G.O. Management (TM)
4. Certificate Programme in Early Childhood Care and Education (EM)

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Sd/-REGISTRAR



Home to over 10,500 students, the university provides education at the diploma, undergraduate, postgraduate and Doctoral levels in various disciplines of engineering, management, computer applications, pharmaceutical sciences, education, legal studies, agriculture, humanities, commerce and biotechnology. The university also boasts of a strong alumni network of approx 30,000.

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UGC RECOGNISED COURSES

UNDERGRADUATE: B Tech, B Tech (H), B Pharm, BCA, BCA (H), BA (English), BA (H) Economics, BBA, BBA (H), BBA (FB), MBA Integrated (5 Yrs.), B Com (H), BA LLB (H), B Com LLB (H), B Ed, B Sc (H) Bio/Chem/Phy/Ag, Diploma in Engineering, Diploma in Pharmacy

POST GRADUATE: MBA, MBA (H), MBA (Financial Markets & Banking), MBA (LSCM), MBA in Construction Mgmt., MCA, M Pharm (Pharmacology, Pharmaceutics), M Sc (Biotech), M Sc (Microbiology & Immunology), M Sc (Chemistry), M Sc (Mathematics), M Sc (Physics), M Tech, LLM, Executive LLM

PG Diploma in Food Safety & Quality Management (with IGNOU)

DOCTORAL: Ph D

CENTRAL LIBRARY: The Central Library has more than 180000 print books, 60 print journals, 15400 e-journals, encyclopedias and over 9850 CDs focusing on the diverse areas of knowledge that befit a university. In addition to this, each department has its own well-stocked library apart from the Central Library.



12-B Status from UGC

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admissions@gla.ac.in

Website :

www.gla.ac.in

VICE CHANCELLOR:

Prof. Phalguni Gupta

REGISTRAR:

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- The residential areas or more popularly known as 'hostel wings' have been specifically built separately for boys and girls. 6000 students resides in the campus.
- Full-time resident doctors, along with part-time specialists.
- Counselors attend to the student's psychological needs.
- A full fledged bank branch of the Indian Overseas Bank along with 2 ATM within the University Campus.
- Round-the-clock uninterrupted internet, electricity and water supply are provided.
- CCTV cameras and security guards keep a close watch and monitor the activities in the campus round-the-clock.

SALIENT FEATURES:

- We have 3000+ publications, 300+ patents published and 21 patents granted.
- We have officially received the certificate of registration from UPIT for incubation centre in the name of GLA Launch Pad.
- India's 14th Institution that has New Generation Innovation & Entrepreneur Development Cell (NewGen IEDC with financial support from DST.
- Students are encouraged for start-ups. In 2021-22 students started their own 41 companies in the incubation centre of University.
- Courses like: Cloud Computing, Data Analytics, Cyber Security, Artificial Intelligence and Machine Learning in collaboration with IBM.
- Industry 4.0 programs in collaboration with DCS for Engineering Courses on Smart Manufacturing and Industrial IoT.

PLACEMENT HIGHLIGHTS:

- 1800+ Placement offers in 400+ MNCs Batch 2022.
- ₹32.16 Lakh P.A. is the highest placement package offered.
- MNCs like Amazon, Microsoft, TCS, Capgemini, Dream11, Accenture, Byjus and many more visit GLA for Campus placements.
- 76% Placement average over the past decade.
- 6000+ Alumni working abroad.





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FACULTY	PRESENT PROGRAMS	PROGRAMS TO BE STARTED
Faculty of Science & Technology	<ul style="list-style-type: none"> B.Tech. (Computer Science) M.Sc. (Mathematics) M.Sc. (Physics) M.Sc. (Chemistry) 	<ul style="list-style-type: none"> B.Tech. (Robotics & Design) B.Tech. (CSE) with specialization Internet of Things B.Tech. (CSE) with specialization in Cyber Security and Block Chain Technology B.Tech. (CSE) with specialization in Data Science and Machine Learning B.Tech. (Electronics and Quantum Computing) B.Sc. (Gaming and Multimedia Technology) B.Sc. (Aviation)

FACULTY	PRESENT PROGRAMS	PROGRAMS TO BE STARTED
Faculty of Commerce & Management	<ul style="list-style-type: none"> M.Com. M.Com. (Integrated) MBA MBA (Integrated) 	<ul style="list-style-type: none"> MBA (Hospitality Operations) PG Diploma in Business Analytics (In Collaboration with Institute of Analytics, UK and ISDC) PG Diploma in Digital Marketing (In Collaboration with Digital Marketing Institute, Ireland and ISDC)

FACULTY	PRESENT PROGRAMS	PROGRAMS TO BE STARTED
Faculty of Law & Humanities	<ul style="list-style-type: none"> MA (English) M.A. (Journalism & Mass Communication) M.A. (Hindi) Master of Laws (LLM) L.L.B. 	<ul style="list-style-type: none"> 5 year Integrated Program in Journalism 3 Year B.Sc. Animation Ph.D. in Journalism & Mass Communication Master in Advt. & P.R. Film Studies & Audio-Visual Production P.G. Diploma in Corporate Communication Diploma Course in Anchoring Videography - Certificate Course VideoEditing - Certificate Course

FACULTY	PRESENT PROGRAMS
Faculty of Life Science	<ul style="list-style-type: none"> Bachelor of Pharmacy (B.Pharm) B. Pharma (LEET) Master of Pharmacy (Pharmacology) Master of Pharmacy (Pharmaceutical Chemistry) Bachelor of Physiotherapy (B.PT.) Master of Physiotherapy (Ortho) Master of Physiotherapy (Cardio Pulmonary) Masters in Public Health M.Sc. (Neurosciences)

FACULTY	PRESENT PROGRAMS
Faculty of Social Sciences & Education	<ul style="list-style-type: none"> M.A. (Education) M.A. (Public Administration) M.A. (Political Science) M.Sc. (Psychology) M.A. (Economics) Master in Social Work (MSW)

Ph.D. PROGRAMS

- Management
- Commerce
- Psychology
- Pharmaceutical Sciences
- Law
- Public Administration

Prof. (Dr.) Dinesh Kumar
Vice-Chancellor,
Gurugram University, Gurugram

For More Information Please Contact

Website : www.gurugramuniversity.ac.in
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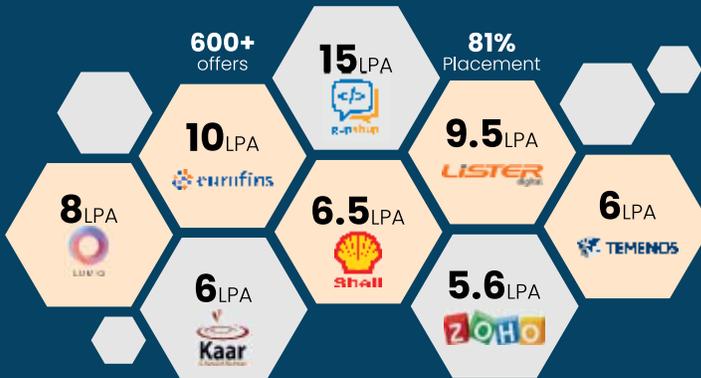
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- The National Assessment and Accreditation Council (NAAC) reaccredited Jadavpur University for the third cycle with grade A and CGPA 3.68 on a scale of 4.
- Jadavpur University is the first Indian university recognized by the Nippon Foundation, Japan, as a SYLFF (Sasakawa Young Leader Fellowship Fund) Institute to promote research by young leaders in the social sciences and humanities.
- Jadavpur University has completed UGC-UPE (Phase-II) and DST- PURSE (Phase-II)
- Jadavpur University has received grants under TEQIP Phases I, II, and III, funded by the Central Sector Scheme (CSS) of the MHRD, Government of India.
- Jadavpur University is among 10 State universities granted Rs. 100 crores each under RUSA 2.0.
- The NIRF 2021 rankings of Jadavpur University, among all Indian Universities and Institutions, initiated by MHRD, Government of India, are as follows:
 - Overall: 14th
 - Universities: 08th
 - Engineering: 17th
 - Research: 17th
- Jadavpur University placed in the 801-1000 band in the Times World Universities Rankings 2022.
- Jadavpur University ranked in the band 251-300 among Emerging Economies institutions in the Times World Universities Rankings 2022.
- Jadavpur University ranked in the 201-250 band in the Times (Asia University) 2021 rankings.
- Jadavpur University ranked in the band 601-800 among Engineering & Technology institutions in the Times World Universities Rankings 2022.
- Jadavpur University ranked in the band 801-1000 among Physical Sciences institutions in the Times World Universities Rankings 2022.
- Jadavpur University is the second-highest ranked State University in the country, according to the QS World University Rankings Asia 2022, with an Asian rank of 162.

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M.A. : English, Hindi, Sanskrit, History, Sociology, Geography, Economics, Political Science, Music. **Diploma Courses** : Diploma in Music (Surmalhar), Diploma in Panchgavya, P.G. Diploma in G.I.S. and Remote Sensing, Bachelor of Journalism and Mass Communication. **Certificate Courses** : Spoken English, Proficiency in English and Communication Skills, Culture of Rajasthan, Research Methods and Data Analyst, Human Rights, Ph.D.

Faculty of Commerce : Ph. : 0294-2413029, 9460275655, 9460372183

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Ph. 2494227, 2494217, 9414737125

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Manikyatal Verma Shramjeevi Evening College

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Department of Physical And Yoga Education

M.V. Shramjeevi Collage Campus, Ph.: 9352500445

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Department of Physical Education, Pratap Nagar Campus - 9829943205, 9352500445

Master of Physical Education (M.P.Ed.)

Department of Law - 9414343363, 9887214600

B.A.LL.B. (5 Year Integrated Course), LL.B. (3 Year Degree Course), LL.M. (2 Years), Ph.D., PG Diploma (1 Year Course) in Labour Law (PGDLL), Cyber Law (PGDCL), Law & Forensic Science (PGDLFS), Accountancy & Taxation (PGDLTA) and Intellectual Property Laws (PGDIPL).

Faculty of Engineering - Rajasthan Vidyapeeth Technology College

Ph. : 0294-2490210, 9829009878, 9950304204

Diploma in Engineering - Civil Engineering, Electrical Engineering, Mechanical Engineering, Electronics & Communication Engineering, Computer Science, **B.Tech** - (Civil, Electrical & Electronics, Mechanical, Electronics & Communication, Computer Science)

Department of Physiotherapy - Ph. : 0294-2656271, 9414234293

Bachelor of Physiotherapy (B.P.T.), Master of Physiotherapy (M.P.T.), Master of Hospital Management, Fellowship in Palliative Care and Oncology Rehabilitation, Fellowship in Neurological Rehabilitation, MBA in Health Care Management, Fellowship in Geriatric Care and Rehabilitation, Ph.D.

Udaipur School of Social Work - Ph. 0294-2491809, 8118806319, 9829445889

Master of Social Work (MSW), PG Diploma in HRM, PG Diploma in CSR, Post Graduate Diploma in Rural Development (PGDRD), Master of Social Work (MSW - Self Finance Evening Batch), P.G. Diploma in Talent Management, Ph.D.

School of Agricultural Sciences, Dabok - 9460728763

B.Sc. Agriculture (Hons.), B.Sc. Horticulture(Agriculture), B.Tech. Food Technology (30 Seats), M.Sc. (Ag.) Agronomy, M.Sc. (Ag.) Horticulture, M.Sc. (Ag.) Extension Education

Manikyatal Verma Shramjeevi Girls College, Dabok

Ph. : 0294-2655327, 9460856658, 9694881447, 9079919960

B.A., B.Com., B.Sc., M.A. (English, Hindi, Sanskrit, Pol. Sc., History, Geography, Sociology, Economics), M.Com (Accountancy), Special Classes for English Speaking and Computer Basics.

R.V. Homeopathic Medical College and Hospital, Dabok

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Faculty of Management Studies (FMS)

Ph. : 0294-2490632, 9461260408, 9782049628, 9001556306

B.B.A, M.B.A (H.R / Marketing / Finance / Production & Operation Management / I.B / I.T / Tourism and Travel / Retail Management / Agri-Business / Family Business Management), M.H.R.M, Ph.D.

Department of Travel, Tourism & Hospitality

Faculty of Management Studies - 9950489333

BBA (Tourism & Travel) Specialisation in Hospitality, Diploma in Hotel Management (Food & Beverage Service) Diploma in Hotel Management (Housekeeping) Diploma in Hotel Management (Food Production).

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