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Arvind Kumar Agrawal and Ram Lal Bagaria

Salvaging Lost Cultural Heritage and Pride: The Indian Knowledge Systems

Shree Raman Dubey

Education is Economy: Global Idea Impacts

Sonali Jaiswal and Harishankar Singh

Training the Students to be Upstanders not Just Bystanders

K Venkatesan and Saravana Selvi C

Effectiveness of Teachers in Implementing Skill-based Curriculum and Sustainable Development Goals: A Case of Andaman and Nicobar Islands

Madhabi Puri Buch

Achieving Goal through Own Mantra

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ITEMS	In This Issue	PAGE
Articles		
Salvaging Lost Cultural Heritage and Pride: The Indian Knowledge Systems		3
Education is Economy: Global Idea Impacts		10
Training the Students to be Upstanders not Just Bystanders		17
Effectiveness of Teachers in Implementing Skill-based Curriculum and Sustainable Development Goals: A Case of Andaman and Nicobar Islands		20
Convocation Address		
Indian Institute of Management Ahmedabad		28
Campus News		
AIU News		
Theses of the Month (Science & Technology)		
Advertisement		

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Salvaging Lost Cultural Heritage and Pride: The Indian Knowledge Systems

Arvind Kumar Agrawal* and Ram Lal Bagaria**

The Indian Knowledge Systems (IKS) represent diverse intellectual traditions encompassing philosophy, science, mathematics, astronomy, architecture, and economics (Subbarayappa & Sarma, 1985). Indian society is a veritable gold mine of scientific, societal, artistic, literary, traditional, linguistic, architectural, and customary expressions. As per the National Education Policy–2020, IKS refers to indigenous mechanisms of knowledge, covering subjects like medicine, astronomy, philosophy, mathematics, yoga, agriculture, engineering, linguistics, governance, economy, and polity (National Education Policy, 2020). Indians have been practicing ancient customs and rituals for generations, and they have been passed down from generation to generation. However, in the last several centuries, despite their profound contributions to human knowledge, many aspects of Indian knowledge systems have been marginalized or lost in this process.¹ This paper explores various aspects of the rich culture of ancient knowledge systems.

It proposes ideas for revival by incorporating the Indian Knowledge Systems (IKS) into the education curriculum. By incorporating IKS into curricula at all educational attainments, efforts should be made to preserve and promote Indian languages, arts, and culture. The paper highlights the need for new courses and programmes at undergraduate and postgraduate levels in higher educational institutes. It outlines the model curriculum structure of the undergraduate programme in IKS as per guidelines of NEP 2020, along with other statutory and regulatory policies in this regard. The paper also explores teaching, learning, assessment, and evaluation mechanisms in the newly introduced model curriculum for undergraduate programme in IKS. By reviving and preserving IKS, India can reclaim its lost cultural heritage and pride while fostering a more holistic and inclusive approach to education.

An essential and foremost step in salvaging IKS is incorporating various aspects of traditional knowledge into the modern education system. By incorporating elements of IKS into curricula, learners may have a comprehensive understanding of their cultural heritage and develop a deeper appreciation for traditional practices (National Education Policy, 2020).

Launching teaching and research programs for different educational attainments in schools and colleges (Certificate, Diploma, Undergraduate, Postgraduate including Research) in India is crucial in promoting India's diverse indigenous knowledge across fields like

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philosophy, language, medicine, and sciences. New Education Policy (NEP) 2020 has also mandated a clear trajectory for imparting training, education, and research on IKS, necessitating the launching of different programmes at various qualification levels in institutions and universities in the country (New Education Policy, 2020).

University Grant Commission has issued particular guidelines for imparting training in Indian Knowledge Systems for faculty members of educational institutes to inspire the academic fraternity to create an attitude towards IKS and explore and undertake quality research on various aspects of IKS as recommended in NEP 2020.² Several Universities, IITs, and IIMs have developed specific courses (value-added courses and elective courses) to impart education and research in IKS to their learners. The All India Council of Technical Education (AICTE) has brought policies for introducing IKS as a minor degree programme as per NEP-- 2020, apart from courses started earlier for learners enrolled in professional programs nationwide. Several courses (Mandatory, Open, and General Electives) have been formulated in IKS as partial fulfillment of Minor degrees at the undergraduate level by learners in regulated institutions.³

A separate division named IKS Division has been created in the Ministry of Education for mainstreaming Indian Knowledge Systems for the contemporary world and promoting IKS for further research and societal applications.⁴ UGC has introduced IKS as a subject in the UGC National Eligibility Test (NET) which is a minimum qualification for becoming eligible for Assistant Professor in Indian institutions. After clearance of this examination, learners will also be eligible for fellowship at institutions of higher education and may pursue research degree programmes.⁵

The programmes in Indian Knowledge Systems are multifaceted, serving to promote India's diverse indigenous knowledge across fields like philosophy, linguistics, medicine, and sciences. These courses are vital in creating an academic community focused on advancing traditional knowledge, trained and professional workforce, and promoting interdisciplinary research. The courses in the programme provide a holistic education, blending traditional wisdom with modern knowledge, thus offering learners a comprehensive and detailed

understanding of various subjects of ancient knowledge (Mahadevan et al., 2022).

In these circumstances, as part of academic administration, launching an Undergraduate Programme fully devoted to Indian Knowledge Systems (IKS) is crucial and a positive move towards promoting IKS, as no such programme is currently available in the country. This paper designs the model curriculum structure of a unique and first-of-its-kind undergraduate program in Indian Knowledge Systems (IKS) in the country. It provides a platform for researchers and professionals working in the field to design the syllabus accordingly.

Curriculum Framework of Undergraduate Programme in IKS

Programme Level: Undergraduate Programme (Level 6 as per NHEQF)

Programme Name: B.A. (Honours/Honours with Research) in Indian Knowledge Systems (IKS)

The B.A. (Honours/Honours with Research) Programme in Indian Knowledge Systems (IKS) is a pioneering academic programme focused on rich Indian philosophy, science, arts, and traditions. Grounded in line with NEP--2020 and other prescribed qualification frameworks, the Programme offers learners a unique opportunity to explore insights embedded in India's ancient knowledge systems. Through a blend of interdisciplinary learning, theoretical understanding, and practical applications, learners embark on a transformative journey of understanding Indian knowledge traditions.

Learning Objectives of the Programme

The Programme in Indian Knowledge Systems (IKS) has the following objectives:

- To provide learners with a comprehensive and detailed understanding of Indian Knowledge Systems, including philosophy, science, arts, and traditions.
- To develop critical and analytical skills by studying Indian philosophy, science, and arts.
- To foster interdisciplinary learning and research in the context of ancient knowledge traditions.
- To prepare learners for advanced and further studies or careers that require an in-depth understanding of Indian Knowledge Systems.

Learning Outcomes

Based on the aforementioned objectives, the expected learning outcomes in programme in Indian Knowledge Systems (IKS) are mentioned below:

- The learners will gain a deeper understanding of core concepts and principles of Indian Knowledge Systems.
- The learners will develop critical thinking and analytical skills through engagement with primary texts and scholarly interpretations.
- The learners will apply the principles of Indian Knowledge Systems to contemporary issues and challenges.
- The learners will be able to pursue further studies or careers that require an in-depth understanding of Indian knowledge traditions.

Eligibility

The model programme has been designed in order to be feasible for learners of all streams, considering the multidisciplinary nature of the subject matter. The prospective learners must have passed 10+2 or equivalent examination in any stream from a recognized Board in India.

Medium of Instruction

The medium of instruction for the Programme in IKS is recommended as Hindi or any other language approved for instruction in India.

Teaching-Learning Process

The teaching-learning methods of the Programme are diverse and engaging, encompassing traditional and modern learning process approaches. Lectures form the backbone of theoretical learning, providing a comprehensive perceptive of the historical context and philosophical underpinnings of IKS. Focused group discussions are integral to the learning process for encouraging critical thinking, and fostering a deeper appreciation of IKS principles. A blend of audio-video resources and excursions to historical sites and cultural centers may be applied to present complex concepts and provide a tangible connection to the subject matter. Practical sessions may also be organized for first-hand training on subject matter aspects for learners. These varied teaching-learning methods should be aimed at preserving and reviving the diverse knowledge traditions of India, ensuring their relevance and

vitality in the modern world (Guidelines for Innovative Pedagogical Approaches & Evaluation Reforms, University Grant Commission).

Assessment and Evaluation

Evaluation and assessment of learning outcomes in the Programme should be achieved through various techniques, ensuring a comprehensive perspective and applications of the concepts. Continuous and comprehensive evaluation should be implemented to assess and evaluate learning outcomes. Research projects and other analytical assessments will be helpful to learners, allowing learners to delve deeply into specific aspects of IKS and demonstrate their research and analytical skills.

Incorporating these varied assessment methodologies, based on learning outcomes, there should be a focus on ensuring a comprehensive evaluation of learners' understanding and applications of Indian Knowledge Systems. However, the guidelines issued by particular universities as recommended by the Board of Studies (BoS), School Board, and Academic Council and statutory policies as prescribed by the University Grant Commission should be followed strictly (Guidelines for Innovative Pedagogical Approaches & Evaluation Reforms, University Grant Commission). Classification of Courses in the Undergraduate Programme (B. A. (Honours/Honours with Research) as per UGC Regulations is given in Table 1.

Model Programme Structure and Curriculum

The Programme is spread over four years (eight semesters) and covers different courses of varying nature and characteristics. The curriculum structure is designed in accordance with 'National Educational Policy (NEP) 2020 as per policies of 'The National Skills Qualifications Framework (NSQF)', National Higher Education Qualifications Framework (NHEQF),' 'National Credit Framework (NCrF),' 'Curriculum and Credit Framework for Undergraduate Programmes,' along with other standards set up by institutions of national and international repute. Table 1 depicts the model course curriculum prepared by the author for the Programme.

Note

1. The Dissertation, Academic Project/ Entrepreneurship, will start in the VII Semester and continue in the VIII Semester. However, the

evaluation and assessment will be done in the VII Semester as well VIII Semester.

2. Learners studying DSEs offered by any Discipline other than the learner's Core Discipline will be treated as GE for the learner.
3. In four years, a learner will study the following number of DSCs, DSEs, and GEs: Total DSC papers: 20
Total DSE paper options: 10 (minimum to be chosen is 4)

Total GE paper options: 10 (minimum to be chosen is 4)

4. In a single core discipline program, the learner shall Major in the core discipline. However, if the learner wishes to do a Minor in another discipline, then the learner has to earn 28 credits from GE courses in the second discipline.

The learner can do a Minor in another discipline if he/she fulfills the following criteria: Seven GEs = Minor (7 x 4) = 28 credits.

Table 1: Classification of Courses in the Undergraduate Programme (B. A. Honours/Honours with Research) as per UGC Regulations

S. No.	Nature of the Course	Course Code	Description of the Course
1.	Discipline Specific Course	DSC	These are the foundational Courses, which are to be compulsorily studied by a learner as a core requirement to complete the program in a discipline of study at the UG level. These also include the introductory Course on research methodology, dissertation writing, project work, fieldwork, lab work, Indian knowledge systems, skill enhancement, value addition, etc., related to the subject.
2.	Discipline Specific Electives	DSE	These are the elective Courses aimed at specializing the learner in a particular sub-discipline of the discipline concerned. The learners can choose the Courses from a basket of DBCE offered in the relevant semester.
3.	General Electives	GE	These are the elective Courses aimed to enable exposure to other disciplines or domains. The learners have to choose open elective courses from other departments of the University.
4.	Ability Enhancement Course	AEC	AEC courses are based on content that enhance knowledge in various study areas. Language and Literature, Environmental Science, Sustainable Development, and other Courses as recommended by specific University will be mandatory for all disciplines.
5.	Skill Enhancement Course	SEC	SEC courses are skill-based in all disciplines and aim to provide learners with hands-on training, competencies, proficiency, and skills. SEC courses may be chosen from a pool designed to provide skill-based instruction. Every discipline may provide skill-based courses, some of which may be offered to learners of their discipline, while the rest can be open to learners of all other disciplines.
6.	Value Addition Course	VAC	VAC courses are a shared pool of courses offered by different disciplines and aimed towards personality building, embedding ethical, cultural, and constitutional values; promoting critical thinking, Indian Knowledge Systems, scientific temperament, communication skills, creative writing, presentation skills, sports. Physical education and teamwork will help in the all-round development of learners.
7.	Indian Language	IL	Pool of Indian Languages in the eighth schedule of the Constitution
8.	IAPC	IAPC	Internship/Apprenticeship/Project/Community Outreach
9.	Cr.	Credits	Credits are allotted to each Course as per the Credit System

Table—1: Model Programme Structure and Curriculum for BA Programme on IKS

Nature of Course	Course Code	Name of Course	Cr.	Course Code	Name of Course	Cr.
Semester I			Semester II			
DSC	UIKS6001	Bhaarateeya Gyaan Pranaalee ka Parichay	4	UIKS6004	Samanya Vaidik Ganit	4
	UIKS6002	Aaryaavart ka Itihaas	4	UIKS6005	Samanya Vigyaan	4
	UIKS6003	Saamaanya Sanskrit	4	UIKS6006	Bhaarateeya Saamaajik Vyavastha	4
GE	GE 1	Saamaanya Vaikalpik Paathyakram 1 (Anya Vishayon se)	4	GE 2	Samanya Vaikalpik Paathyakram 2 (Anya Vishayon se)	4
AEC	AIKS6001	Sambandhit Vishvavidyaalaya/ Sansthaan ke Anusaar	2	AIKS6002	Sambandhit Vishvavidyaalay/Sansthaan ke Anusaar	2
SEC	SIKS6001	Aayurved	2	SIKS6002	Aadhyaatmik Chikitsa	2
VAC	VIKS6001	Rishi Parampara	2	VIKS6002	Sanaatan Dharm	2
Semester III			Semester IV			
DSC	UIKS6007	Bhaarateeya Arthashaastr	4	UIKS6010	Sandhaaraneey Vikaas Hetu Paryaavaran	4
	UIKS6008	Bhaarateeya Raajaneetik Vyavastha	4	UIKS6011	Bhaarateeya Bhoogol Shaastr	4
	UIKS6009	Bhaarateeya Lok Prashaasan Vyavastha	4	UIKS6012	Bhaarateeya Khagol Vigyaan	4
DSE	UIKS6021	Praacheen Bhaarateey kootaneeti Evam Antararaashtriy Sambandh	4	UIKS6022	Bhaarateeya Vigyaan, Abhiyaantrikee Evam Takaneek (Ateet, Vartamaan Evan Bhavishy)	4
AEC	AIKS6003	Sambandhit Vishwavidyalaya/ Sansthaan ke Anusaar	2	AIKS6004	Sambandhit Vishvavidyaalaya/ Sansthaan ke Anusaar	2
SEC	SIKS6003	Sandhaaraneey Krishi Evam khaady Sanrakshan	2	SIKS6004	Bhaarateeya Saundarya Shaastra	2
VAC	VIKS6003	Bhaarateeya Anushthan Evam Parv	2	VIKS6004	Yog Vidya	2
Semester V			Semester VI			
DSC	UIKS6013	Bhaarateeya Nyaay Pranaalee	4	UIKS6016	Bhaarateeya Shikshan Pranaalee - gurukul Parampara /Vidyaapeeth	4
	UIKS6014	Bhaarateeya Prabandhan	4	UIKS6017	Bhaarateeya Svaasthy Vigyaan	4
	UIKS6015	Bhaarateeya Darshan	4	UIKS6018	Bhaarateeya Gyaan Parampara Mein Vyaktitv Vikaas kee Pranaaliyaan	4

Nature of Course	Course Code	Name of Course	Cr.	Course Code	Name of Course	Cr.
DSE	UIKS6023	Kaavy Evam Puraan	4	UIKS6024	Shodh Pravidhi	4
GE	GE 3	Saamaany Vaikalpik Paathyakram 3 (Anya Vishayon se)	4	GE 4	Samanya Vaikalpik Paathyakram 4 (Anya Vishayon se)	4
SEC	SIKS6005	Bhaarateey Gyaan Pranaalee Mein Manovigyaan Evam Chetana ke Vikaas ke Vibhinn Upaagam	2	SIKS6006	Vyaakaran	2
Semester VII			Semester VIII			
DSC	UIKS6019	Ved Evam Vedaang Jyotish	4	UIKS6020	Dharmashastra	4
DSE	UIKS6025	Upanishad	4	UIKS6028	Vaastushastra	4
	UIKS6026	Bhaarateeya Sainya Vigyaan	4	UIKS6029	Naatyashastra	4
	UIKS6027	Jyotish	4	UIKS6030	Sahitya-Abhigyan Shakuntalam, Meghdoot, Mrichakatikam, Mudrarakshas, Uttarramcharitam, Swaapnawasvadattam, Kiratarjuneeyam	4
IACP	UIKS6091	Laghu Shodh Prabandh	6	UIKS6092	Laghu Shodh Prabandh	6

Source: Author

- On Exit after the First Year, the Learners will be awarded an Undergraduate Certificate in IKS.
- On Exit after Two Years, the Learners will be awarded an Undergraduate Diploma in IKS.
- On Exit after Three Years, the Learners will be awarded a B. A. (Honours) in IKS.
- On Exit after Four Years, the Learners will be awarded a B. A. (Honours with Research) in IKS.
- Learners may work in cultural organizations, museums, or heritage sites to preserve and promote Indian Knowledge Systems and Traditions.
- Learners may work in government agencies, NGOs, or advocacy groups to promote policies that preserve and promote Indian Knowledge Systems.
- Learners may work in publishing houses, media organizations, or digital platforms to create content related to Indian Knowledge Systems.

Career Prospects

Successful learners of the Programmes in Indian Knowledge Systems (IKS) can pursue various career paths in traditional and modern fields. Some potential career opportunities include:

- Learners may pursue research positions in academic institutions, think tanks or research organizations focusing on Indian knowledge systems.
- Learners may become teachers or professors in schools, colleges, or universities specializing in Indian Knowledge Systems.
- Learners may start businesses related to Indian Knowledge Systems, such as wellness centers, cultural tourism ventures, or educational platforms.
- Learners may work as consultants, providing expertise on Indian Knowledge Systems to businesses, organizations, or government agencies.
- Learners may work in the social sector, using their knowledge to address social issues and promote holistic well-being in communities.

Conclusion

Salvaging and reviving the Indian Knowledge Systems is not just a matter of preserving ancient texts and traditions but reclaiming our cultural heritage and pride. By honoring the wisdom of our ancestors and integrating traditional knowledge into contemporary society, we can ensure that India's rich intellectual legacy continues to inspire and enrich future generations. Incorporating Indian Knowledge Systems (IKS) into the education curriculum at all levels is crucial for preserving and promoting Indian languages, arts, and culture. The paper underscores the importance of a new programme at the undergraduate level in higher educational institutions to revive IKS. By reviving and preserving IKS, India can reclaim its lost cultural heritage and pride while fostering a more holistic and inclusive approach to education.

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Education is Economy: Global Idea Impacts

Shree Raman Dubey*

The Dream of 'Developed India', which remained unfulfilled so far is now not far away from becoming true. 'Amrit Kaal' i.e. the period of 25 years period from the 75th year to the 100th Year of India's Independence is demarcated for realising the dream of a developed India. The newly crafted National Education Policy---2020 (NEP) has also rightly envisioned a developed India and made recommendations to realise the vision. Indian Higher Education is excelling globally in line with the mandates of 'Viksit Bharat@2047'.

The National Education Policy-2020 is the first education policy of the country in the 21st Century and aims to address the many growing developmental imperatives of our Country. This Policy proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the aspirational goals of '21st Century Global Education'; while building upon India's diversified traditions and value systems.

Our National Institutes of importance like IITs (Indian Institute of Technology), IIMs (Indian Institute of Management), AIIMS (All India Institute of Medical Sciences), Central Universities, State Universities, Private Universities, Deemed to Universities, and others have started implementing the new education policy to constructively reap the benefits of NEP-2020.

NEP---2020 has undoubtedly turned out to be the saviour for Higher Education. The higher education crisis in India is being professionally addressed by the new National Education Policy--2020. Its implementation is shining as the impacts of envisioned ideas are being vibrantly witnessed and there is no second thought; about the way reforms and restructuring are leveraging our potential to outsmart the benchmark set for the Internationalisation of India's Education System. The Internationalization of Higher Education in India', is one of the prime objectives of

the National Education Policy. The accelerated rate of Globalization has compelled Indian policymakers to take immediate measures to transform the prevailing Higher Education System. The future survival in the Globalized Competitive Economy will demand multidisciplinary qualitative skills.

India has a rich heritage and legacy in higher education. In ancient India, universities like Takshashila and Nalanda (Nalanda, the seat of knowledge, once lured outstanding scholars from abroad (China) like Hiuen Tsang) attracted many scholars from various parts of the globe. Now, the country is invariably battling to regain its lost glory and status of "*Vishwa Guru*". The universally transforming education, learning, and teaching is now a subject of Global Quality Standards.

The strategy 'Internationalization at Home' is the first step to promoting Indian ethos on internationalisation. The future-readiness road map towards India becoming a Global Study Destination should be continually crafted by bringing in innovative reforms and restructuring India's Education System. The challenge is how to globalize the Diverse Education Systems in India and how India can become a hub for Global Education.

The NEP-2020 is directed to connect to the Global Economy. The evolving Lifestyles are being dictated by technological advancements like AI (Artificial Intelligence), ML (Machine Learning), and IoT (Internet of Things). With all the promises NEP-2020 is poised to give births at home the similar Institutes of Excellence and Eminence at par with the standards and quality of higher education imparted at Global Universities symbolized for Academic Excellence like Oxford (UK), Stanford (USA), Harvard (USA), MIT (USA), Cambridge (UK), University of Sydney (Australia), University of Toronto (Canada), University of Hong Kong (Hong Kong) and so on.

Digital Transformation, Integrating Bhartiya Knowledge System (BKS), Future of Work and Skill Development, Nurturing Research and Innovation, Globalization and Internationalization, are some of the core areas of the NEP-2020, that have sincerely

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taken off to overhaul the Higher Education System in India.

On understanding the perspectives through the intensive review of literature pre and post-NEP-2020 enactment; the barriers, objectives, challenges, opportunities, and way forward can broadly be categorized into the following:

Economy by Entrepreneurship !

- Will the digital empowerment of citizens create a knowledge-based society and Digital Economy in India?
- Do we have a Holistic Economic Model evolving?

The aim of ‘Digital India’ with the motto of “Power to Empower,” initiated in 2015, kicked off well, despite questions about the competencies and capabilities of India becoming *Atam Nirbhar Bharat* (Self-Reliant India) by 2020.

Digitalization is the New Pandemic in India. The Digitalization drive has started transforming the sectors like Education, Transport, Marketing, Communication, Health, Governance, Human Resources, Finance, Banking, and many more to the list. The central idea behind dynamically propelling ‘Digitalization’ is to explore all possible ways of innovation in effectively integrating the overall Supply Chain Delivery System.

The new National Education Policy-2020 is a promising step for bringing changes in the Indian educational landscape toward future preparedness and readiness of the country to become a Global Leader in the ‘Digital Economy’ without sacrificing the principles of *Atma Nirbhar Bharat*. In recent times out of all the transformations, the Entrepreneurial Sector stands remarkable in re-building India’s Economy after the Global COVID-19 Pandemic (2020-2021) setback. There is no doubt about the “Digital India Movement” contribution to boosting employability and Entrepreneurship.

Today is the era of Digital Entrepreneurs. Digital India represents a \$1 Trillion opportunity to grow the economy with the ability to sustain 55-60 million jobs. This digital transformation campaign is making the country digitally empowered in the areas of business, commerce and management, engineering and technology, online infrastructure, enhancing internet connectivity, and many more.

Is our socio-economic and political environment conducive to supporting and sustaining the emerging digital environment globally?

The policy of strengthening the economy through entrepreneurship has gained great momentum in India despite its apprehensions of start-up failure. M/o MSME (Ministry of Micro, Small and Medium Enterprises) is playing an appreciable transformative role in uplifting the Rural Youths of India.

Education is Empowerment !

- What kind of Sustainable Education Excellence Models in India is required in 21st Century?
- Will Academic Autonomy liberalize and globalize the Education System in India?

The Digital Revolution is transforming Learning and Teaching Systems all over the World. The “Knowledge of many Arts” is to be brought back to Indian Education. The Education approaches that integrate the Humanities and Arts with Science, Technology, Engineering, and Mathematics (STEM) have shown positive learning outcomes. India aims to have an Education System at par with Global Standards by 2040 that is second to none.

Though the necessity for “Multidisciplinary Learning” for Sustainable Growth and Development has been felt so late in India; the recent National Education Policy ---2020 by the Ministry of Human Resource Development, Government of India is a very promising step towards reforming and restructuring the overall Education System in India.

The major focus is on Learning Environment, Multidisciplinary Education, Quality and Integrity, Motivated and Energized Faculty, Effective Governance and Leadership, and Standards for Approvals and Accreditation, Policies and Regulations, Technology Application and Integration, Curriculum and Creativity, and Support for Students Professional Career and Growth for transforming the Higher Education System in India.

Imagination is Innovation !

- What is our present readiness for Contemporary Multidisciplinary Research and Learning?
- Will the creation of the National Educational Technological Forum (NETF) and National Research Foundation (NRF) help to achieve the targets and mandates of NEP-2020?

Gone are the days of content Education. The demand is for multidisciplinary and innovative research.

Education is a tool for transforming life, culture, and society. A phenomenal innovative transformation outcome is only possible through discipline, dedication, commitment, and extraordinary efforts collectively by any System. It has become imperative today, considering our present scenario from the perils of limping and crippling state the country was experiencing.

Global Learning is looking for creativeness which ultimately adds value to the entire supply chain struggling to achieve Sustainable Education. Despite this critical importance of Research, the Research and Innovation investment in India is at the current time, only 0.69% of GDP; far behind the Countries topping the Global list.

In the above context, the Role of Higher Educational Institutions and Universities both in the Public and Private Sector in India becomes indispensable. Though a large number of Professionals are being produced annually by Higher Educational Institutions and Universities in India very marginal of them are enable to apply their Academic Knowledge in the pursuit of bettering Society and Country.

Why the Indian Academic Learning Culture fails to promote the potential of integrated creativity in aspiring students? And moreover, the situation is more pathetic in multidisciplinary Academic Research.

Truthfully the present Education System in India lacks creativeness in learning to sustain regional localities and uplift equitably and integrally the Socio-Economic Development Globally.

The NEP-2020 is focused on empowering the Youths of India. The importance of skill development programs is being witnessed in the true spirit of the country.

Restoring as *Vishwa Guru* !

- Will the initiatives of NEP-2020 in reforming and restructuring the Higher Education System in India attain the Global outreach?
- Will Academic Autonomy to HEIs (Higher Educational Institutions) liberalize, globalize and internationalize the Education System in India?

India aims to restore its status of being '*A Vishwa Guru*', catering to the needs of the Global Knowledge Society. The recent National Education Policy -2020 by the Ministry of Education, Government of India, is a very promising step towards reforming and restructuring the Higher Education System in India in line with the Global Standards.

The major focus is on standards of Global Education. The philosophies of "Internationalization at Home" will certainly open doors for foreign students but the global challenges in implementation are unending.

India's potential towards Learning Environment, Multidisciplinary Education, Quality and Integrity, Motivated and Energized Faculty, Effective Governance and Leadership, and Standards for Approvals and Accreditation, Policies and Regulations, Technology Application and Integration, Curriculum and Creativity, Support for Students Professional Career and Growth for transforming the Higher Education System in India; is being put to test for evaluating its Global Standards.

The Indian Higher Education Institutions and Universities are looking for collaborative creativeness which ultimately will add value to the entire supply chain struggling to achieve Internalization of Higher Education. The fact is that India at present is far behind the Countries topping the Global list of rankings with their Globally Branded Institutions.

In the above context the Role of Higher Educational Institutions and Universities both in the Public and Private Sectors in India becomes indispensable. Though a large number of Professionals are being produced annually by Higher Educational Institutions and Universities in India very marginal of them are enable to apply their Global Knowledge in the pursuit of bettering Society and Country.

Why the Indian Global Learning Culture fail to capitalize on the potential of integrated creativity in aspiring students who are not from the native land? And moreover, the situation is more pathetic in managing the diversity of national traditions and value systems. One should not be surprised to understand that the present Education System in India lacks collaborative creativeness in learning programs to sustain Socio-Economic Development Globally.

Barriers and Breakthroughs !

- Will our NEP-2020 reform and restructure the Education System in India?
- Will Indian Teachers arise to the expectations of the NEP-2020 vision and mandates?

In the dynamic realm of evolving global education today, NEP-2020 is the discovered magical tool for forging excellence in India's Higher Education System to secure a sustainable tomorrow with improved standards of living.

The study identified some of the major barriers to Technical Skills, Communication Skills, Vast Curriculum, Infrastructure, Counselors, Student Diversity, Global Culture, Students as well as Teachers Productivity, Assessment and Accreditation, Abolition of Affiliations, Globalization and Internationalization, Research, Innovation, Technology, Faculty and Academic Leadership, University Administration and Management, Governance System, Education Management and learned that all these have been very categorically taken up in formulating the NEP---2020 by the policymakers of India.

This speaks about its solidarity, way-forward vision, so let us religiously, leaving behind the apprehensions of hesitation in approach to adopt, embrace ourselves with its guiding principles for committed implementation to witness the golden days.

The barriers are being broken down by synergy and collaborations depending on the demand-supply gap. The philosophy of building bridges has brought in huge responses in reforming the ailing sector.

There is no doubt, as to why the target of enhancing the GER in higher education from the present 25% to 50% by the next 10 years cannot be achieved.

Though we are obsessed with the fact that the present ecosystem of higher education is fragmented and professionally unorganized in the country, at the same time no one can deny the preparations it has begun to face the global competitiveness challenges and opportunities for excelling in the world.

Humanizing and Harmonizing !

- Is NEP-2020 Student friendly?
- Is not Student our customer?

The "Student is King", is the new making recommended by NEP---2020 and the branding needs

to be established by humanizing and harmonizing the standards of Higher Education in India. Student is the prime source of revenue in the Education Sector. Student has all the right to be a satisfied customer in terms of quality, services, and career.

People are defined and dictated by their respective philosophies of life and living. The teacher too is a learned philosopher and the giver of knowledge to the students. Teacher-Student relationship creates a conducive environment of learning and teaching. To do justice, we have already started with, "Education for All", irrespective of creed, caste, religion, disparities, remoteness, economically weaker sections of society, and the demographic limitations of the country.

The Academic Bank of Credits is a very influencing national-level facility to promote and provide significant autonomy to students by providing extensive choice of courses for a programme of study, flexibility in curriculum, and novel and engaging course options across a number of higher education disciplines or institutions.

Total Literacy is our aim which will enable us to lead in the Global Economy by 2035/2040 year. NEP---2020 assures and ensures that overall Education should be unstoppable under any odd circumstances in the country. The cure for abolishing poverty is 'Education'. The consciousness for healthiness, happiness and harmony lies in the hands of 'Education'.

Sustaining NEP-2020 !

- Can a Multidisciplinary Education System help in developing all capabilities of Human Being to meet the challenges of the 21st Century?

No policy is exceptional to sustainable challenges, especially when your perspectives and objectives are global. The prime challenge is how to globalize the Education System in India. Integrating the diverse education systems for effective interactions will not be free from the mobility of students and scholars from various parts of the Globe.

The struggle continues as it is still suffering with the revamping measures on the development of cognitive skills, inadequate facilitation in Innovative Research and poor implementation of schemes and plans in affiliated Higher Educational Institutions and Universities (all Central, State and Private).

The NEP-2020 focuses on Research-Based Curriculum with priority on developing Creativeness-Based Cultures both at Schools and Higher Education Levels. There is huge demand to increase the Public Investment in Education Sector to reach 6% of GDP at the earliest.

The freedom to student's 'Choice of Course' with the option of "Multiple entries and exit points" being introduced through the establishment of "Academic Bank of Credit", as per the NEP-2020 is being rightfully experimented with to empower the youths.

Interpretation

The NEP-2020 is the new prime mover to accelerate the ambitions and aspirations of the Youth of India. The script for India's success especially in the last decade (2014 to 2024) supported by the rolling schemes one after the other has exponentially grown beyond the national borders of the country.

The prime purpose of Reforming and Restructuring Education System in India is to stand at par and cope up with the emerging Digital Revolution engulfing the Global Economy for Sustainable Growth and Development. NEP-2020 so far has been appreciably doing well addressing the arising apprehensions like:

- Will India restore its lost glory and role as "A Vishwa Guru"?
- How to promote India as a Global Study Destination?
- Do we have a roadmap for exchange programs with Global Institutions?
- What is the plan for having large numbers of International Students studying in India?
- Will India achieve the goal of "Internationalization at Home"?
- Are we prepared for the Global Quality Standards in Higher Education?
- Do we have well -defined pathways to implement NEP-2020?
- Is the partnering role of Private Universities becoming predominant in Higher Education?

The above are not the limited issues and as it progresses with its road-map the implementation and improvising challenges too are going to surmount questioning the effectiveness of the NEP-2020 Policy.

Indian Higher Education has started moving towards less content, and more towards learning to think critically and solve emerging problems globally. The solution to sustainability lies in how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields.

The Global Pedagogy (A New Education Mix) is evolving to make Higher Education more enthusiastic, experiential, holistic, multidisciplinary integrated, inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible, and, of course, enjoyable.

It is not only the "Collaboration of Global Technologies" but even the "Collaboration of Global Cultures", that is equally to be addressed by the Indian Higher Education System striving to Globalize through the philosophy of Internationalization. At present the investments in Internationalization programme have been rightly brainstormed and channelized for successful implementation in India.

The pursuit of NEP--2020 is promisingly improving and attaining the objectives of GER (Gross Enrolment Ratio), PTR (Pupil Teacher Ratio), VET (Vocational Education and Training), SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds), MOOC (Massive Open Online Course) and Global Citizens giving a new global outlook to India's Higher Education. Moreover, though the policy of commercialization and corporatization have been initially criticized; the mandate of "Access, Equity and Quality" is certainly revolutionizing the overall supply chain and transforming India's Higher Education System to attain "Internationalization at Home".

Conclusion

To comprehend "Education is Economy", the NEP-2020 aims to convert India into a Knowledge-based Economy. A long-awaited reform policy after 30 years has finally struck the door of India's Education System with all apprehensions of its success of implementation within the time frame of 2040.

Today, Higher Education is not only the cornerstone in the foundation of nation-building but equally responsible for Global Building. India's aim of becoming 'Global Education Hub' thus, in the pursuit of Internationalization -Teaching and Learning must create continual opportunities to attract international students, academics, researchers and teachers from numerous subject areas and faculty across the Globe.

The Indian Academic System has started thinking qualitatively with the multidisciplinary perception for Sustainable Educational Growth and Development. The future readiness is being felt seriously to compete with respect to Global Standards. The ultimate aim of Multidisciplinary Learning and Education is to prepare Students for a Sustainable Knowledge Society.

“Economy by Entrepreneurship” is the new Global Mantra. The Employment is through Entrepreneurship. Indian Citizens are being encouraged and empowered to take up entrepreneurship.

The Indian Government is becoming a facilitator more than a regulator. “The Economic Environment is Evolving Globally”. The issues of Climate Change and Go-Green are impacting every country. The shift is towards Digital Industry (Manufacturing and Services). The demand for Information Technology (IT) enabled skilled manpower is increasing day by day.

The Digital Economy is the new emerging face competing with the Industrial Economy. Opportunities for global livelihood are being created throughout the country and the world. The Indian Economic System has started thinking qualitatively with the multidisciplinary perception for Sustainable Economic Growth and Development future readiness to compete with respect to the Global Economic Standards.

Though the past was burdened with accumulated lapses in policies, time losses in implementation, delayed decisions, and ineffective corrective measures; altogether had landed India into major problems hindering the germination of “Imagination-Seed” in the Country, the turnaround is being acknowledged as a larger scale today.

The present results obtained justifies the story of the success of the philosophy of “Make in India” to collectively scale our Economy at par with the World. The success mantra for “Make in India” policy can only be further sustained by “Imagination is Innovation”. India gradually with the promising changes is looking forward to becoming a Self-Reliant Country in all walks of Life through “Education is Empowerment”, and re-defining Higher Education System in India.

India’s integrated efforts of Government, Universities, Higher Institutions, Academics,

Researchers, Educationists, Reformers, Teachers, Scholars and Students are paying off in elevating the country’s ranking in the world of International Education. Finally, to conclude, NEP-2020 has been fostered for the long-term vision that where, “Young India” is going to shape our “Global Destiny” as we transition from “\$3.5 Trillion Economy to \$35 Trillion Economy”, when we celebrate 100 years of independence in 2047 year. Today’s “Start-Ups” are going to be the backbone of “Emerging India” to compete in the Global Economy. An educated society is the prime foundation for an empowered nation. The path to Global Economy is only through the window of Global Education.

India was a “*Vishwa Guru*” (The Seat of Knowledge) and is in the process to become “*Vishwa Guru*” again.

University Grants Commission (UGC) has played a historic pivotal role in revolutionizing the Higher Education System in India. It has catalyzed the entire team of institutions and universities exemplifying the ideals of Global Leadership in Education Industry. NEP---2020 after its notification on 29th July 2020 is being successfully implemented by the HEIs across the Country. The UGC has been continually taking many initiatives at the national level under the umbrella of access, equity, quality, affordability, and accountability engaging the HEIs to become better day by day to excel globally.

Indian Network for Internationalization of Higher Education (INIHE) is a pioneering initiative of the Association of Indian Universities (AIU) in line with the vision and mission of NEP-2020. AIU has always remained a renowned national body of importance, nearly touching 100 years of establishment and is an Institution of Heritage in the landscape of Indian Higher Education.

Ministry of Education, UGC, AIU, (National Assessment and Accreditation Council (NAAC), NCERT, IGNOU, NIOS, AICTE, QCI (Quality Council of India), NIRF (National Institutional Ranking Framework) and many more National Bodies/ Councils have been the key players of the Indian Higher Education System taking the country to commendable heights.

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Training the Students to be Upstanders not Just Bystanders

Sonali Jaiswal* and Harishankar Singh**

Bullying incidents in school have become common and we have become accustomed to hearing, seeing, and reading such incidents in daily headlines but the irony is that no one is taking any step forward to stop such incidents. Bullying is characterized by the repetitive occurrence of aggression or harassment, specifically aimed at individuals who hold a lower social status or power in comparison to the individuals perpetrating the bullying (Olweus 1993). If we stop the perpetrators at the time of the incident they will not be repeated. When two equal people fight together, it is normal but, when a weaker class is tried to be suppressed or tolerated by a much larger class or a more powerful class, then there is a possibility of bullying (Harris, H., and Petrie, G., F.). Barry Edward McNamara in his book stated that mere mention of this term evokes unpleasant emotions in adults who have experienced teasing, taunting, or physical aggression during their school time in the classroom or on the playground. Bullying activist Berdahl-Baldwin says that Bullying goes beyond the isolated incident involving the perpetrator and the victim, spreading throughout the social connections within a community and influencing the physical and psychological health of individuals.

The main focus of this article is on ways to motivate Bystanders who are mute spectators of bullying incidents in school to become Upstanders. Witness of bullying, or those who care for the victims might have very strong feelings of anger and feel a need to punish the perpetrators. The student who displays strength or bravery on the weaker students who are easily targeted by bullies. When someone stands behind, the victim is saved from getting mistreated. This article explains how bystanders can play a role in causing harm to the victim or how they can play a vital role in protecting the person. The authors explain how a small step taken by the bystanders

can prevent misdeeds like bullying from happening to their classmates. Convincing and justifying the bystanders of their positive role, they will understand their importance and modify themselves from being unresponsive to responsive. They will move from being bystanders to becoming upstanders.

Role of Bystanders

In the majority of bullying scenarios, three distinct roles can be identified: the Bully, the Victim, and the Bystander. Bullies can present themselves in diverse shapes and sizes. They exhibit differences in physical appearance, intelligence, attractiveness, and popularity. Some bullies are large, while others are small; some are bright, while others are not so bright; some are attractive, while others are not so attractive; some are popular, while others are disliked by almost everyone. All children who experience bullying share a commonality - they have been singled out by a bully or a group of bullies. Each child becomes the target of ridicule and harassment simply because they possess some form of uniqueness that sets them apart. Victims are the ones who are from weaker sections and incidents of bullying happen to them. *George Robinson* defines a victim in his book as “A person or group that is harmed by the behavior of others and who does not have the resources, status, skill or ability to counteract or stop the harmful behavior”. Among these roles, the Bystander assumes the largest and most influential position. Bullying involves bystanders who witness bullying and can play different roles such as “reinforcers” (providing support to bullies), “outsiders” (remaining uninvolved in the bullying), and “defenders” (helping or supporting the victim) (Salmivalli, C., et. al., 1996).

Bystanders can safeguard others from becoming victims if they intervene when their friends engage in bullying behavior. Bystander behavior must have a significant impact on peers. Ensuring a safe environment requires the collective effort of students, staff, and parents, as they must consistently remind one another about the types of texts, pictures, and information that are inappropriate for communication.

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Within this tragedy, bystanders emerge as the third faction of participants. Functioning as the supporting cast, they play a significant role in enabling and assisting the bully, whether through their inaction or direct involvement. Bystanders are described as a “supporting cast in a play” whose role is to aid and abet the bully through acts of commission or omission (Colorso, Garrett and Sullivan, et. al., 2005). A significant yet frequently disregarded group of children impacted by bullying are those who neither fall victim to nor engage in bullying themselves, but witness their peers being bullied. Additionally, some children may not instigate bullying behaviour but will join in with a bully to target and victimize a specific child within their classroom or school. Bystanders may choose to passively observe or deliberately turn a blind eye, while others may actively encourage the bully’s behaviour or even become part of a group of bullies themselves. It is crucial to acknowledge that when instances of injustice are disregarded or dismissed, they possess the ability to proliferate and infect even those who once believed they could detach themselves from such circumstances. The bystanders’ group, who have nothing to do with anyone but keep watching the happenings around them but do not say anything are called unresponsive bystanders. They always think to act or not to act but in the last, they choose not to get involved or take any action. On the other hand, some bystanders are directly or indirectly involved/intervene and offer support to the victim. Only a limited number of studies have explored the bystander effect through the exposure of participants to a perilous and aggressive emergency (Harari, Harari, and White, 1985; Schwartz and Gottlieb, 1976). Implying significant expenses for assisting (risk to the bystander) as well as substantial costs for failing to help (risk to the victim).

Ways to Motivate Bystanders to Become Upstanders

It is best to try to stop others from bullying before it happens. The role of bystanders is very important in bullying situations because they are the real spectators of any incidents. They have the power to “bounce off” the bullying incidents but in most situations, they become a neutral eyewitness. A student is an upstander in his or her way. The presence of bystanders is not to be overlooked when considering the context of bullying, as they are not just peripheral figures but rather an integral part (Paull, et. al., 2012). If witnesses to bullying intervene, the behaviors stop within 10 seconds, 57 percent of the time (Hawkins,

et. al., 2001). Yet, in 85 percent of bullying situations, bystanders encourage or allow the bullying to persist (Padgett and Notar, 2013). As a peer or classmate, they can save the victim’s life. It is therefore the responsibility of the school authorities to empower the bystanders to become Upstanders and help the bully victims.

The bystanders need to be made to understand that nothing will be achieved by just standing and watching the show, at that time they have to intervene because the victim is weak and cannot save him/her. At the time of bullying, they should stop the bullies and tell them that it is not good to make fun of anyone. If they are afraid that bullies can catch them also, they can inform the teacher. Sometimes bullies also feel that they are doing something wrong but they are unable to stop themselves from it as they have to prove their superiority. But if someone stops them or intervenes at that time they can bring about a change in themselves.

In many cases, we see that the teachers not taking bullying seriously. Sometimes they are also not responding to these incidents. In so many cases it has been seen that teachers were also involved in bullying. Educators play a crucial role in shaping the minds of students and fostering positive social connections, ultimately working to deter harmful behaviours. (Smith, et. al., 2004). When bullying the students are involved that is normal but when the teachers are involved in this, its effect is very negative on students who are victims. In schools, the victim looks towards his teacher with hope and in many circumstances, he also complains to their teachers. So the teacher should stand for the bullies because perpetrators understand very well that no one will stop them. Little modification in teachers’ behaviour and bullying can be stopped. When a teacher is authoritative, they lead by example, they are clear about what is acceptable and what is not, there is consistency and follow-up, they pay attention to each student, and they never ridicule or sarcasm (Keith Sullivan, 2011) As a teacher, by fulfilling one’s duty and opposing injustice, by being supportive and looking at everyone with equal respect and by taking immediate action on activities like bullying, and also empowering students to strengthen their voice and passion for change, one can bring a lot of change in school environment. If a teacher suspects that there is bullying in the class, he/she should not delay taking action. It is important to initiate talks quickly both with the bully or bullies and with the victim. With

these little changes, a teacher can transform from a bystander to an upstander.

In so many studies parents are not involved in entertaining their children, they have no time to know what the behaviour of their children in school. It is the responsibility of the parents to talk to their children regularly from normal talk to the school environment and try to know that their children are safe in school. Is their child involved in wrong things or is the victim of bullying? And that's where the role of a parent comes in, to explain to their children to keep away from these things, neither should they bully others nor get bullied by others. And also teach their students if something wrong happens to them in school they should bring it to the notice of the parents. Parents also should assure them that they are always with them.

Conclusion

Every morning we read so much news related to school violence where students face bullying in their school and it's also a cause of the dropout rate of students. In March 2011 President Barack Obama said, "Bullying is not a problem that makes headlines every day" but every day it touches the life of young people all across the country." The bystander can play an active and engaged role in the social dynamics of school violence, rather than simply observing passively. The concept of bullying is expanded to include the involvement of a third party (bully-victim-bystander) instead of just the bully and victim. Teachers, parents, and students collectively can either encourage or reduce bullying and other forms of violence when they assume this social responsibility. Simply removing the audience (and implicit peer acceptance) can reduce or stop bullying. One way to help bystanders become upstanders is to teach empathy and prosocial behaviour. Bullying has the power to ruin the students' lives so such things need to be tackled very carefully in schools.

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Effectiveness of Teachers in Implementing Skill-based Curriculum and Sustainable Development Goals: A Case of Andaman and Nicobar Islands

K Venkatesan* and Saravana Selvi C**

In September 2015, World leaders came together under the umbrella of the United Nations (UN) and made a historic promise to secure the rights and well-being of everyone by adopting the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). The United Nations introduced the Sustainable Development Goals as a global framework to address poverty eradication, environmental protection, and the promotion of freedom and peace by 2030 (de Villiers et al., 2021). These 17 interconnected SDGs require collective efforts involving creativity, knowledge, technology, and financial resources to achieve social, economic, and environmental sustainability. Among the 17 SDGs, Goal 4 is on Education and it is to ensure quality education for all children by 2030. This is a very ambitious goal. In many developing countries, many children are left behind by not having proper access to school or learning the basics. Of the 121 million, out-of-school children and adolescents in low- and middle-income countries, one-sixth of children did not complete primary school and one-third of adolescents did not complete lower secondary. Thirty percent of countries still do not have gender parity in primary and 50 percent do not have it in secondary. Worst part of all, 250 million children cannot read, write, or do basic arithmetic, although many of them have been in school for some years. “Schooling Isn’t Learning” states the subtitle of the excellent book from Lant Pritchett, “The Rebirth of Education,” which analyzes the challenges that the developing world faces to ensure improvements in literacy and numeracy. The United Nations Educational, Scientific and Cultural Organization (UNESCO) has described it as the Global Learning Crisis. UNESCO plays a crucial

role in advancing education initiatives to combat global challenges such as the millions of children currently out of school, which could exacerbate poverty and marginalization (UNESCO, 2021).

To make things worse, the demand for skills is migrating to non-routine cognitive and interpersonal skills, since many jobs are being lost to automation. Curricula in schools do not normally consider this change and education systems do not have the tools to address these more high-level skills. Globalization has made these changes in almost every country, adding to existing inequalities and contributing to the intergenerational transmission of poverty. In many low-income, and even middle-income countries, certified teachers lack knowledge in some subjects such as mathematics, physics, and chemistry, and lack adequate quantities of textbooks.

Importance of Education and SDG-4

SDG 4 specifically aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030 (Demirbağ & Sezgin, 2021; Shiohira, 2021). This education goal serves as a roadmap for governments and private sector partners to translate commitments into actionable strategies (Marope, 2016). UNESCO and other international stakeholders work towards promoting education as a fundamental human right and a catalyst for sustainable development (Briones Alonso et al., 2021; Ahmad, 2019). SDG 4 underscores the importance of providing universal access to quality education and fostering continuous learning opportunities to empower individuals and promote global citizenship (Ferguson et al., 2021).

Educational technology draws on interdisciplinary knowledge from fields such as communication, education, psychology, sociology, machine intelligence, and information technology, along with practical academic experience (An & Oliver, 2021; Brill & Galloway, 2007; Januszewski & Molenda, 2013). Information and Communication Technology (ICT) encompasses a wide range of

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technologies that enable unified communications, computer systems, software applications, middleware storage, and audio-visual services, facilitating the access, storage, transmission, comprehension, and manipulation of information (Schreyer, 2000; Yusuf, 2005).

In traditional education models, a teacher-centric classroom approach predominated, with students primarily seated in front of the teacher, listening to lectures, and taking notes (Pereira & Murzyn, 2001; Sibirskaia et al., 2019). However, in the twenty-first century, education has evolved towards blended learning (Bruggeman et al., 2021; Osguthorpe & Graham, 2003; Singh, 2021), flipped classrooms (Hew et al., 2020; Wright & Park, 2021), and internet-based learning (or E-learning) (Singh et al., 2021; Winiharti & Chairiyani, 2021). Blended learning and flipped classrooms have been shown to enhance students' academic performance and perception compared to traditional teaching methods (El Sadik & Al Abdulmonem, 2021).

Role of the Teacher

Important changes that arose in the professional requirement of teachers is to be a part of a team of students to guide them in addition to being a mediator. Teachers should learn to collaborate, re-create, plan classes, and monitor their work together. Good initiatives need to be taken in developing or pairing struggling schools with better-performing ones in the same area thus dealing with the same student population that has shown promising results globally. Though pre-service education is more effective, provision should be made for in-service to orient teachers on SDGs.

Importance of Skill-based Education

Skill-based learning is about planning, implementing, and analyzing skills gained through knowledge-based learning methods. The students are motivated to think logically, analyze the concepts, and able to apply their thoughts. The motto behind this creative and most in-demand learning method is to develop the students to be independent thinkers and by the way, this will prepare them for the challenges in the future. As Pramilla Gupta Manager of VSPK International School, Delhi states, "The world changes and so do economies along with it, the need for a skill-based workforce is on the rise"

To Enhance Creativity

In skill-based learning, students are pushed to think out of the box and innovate to find new ways to approach matters.

Encourages Teamwork

Collaboration is key to good output. And through skill-based learning, children are taught to think and work together as much as they're taught to be independent. This way, they can play on each other's strengths.

Makes Students Fast Learners

When students have multiple avenues to learn through, their speed of learning and grasping automatically shoots up. Using a skill-based approach can help students grasp concepts faster and also strengthen what they already know.

Develop Social Skills

Social skill development is imperative for any child, and through skill-based learning, children learn the basics of how to be in different social environments and react appropriately.

Makes them Better at Communication

Through skill-based learning, children are taught to push the boundaries and develop their vocabulary, which in turn also makes them better orators and communicators.

Keeping the above things in view, the authors conducted a study to evaluate the effectiveness of teachers in implementing Skill-Based Curriculum and Sustainable Development Goals (SDGs) in vocational and technical education at secondary schools in Port Blair. The study aligns with the Ministry of Education's 'Padhe Bharat, Badhe Bharat' initiative, which aims to foster motivated, independent, and engaged learners. A descriptive research design was employed, and the study included a sample of 100 teachers from 25 selected schools in Port Blair, using random sampling. Quantitative methods were used for data collection and analysis, utilizing questionnaires and observations as primary instruments. A high percentage of teachers (95%) emphasize skill development in their teaching, highlighting a proactive approach to promoting practical and applicable skills among students. The findings highlight the importance of providing

adequate resources, professional development opportunities, and collaborative support to empower teachers in effectively integrating SDGs into lesson plans and promoting skill-based education. The study could conclude that it is essential to enhance the role of teachers in advancing skill-based curriculum and SDGs in Port Blair schools, ultimately contributing to the broader agenda of sustainable development and quality education. The objectives of the Study were:

- To elicit the personal profile of the teachers.
- Analyzing the perspectives of Sustainable Development Goals in School Education
- To evaluate how efficient is the role of teachers in Skill-based curriculum & SDG's
- To the accomplishments of the Indian government initiatives taken to implement SDG4
- To ensure equitable quality education and promote lifelong learning opportunities for all.

The area selected for the present study is South Andaman, which is the third largest Island among the island group of Andaman. The geographical area is covered by 1,262 km² with a total population of 20,9602, specifically island is 83 kilometers (52 miles) long and 28 kilometers (17 miles) at its widest part. For the study, 10 schools were selected randomly and 100 school teachers were selected, and a stratified random sampling method. A structured questionnaire was prepared and used to elicit the personal profile of the school teachers and their ideas of the skill-based curriculum in the school and how well they initiate the implementation of SDG in classrooms. Teachers were directly connected to the Google platform. Therefore, the present web survey study does not require approval by the ethics committee. Once completed, each questionnaire was transmitted to the Google platform. The final database was downloaded as a Microsoft Excel sheet. The collected data were statically analyzed and interpreted by using appropriate statistical tools.

Result and Discussion

Tables 1 to 5 deal with the role of teachers in skill-based curriculum and SDGs in schools of Port Blair.

Table 1: Personal Profile of the Teachers

Variables	N-100	%
Age in years		
25-30	21	21.0
31-40	46	46.0
41-50	24	24.0
Above 51	9	9.0
Gender		
Male	36	36.0
Female	64	64.0
Educational Qualification		
Bachelor Degree	25	25.0
Master Degree	62	62.0
Others	13	13.0
Teaching Experience in years		
Less than 5	12	12.0
10-15	32	32.0
Above 15	56	56.0
Specialization		
Science	54	54.0
Arts	33	33.0
Commerce	13	13.0

Table 1 presents a summary of the personal profile of 100 teachers surveyed for a study on skill-based curriculum and Sustainable Development Goals (SDGs) in Port Blair schools. Here's a brief analysis and discussion of the results:

Age Distribution

The majority of teachers surveyed (46%) fall within the age range of 31-40 years, followed by those aged 25-30 years (21%) and 41-50 years (24%). A smaller percentage (9%) are aged above 51 years. This distribution suggests a relatively balanced mix of experienced and relatively younger teachers in the sample.

Gender Representation

The survey reflects a higher proportion of female teachers (64%) compared to male teachers (36%). This gender distribution highlights the significant presence of female educators in the teaching workforce.

Educational Qualifications

The majority of teachers hold a Master’s degree (62%), indicating a well-educated teaching cohort. A notable percentage (25%) have a Bachelor’s degree, while 13% possess other qualifications. The higher prevalence of Master’s degrees suggests a qualified teaching pool capable of handling specialized subjects.

Teaching Experience

A significant portion of teachers (56%) have over 15 years of teaching experience, demonstrating a seasoned group of educators. About one-third (32%)

have teaching experience ranging from 10 to 15 years, while a smaller fraction (12%) has less than 5 years of experience.

Subject Specialization

The majority of teachers specialize in science (54%), followed by Arts (33%) and Commerce (13%). This distribution reflects a predominant focus on science subjects among the surveyed teachers.

The demographic profile of teachers in Port Blair schools, as evidenced by the survey results presents a diverse and experienced teaching workforce, with a notable presence of female educators. The high

Table 2: Perspectives on SDGs in School Education Statements

Statements	Agree	Disagree
Awareness and Importance of SDGs:		
I am aware of the United Nations Sustainable Development Goals (SDGs) and their relevance to school education.	95	5
I believe that integrating SDGs into the curriculum is important for educating students about global issues.	88	12
Integration of SDGs into Curriculum:		
SDGs should be integrated into lesson plans across different subjects (e.g., Science, Social Studies) to promote holistic learning.	83	17
I actively incorporate discussions and activities related to SDGs in my teaching practices	85	15
Challenges in Implementing SDGs		
Lack of resources (e.g., teaching materials, training) is a barrier to effectively integrating SDGs into education.	65	35
Limited time within the curriculum makes it challenging to address SDGs alongside academic subjects.	62	38
Perceived Impact of SDGs on Students		
Integrating SDGs into education helps students develop a sense of global citizenship and responsibility.	64	36
SDGs empower students to think critically about social and environmental issues and encourage them to take action.	45	55
Collaboration and Support for SDGs		
Collaboration with community organizations and stakeholders is important for successfully implementing SDGs in schools.	67	33
I would benefit from additional training and support to effectively incorporate SDGs into my teaching practices.	87	13
Opportunities for SDG Education		
Schools play a vital role in preparing students to address real-world challenges through SDG-focused education.	55	45
Engaging students in projects related to SDGs fosters creativity, teamwork, and problem-solving skills.	52	48
Monitoring and Evaluation of SDG Progress		
It is important to track and assess the impact of SDG education on students’ knowledge and behavior.	88	12
Regular assessments of SDG integration can help identify areas for improvement and measure outcomes.	87	13

educational qualifications and extensive teaching experience among the majority of teachers indicate a well-prepared cohort capable of implementing a skill-based curriculum and promoting SDGs effectively. The concentration of teachers in science subjects suggests a potential emphasis on STEM (Science, Technology, Engineering, Mathematics) education within the surveyed schools. However, the representation of Arts and Commerce teachers also underscores a balanced disciplinary approach.

Table 2 provides insights into teachers' perspectives on integrating Sustainable Development Goals (SDGs) into school education, including their awareness, challenges, perceived impacts, collaboration, and opportunities for SDG-focused education.

Awareness and Importance of SDGs

A high percentage (95%) of teachers are aware of the SDGs and their relevance to school education, indicating a strong foundation in understanding global development goals. The majority (88%) believe that integrating SDGs into the curriculum is crucial for educating students about global issues, emphasizing its significance for holistic education.

Integration of SDGs into Curriculum

Most teachers (83%) support the integration of SDGs into lesson plans across different subjects to promote holistic learning, underscoring the importance of interdisciplinary education. A significant proportion (85%) actively incorporate discussions and activities related to SDGs in their teaching practices, indicating proactive engagement in promoting global awareness.

Challenges in Implementing SDGs

Resource constraints, such as a lack of teaching materials and training, pose a barrier according to 65% of teachers, highlighting the need for adequate support and infrastructure. Limited curriculum time is a challenge for 62% of teachers, suggesting the need for curriculum flexibility and prioritization of SDG-related content.

Perceived Impact of SDGs on Students

Integrating SDGs into education is seen as empowering students to develop global citizenship (64%) and critical thinking skills (45%), reflecting the transformative potential of SDG-focused

education. However, a notable percentage (55%) express skepticism about SDGs' effectiveness in encouraging students to take action, indicating room for enhancing student engagement strategies.

Collaboration and Support for SDGs

The majority (67%) emphasize the importance of collaboration with community organizations and stakeholders, highlighting the need for partnerships in SDG implementation. Most teachers (87%) express a desire for additional training and support to effectively incorporate SDGs into teaching practices, pointing to opportunities for professional development.

Opportunities for SDG Education

While schools are recognized (55%) for their role in preparing students to address real-world challenges through SDG-focused education, there is an opportunity to enhance project-based learning (52%) to foster critical skills.

Monitoring and Evaluation of SDG Progress

Teachers overwhelmingly support (88%) tracking and assessing the impact of SDG education on students' knowledge and behavior, emphasizing the importance of monitoring outcomes for continuous improvement.

The result highlights positive attitudes among teachers toward SDGs in school education, with strong awareness and belief in the importance of integrating SDGs into the curriculum. However, challenges such as resource constraints and limited curriculum time underscore the need for support and flexibility in implementation.

Table 3: Efficiency of Teachers in Skill-Based Curriculum & SDGs

Efficiency of Teachers in Skill-Based Curriculum & SDGs	N=100*
Skill Development Focus	95
Integration of SDGs into Lessons	82
Personalized Learning and Support	94
Assessment of Skill Development and SDG Progress	81
Teachers actively collaborate with local communities	83

*Multiple Responses

Table 3 outlines the efficiency of teachers in integrating skill-based curriculum and Sustainable Development Goals (SDGs) into their teaching practices, focusing on skill development, SDG integration, personalized learning, assessment, and community collaboration.

A high percentage of teachers (95%) emphasize skill development in their teaching, highlighting a proactive approach to promoting practical and applicable skills among students. The majority of teachers (82%) integrate SDGs into their lessons, indicating a commitment to addressing global issues and fostering awareness and action among students. Nearly all teachers (94%) provide personalized learning and support to students, underscoring a student-centered approach tailored to individual needs and learning styles. A significant percentage of teachers (81%) assess students' skill development and SDG progress, ensuring accountability and monitoring outcomes for continuous improvement. A substantial portion of teachers (83%) engage in active collaboration with local communities, leveraging external resources and partnerships to enrich students' learning experiences.

Active collaboration with local communities further enriches students' educational experiences by connecting classroom learning with real-world contexts and resources. Overall, these findings underscore the vital role of teachers in advancing skill-based education and SDG implementation, promoting meaningful learning outcomes, and preparing students to thrive in a complex and interconnected world.

Table 4: Accomplishments of Indian Government Initiatives on SDG4

Accomplishments of Indian Government Initiatives on SDG4	N=100*
Implementation of the National Education Policy (NEP)	100
Expansion of Rashtriya Madhyamik Shiksha Abhiyan (RMSA)	95
Digital Initiatives for Education Transformation	92
Skill Development Programme for Youth Empowerment	86
Improvement in School Infrastructure and Resources	82

*Multiple Responses

Table 4 outlines the perceived accomplishments of various Indian government initiatives aimed at achieving Sustainable Development Goal 4 (SDG4), which focuses on inclusive and equitable quality education and lifelong learning opportunities.

All respondents acknowledge the implementation of the National Education Policy (NEP) as a significant accomplishment toward achieving SDG4. The NEP aims to transform the education sector in India by promoting holistic development, flexibility, and inclusivity. The expansion of the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) is recognized by a majority of respondents (95%) as contributing to improving secondary education access and quality across India. A significant percentage of respondents (92%) acknowledge the impact of digital initiatives in transforming education delivery and accessibility, particularly amid technological advancements and the shift towards online learning. The implementation of skill development programs for youth empowerment is widely recognized (86%) as enhancing students' employability and fostering practical skills aligned with SDG4 objectives. A substantial proportion of respondents (82%) cite improvements in school infrastructure and resources as a notable accomplishment, indicating progress in enhancing learning environments and supporting quality education delivery.

Overall, these accomplishments underscore India's progress in advancing inclusive and equitable education, leveraging policy reforms, digital innovations, and targeted interventions to promote lifelong learning opportunities and support sustainable development goals. Continued efforts and strategic investments will be essential for sustaining and furthering these achievements in the pursuit of quality education for all.

Table 5 summarizes responses from a survey of 100 individuals regarding perspectives on equitable quality education and lifelong learning, focusing on inclusive practices, holistic development, and the role of government policies.

All respondents unanimously agree on the importance of ensuring equitable access to education for all, highlighting a commitment to addressing barriers and promoting inclusivity in educational

Table 5: Equitable Quality Education and Lifelong Learning

Equitable Quality Education and Lifelong Learning	N=100*
Ensuring equitable access to education for all	100
An inclusive education system values diversity	98
Quality education goes beyond academic achievement, encompassing holistic development	89
Lifelong learning initiatives empower individuals of all ages to continuously acquire new knowledge, skills	98
Government policies and programmes play a vital role in promoting equitable quality education	92

opportunities. A high percentage of respondents (98%) recognize the value of diversity within an inclusive education system, emphasizing the importance of respecting and celebrating differences among students. The majority of respondents (89%) emphasize the broader scope of quality education, acknowledging the significance of holistic development that nurtures various aspects of students' well-being beyond academic performance. Nearly all respondents (98%) support lifelong learning initiatives as empowering individuals of all ages to continuously learn and adapt, reflecting the importance of continuous personal and professional development. Government policies and programs play a vital role in promoting equitable quality education (92%): A significant percentage of respondents (92%) recognize the critical role of government policies and programs in advancing equitable and quality education, underscoring the importance of policy support and strategic interventions.

While the majority acknowledges the broader scope of quality education beyond academic achievement, there is room for further emphasis on holistic development, including social, emotional, and practical skills that contribute to well-rounded individuals. Support for lifelong learning initiatives signifies a collective belief in the transformative power of continuous learning throughout life, essential for personal growth, adaptability, and career development. The acknowledgment of the government's role in promoting equitable quality

education emphasizes the significance of policy frameworks and interventions in addressing educational inequalities and fostering inclusive and sustainable development.

Conclusion

In conclusion, the role of teachers in implementing skill-based curricula and Sustainable Development Goals (SDGs) in schools of Port Blair is pivotal for fostering holistic student development and addressing global challenges. Through their awareness, engagement, and commitment, teachers contribute significantly to preparing students for lifelong learning and responsible citizenship. The findings highlight the importance of providing adequate resources, professional development opportunities, and collaborative support to empower teachers in effectively integrating SDGs into lesson plans and promoting skill-based education. Despite facing challenges such as limited resources and time constraints, teachers demonstrate resilience and enthusiasm in aligning their instructional practices with SDG objectives. Moving forward, prioritizing continuous professional development and fostering partnerships with community stakeholders will be essential for enhancing the role of teachers in advancing skill-based curriculum and SDGs in Port Blair schools, ultimately contributing to the broader agenda of sustainable development and quality education.

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Achieving Goal through Own Mantra

Madhabi Puri Buch, Chairperson, Securities and Exchange, Board of India (SEBI) delivered the Convocation Address at the 59th Annual Convocation Ceremony of the Indian Institute of Management Ahmedabad on March 30, 2024. She said, “In today’s multidimensional and multivariate world, there are infinite combinations of which mantra can help you achieve which goal, you just need to make sure you find the fit and be agile in terms of the arrow you choose from your quiver.” Excerpts

Shri Pankaj Patel, Prof. Bharat Bhasker. Ladies and gentlemen. It is wonderful to be here today. Not least of all because it brings back so many memories... which I savor. Notwithstanding the fact that the strongest memory of my alma mater is that of feeling like I was inside a pressure cooker for two years..... the panic, the self doubt, the tears, the mad dash to meet deadlines, the successes, the failures..... and then.... every now and then, the whistle of the cooker that would release the pressure..... only to build up again.....it felt like torture. But in hindsight.....how to deal with being inside a pressure cooker.... Was perhaps one of the most valuable learnings I took away from the Indian Institute of Management Ahmedabad.

Cut to today, and I ask myself.... What is it I can possibly say.... That would be even remotely useful to some of the best and brightest young minds of the country..... Well, there are 3 things I would like to share with you today.

First, I would like share how much fun I have had in the last three and a half decades.....and what is it, on reflection, that I think was at the core of my journey.

Second.... As you go through your journey, if you are having a blast....don’t think... just enjoy yourself ! But if you are facing a dilemma, if there is noise in your head....what are the 4 questions that you can ask yourself, that might help you navigate your journey....

Third, I would like to share my enthusiasm, and optimism for the opportunity that I believe you have in our country today. My generation was very fortunate.... We participated in the dawn of the new India. Your generation, in my view, is even more fortunate.... You are on the way to seeing the high noon of the new India.... And all the amazing opportunities that it offers.

So, why was it that I enjoyed the last 35 years so much ? Firstly, the sheer variety of stuff that I got to do.....creating and building businesses.... Being an entrepreneur within the safe harbour of a large organisation.... Enjoying every ounce of the empowerment that we were given. And now, for the

last six and a half years.... Bringing to bear all that I learnt to being a regulator.....and having this amazing opportunity to create impact Not just at an organisation level, but at an ecosystem level. In my wildest dreams.... I couldn’t have asked for more !

On reflection, what is it, that has been at the core of my journey ? What has defined me.... And the way that I work.... What has been my mantra, my temperament, my swabhav, my fitrat..... in effect, my default setting.... That possibly makes me...at one level, entirely predictable, every single day....

I believe, that at a conscious and subconscious level, my mantra has been very simple.... Do the right thing....no matter how hard. And leave no stone unturned.... No matter how hard ! The wonderful thing about this mantra is 8 times out of 10.... You succeed. And the 2 times that you don’t you have absolutely no regrets ! In a way, it’s a.... Pretty Good Odds of success and yet...No Regrets strategy !

Let me share 2 short stories with you on this..... The first relates to when I was running the client side treasury business for the bank....around 2006, 2007. I had just taken over, and I really didn’t understand the world of fx derivatives at all ! For about a month... I took tutorials from a young officer... 2, 2.5 hours every day..... to get to grips with the basics. Then I graduated to sitting in the dealing room and listening in on the telephonic confirmations that clients gave for their deals. Now ...this really worried me ! The deal confirmation script was so full of jargon....I couldn’t believe that any normal of on the other side understood a word of what he was confirming. I mean, I had taken tutorials for a month.... And I barely understood half of what was being said ! I took a decision.... And rewrote the script in simple English.... On what exactly was the upside and downside of the deal that the client was agreeing to. Now remember, this was a time when the most popular deals were where exporters sold options on currency pairs. Their upside was the premium they earned.... The downside potentially could be anything.... Anything ! The team was aghast....this is

not the market practice they said.... The clients will run away to competition they said.... We won't meet our 1800 cr profit target they said..... I had only one answer..... what is the right thing to do ? Simple. And if we do the right thing, will we have to work harder to meet our targets... perhaps ... but that is what we are going to do. Cut to 2008, the global financial crisis hits the world and the most popular currency pair of swiss franc to us dollar is in deep trouble. Our clients have 10s of crores of losses.... Some of them 100s of crores. Globally, law suits are flying left right and centre.... Banks are struggling to collect from their clients.

And one large diamond exporter walks into my office...red in the face...raging...the bank missold these options to my cfo he says..... I will sue you he says ! I politely request him to hear just one call recording The bank officer is saying... Sir, you are selling an option for 100 million. If the swiss franc vs usd crosses x threshold, you would loose 5 crores. If it crosses y threshold, you would loose 20 crores and so on. Would you like to proceed ? And the CFO says yes. I look at the client, he looks at me.... And in the most gracious manner I have ever seen, he says.... How much time can the bank give me to pay for my losses Doing what is right..... is just that.... Right ! It is usually the harder path..... it take a lot to traverse that path.... But it is just that.... It is the right thing to do ! By the way, that year..... we almost got to our 1800 cr profit target !!

As far as the second mantra is concerned : "leave no stone unturned" , am afraid I have a loooong list of colleagues, as well as bosses who would testify to the fact that I am not only a very difficult boss to work for, but also a very difficult subordinate Because I just wont give up..... until a problem has been dissected to the last degree ! My colleagues often tell me that problem solving with me is like peeling an onion..... it makes everyone cry in the process..... but by the time you finish peeling layer after layer of the onion, you suddenly realize that there is no problem left. When India became the first large market in the world to move to T+1 settlement..... and just 2 days ago when we went live with optional T+0 settlement..... the process felt pretty much the same.

So this is what worked for me..... doggedly following the mantra of " do what is right no matter how hard " and " leave no stone unturned no matter how hard ". Each one of you will discover your own mantra..... your own personal superpower, your own mojo.....your own default setting that it is effortless for you to operate with. And until you find that special

mantra, it is as though you have a quiver full of arrows.... Some sharp, some not so sharp.... And as you take aim at the goals that you choose, you may find that your sharp arrows work perfectly well.... Or that you need to sharpen some of your arrows. Each of your arrows will bear your unique stamp.... Your time, your energy, your passion, your intellect, your knowledge, your eq, your you.....

And as you journey along, if it feels effortless and you are enjoying yourself, don't think too much.... Just go with the flow. But if you face a dilemma.... If you are not so sure of the direction your life it taking.... Perhaps it might help to ask the following 4 questions :

- a. what exactly is my mantra.... What exactly is my core..... what exactly is my mojo.....
- b. what goal am I taking aim at..... am I sure that this is the goal I want to shoot for....
- c. is my mantra a match for the goal that I am aiming for ? If yes, great. If not, maybe I need to rethink my mantra.... Or rethink my goal.....
- c. lastly, all this analysis is for a point in time..... and this aspect is often the most important because the goal you want to reach for will change over time.... As it

should.... When you are 25.... You will have a different set of goals, at 40...different.... At 55 quite different.....when you are single, when you are married, when you are a parent..... all quite different. And the only thing I can say is that you have plenty of time..... over a working career that could possibly span 40 years or more..... there is plenty of time to achieve what you want.... If you bring your A game to it.

In today's multidimensional and multivariate world..... there are infinte combinations of which mantra can help you achieve which goal..... you just need to make sure you find the fit.....and be agile in terms of the arrow you choose from your quiver.

Lastly I would like to share with you my enthusiasm and optimism for the opportunities that I believe you have in our country today. As I said earlier, my generation got to ride the wave of the dawn of a new India. You will get to see the high noon of the new India. Everywhere, there is opportunity..... for growth, for inclusion, for entrepreneurship, for breaking the mould.... And for leading the world. It's a wonderful time to be 25. Interestingly, it is also a wonderful time to be 60 ! Thank you ! □

CAMPUS NEWS

Seminar on Health Concerns of Women in Sports

The one-day National Seminar on 'Health Concerns of Women in Sports' was jointly organized by Jesus and Marry College (JMC), University of Delhi and National Commission for Women, Govt. of India, recently at the college campus. The seminar was attended by sportspersons, experts, sports industries, academia, historians, ex-alumni of JMC from Germany, and sports developers from all over India. More than 200 participants attended the event along with the members of the teaching and non-teaching staff of the JMC.

The event commenced on a positive note with the lighting of the lamp by the Principal, Prof. Sandra Joseph, Chief Guest, Dr. Daisy Panna, Consultant Epidemiologist, Dr. Anju Luthra, Prof. Vibha Mathur, Dr. Alok Mathur, Additional Deputy Director General, Central Tuberculosis Division, Dr. Manmohan Chawla, Former Associate Professor, JMC and Dr. Rekha Dayal, Former Executive Member, University of Delhi, Delhi.

During Keynote Address, Prof. Sandra Joseph talked about the theme of the seminar conveying that the participation of women has risen considerably and bagged medals despite the tough conditions they face every day. She brought attention to the issues women face including their mental health and gender discrimination.

Keynote Speaker, Dr. Alok Mathur commenced by addressing the health concerns of women in the sport and the power and importance of the same. He expressed pride in how women have made a significant rise in the field of sports and all the remarkable advancements that sports have made. Dr. Mathur also addressed the health challenges of women and shed light on the pressing health concerns of women named female athlete triad including disordered eating, dysfunctional menstruation, and osteoporosis. He also enlightened everyone on how women's health affects their sport. Dr. Alok Mathur stressed the importance of mental health.

The Chief Guest, Dr. Daisy Panna has vast and diverse experiences in both government and private

sectors. She started by telling the importance of taking care of our health and how negligence can affect us in the future. She advised teaching healthy eating habits and being mindful of what we eat and consume throughout the day. She talked about how newer generations are addicted to digital gadgets and how it affects our functioning. She also mentioned the harmful effects of smoking and said that smoking not only affects the smoker but also affects the person standing with them because they experience passive smoke.

Ms. Kumari Swatee, JMC presented on the struggle of Women's sportsperson. The main aim of the presentation was to highlight the root cause of health issues of sportswomen and the solution for the same. She also discussed the reasons leading to health issues such as PCOD, Osteoporosis, arthritis, etc. faced by women. The major contributing reasons are mental pressure and an unbalanced diet and to cure her study suggested performing some asanas such as *Padmasana*, *Mayurasana* and *Paschimottanasana*.

Dr. Shalu Gupta, CMO at Samshudhi Residential Naturopathy and Panchakarma Hospital started by taking a two-minute meditation session to calm minds and bodies. She talked about the most common disease amongst female athletes, PCOD, its symptoms include lack of menstruation, hair fall, rashes, and irregular patterns of menstruation. She also mentioned the easiest way to cure PCOD, which is yoga, she talked about body cleaning which includes waking up on time, and cleansing our inner system. She discussed diet cleaning which includes consuming the right food and being mindful of the food combinations that we eat.

Mr. Deepak Sury, Head Physiotherapist, Delhi and District Cricket Association addressed the gathering where he showed a practical example of mobility which made the presentation more interesting. He presented a PowerPoint presentation discussing the female athlete triad, anterior cruciate ligament injury, pelvic stability, and the work of a sports physiotherapist.

Dr. Namrata Devgun, Homeopathic Physician spoke about sports nutrition. She insisted on consulting a therapist and taking music or reading therapy rather

than taking medicines. She also shed light on how females are more prone to injuries. She spoke about what nutrients one should consume and the importance of being hydrated. Dr. Devgun also suggested healthy habits while on menstruation; consuming less sugar, not lifting heavy weights, and cutting down caffeine and alcohol.

Dr Deepak Dangwal, Counsellor, University Counselling and Guidance Centre spoke about mental health, spiritual health, physical health, and social health. He talked about women's mental health and the challenges that women face in tournaments. He talked about the recurring thoughts that female athletes experience in tournaments: Perfection, Involuntary Termination, Anxiety, etc.

Ms. Shalini Chaudhary spoke about her research titled 'Transactional Analysis of Female Adolescent Athletes'. The highlight of her presentation was the development of women over the years and also the problems faced by women pursuing sports. She mentioned the issues and problems of a female adolescent athlete. It was indicated that self-awareness, emotional regulation, communication skills, goal setting, and problem-solving methods could be the possible solutions. She stated that transactional analysis is a psychological theory and method of therapy that aims to understand and improve human interactions and relationships. It is based on the idea that people have three ego states: parent, adult, and child, and that these ego states influence how they communicate and behave with others. Transactional analysis can be applied to various fields and contexts, including sports and athletics.

Ms Nancy Gupta, Research Scholar, Mewar University, Chittorgarh, Rajasthan presented her research on 'Hormonal Disorders and Mindfulness in Indian Football Players' mainly, focusing on the interplay between Hormonal Disorder and Mindfulness. She highlighted the comprehensive research involving factors such as psychological, dietary, intense training, etc. leading to hormonal disorders. She concluded by emphasizing mindfulness practices and their positive impacts which may lead to a better hormonal balance.

Ms. Amita Kumari, Amity School of Physical Education and Sports Sciences presented her research on the analysis of vital air capacity on different BMI levels of sedentary female teachers. The main objective of the research was to compare the vital air

capacity among sedentary female teachers concerning the teacher's body mass Index Level. She stated that women tend to sedentary life and become prone to diverse respiratory ailments with the progression of BMI.

Ms. Omshri Bharadwaj, Amity University presented her study on 'Integrating Sports into the Mainstream Curriculum'. Her presentation mainly focused on the students of classes 6th, 7th, and 8th and the improvement of children's health by introducing them to sports. According to her paper, curriculum is a tool to improve academic performance and overall student growth. The definition of the educational program is examined, focusing on the function of teachers in designing it in accordance with student's needs and learning preferences. In order to encourage the integration of sports and physical activity with core topics, the project highlights sections of the National Education Policy 2020 that support multidisciplinary and holistic education.

Ms Karnika Sehgal, Research Scholar presented the paper entitled 'Exploring the Efficacy of Psychological Interventions and Relaxation Techniques in Pain Management'. She briefly talked about the management of pain in sportswomen as a critical aspect of Sports Psychology. This comprehensive review explores the efficacy of various psychological interventions and relaxation techniques in managing pain among this population. Techniques such as Cognitive-Behavioural therapies, Mindfulness, Biofeedback, and Progressive Muscular Relaxation are examined for their effectiveness in reducing pain and improving performance. The review also delves into the role of narrative medicine and coping strategies in helping sports women navigate their pain experiences.

Ms. Yashvi Ahuja, A Certified Yoga Practitioner presented her paper entitled 'Impact of Yoga on Polycystic Ovarian Syndrome'. She engaged the whole audience by asking them to get into *Gyan Mudra* and pray as part of Indian culture. She emphasized how PCOS is a new Gynaecological epidemic as 10 new cases are diagnosed every day. She differentiated between PCOD and PCOS. She threw light upon various symptoms of the syndrome. She also shared various yogic techniques to deal with PCOS like *pranayama (Kapal Bhati, Om Chanting, etc.)*, Asanas (especially *Surya Namaskar, Savasana*

and lower body asanas) and concluded that yoga can be very helpful in these kinds of diseases.

Ms. Ankita Kamra, Researcher presented the paper on 'Empowering Women in Sports; Breaking Stereotypes and Rising beyond Limits'. Her presentation was organised in three parts viz. challenges faced, progresses, and empowerment of women in sports. She talked in depth about both historical and modern-day challenges for women's participation in sports and stated that women's empowerment in sports is not just a matter of equality; it is a testament to the strength, determination, and resilience of women athletes who have shattered stereotypes and paved the way for future generations.

Ms. Warisha, Gargi College, University of Delhi presented her paper on 'Health is Wealth'. She started with the definitions of Hygiene- The practice of keeping yourself and your surroundings clean, especially to prevent illness or the spread of diseases, Habits - A usual way of behaving and Female Athletes - A person who can run, and jump but in general usage, track sports person are referred as athlete. The objectives of her presentation were preventing the spread of infectious diseases, better health, boosting confidence, growth in all aspects personal and professional and leading to success. She also gave various tips on how to maintain hygiene for growth in personal and professional aspects. In conclusion, she urged everyone to make hygiene a habit which will result in a long and good quality of life.

Mr. Deepak M P presented his paper on the topic 'Comparison of Emotional Regulation and Achievement Goal between Male and Female Judo Players'. He started by talking briefly about Judo and its origin. His paper was based on a questionnaire that he conducted at Lovely Professional University, Phagwara, Punjab among 201 selected judo players.

Ms. Anju Bala presented her paper on 'Female Athlete Triad'. She briefly, and in very simple terms, explained what triad means. Her research was based on the eating attitude test, another test for menstrual abnormality, and the DEXA test conducted on 50 Females. Her paper revealed that 14% of women suffered from eating disorders, 44% of women had menstrual abnormalities and 5% had symptoms of low bone mineral density.

During the Plenary Session, Anchors, Ms. Mahika Dixit and Ms. Mansi Singh delivered the welcome

speech. Dr. Rekha Dayal, Former Faculty, Jesus and Mary College and Chairperson for the session called upon the other Chairperson, Dr Manmohan Kaur Chawla, Former Faculty, Department of Sports.

Prof. Ajita D Singh, Director of Sports, Punjab University, Chandigarh, Punjab discussed her paper on 'Inter-relationship between Dietary Intake, Bone Mineral Density and Incidence of the Development of Musculo-skeletal Disorder in College Students'. She talked about the struggles faced by women in sports. How they weren't able to participate in sports due to social norms and prejudices. They had to fight for their right with their male counterparts for equal representation. She talked about issues such as Menarche, Female Triad, and Low Energy Availability (LEA).

Dr. Vikram Singh, Professor, Jawaharlal Nehru University, Delhi presented his paper on 'Immunity Boosting: New Perspective'. He said, "Immunity boosting is enriching but elusive for several reasons. The immune system is precisely that – a system, not a single entity. To function well it requires balance and harmony." He presented points that can help to strengthen your immunity system the healthy way: A healthy lifestyle, i.e., protection from environmental assaults and bolstered by healthy living strategies, exercise, sleep is the new nutrition, healthy Sanitation Practices and reducing Stress.

Dr Rajveer Choudhary, Professor and Dean, Pt. Ravishankar Shukla University presented his paper on 'Gender Issues in Sports'. He said that many politicians may claim that women are not advancing in sports because of a lack of facilities. But it may be a part of the case, it is also because of a lack of research and awareness of the issues faced by women in sports, he further said. He put forward 8 points that led to Gender Issues in Sports; (1) most girls by the age of 14 drop out of sports. Which is 1.5 times the number of boys. (2) Pay Disparity. (3) Media Coverage. (4) Coaching and Leadership Opportunities. (5) Mental Health and Pressure. (6) Immune Response. (7) Training and Female Issues. (8) Difference in Recovery, Training Load and Muscle Gain.

Dr Jawahar Lal Jain, began with his insightful speech by extending his gratitude towards Organising Committee for arranging such an event by choosing a topic of immense importance. This was followed by expressing his gratitude to the dignitaries.

Dr Shelly, Senior Consultant Obstetrics and Gynaecology Rainbow Hospital, Fortis La Femme and Rosewalk Health Care presented her views on the concerned subject while focusing on why women do not engage in sports and exercise regularly and the reasons behind the same. She emphasised how sports give physical, mental, and hormonal support. She also mentioned the consequences of under-exercising and over-exercising. Dr Anju Luthra concluded the seminar and thanked the dignitaries, student speakers, and all present there. Dr Luthra proposed the Vote of Thanks.

International Conference on Electronics, Communication and Signal Processing

A three-day International Conference on 'Electronics, Communication and Signal Processing' is being organized by the Department of Electronics and Communication, National Institute of Technology Delhi from August 08-10, 2024 through hybrid mode. The event provides a platform for researchers, academics, scholars, and industry experts from India and the world to present and discuss their research findings in various areas of Electronics and Communication Engineering. The Tracks of the event are:

Microelectronic Circuits and Systems

- Electronic Device Physics.
- Photonic/Opto-electronic Devices.
- Circuits and Systems.
- Nano-electronics.
- System Level Design.
- Electronics for Green Technology.
- Nanoscale Device Modeling.
- Device Processing Techniques.

Communication Systems and Networks

- Optical Fibre Communication and Systems.
- Computer and Intelligent Communication.
- Wireless and Broadband Communication and Sensor Networks.
- Network Security.
- RF Antenna Design and Modeling.
- Cognitive Communications.
- Analog/Digital Communication Systems.

- LTE, 5G and 6G Design.

Signal Processing and Applications

- Signal Processing Systems and Algorithms.
- Radar Signal Processing.
- Speech and Audio Signal Processing and Coding.
- Image Signal Processing.
- Biomedical Signal Processing and Bioinformatics.
- Remote Sensing Applications.
- Signal Processing Applications.
- Computer and Artificial Intelligence.

VLSI Technology and Embedded Systems

- VLSI Design.
- High Speed/Low Power Circuits.
- Digital Circuits and FPGA Based Designs.
- Analog/Mixed Signal System Design.
- Deep Submicron Design and Modeling Issues.
- Testing and Verification.
- Emerging Semiconductor Technologies.
- Real-Time Embedded Systems and Applications.
- Distributed Embedded Computing.
- Internet-of-Things.

For further details, contact Organising Secretary, Department of Electronic and Communication Engineering, National Institute of Technology, Zone P1, GT Karnal Road, Delhi-110036. Mobile No: 09873853870/ /09990344355/ 09899320887. E-mail: manojtaleja@nitdelhi.ac.in/manishabharti@nitdelhi.ac.in/Rikmantrabasu@nitdelhi.ac.in. For updates, log on to: www.nitdelhi.ac.in

International Conference on Psychology Learning and Teaching

A three-day International Conference on 'Psychology Learning and Teaching' is being organized by the Department of Psychology, CHRIST (Deemed-to-be University), Bengaluru in association with the Society for the Teaching of Psychology (STP), Division 2 of the American Psychology Association (APA) and the International Council of Psychology Educators Incorporated (ICOPE Inc). from August 01-03, 2024.

Psychology is a growing discipline with new fields and branches in the past decade. Global changes, including the pandemic, technology, and globalisation, directly impact psychology teaching and learning. The specific issues of a community, location, or nation place demand on psychologists to respond with sensitivity to the community's culture, ethnicity, and needs. Hence, psychology education is pushed to innovate and develop competent training and teaching models. The discipline requires pedagogies and assessment models to teach and assess students' knowledge, skills, values, and attitudes. The need to build foundational competencies and foster personal and professional development places a huge emphasis on the need for trained faculty. There are no formal educator training programmes for faculty in higher education. Most faculty members develop their skills through experience and experimentation within their careers. Psychology educators apply principles of psychology and education to their teaching, learning, and assessment practices. There is a growing need to document, test, and validate these practices and create evidence-based and culturally competent models that are replicable and sustainable. Psychology teaching covers teaching-learning practices in high schools to doctoral-level programmes. The Themes and Tracks of the event are:

Teaching-Learning and Assessment Models in Psychology

- Teaching Models, Supervision, Mentoring, Competency-based Model.
- Signature Pedagogies- Research-informed Teaching, Case-based Teaching, Experiential Learning, Participative Learning, and Problem-solving Methodologies.
- Evaluation and Feedback Methods -Use of Rubrics and Open-book Exams, Designing Assessments.
- Curriculum Design and Development.

Teaching Psychology at Different Levels (High School-Doctoral Level)

Teaching Introductory Psychology, Research Methods, Foundational Knowledge, Attitude and Competencies. Domain/course-Specific Methods -Counsellor Education, Developmental, Social,

Organisational, Clinical, Cognitive, Neuropsychology, Health, Educational Psychology, Experimental Psychology, Research Methods, and Assessments.

Psychology Educators' Experience, Perceptions and Challenges

- Challenges to Psychology Education.
- Training and Professional Development for Educators.
- Community of Practice.
- Personal and Professional Development.
- Educator Mental Health and Well-being.

Psychology Student's Engagement and Experiences

- Internship, Apprenticeship, Service Learning, Professional Development.
- Student Mental Health and Well-being.
- Positive and Challenging Experiences in Classrooms.

Leadership, Governance and Policies in Psychology Education

- Policies and Programmes, Benchmarking, Internationalization.
- Licensure and Certification, Role of International and Local Organizations.
- Ethical Practice in Teaching and Learning.
- Current Trends and Future Directions in Teaching Psychology
- Decolonising Psychology Education, Indigenous Psychology.
- Cultural Perspectives, Psychological Literacy.
- Teaching for Sustainability, Peace, Inclusivity.
- Role of Artificial Intelligence and Technology.

For further details, contact Conference Chair, Dr Aneesh Kumar, Department of Psychology, CHRIST (Deemed-to-be University), Hosur Road, Bengaluru- 560029, Karnataka, E-mail: iplat.conference@christuniversity.in. For updates, log on to: <https://icplt.christuniversity.in/>

Faculty Development Programme on Artificial Intelligence

The eight-day Faculty Development Programme on ‘Artificial Intelligence in Advanced Teaching Learning’ was organized by the Association of Indian Universities—Academic and Administrative Development Centre and Department of Computer Science, University of Science and Technology, Meghalaya from March 19-26, 2024 through online mode. About seventy participants including research scholars, faculty members from various universities, and industry people participated in the event. Various eminent and experienced academicians from IIT, IIIT and various universities across India participated in the event.

The opening session was graced by Prof. Ram Prakash Sharma, National Institute of Technology, Arunachal Pradesh, Dr. Pankaj Mittal, Secretary General of AIU, Convenor of the event, Dr. Amarendra Pani, Joint Director and Director (I/c), Research Division, and President, AIU, Prof. G D Sharma, Vice Chancellor, University of Science and Technology, Meghalaya.

Dr. Shyamanta M Hazarika, Professor, IIT Guwahati headed the Session on ‘AI in Teaching Learning’. Dr. Hazarika shared insights into how artificial intelligence revolutionizes the teaching and learning landscape, offering innovative methods to enhance educational experiences for educators and learners. Drawing from his expertise, he discussed the various applications of AI in educational settings, highlighting its potential to personalize learning, provide real-time feedback, and optimize educational resources.

Dr. Navanath Saharia, The Indian Institute of Information Technology Senapati, Manipur conducted a Session on ‘Resetting Teaching and Learning in the Age of GPT’. Dr. Saharia explored the transformative impact of cutting-edge technologies like GPT models on traditional teaching and learning paradigms. He examined how GPT and similar advancements are reshaping educational practices, emphasizing the need for educators to adapt and leverage these tools effectively to meet the evolving needs of students in the digital age.

Prof. Shahinara Begum, Faculty Member, Assam University, Silchar led the session on ‘Leveraging AI for Advanced Teaching Learning’. Prof. Begum illustrated the strategic integration of artificial intelligence into educational frameworks to facilitate advanced teaching and learning methodologies. She discussed practical approaches to harness AI technologies for enhancing curriculum design, instructional delivery, and student engagement, fostering a dynamic and inclusive learning environment.

Dr. Parveen Sultana, Professor, University of Science and Technology, Meghalaya led the Session on ‘Exploring Various AI Techniques in Teaching/Learning’. Dr. Sultana provided a comprehensive overview of the diverse AI techniques applicable to educational contexts, ranging from machine learning algorithms to natural language processing tools. Through case studies and demonstrations, she showcased the efficacy of these techniques in optimizing learning outcomes, promoting adaptive learning pathways, and providing interdisciplinary collaboration within educational institutions.

Dr. Rajni Mohana, Professor, Amity University, Punjab conducted a session on ‘Empowering Education: Harnessing ICT in E-content Development’. Dr. Mohana emphasized the pivotal role of Information and Communication Technology (ICT) in creating enriching e-content for educational purposes. She explained strategies for utilizing ICT tools and platforms to develop interactive and multimedia-rich educational materials, catering to diverse learning styles and preferences.

Dr. Samarjeet Baruah, Professor, Sikkim Manipal Institute of Technology (SMIT) conducted the Session on ‘How AI is Reshaping the Classroom’. Dr. Baruah explored the transformative impact of AI technologies on traditional classroom dynamics, highlighting the opportunities and challenges they present for educators and learners alike. He discussed integrating AI-driven tools and applications to personalize instruction, optimize learning environments, and foster collaboration and critical thinking skills among students.

During the closing ceremony, Chief Guest, Vice President of AIU, Prof. Vinay Kumar Pathak, Vice

Chancellor, Chatrapati Shahuji Maharaj University, Kanpur expanded upon the significance of the Faculty Development Programme in the present context.

Workshop on Boosting Employee Productivity

A two-day Workshop on ‘Boosting Employee Productivity Using IT Tools’ was organized by the Association of Indian Universities (AIU)—Academic and Administrative Development Centre (AADC), Guru Gobind Singh Indraprastha University (GGIPU), Delhi from September 25-26, 2023. About 54 Participants were present during the workshop.

The Programme commenced with the Inaugural Ceremony, led by Mr. O P Dwivedi and Prof. Arvinder Kaur, Chairperson, Staff Development Cell. Prof. Kaur delivered the Inaugural Address. She emphasized the critical role of technology in enhancing workplace efficiency and encouraged participants to leverage IT tools effectively. Her insights set an inspiring tone for the event.

Mr. Amrit Pal Singh, USAR, GGSIPU provided comprehensive guidance on leveraging Google Meet, Google Drive, and Webex for professional purposes. He elucidated the process of conducting online meetings, recording them, and securely storing them in the cloud via Google Drive. Moreover, he demonstrated how these platforms facilitate collaborative document editing, particularly with tools like Excel, thereby streamlining workflows and enhancing productivity for employees. His expertise illuminated practical strategies for integrating these IT tools into daily work routines, fostering efficiency and adaptability in the modern workplace.

Mr. Manraj Singh Sindhu delivered the next two sessions. Mr. Sindhu delved into the intricacies of Excel, focusing on its fundamental operations and diverse functionalities. With a comprehensive approach, Mr. Sindhu elucidated the essential workings of Excel sheets, offering participants valuable insights into its versatile capabilities. He adeptly demonstrated how users can manipulate data efficiently, performing a myriad of operations with ease. Throughout the session, Mr. Sindhu emphasized the practical utility of Excel in organizing, analyzing, and presenting data effectively. Attendees gained a deeper understanding of the software’s interface and its myriad features, enabling them to navigate Excel proficiently in their professional endeavors. He elucidated the process of executing

mathematical computations, whether column-wise or row-wise, empowering participants to streamline their data management tasks. Furthermore, Sindhu provided hands-on guidance on leveraging Excel’s advanced functions, including formulas, macros, and conditional formatting. By illustrating real-world examples and scenarios, he facilitated a deeper comprehension of Excel’s applications across various industries and job roles. Participants learned how to harness Excel’s power to generate insightful reports, charts, and graphs, thereby enhancing their data-driven decision-making capabilities.

Mr. Amit Dubey, Cyber Expert spearheaded the inaugural session on ‘Cyber Security’, a topic of paramount importance in today’s digital age. Mr. Dubey who is also directing ‘Hidden Files’ on Radio FM provided invaluable guidance to participants on safeguarding their social media accounts, such as Facebook, and mitigating the risks of online theft and scams. His session proved enlightening for employees, offering practical strategies to enhance their online security posture and protect their personal and professional assets. His expertise shed light on the evolving threat landscape and equipped attendees with actionable insights to fortify their defenses against cyber threats. By emphasizing proactive measures and best practices, Mr. Dubey empowered participants to navigate the digital realm with confidence, minimizing the likelihood of falling victim to cybercrime. The session underscored the critical importance of cyber hygiene and instilled a heightened awareness of potential vulnerabilities in online interactions. Overall, comprehensive coverage of the cyber security left a lasting impression on participants, arming them with the knowledge and tools necessary to safeguard their digital identities and financial resources effectively.

Ms. Kirti took the session on ‘MS Word’. She first introduced what Microsoft Word offers as a plethora of advanced features to enhance document creation and productivity. She gave a hands-on session on Mail Merge, enabling users to merge documents with data sources for personalized outputs like letters or labels. She also explained how can you track changes to facilitate collaborative editing by recording modifications made to the document. She explained various advanced features for example, how Table of Contents automates the generation of content listings based on headings, how Cross-references allow seamless navigation within the

document and the way Styles ensure consistent formatting throughout. Sections enable dividing the document for independent formatting. In the security section, Ms Kirti explained how document protection restricts editing permissions, and how we can add watermarks as a layer of security or branding. The use of Footnotes and Endnotes aid in referencing was also explained. Lastly, the Accessibility Checker was also explained to ensure documents are inclusive and usable by all.

In the concluding session of the event, Mr. Navlesh took the stage to elucidate the intricacies of PowerPoint, offering participants a comprehensive tutorial on crafting dynamic presentations. With a keen focus on both functionality and creativity, Mr. Navlesh guided attendees through the process of slide creation, emphasizing effective design principles and layout strategies. Participants gained insights into leveraging PowerPoint's features to enhance their presentations, including the incorporation of animations to captivate audiences and reinforce key points. Mr. Navlesh also demonstrated the seamless integration of images into slides, showcasing how visuals can elevate the impact of a presentation. Moreover, Mr. Navlesh underscored the importance of striking a balance between formality and creativity in slide design, catering to both official and professional contexts. Attendees learned how to tailor their presentations to suit diverse audiences and objectives, mastering the art of delivering compelling content in a visually engaging manner. By equipping participants with practical skills and creative techniques, Mr. Navlesh empowered them to craft polished and persuasive presentations that leave a lasting impression. His expert guidance

fostered a deeper appreciation for the potential of PowerPoint as a versatile tool for effective communication in various professional settings. After the Sessions, MCQ test was conducted using Google Forms. It consisted of forty questions to be submitted in thirty minutes. Based on the employee's performance, certificates were distributed to those who successfully cleared the test. □

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THESES OF THE MONTH

SCIENCE & TECHNOLOGY

A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of Feb-March, 2024)

BIOLOGICAL SCIENCES

Biochemistry

1. Sharanya, J. **Effect of dietary calcium and magnesium on sex ratio and placental genes expression in New Zealand White Rabbit.** (Dr. A Arangasamy), Department of Biochemistry, Jain University, Bangalore.

Biotechnology

1. Behera, Susanta Kumar. **Synthesis, characterization, and biomedical applications of zinc oxide impregnated clay minerals.** (Dr. Amrita Mishra and Dr. Srinivas Patnaik), Department of Biotechnology, Kalinga Institute of Industrial Technology, Bhubaneswar.
2. Sinha, Saptarshi. **Study the anticancer potentiality of a natural bioactive compound resveratrol in combination with PARP inhibitor olaparib through deregulation of homologous recombination repair pathway in pre-clinical model systems of breast cancer.** (Dr. Chanakya Nath Kundu), Department of Biotechnology, Kalinga Institute of Industrial Technology, Bhubaneswar.

Botany

1. Mewada, Mitu Vinodbhai. **Municipal solid waste characterization and its assessment for fungal bioremediation.** (Prof. Susy Albert), Department of Botany, M S University of Baroda, Vadodara.
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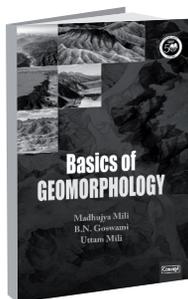
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